



dakshana

DAKSHANA VALLEY

KADUS, PUNE, MAHARASHTRA, INDIA

MASTER PLAN
(2020-35)

NAMING RIGHTS FOR BUILDINGS & INFRASTRUCTURE AT DAKSHANA VALLEY

NAMING RIGHTS FOR BUILDINGS AT DAKSHANA

Acquired Naming Rights

Naming Rights Granted at Dakshana Valley

Donor	Project Name	Purpose	Construction Cost	Donor's Contribution	Completion
Indira Foundation	Tara Ben J. Mehta Girls Hostel	Girls Hostel	\$873,585	\$436,792	2019
Indira Foundation	R. G Manudhne Excellence Hall	Lecture Hall	\$294,667	\$147,333	2021
Bablie & Brij Sood	Prem Nath and Kaushalaya Devi Sood Hall	Lecture Hall	\$309,160	\$154,580	2027
Indira Foundation	Indira Manudhane Innovation Hall	Lecture Hall	\$309,160	\$154,580	2027
Indira Foundation	Jasubhai Mehta Collaboration Hall	Lecture Hall	\$309,160	\$154,580	2030
Indira Foundation	Taraben J. Mehta Determination Hall	Lecture Hall	\$309,160	\$154,580	2030
Indira Foundation	R.G. Manudhane Perserverence Hall	Lecture Hall	\$309,160	\$154,580	2032
Indira Foundation	R.G. Manudhane Continuous Learning Hall	Lecture Hall	\$309,160	\$154,580	2032
Karin Sinniger	The Emma Meyer Hall	Lecture Hall	\$309,160	\$155,000	2032
United Overseas Bank	UOB My Digital Space	Computer Lab	\$136,000	\$45,000	2022
Sanjeev Shah	Induben R. Shah Hall	Computer Lab	\$136,000	\$40,000	2017
Bablie & Brij Sood	Walaitiram And Padmavati Sood Dining Hall	Dining Hall	\$3,854,933	\$1,927,467	2028-32*
Sriram Jaganmohan	Vijayalakshmi Jaganmohan Clinic	Clinic & Tuck Shