THESIS REPORT ON

CENTRE FOR SCHIZOPHRENIC , SECTOR 62 , NOIDA

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE DEGREE OF:

BACHELOR OF ARCHITECTURE

BY

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THESIS GUIDE

AR. AANSHUL SINGH

SESSION 2022-23

TO

THE

SCHOOL OF

ARCHITECTURE AND

PLANNING

BABU BANARASI DAS UNIVERSITY LUCKNOW.

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B. Arch Thesis 2022-2023

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CERTIFICATE

I hereby recommend that the thesis entitled "**CENTRE FOR SCHIZOPHRENIC, SECTOR 62, NOIDA**"

under the supervision, is the bonafide work of the students and can be accepted as partial fulfillment of the requirement for the degree of Bachelor's degree in architecture, school of Architecture and Planning, BBDU, Lucknow.

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Recommendation

Accepted

Not Accepted

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External Examiner

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CERTIFICATE OF THESIS SUBMISSION FOR EVALUATION

1. Name :APOORVA GUPTA

2. Roll No : 1180101010

3. Thesis title: CENTRE FOR SCHIZOPHRENIC

4. Degree for which the thesis is submitted: …BACHELOR OF ARCHITECTURE……

5. Faculty of the University to which the thesis is submitted ……..

6. Thesis Preparation Guide was referred to for preparing the thesis. YES NO

7. Specifications regarding thesis format have been closely followed. YES NO

8.The contents of the thesis have been organized based on the guidelines. YES NO

9. The thesis has been prepared without resorting to plagiarism. YES NO

10. All sources used have been cited appropriately. YES NO

11. The thesis has not been submitted elsewhere for a degree. YES NO

12. Submitted 4 spiral bound copies plus one CD. YES NO

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Signature(s) of the Supervisor
Name:

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Signature(s) of the Supervisor
Name:

CONTENTS

INTRODUCTION & PROPOSITION

1. Facts & Figures
2. Proposition
3. Vision, Aim and Objectives
4. Methodology

FACTS AND FIGURES

1. Affects 1% of the population.
2. 50% mental hospital beds are occupied by Schizophrenics.
3. 10% of them die by suicide.
4. 200-250 mental patients daily out of which 7% are Schizophrenic according to Institute of mental health and hospital, Agra.
5. 7% between the age of 25-30 are diagnosed.

PROPOSITION

Developing a safe place for Schizophrenics where general activity training, residential and healthcare facilities are provided for their holistic development.

VISION

An all-facility inclusive campus, being a space for the patients to medical recover from the condition by gradual healing with the nature and help combat the condition.

AIM

The aim of the project is to create a safe and disorder friendly environment for such people, for the proper development of the patient.

OBJECTIVE

- Schizophrenics are generally categorized as common mentally disordered people and after the diagnosis of schizophrenia they are generally recommended to stay at home or rehabs which are multidisciplinary and not schizophrenia centric, and in worst cases they are sent to mental asylums.
- So to provide them with a personalized environment a campus with proper medical, educational and residential facility needs to be developed in which the person can get their education according to their medical condition and also has easy access to medical facility while residing on the campus.
- Currently there are only rehab centers which cater a number of disabilities collectively at one campus.

- To provide a holistic development to the people a campus which is designed by a sensitive approach keeping in mind the mental condition needs to be developed. A campus where all the facilities are schizophrenia friendly, where they have a safe environment to heal. Under observation of highly trained and experienced psychiatrists, patients with schizophrenia will find miraculous improvement.

METHODOLOGY

INTRODUCTION TO THE TOPIC

Research

- About Schizophrenia
- Dopamine Hypothesis
- The Pathology of Schizophrenia
- Schizophrenic Architecture
- Treatment

Quantitative secondary research

- Facts and figures

Identifying issues

- Spatial Quality
- Crowding in general asylums

SITE STUDIES

Case study **Area statement** **Site analysis** **Zoning and circulation**

ARCHITECTURAL INTERVENTION

Concept and form development **Final Design**

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SITE STUDIES

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RESEARCH

1. About Schizophrenia
2. Dopamine Hypothesis
3. The Pathology of Schizophrenia
4. Schizophrenic Architecture
5. Treatment

ABOUT SCHIZOPHRENIA

- A chronic brain disorder affecting millions of people worldwide. It describes a scattered or fragmented pattern of thinking.
- It is actually a syndrome, so there are a lot of symptoms associated with it, and as a result, different patients may experience different symptoms.
- Schizophrenia is a chronic brain disorder that describes a fragmented pattern of thinking.

- Commonly defined as SYNDROME, its symptoms are cast into three categories:

1. POSITIVE
2. NEGATIVE
3. COGNITIVE psychotic effects

- Schizophrenia means split mind.

It is diagnosed through

- Delusions
- Hallucinations
- Disorganised speech
- Disorganised catatonic behaviour
- Negative symptoms

DOPAMINE HYPOTHESIS

Dopamine is a neurotransmitter made in the brain, it acts as a chemical messenger between neurons to control our movement, feelings and emotions which may affect our motivation to enact certain behaviours just to name a few.

In patients with schizophrenia, many studies have shown that dopamine in overactive or underactive quantities can trigger its development or onset.

NEGATIVE SYMPTOMS

Mesocortical Pathway

Over- activity of the Mesocortical pathway induces Negative & Cognitive symptoms when there is decreased D1 receptor stimulation.

Aim of Treatment:
INCREASE
Dopamine Nuerotransmission

POSITIVE SYMPTOMS

Mesolimbic Pathway

Over-activity in the Mesolimbic Pathway Induces Positive Symptoms of Schizophrenia when there is increased D2 receptor stimulation.

Aim of Treatment:
SLOW DOWN
Dopamine Nuerotransmission

THE PATHOLOGY OF SCHIZOPHRENIA

- It's common sense that a "manufactured" environment would affect our phycological wellbeing, and while the pathology of schizophrenia is formally unknown, its been well documented since the 1900's that urbanism is the locus of the schizophrenic epidemic. To many, this provides evidence that cities are universally bad our mental health (bell 2016).
- The effect of architecture and urbanicity on our phenomenological experiences are often casually overlooked as casual factors as opposed to the actual genesis of it. With rapid urbanization comes a decreases in socialization and human contact with nature.
- This brings about questions on the role architecture plays in our mental health. While the link between these two are becoming these two are becoming clearer. Literature on schizophrenia and the unsavoury effects of poor city living are typically found separately.

SCHIZOPHRENIC ARCHITECTURE

- As a profession, we should be deeply concerned about what is happening to the human psyche when such a deep defining part our evolutionary experience is being rapidly diminished. (Gullone, 2000).
- This challenge calls for us to not only document, but re-engineer the way we think about living.
- For my thesis proposal Schizophrenic Architecture, I pro-port to stand in the gap between the two architects and psychologists.
- Rurality has more to offer than its trans-locality to urbanism; biophilic design should be made a necessary component of architecture.

TREATMENT

Due to the fact that the natural environment has shaped our cognitive and emotional apparatus, it may be possible to naturally regulate dopamine levels in persons with Schizophrenia without the use of medication.

QUANTITATIVE SECONDARY REASEARCH

1. Need of the project
2. Issues (Spatial Quality)
3. Issues (Crowding)

NEED OF PROJECT

- Mental disorders are significant public health issue and pose a tremendous socioeconomic burden on community. Neuropsychiatric conditions have an aggregate point prevalence of about 10% for adult population.
- About 450 million people are estimated to be suffering from neuropsychiatric conditions worldwide . The resources available to tackle the huge burden of these disorders are insufficient, inequitably distributed and inefficiently used, which leads to a treatment gap of more than 75%.
- In terms of absolute number suffering from mental illnesses, the prevalence estimate throws up a huge number of about 7 crore persons.
- According to a study on mental patients arriving at the institute for treatment, it is estimated that about 7 percent of Indians suffering from mental disorders have schizophrenia in various degrees of severity.
- 7 per cent between the age of 25-30 years are diagnosed with schizophrenia in various degrees of severity.

ISSUES SPATIAL QUALITY

- The spatial construct mimics that of inmate in prison being looked over by a prison warden, consisting of isolated dormitories, large-scale overwhelming common spaces and an imposing 'guard-tower' to keep the patients in check.
- The buildings are texturally uniform and covered in an "institutional color palette (dull, pastel colors like- sandstone red, blues, whites etc.
- The wards/ dorms themselves are in appalling conditions, almost inhumane and inhabitable, with patients being restrained to their beds indefinitely.

ISSUES CROWDING

- In India, approximately 56,600 public psychiatric beds (35,000 psychiatric beds in mental hospitals, 10 beds each in 723 district hospitals, and 30 beds each in 479 medical colleges) exist for 130 crore population.
- The estimate requirement would be 50 beds per 1,00,000 population.
- The deficit is approximately 6 lakh public psychiatric beds. (Bada Math et al,2019)
- It is recommended that the bed strength of the existing hospitals be restricted to 400. Psychiatric Training units (25-50 beds) be established at district level.
- 200-250 mental patients daily out of which 7% are Schizophrenic and are getting victimized by the violent nature of the mentally disordered patients.

CASE STUDY AND LITERATURE STUDY

1. Vidya Sagar Institute Of Mental Health, Amritsar
2. National Institute Of Mental Health And Neuro-sciences , Bangalore
3. Socso Rehabilitation Centre Malacca, Malaysia
4. Bronderslev, Denmark.

CASE STUDY

VIDYA SAGAR INSTITUTE OF MENTAL HEALTH, AMRITSAR

- LOCATION: Amritsar
- ARCHITECT: Sarbhjit Bhaga
- YEAR OF CONSTRUCTION: 2004
- AREA: 47 acres

INTENT OF THE CASE STUDY :

The intent of the case study is to learn the zoning and planning scheme of the entire complex, also to understand the impact of small pockets of interaction, which results in good outcome. To study the art of the building which seems to be a part of nature or which arises from nature. Also to acquire the philosophies of the architect Sarabjhit Singh Bagha, who has done well in designing a mental Institute by keeping in mind the psychology of different types of users and patients, and their special needs for a controlled environment.

ABOUT MENTAL HOSPITAL :

Mental hospital is a specialty hospital, with its patients having their special needs. Broadly, the patients can be acutely disturbed and excited, or behaviorally settled. Most of the patients are mobile, and, therefore, need more open space. Average stay of patients in a mental hospital is usually much longer than their counterparts in other hospitals, and they frequently suffer from social stigma and face problems in rehabilitation on discharge. All these factors have been taken into consideration while planning and designing the VSIMH, Amritsar.

There are broadly three types of activities involved in the in-patients units.

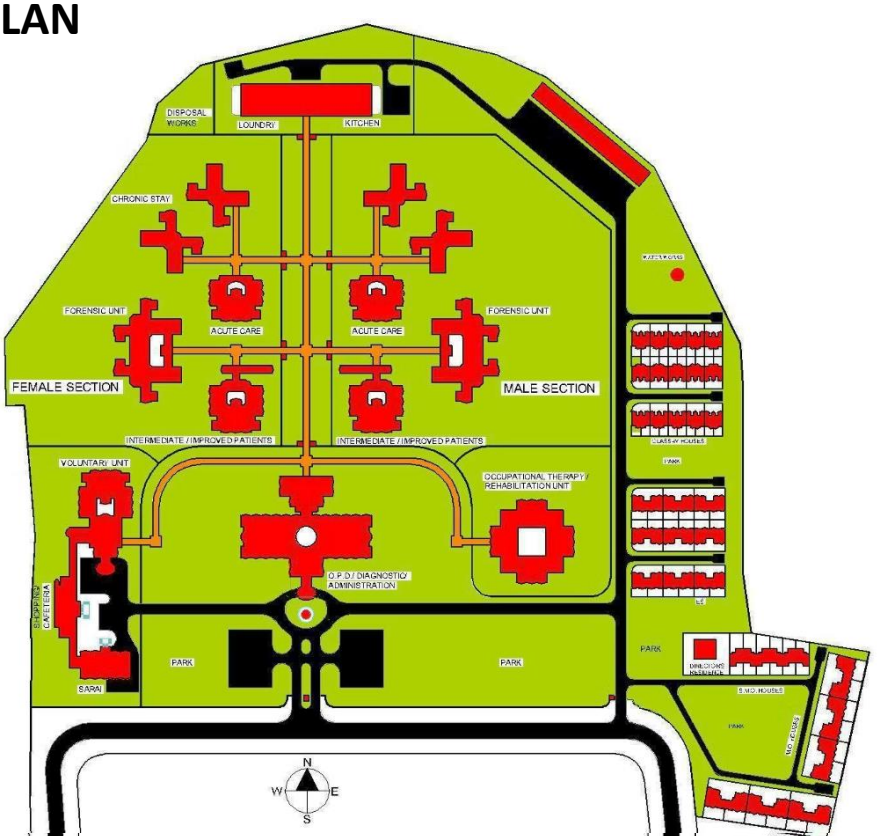
- Firstly, the patients stay in a congenial environment together performing their daily-routine chores .
- Secondly, the service of meals, done three times a day, requires trolley movement between the Kitchen Block and the Words .
- Thirdly, the replacement of dirty clothes with fresh laundry which lakes place at least once a day also requires trolley- movement between the Laundry Block and the Wards.
- Apart from this circulation, the patients' movement from the Wards to the Occupational Therapy/Rehabilitation Unit and the doctors/staff's movement from OPD/Administration Block to the Wards are also involved.
- The layout has thus been planned keeping in view the above activities and the easy low of pedestrian movement between different activity-zones.

CASE STUDY

Campus Designing/Masterplans

- All the building blocks in the campus have been laid out on a strict Cartesian pattern with symmetrical juxtaposition reminiscent of traditional Indian campuses.
- The built-up masses and the open spaces are ingeniously interwoven to create a building-in-the-garden effect.
- The entire hospital complex has been linked by vaulted corridor running independently through open spaces with greenery on both the sides.
- The intersections of two corridors have been developed as a 20 feet by 20 feet chowk with a high roof.
- Planned on a site of 45 acres, the master plan comprises primarily two zones: the Outer Circle and the Inner Circle.
- The Outer Circle accommodates the buildings with out patient facilities.
- The Inner Circle having wards of different types has further been divided in two Sections: the Male Section on the east and the Female Section on the west.
- The master plan provides for ample open spaces to be developed as gardens, parks, play fields, etc. this helps in creating a lively, cheerful, and natural environment, which is prerequisite for such hospitals.
- Built-up benches have been provided at certain intervals for casual sitting while walking in the corridor.

MASTERPLAN



CASE STUDY

- **CIRCULATION PATTERN**
- The architect has promoted pedestrian movement in the campus; all the roads have pedestrian walkways. He has accommodated staff and faculty away from the campus but to promote pedestrian walk, he has very beautifully designed the campus. Separate entry for the residential block is provided. Visitors entry is restricted to Outer circle of the com plex, whereas doctors, patients, nursing and non nursing staff have movement inside the inner circle. Patients who are admitted once can not leave the inner circle without the prior permission of the doctors whereas patients in voluntary care free to move as their family members are present there for care of he patients
- The unity and consistency-the two important aspects of campus designing-have been taken care of by providing uniform external finishes i.e., exposed concrete and red sand-stone cladding.
- The OPD-cum-Administrative Block is placed on the front that is the southern side while the Kitchen and Laundry Block is placed at the back or the northern side. Occupational Therapy/Rehabilitation Unit on its east and a mini-complex of Voluntary Unit, Shopping/Cafeteria and Serai on its west flanks the OPD/Administrative Block.

· Planned on a site of 45 acres, the master plan comprises primarily two zones:
  - the outer circle
  - the inner circle.

➢ **The outer circle** accommodates the buildings like

1. OPD-cum-diagnostic-cum-administrative block
2. Occupational therapy/rehabilitation unit
3. Voluntary patients' unit
4. Serai
5. Shopping/cafeteria
6. Services like kitchen, laundry, and stores
7. Staff quarters

- Staff quarters have also been located in the Outer Circle on the eastern fringe of the campus.

➢ **The inner circle** having wards of different types has further been divided in two sections:

1. The male section on the east.
2. The female section on the west.

- These Sections are enclosed by 6-foot- high boundary-walls with restricted entries. Check-posts are provided at each entry point. Each section has separate ward blocks i.e. for Intermediate/Improved Patients, Forensic Unit, Acute Care and Chronic Stay.

CASE STUDY

- The entire inner circle has been kept strictly pedestrian so as to impart serene and tranquil environment to the inmates
- Vehicular traffic has been restricted to the periphery.

OPD CUM ADMINISTRATION BLOCK

The OPD is strategically located on the southern side facing the main entrance to the hospital. By virtue of its location this block becomes landmark for this campus the three story building covers an area of 8475sqm and is cross shaped in plan it accommodates out patient on ground floor, diagnostic on first floor, administration department, library, lecture hall and exhibition hall on second floor . The building is well lit as it has an atrium at the top of a spiral ramp that is connecting building in terms of vertical circulations.

CASE STUDY

OCCUPATIONAL THERAPY AND REHABILITATION CENTRE

The occupational therapy and rehabilitation is a vital component in the functioning of a mental hospital. Its purpose is to train the patients in utilizing their time effectively and productively. The single storey building covers an area of 1685 sqm. and is located in outer circle. The building is designed around a central courtyard of 64x64 feet in size. All rooms and workshops draw sufficient daylight and large fenestrations on the outer periphery. In addition, ventilators have been provided on the internal courtyard side for effective cross ventilation.

FORENSIC UNIT

The forensic ward is planned to house mentally ill offenders or criminals who are admitted to the hospital under law. Separate wards were required for such patients to safeguard the interest of other inmates, and to ensure adequate security by police. In male section, the building is double storey structure with covered area of 2260 sqm. accommodating 80 patients. Each floor of these blocks have identical plan, which contains two independent units of 20 beds each. The units are mirror imaged and joined together resulting in enclosed and semi enclosed courtyards. These courts are ideal for outdoor activities for patients. The form of this unit is a pleasant synthesis of fulfillment of functioning needs of forensic patients and visually pleasing architectonics. This building thus portrays the Architect's firm belief in dictum : Form Follows Function.

Patient units or wards form a major component of a mental hospital because contrary to the general hospitals, the average stay of a patient in such a hospital is much longer.

There are broadly three types of activities involved in the in-patients units.

- Firstly, the patients stay in a congenial environment together performing their daily-routine chores.
- Secondly, the service of meals, done three times a day, requires trolley movement between the Kitchen Block and the Wards.
- Thirdly, the replacement of dirty clothes with fresh laundry which takes place at least once a day also requires trolley-movement between the Laundry Block and the Wards.
- Apart from this circulation, the patients' movement from the Wards to the Occupational Therapy/Rehabilitation Unit and the doctors'/staff's movement from OPD/Administration Block to the Wards are also involved. The layout has thus been planned keeping in view the above activities and the easy flow of pedestrian movement between different activity-zones.

CASE STUDY

ACUTE CARE UNIT

Acute Care unity accommodates those mentally ill patients who are acutely serious, and needs longer stay and special care in the hospitals. Since these are not expected to move upstairs, their wards are single storey units Two units of 20-bed capacity each have been provided in male and female section. Each unit has an covered area of 790 sqm, and plan form is almost identical to the typical floor plan of Improved stage patients . The retiring room for the nurses have wider angle of view for maximum gain of daylight, as it is necessary for the staff also to enjoy day space in between their breaks between the job. Circulation areas/day-spaces were kept large for the patients to move freely in the unit.

VOLUNTARY UNIT

This unit is virtually a complete mental hospital in itself - a sort of micro hospital in a macro complex. It is designed to house 50 beds distributed on three floors. The ground and first floors, each accommodates wards for 20 beds, with 10 privates rooms on second floor. These paid rooms are spacious enough to accommodate one family attendant with each patient. Each room has an attached toilet and worktop for preparation of food.

CHRONIC-STAY UNITS

Chronic Stay Units have been designed to house those chronically-ill patients who are unable to sustain lifestyle on their own, and, therefore, need external help to perform their daily chores. Majority of these patients are unlikely to be recovered and hence need hospitalization throughout the remaining part of their life. The User-Group's Brief given to the Architect for designing Wards for these patients includes single-storey dormitory-type accommodation with 10-12 beds each together with Nursing Station located strategically to keep direct watch on the patients. Furthermore, it was required to provide the patients their exclusive open space/court for outdoor activities. To translate Client's Brief into blueprint, cross-shaped twin units have been designed to accommodate 50 beds. These Units are juxtaposed in such a way that they enclose an adequate open space in between. Nursing Stations of both the Units are judiciously located to enable the attendants to keep an eye not only on the dormitories but also the central court. Each Unit has a covered area of 1180 square metres and it comprises, apart from two dormitories, a nursing station, a dinning hall, wash-room, recreation hall, doctor-room, interview-room, isolation-room, store, etc. Separate entries have been provided to both the Units for better management and control of chronic patients. The low-height buildings of Chronic Stay Units set amidst sprawling lawns are ideal homes away from the original homes of these under-privileged, pitiable persons.

CASE STUDY

ANALYSIS

The architect has created an amazing play of corridors with respect to volume and function to be carried out. The entire campus has multiple interactional open green spaces to areas from Small courtyards to enhance the reintegration of patients through socialization.

INFERENCES

1. Nurse's Station always placed at a point where the dorms are visible from all ends.
2. The Forensic word is separated from the rest of the units for safety.
3. The acute care unit, Improved patients' unit and the chronic stay unit are connected linearly.
4. The acute care and Improved patients' unit have Identical functional distribution.
5. Starting hints of curvature seen in the interior shaping of spaces.

CASE STUDY

NATIONAL INSTITUTE OF MENTAL HEALTH AND NEURO-SCIENCES , BANGALORE

CONTEXT :

Bangalore, officially known as Bengaluru, is the capital of the Indian state of Karnataka. It has a population of about 8.42 million and a metropolitan population of about 8.52 million, making it the third most populous city and fifth most populous urban agglomeration in India. It is located in southern India on the Deccan Plateau. Its elevation is over 900 m above sea level, the highest of India's major cities . Most of the buildings here are high raised and many of historical importance starting from the British East India company rule, which followed a colonial style of Architecture.

LOCATION :

Hosur road, Bengaluru.

It is situated in the middle of Bengaluru city, which makes it more easily accessible.

Nearest bus station - Kempagowda Bus station 7.5 km.

Nearest Railway -Kempagowda metro station 7 km.

Different Centers in Nimhans

1. Advanced Centre for Ayurveda
2. Center for Public Health
3. Central Animal Research Facility
4. Centre for Addiction Medicine
5. Library and Information Centre
6. Magnetoencephalography (MEG) Centre
7. Neurobiology Research Centre (NRC)
8. NIMHANS Centre for Well Being
9. Advanced Centre for Yoga
10. Sakalwara Community Mental Health Centre
11. Virtual Learning Centre (VLC)
12. WHO Collaborating Centre for Injury Prevention and Safety Promotion

CASE STUDY

CLIMATE :

Bangalore has a tropical savanna climate with distinct wet and dry seasons. Due to its high elevation, Bangalore usually enjoys a more moderate climate throughout the year. although occasional heat waves can make summer somewhat uncomfortable. The coolest month is January with an average low temperature of 15.1 °C and the hottest month is April with an average high temperature of 35 °C. The highest temperature ever recorded in Bangalore is 39.2 °C (103 °F).National Institute of Mental Health and Neuro Sciences is a multidisciplinary Institute for patient care and academic pursuit in the frontier area of Mental Health and Neuro Sciences. The priority gradient adopted at the Institute is service, manpower development and research. Multidisciplinary integrated approach is the mainstay of this institute, paving the way to translate the results from the bench to the bedside . On November 14, 1994, NIMHANS has been declared a Deemed University by the University Grants Commission, with academic autonomy. The Institute functions under the direction of Ministry of Health and Family Welfare, Govt. of India and Ministry of Health and Family Welfare, Government of Kamataka. Several National and International funding organizations provide resources for research.

PSYCHIATRIC REHABILITATION CENTRE

After the first course treatment in hospital block the patients are shifted to different rehabilitation blocks according to their condition. This rehabilitation is a second course treatment where the patients are trained in various aspects which includes exercise, therapy, workshops, etc. The main psychiatric block offers the main therapy activities for the patients .

The Planning

The plan follows a typical conventional method of hospital planning. It consists of central courtyard around which the rooms are arranged in a series .

Circulation

Almost 213 m^2 of area is allotted as circulation space which is more than enough for the basic movement structure. Almost 50 m^2 is allotted as waiting in common areas .

Out patient

Two consulting areas and a neuro OPD is given here. They are given for frequent consultations of inpatients in the rehabilitation blocks .

Diagnostics

The orthotic section and gait analysis laboratory are given in the first floor and a uro dynamic laboratory in second floor . These labs are used for testing various defects in patients that restrict their movements and action .

CASE STUDY

Training

Different workshops are conducted here mainly candle making, weaving, bakery, bamboo section, etc. Each category is given almost 30 m² of area .

Physiotherapy areas are given in the first floor and each floor has nurse stations.

COTTAGES

There are total of 3 set of cottages, one with two rooms and the other two with four rooms . Here patients of almost most stable conditions are occupied. They will have separate rooms for stay and have one common nurse in each set of cottages . They will be having group therapies with other patients.

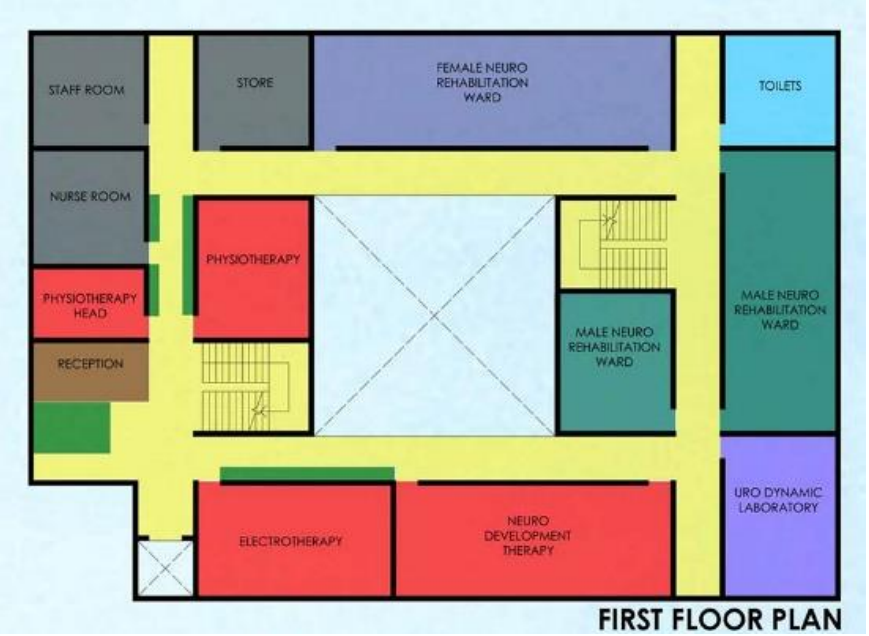
AREA STATEMENT

1. Nurse Station = 43.55 m²
2. Library = 43.5 m²
3. Bamboo section = 36.15 m²
4. Candle section = 15 m² x 2
5. Bakery section = 20 m²
6. Printing section = 31.15 m²
7. Domestic skill training session = 25 m² x 2
8. Orthotic section = 25 m² x2
9. Gait analysis laboratory = 25 m²
10. Consulting room =15.57 m² x 2
11. Neuro Rehabilitation OPD = 31.15 m²
12. Reception = 14.84 m²
13. Toilet = 25 m²

CASE STUDY

AREA STATEMENT

1. Electrotherapy = 43. 55 m²
2. Neuro Development Therapy = 62.2 m²
3. Uro Dynamic lab = 36.15 m²
4. Male General Ward = 63.45 m²
5. Male ward = 31.15 m²
6. Female General Ward = 80.75 m²
7. Store room = 25 m²
8. Staff room = 25 m²
9. Nurse room = 25 m²
10. Physiotherapy room = 31.15 m²
11. Physiotherapy head = 15.57 m²
12. Reception = 14.84 m²
13. Toilets = 25 m²



- There are no special treatments given in this building. Flooring is done using smooth finished files. All the upper floor corridors are grilled in the exterior to protect the patients from any unnecessary activities, which is more common here. It is planned CS conventional type of a hospital which makes the circulation more simpler.
- It follows a basic typology of planning in medical centres. There is a linear or rectangular main circulation path from which access to each areas are protruding from it as branches. This type of planning are most preferable in medical centres as it reduces complexity in circulation.
- Immense landscape features are given here as it gives a healing effect in patients. They are free to roam through these spaces which gives a soothing effect to their minds.

CASE STUDY

AREA STATEMENT

1. Independent living skills training hall =43.55 m² x 2
2. Psychiatric social worker = 17.5 m²
3. Tailoring section = 36.15 m²
4. Plastic moulding section = 31.15 m²
5. Weaving section = 31.15 m²
6. Occupational therapy lab = 31.15 m²
7. Occupational therapy multi sensory unit = 25 m²
8. Occupational Therapy = 54.6 m²
9. Occupational therapy office = 25 m²
10. Computer section = 25 m²
11. Nurse room = 25 m²
12. Rounds room=31.15 m²
13. Office=15.57 m²
14. Reception= 14.84 m²
15. Toilet=25 m²

AREA STATEMENT

1. Nimhans data center = 43.55 m²
2. Hospital assistant room = 36.05 m²
3. Asst. Administrative officer = 25 m²
4. Leather section = 36.15 m²
5. Craft section = 31.15 m²
6. Leather section = 31.15 m²
7. DPNR office 31.15 m²
8. Store room = 25 m²
9. Hall PSW = 54.6 m²
10. DPNR HOD office = 25 m²
11. Ward supervisor room = 25 m²
12. Recreational room = 25 m²
13. Tutors room = 15.57 m²
14. Reception = 14.84 m²
15. Toilet = 25 m²

Room heights are almost given 4.5 m which is done as a precaution from any suicidal attempts or any unnecessary actions from patients. The fan is fixed very high which makes it difficult for them to access.

All the open corridors are grilled which protects the patients from any unnecessary actions such as suicidal attempts.

LITERATURE STUDY

SOCSO REHABILITATION CENTRE MALACCA, MALAYSIA

ABOUT

Arguably the first rehabilitation complex in the world that combined medical and vocational rehabilitation facilities with an allied health institute. This project is initiated under Social Security Organization Malaysia (SOCSO) 'Return To Work' programme. The brief is to provide 'insured person' under SOCSO who has lost their normal capabilities due to accidents or sickness to undergo physical and vocational rehabilitation with the purpose of restoring their physical abilities to continue working faster, healthier and safer. The disabilities range - from losing one or more limbs, blind, mute, deaf, - wheelchair bound or a combination of disabilities.

- The medical rehab will provide rehabilitation facilities after the healing process at normal hospital . The patient will be trained to live a 'normal' life
- The vocational rehab will provide training facilities for new skills to prepare the patient into the work market
- An allied health institute specifically related to rehabilitation will provide the future manpower while using the rehab centre as training facilities.

LITERATURE STUDY

ARCHITECTURE CONCEPT

1. The buildings are placed sensitively on existing topography: maintaining & enhancing wherever possible
2. Each buildings are given different outlook- identity for easy recognition and orientation.
3. Great emphasize on 'green design' such as orientation. maximize natural lighting and ventilation, creation of 'wind corridor', low e-glass, fixed and movable shading panels.
4. A conscious move from hospital outlook into a more corporate resort environment: again to expedite the healing process

THERAPEUTIC DESIGN (TD) ELEMENT

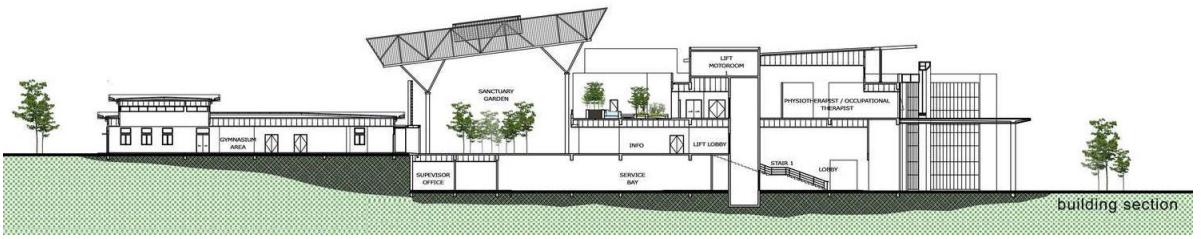
Looking on the perspective of architectural concept approach, the placement of the building is taking into consideration so that minimal amount of changes that required to be implemented during the construction process while preserving and enhancing if necessary. To increase the legibility of each cluster for easy identification. each building from each cluster were given a unique architectural language with all the cluster will begiven an emphasize on 'green design approach'. A special treatment was to be given to the building orientation, maximizing the use of natural ventilation and lighting and standing panels. This approach that look a different route from the conventional hospital and focusing more to create corporate environment is mean to speed u the healing space.

LITERATURE STUDY

PLANNING CONCEPT AND DESIGN

1. The main tenants are people with disabilities and their caretakers.
2. The whole planning was orchestrated based on ease of movement and compliance to universal access for all concept, and Malaysian Standard Code of Practice on Access for Disabled Person to Public Buildings and other relevant guidelines
3. The creation of a 'primary spine' will provide ease of movement either for walking, wheel chair or buggy.
4. Multiple experience created by landscape and resting areas provide 'pausing stations
5. Buildings are clustered according to principle function; and each cluster is intimately connected via the 'primary spine'
6. There are five main clusters. Administration Block & staff canteen, Medical & Vocational Rehab Blocks, Hostel and Canteen Blocks. Allied Health Institute Block, Surau (Muslim prayer hall) & main car park , Services blocks .
7. The administration block creates the starting point in the journey for healing. It is designed as an impressive building to emphasize its formal function.
8. The main rehab blocks, canteen & hostel are set radially with the surau being the axis; signifying spiritual healing.
9. The medical block is designed based on the 'healing handwhere main facilities & wards forming the palm; while the five fringes housed the therapy blocks.
10. Shaded garden formed a sanctuary for the patient to rest post therapy.
11. Soft and hard landscaping is a very strong element that holds the whole development together. It is intended that the greenery and spiritual therapy as part of the healing process.

MEDICAL REHABILITATION BLOCK



LITERATURE STUDY

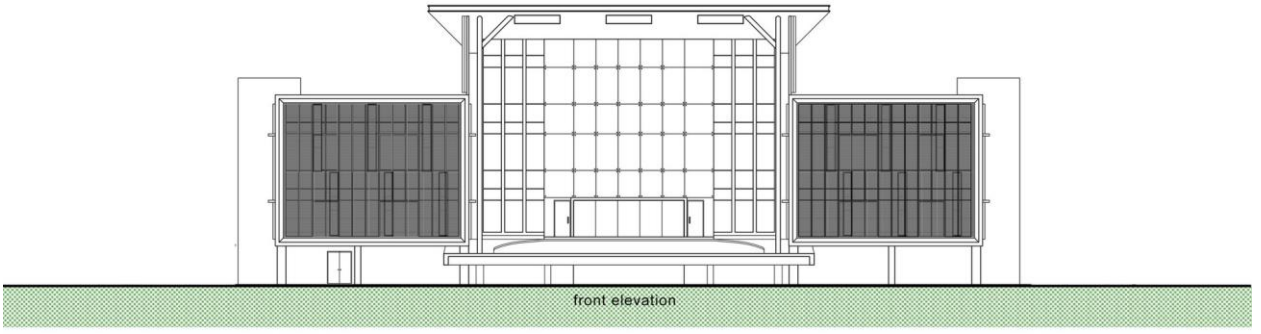
VOLUME EXPANSION AND SMALL DETAILS

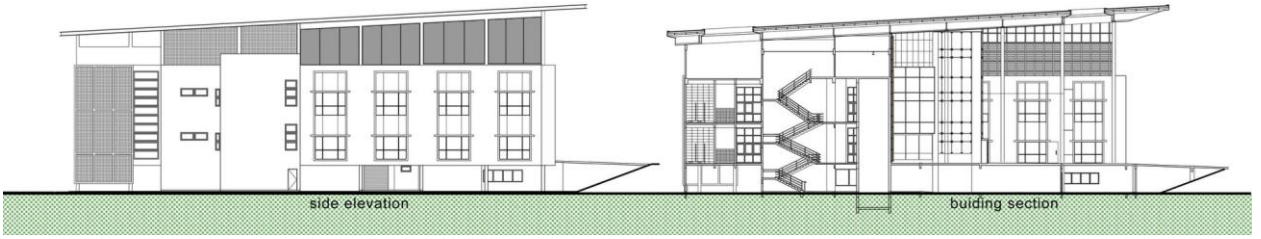
The main rehab blocks, canteen & hostel are set radially with the surau being the axis; signifying spiritual healing. The medical block is designed based on the 'healing hand' where main facilities & wards forming the palm; while the five fingers housed the therapy blocks. Shaded garden formed a sanctuary for the patient to rest post therapy. Soft and hard landscaping is a very strong element that holds the whole development together. It is intended that the greenery and spiritual therapy' as part of the healing process.

INFERENCES

1. Space segregation and space management is not done as per the site scale.
2. Providing healthcare and rehab converge the patients.

ADMINISTRATION BLOCK





LITERATURE STUDY

NEURO-REHABILITATION CENTRE, BONDERSLEV , DENMARK

Accessibility- Bronderslev is small a town in northern Jutland and is connected to Aalborg by train and a highway. Nearby facilities- High School, Kindergarten, Sports academy, Football field.

A long avenue frames the entrance to the new Neurorehabilitation Center in Bronderslev. On the right of the avenue are two car parks from where a sloping path leads pedestrians to the main entrance of the building. In front of the entrance is a square covered with stone tiles. From here two large window sections lead into the entrance hall and the neuro rehabilitation centers canteen, Café Hack. In summer, the façade can be opened up, so the cafe can move tables and chairs out on the square. This creates life around the entrance that welcomes new patients and their relatives. making sure that a positive experience is established right from the beginning of the stay . When new patients move into the Neuro-rehabilitation Center, some have considerate physical impairments, therefore the patient- transport can drive right up to the entrance on a levelled drive through. In connection with the drive through are also parking lots for disabled, ambulances and minibuses. Furthermore linen and food for the kitchen can be delivered directly to the appertaining functions, which are located on ground floor facing the arrival area. Surrounding the building complex is a large green park that gives patients a green view.

Ground Floor Plan

LITERATURE STUDY

CONCEPT :

HEALING ARCHITECTURE

According to investigations there is a connection between the daylight and the comfort of the patients. A study that was done on patients after they had a back surgery showed that the daylight has a positive effect on stress and pains. It was done as a parallel study, where half of the patients were placed in bright rooms oriented against west, and the other half was placed in rooms oriented against east, facing another building that was obstructing the daylight to enter the rooms. The patients in the west orientated bedrooms got 46% more daylight than the east orientated. By the time of discharge the patients in the bright bedrooms had used 22% fewer painkillers and rated their stress level lower than the patients in the dark bedrooms. Studies also show that it is important for patients to be exposed to a height amount of daylight, as this helps them keep a good circadian rhythm.

AREA STATEMENT

Bedroom x 60 (20 rooms in each floor) - 46 m²

Functions related to a bed unit-

Dining room x 6 (Patients)- 20 m²

Common room x 6 (Patients)- 30 m²

Training kitchen x 6 (Patients)- 15 m²

Group room x 6 (staff)-63 m²

Office x 6 (Staff)- 36 m²

Silent office x 6 (Staff)-16 m²

Toilet x 12 (Staff)-3 m²

Unit depot x 6 (Staff)- 13 m²

Unit sluice x 6 (Staff)- 13 m²

Overall common functions-

Reception x 3-10 m²Café- 74 m²

Room for relatives - 39 m² 5

Toilets for visitors x 3-3-5 m²

Common training functions-

Pool area- Patients and Staffs - 250 m²

Training hall- Patients and staffs - 120 m²

Training laundry-35 m²

Senseroom-16m²

Training walk - 81 m²

Training cardio - 65 m²

Training wood-25 m²

Training hobby-25 m²

Training with couch x 2-15 m²

Common Staff functions-Common group room x 2-39 m²

Offices x 13-10-44 m²

LITERATURE STUDY

Orientation and zoning-

Since it is a northern area the bedrooms are strictly oriented towards west and east to get more natural light. The increase in amount of natural light in a patients room helps him to attain relief and peace. It is a part of treatment therapy. The bedrooms are placed such that they are connected to natural environment. The training areas are kept near the entry where public access is more and the bedrooms and wards are kept aside from public which helps from further noise disturbance.

Disabled Friendly-

Each space is designed considering the ability of a patient. Most of the patients are physically disabled due to which special considerations are applied as shown above.

Play with levels-

An interesting method applied is designing the form at different levels. This is an intermediate method to keep the patients active throughout when in the building.

Ventilation-

In the bedrooms the ventilation principle are based on inlet in the lowered ceiling in front of the entrance and outlet through the bathroom. This will ensure that the bathroom has a negative pressure, and the air from the rest of the bedroom will be drawn out here. The principle of the inlet is to use the Coanda effect, which means that the inlet air will be dragged towards the ceiling due to the under pressure that will occur between the inlet squirt and the ceiling. This will increase the range of the inlet jet and thereby ensure that the inlet air will come all the way into the bedroom . The interior courtyards play an important role in the healing environment, as it creates a internal congregation space for the patients without leaving them outside the enclosure. Mar medicinal plants are used here as it purifies the exterior atmosphere and heals the inter environment.

Connection with natural environment

AREA ANALYSIS

1. Area analysis of each block

AREA ANALYSIS

AREA ANALYSIS

SITE ANALYSIS AND DESIGN DEVELOPMENT PSYCHOLOGY

1. Site analysis
2. Climate analysis
3. Concept and design development

SITE ANALYSIS

INTRODUCTION :

The site is located in sector 62 NOIDA, on Paramhans Yoganand Marg ,which is the new industrial city of Uttar Pradesh. NOIDA has now emerged as a planned, integrated, modern industrial city well connected to Delhi through the network of roads, national highways and the ultra modern DND flyover offering inter-road linkages to all the parts of the country. The project is expected to be the first fully integrated convention, exhibition and entertainment precinct in the district. The center is intended to provide an opportunity for organization,. executives, academics and professionals to gather and interact in an informal environment.

Noida, short for New Okhla Industrial Development Authority, is a planned city located in Gautam Buddha Nagar district of the Indian state of Uttar Pradesh. It is a satellite city of Delhi and is a part of the National Capital Region (NCR) of India. As per provisional reports of Census of India, the population of Noida in 2011 was 642,381. The city is managed by New Okhla Industrial Development Authority (NOIDA).The district's administrative headquarters are in the nearby city of Greater Noida.

LOCATION :

It is located in the state of Uttar Pradesh at the fringes of Delhi, the national capital, located at the doorstep of Delhi, NOIDA is only 14 KM away from Connaught Place. The 550m long, eight lane NOIA toll bridge across Yamuna connecting maharani bagh in Delhi to Noida has further reduced the distance, time and cost of commuting to and fro Delhi-NOIDA. NOIDA has all the key advantages of Delhi without having its disadvantages. Noida is bounded by NH-24 Bye-pass in the north beyond which the Ghaziabad development area exists, in the east by river Hindon beyond which Greater Noida Development Area exists, in the West by river Yamuna, beyond which are the states of Delhi and Haryana and in the south is the meeting point of the rivers Yamuna and Hindon.

Site coordinates : 28 degree 37 minutes North
77 degree 21 minutes East

SITE INFORMATION

Site Dimensions -195M X 245M
Site area = 11.8 acres (47775 sq m)
Permissible far. = 1.5
Permissible ground coverage = 30%
Permissible ground coverage = 30 x 47775/100 = 14332.5 sq m
Minimum set back
Front-15m
Side and rear-9 m
Height restriction - 20m

SITE ANALYSIS

SITE CONSTRAINTS

Shape- its a plain and rectangular in shape site.
Orientation – the site is south facing
Topography-site is almost flat
Vegetation- site is barren and partly filled with wild grass
SOIL TYPE - alluvial soil, bearing capacity off soil is 150kg/sq.

ENTRY TO THE SITE

BARREN SITE AREA WITH WILD TREES

VIEW OF SITE FROM ENTRANCE OF THE SITE

CLIMATIC ANALYSIS

The Climate of Noida is same as of Delhi, i.e. Composite climate. NCR lies between the Tropic of cancer and Tropical of Capricorn far enough from equator dew to which seasonal variation occurs the main season are summer followed by monsoon and winter . During the month of January, February , march, April , October , November , one is more likely to experience good weather with pleasant average temperature. Hot seasons/summers are from march to November . On average the warmest month is may, the coolest month is January & july is the wettest month whereas november is the driest month in Noida.

VEGETATION

CLIMATIC ANALYSIS

- Average temperature in Noida is 25.2 Degree Celsius.
- Average rainfall is 728 mm.
- In summer, i.e. from march to June , the weather remains hot and the temperature ranges from maximum of 48° to a minimum of 28°c.
- The cold waves from the Himalayan region Makes the winters in Noida chilly and harsh . Temperatures fall to as low as 3 to 4°c at the peak of winters .
- The prevailing winds flow from north-west to south-east .
- With already existing buildings on the surroundings like hospitals, apartments etc. the electrical line are already laid along the site .
- The main drain lines are already laid and are 10 feet wide, which can be further connected to drain on the site.
- Vegetation on the site is scattered with wild grass and PROSOPIS , SACRED FIG on the boundary of site.
- Air quality in Noida is worse than Beijing's. Indeed, if Noida ranked 11 on the IQ Air Visual World City Pollution Ranking, the Chinese city was at the 122nd position with a 2018 annual average PM2.5 concentrations of 50.9 micrograms per cubic meter (μg/m³).

STRENGTHS

The site has rectangular shape close proximity to metro station developing sub city at this point of time thus provide scope for advancement. location of site near green belt provides a healthier and fresher environment.

OPPORTUNITIES

Makes able to enhance the social and cultural lives of neighborhood. Absence of any mental healthcentre in the vincity.

WEAKNESSES

Untreated sewerage drain close to the site and currently used as a dumping zone which can give rise to waterborne disease. garbage is thrown on the site

THREATS

Traffic is likely to get heavy on the roundabout. Sewage system is mismanaged.

VIEW FROM THE SITE TOWARDS THE ROAD

CONCEPT AND DESIGN DEVELOPMENT

BIOPHILIA AS A HEALING ENVIRONMENT

Due to the fact that the natural environment has shaped our cognitive and emotional apparatus, it may be possible to naturally relegate dopamine levels in persons with Schizophrenia without the use of medication . Nature when made in reference to this thesis will always focus on the environmental considerations of a Forest.

CENTRE FOR THE SCHIZOPHRENIC

One should be deeply concerned about what is happening to the human psyche when such a deep defining part the evolutionary experience is being rapidly diminished. This challenge calls for us to not only document. but re-engineer the way we think about living . For my thesis proposal Centre for Schizophrenic , the intent is to stand in the gap between the two architects and psychologists. Rurality has more to offer than its translocality to urbanism: biophilic design should be made a necessary component of architecture. "It's no longer about nature's place in human society, but humanity's place in nature and the intrinsic benefits that can have in preserving and maintaining our mental health."

URBANISM LEADING TO SCHIZOPHRENIA

It’s common sense that a "manufactured" environment would affect our psychological wellbeing, and while the pathology of schizophrenia is formally unknown, it's been well documented since the 1900's that urbanism is the locus of the schizophrenic epidemic. To many, this provides evidence that cities are universally bad for our mental health .The effect of architecture and urbanicity on our phenomenological experiences are often casually overlooked as causal factors as opposed to the actual genesis of it. With rapid urbanization comes a decrease in socialization and human contact with nature . This brings the role of architecture in our mental health. while the link between these two are be coming clearer.

CONCEPT AND DESIGN DEVELOPMENT

SPACE DESIGN FOR THE PATIENT

SOCIALIZE
Family & Community are critical components for long term recovery. Ensuring the patient feels heard, included, and supported n their journey is also critical for compliance with treatment. Spaces for socialization should feel incidental and informal to maximize the potential benefits.

REHABILITATE
Rehabilitation through medication, psychotherapy, and biophilia will remain consistent tenants in the design apparatus. Having spaces that are open for use rather than prescriptive can increase feelings of privacy and have different modes of therapy to be introduced and practiced.

PANOCEPTION

Due to the fact that person's with schizophrenia struggle with medication and regimen compliance as a result of delusions about not having the disease: this portion of the hypothesis was developed by introducing the idea of Panoception . At the core of Panoception is the idea of central inspection. Essentially, there are some activities that are best executed when humans think they are being over- seen. This technique may be used to reduce the likelihood of a patient not adhering treatment requirements . Originally introduced by Bentham, it was eventually incorporated into the design of a panoceptic prison where the person being watched, cant see the watcher, and as a result maintains compliance with the specified program. Due to the circular nature of the concept, this idea was coupled with treatment programs for community and socialization.

PLAN

Designing in circularity allows for a multiplex & layered approach which denote areas of privacy, social interaction and community. This may be intersected with psychosocial techniques of rehabilitation and culture to maintain the undertone of perceived surveillance. Maintaining sight-lines are especially critical for medication compliance which will combat positive psychotic symptoms.

CONCEPT AND DESIGN DEVELOPMENT

SECTION

Designing in circularity and playing with the levels in section are critical for medication compliance which will combat positive psychotic symptoms, as the patient never really knows when they are being watched, even in times when they may perceive themselves to be the "watcher".

VISUAL CONNECTION TO NATURE

LIGHT

The view of nature through natural light is critical to our psyche. Not only is it essential to perceive and then to evaluate our surroundings, but it lowers blood pressure, increases cognitive performance and regulates sleep. (Terrapin Bright Green, 2014)

NON- VISUAL CONNECTIONS

SOUND

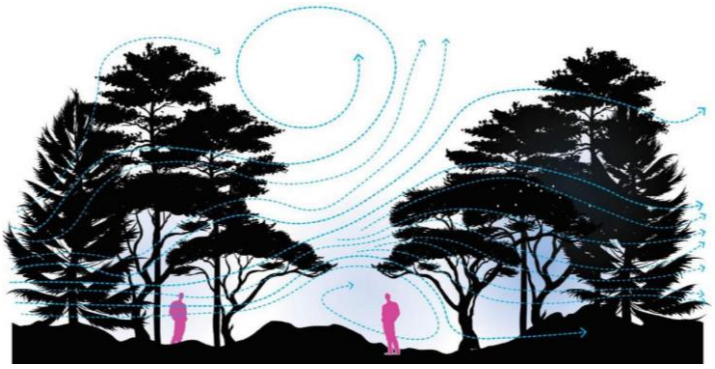
Auditory, haptic, or olfactory stimuli engender a deliberate and positive reference to nature, its living systems and natural processes. Nature's sounds can reduce blood pressure and stress hormones, which improves our feelings and positively impacts our cognitive functions (Terrapin Bright Green, 2014)

CONCEPT AND DESIGN DEVELOPMENT

THERMAL CONTROL AND AIRFLOW

WIND

Subtle changes in air temperature, relative humidity, airflow across the skin, creates ideal areas for place-making through improved perceptions of temporal and spatial pleasure (Terrapin Bright Green, 2014)



BIOMORPHIC FORMS

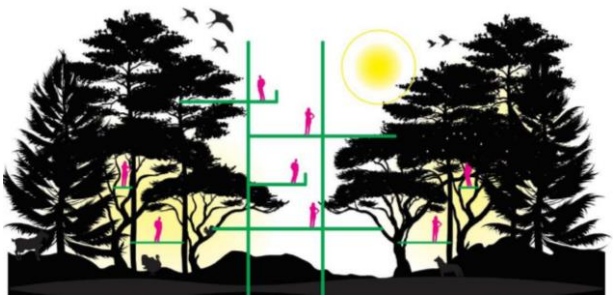
GOLDEN RATIO

An infinite complex series of patterns, symbolic references to contoured, patterned, textured or numerical arrangements that persist in nature are called fractals. The ability to perceive something as infinite as a forest, lowers avolition and improves depressive moods.

RAISE OR ELEVATE

HEIGHT

Freshest most purified air is found at the top or highest points of nature. Viewing nature at high altitudes I rejuvenates the body and lowers consistent negative feelings and emotions.

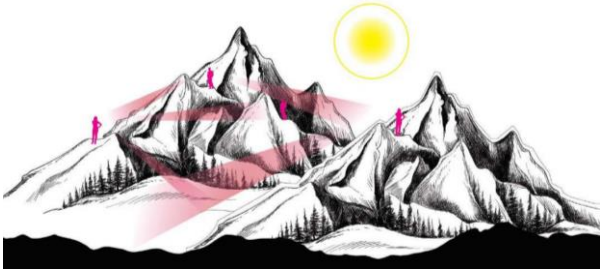


CONCEPT AND DESIGN DEVELOPMENT

PROSPECT OR VIEWS

TRANQUILITY

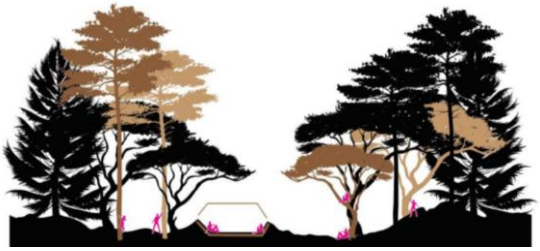
When a patient is in a vulnerable state and uncomfortable in his/her surroundings, a savanna landscape overhead, open, elevated or distant views can offer a sense of calm, safety and control. It also reduces boredom, irritation and fatigue. This is known formerly known as the Biophilic Prospect Pattern.



MATERIAL CONNECTION

WIND

Material connects with nature, barefoot, hand or otherwise feels grounding and gives a general sense of shelter and safety. This is of particular importance to the Paranoid Version of Schizophrenia. This largely reduces negative psychotic effects while improving cognition.



WATER THERAPY

TRANQUILITY

The presence of water brings humans to a calm and meditative state. The touch, feel, smell and taste of water or humidity in copious amounts can leave one feeling inspired, while heightening the powers of your other senses.

DESIGN DEVELOPMENT

1. Site Plan
2. All Plans
3. Sections

ELECTIVES

1. LANDSCAPE
2. SECURITY AND SURVEILLANCEurveillance

3D VIEWS

1. Views of the project

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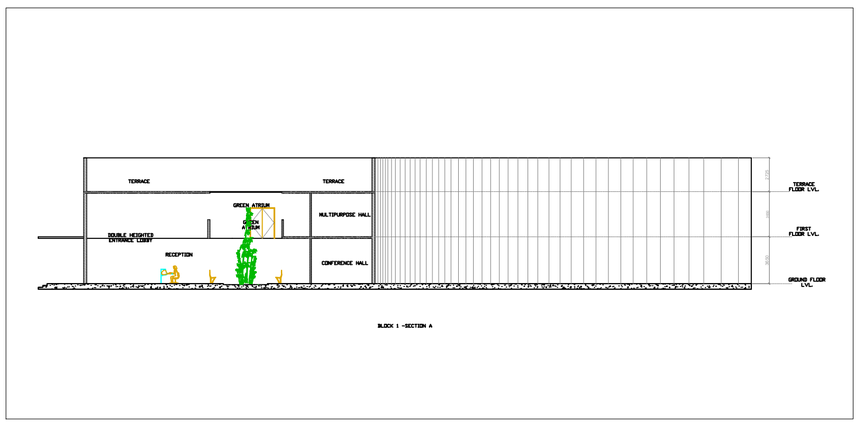
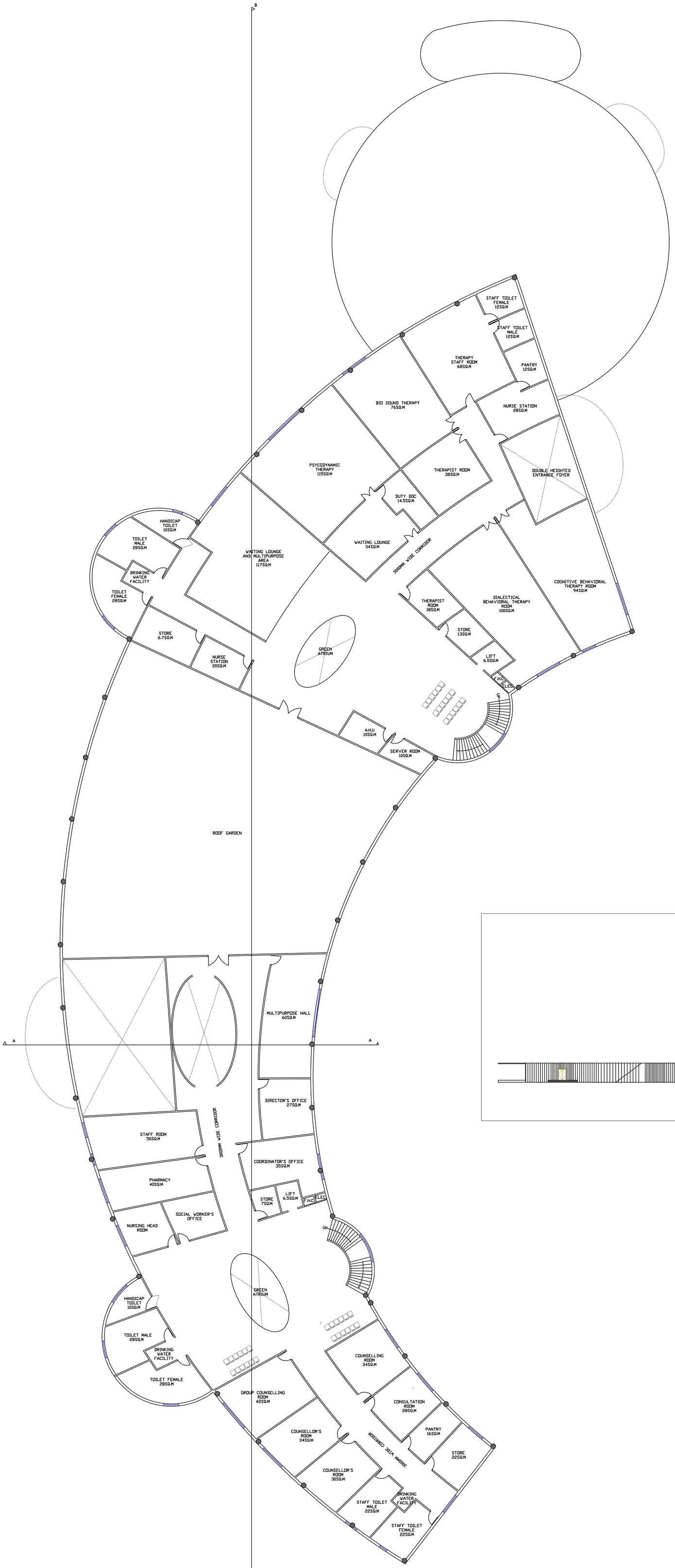


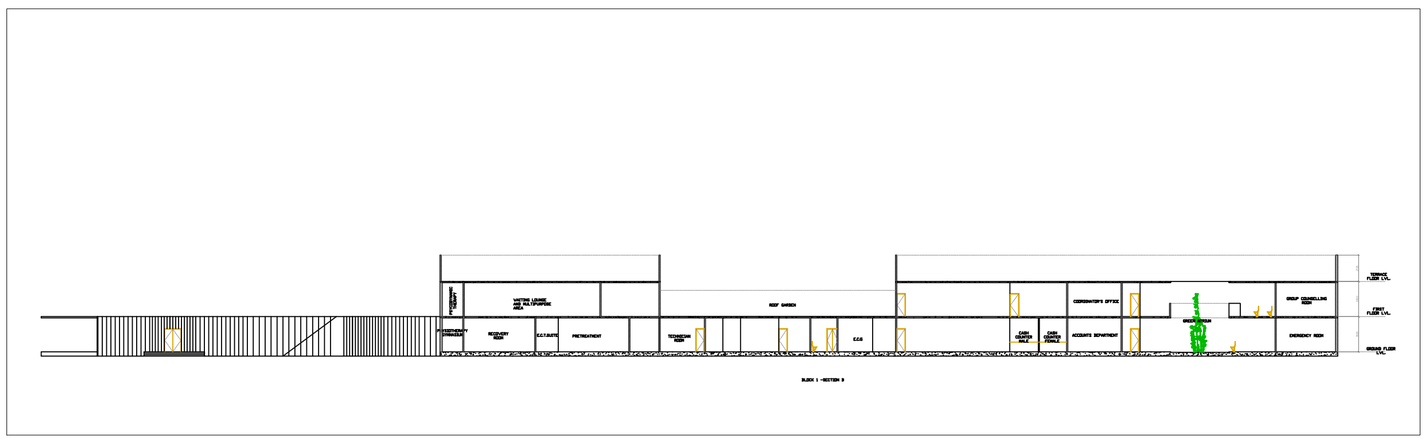
BLOCK 1 -SECTION A

CENTRE FOR SCHIZOPHRENIC

FLOOR PLAN
BLOCK-1 GROUND FLOOR

APOORVA GUPTA
B.ARCH 5TH YEAR(SEM X)
THESIS(2022-2023)
SCHOOL OF ARCHITECTURE B.B.D.U.

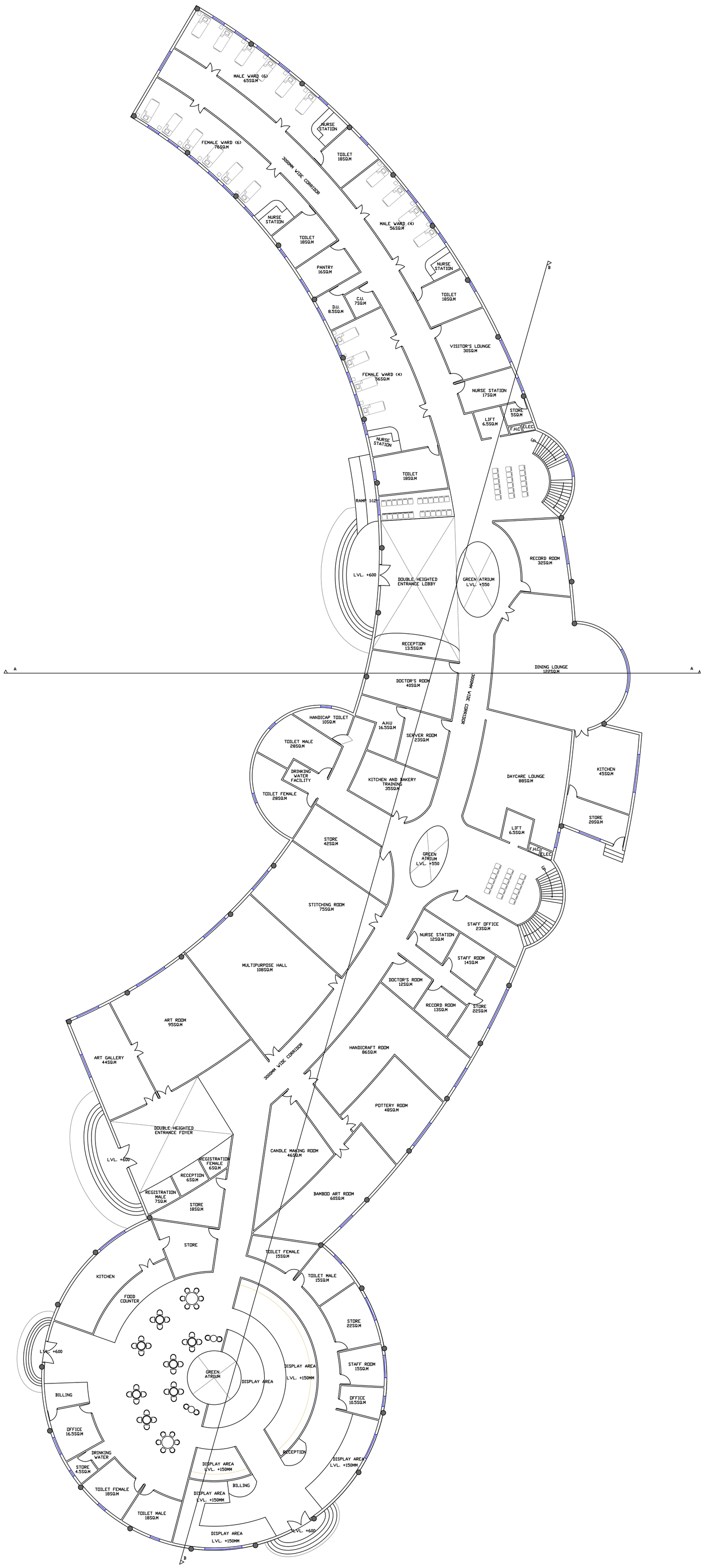




CENTRE FOR SCHIZOPHRENIC

FLOOR PLAN
BLOCK-1 FIRST FLOOR

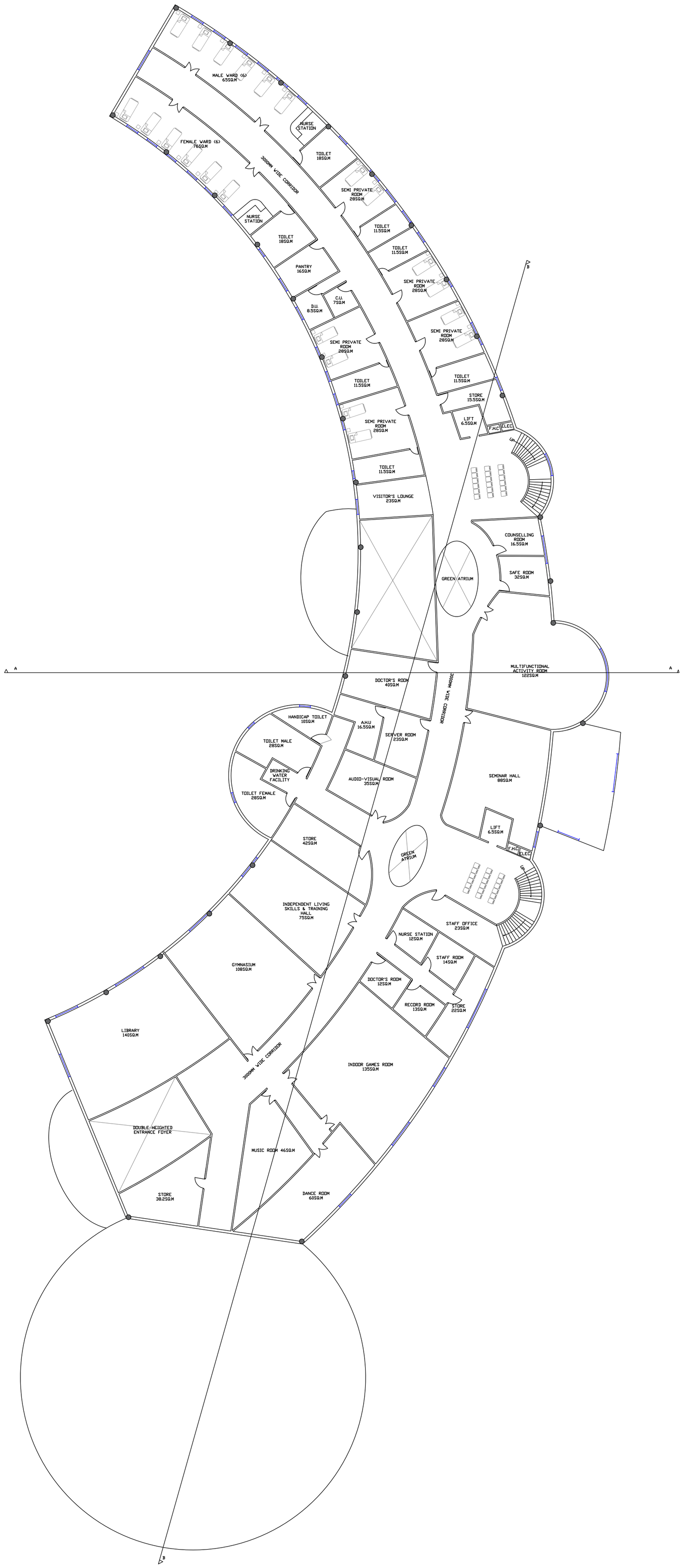
APOORVA GUPTA
B.ARCH 5TH YEAR(SEM X)
THESIS(2022-2023)
SCHOOL OF ARCHITECTURE B.B.D.U.



CENTRE FOR SCHIZOPHRENIC

FLOOR PLAN
BLOCK-2 GROUND FLOOR

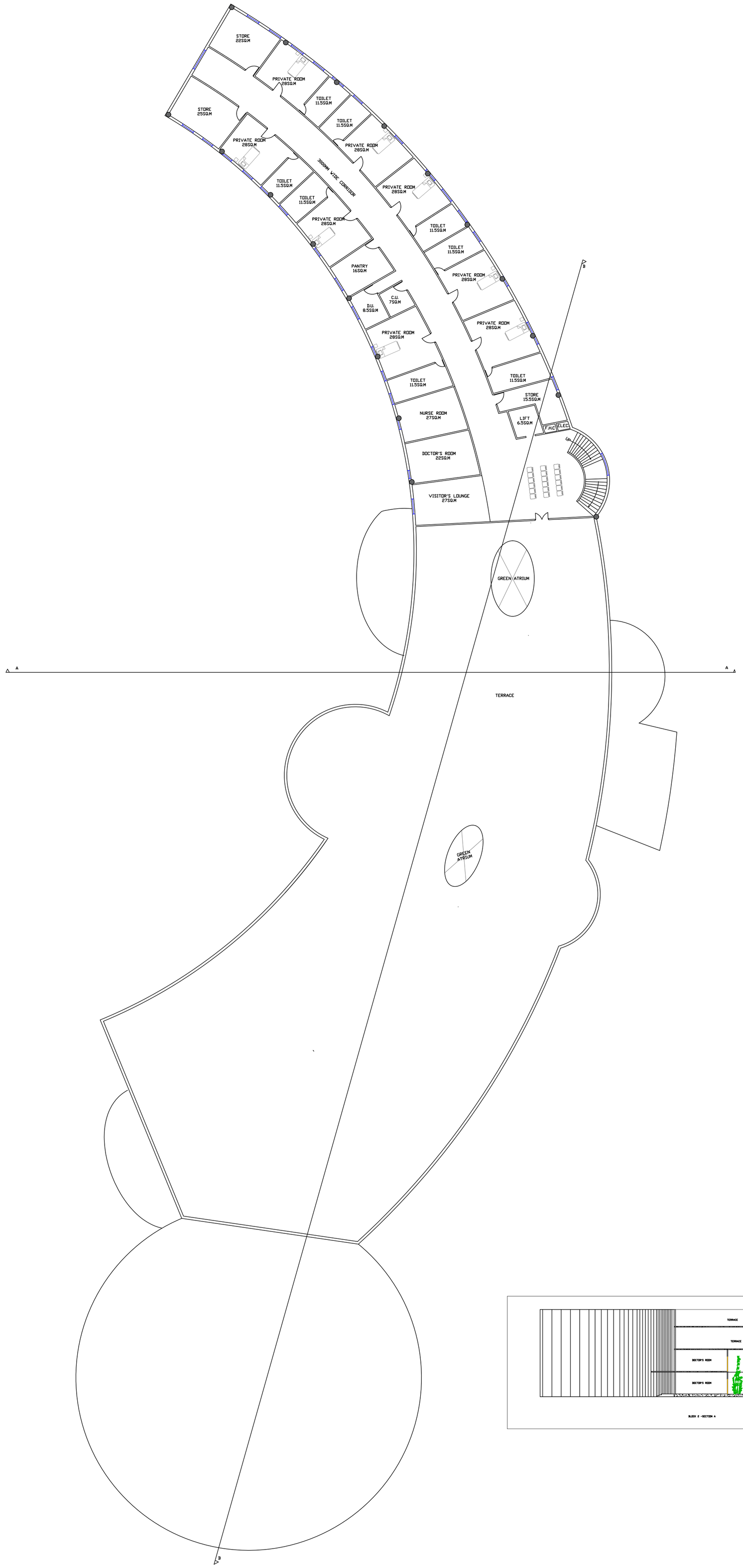
APOORVA GUPTA
B.ARCH 5TH YEAR(SEM X)
THESIS(2022-2023)
SCHOOL OF ARCHITECTURE B.B.D.U.

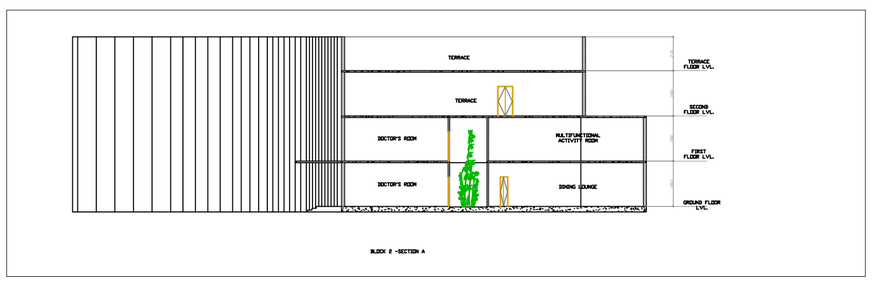


CENTRE FOR SCHIZOPHRENIC

FLOOR PLAN
BLOCK-2 FIRST FLOOR

APOORVA GUPTA
B.ARCH 5TH YEAR(SEM X)
THESIS(2022-2023)
SCHOOL OF ARCHITECTURE B.B.D.U.





CENTRE FOR SCHIZOPHRENIC

FLOOR PLAN
BLOCK-2 SECOND FLOOR

APOORVA GUPTA
B.ARCH 5TH YEAR(SEM X)
THESIS(2022-2023)
SCHOOL OF ARCHITECTURE B.B.D.U.

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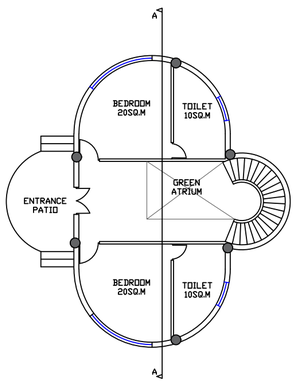
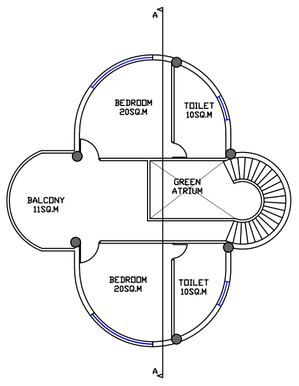
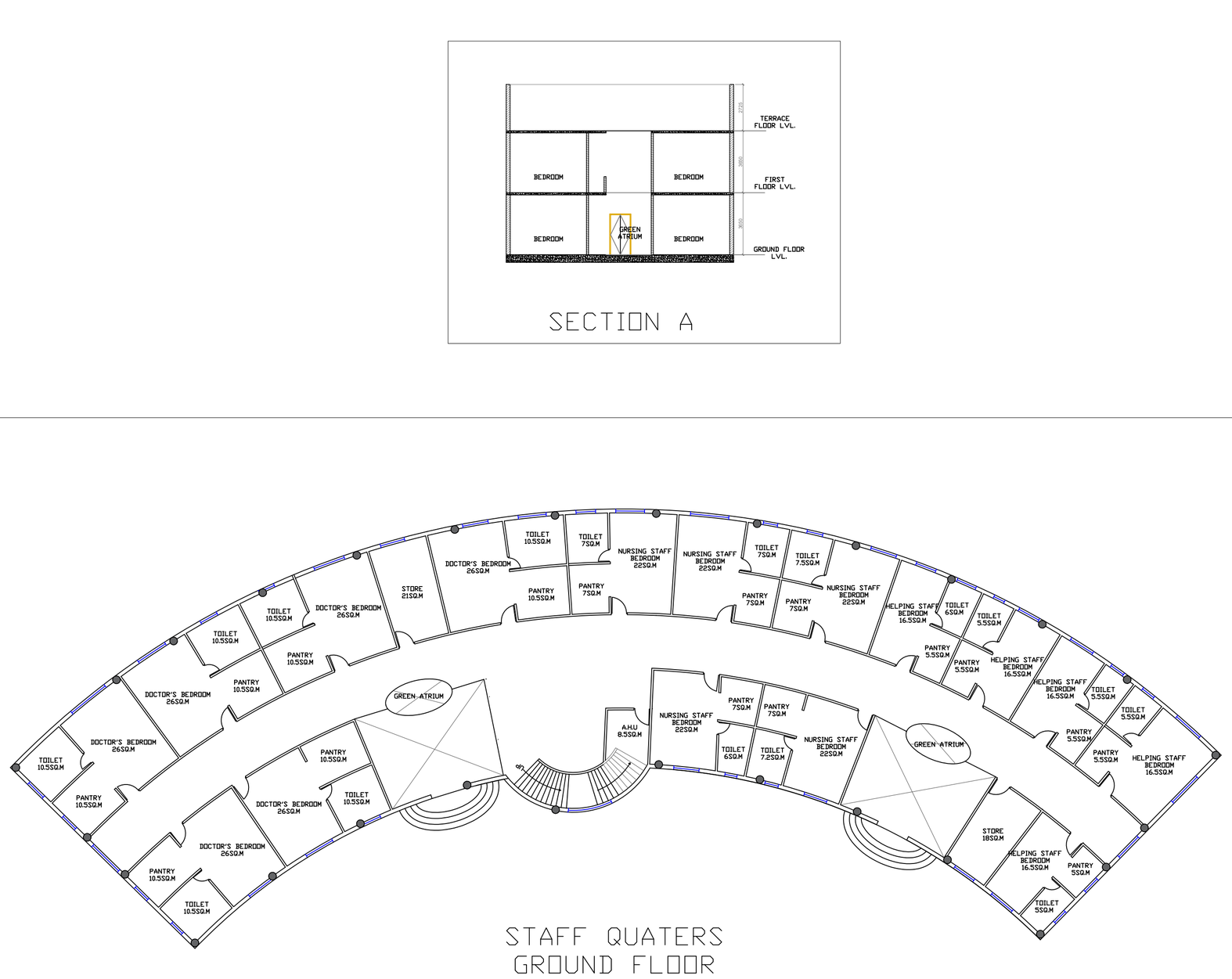


COTTAGE
GROUND FLOOR

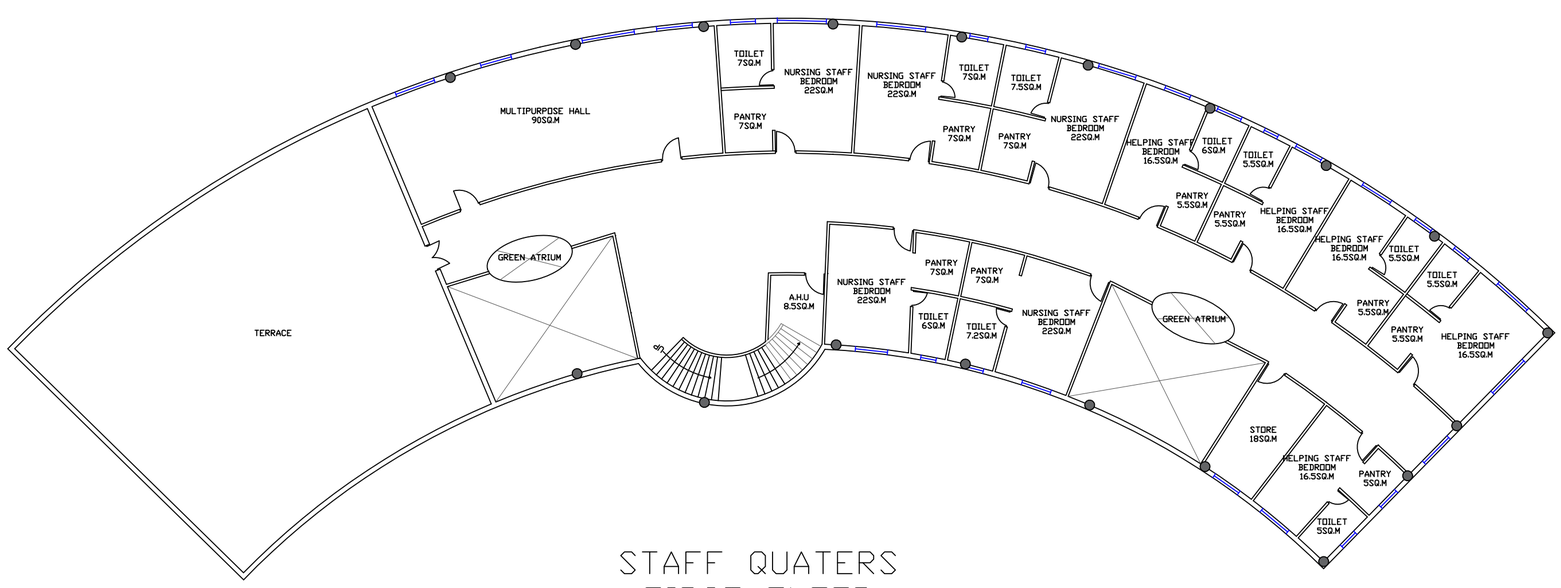


COTTAGE
FIRST FLOOR

SECTION A



STAFF QUATERS
GROUND FLOOR



STAFF QUATERS
FIRST FLOOR

CENTRE FOR SCHIZOPHRENIC

FLOOR PLAN
COTTAGE (13 NOS.)
STAFF ACCOMMODATION

APOORVA GUPTA
B.ARCH 5TH YEAR(SEM X)
THESIS(2022-2023)
SCHOOL OF ARCHITECTURE B.B.D.U.

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Staff Accommodation

Cottages

Meditation &
Yoga

Block -2
Administration,O.P.D,
Diagnostics &
Therapeutic services

Surface
Car Parking

Block -2
I.P.D &
Training

Cafetaria &
Exhibition Hall

Paramhans Yoganand Marg

CENTRE FOR SCHIZOPHRENIC

SITE PLAN
1:500

APOORVA GUPTA
B.ARCH 5TH YEAR(SEM X)
THESIS(2022-2023)
SCHOOL OF ARCHITECTURE B.B.D.U.

N

LEGEND

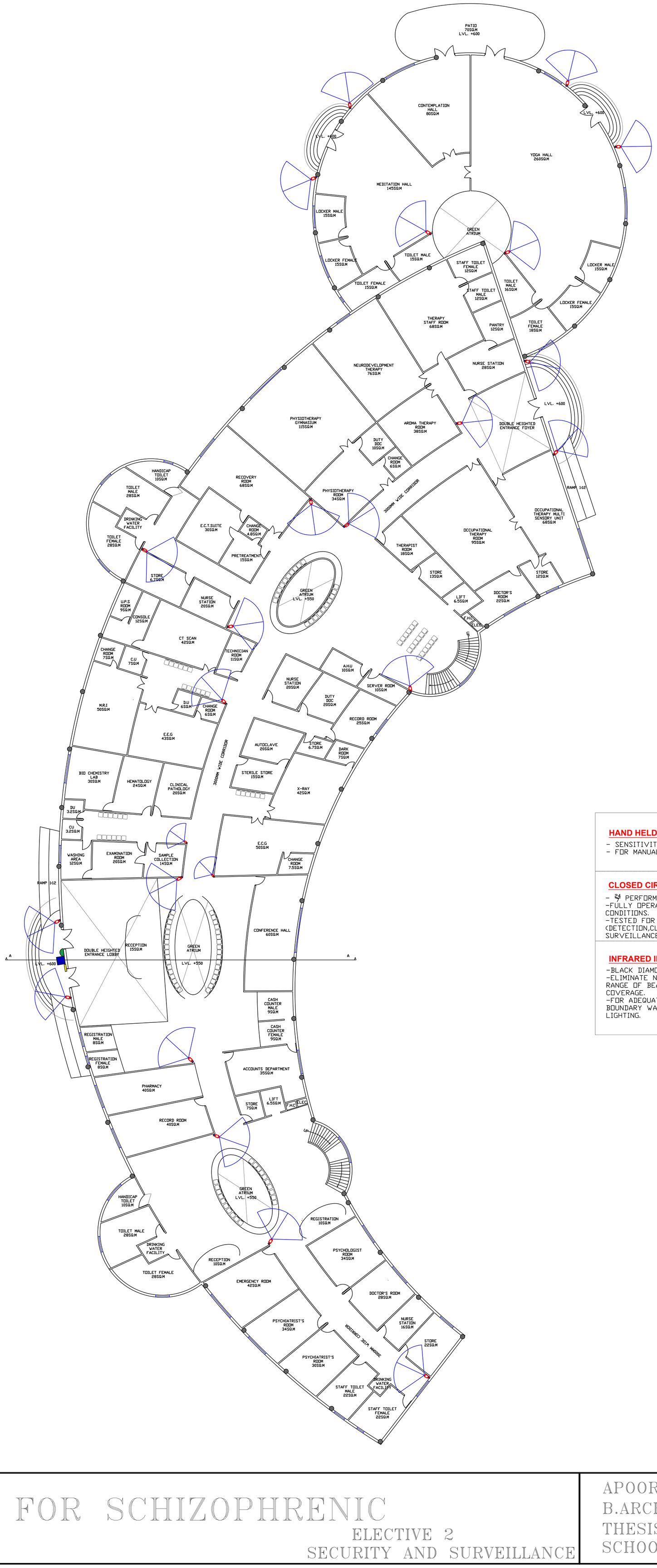
	ANTHOCEPHALLUS CADAMBA - AC KADAMB Average height - 12M -21M
	MORUS ALBA MULBERRY TREE - MA Average height - 13M -18M
	PLUMERIA ALBA CHAMPA - PA Average height - 4M
	CALLISTEMON LANCEO LATIS BOTTLE BRUSH - CL droppping habit,red/golden flower. Near gardens and boundary of water bodies
	ERYTHRINA INDICA CORAL TREE -- EI bright red beak shape flower,dense & fast growth
	POLYALEHIA PENDULA DROPPING ASHOKA --Pp EG,shinning leaves & shape columner
	PELTOPHORUM INERMI YELLOW GULMOHAR --PR EG dense foliage,tall heavy yellow flowering.
	PLUMERIA ALBARUBRA PAGODA TREE --PA sculptural form white/red flower
	LARGESTROEMEA sp PRIDE OF INDIA -- Ls red all time excepted
	ALLTERNITHERIA sp (small ted /patchy leaves) --AL red edge,6 to 8 inch
	CALLIANDRA sp (POWDER PUFF) --Cs feathery folliage pink red puff flower
	GOLDEN DURANTA (varigated ornamental hedge) --Gd dwarf small leaves
	HELIANTHUS ANNUS-HA SUNFLOWER Average height- 2m
	HEUCHERA-H CORAL BELLS Deep purple leaves
	BRIZA MAXIMA-BM QUAKING GRASS 18-24 Inch Tall
	NIGELLA DAMASCENA-ND LOVE IN A MIST Blue flowers with thread like leaves
	NANUS VARIEGATUS-NV SILVER GRASS 5'-6' tall
	HELICHRYSUM ITALICUM-HI CURRY PLANT
	LAVANDULA ANGUSTIFOLIA-LA LAVENDER
	STACHYS BYZANTINA-SB LAMB'S EARS Small feathery leaves

	PEDESTRIAN
	NATURAL TURF
	ROAD

CENTRE FOR SCHIZOPHRENIC

ELECTIVE 1
LANDSCAPE PLAN

APOORVA GUPTA
B.ARCH 5TH YEAR(SEM X)
THESIS(2022-2023)
SCHOOL OF ARCHITECTURE B.B.D.U.



HAND HELD SCANNER

- SENSITIVITY TEST: 1 GM:DIST. 25MM
- FOR MANUAL CHECKING OF VISITORS

CLOSED CIRCUIT CAMERA

- 24/7 PERFORMANCE
-FULLY OPERATIONAL IN HARSH WEATHER CONDITIONS.
-TESTED FOR DCRI (DETECTION,CLASSIFICATION,RECOGNITION,IDENTIFICA SURVEILLANCE LEVELS.

INFRARED ILLUMINATORS

-BLACK DIAMOND TECHNOLOGY
-ELIMINATE NIGHT TIME IMAGE HOTSPOT,FULL RANGE OF BEAM PATTERNS FOR COMPLETE AREA COVERAGE.
-FOR ADEQUATE STREET LIGHT SYSTEM INSIDE THE BOUNDARY WALL WITHOUT DISTURBING LANDSCAPE LIGHTING.

CENTRE FOR SCHIZOPHRENIC

ELECTIVE 2
SECURITY AND SURVEILLANCE

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CENTRE FOR SCHIZOPHRENIC

3D VIEWS

APOORVA GUPTA
B.ARCH 5TH YEAR(SEM X)
THESIS(2022-2023)
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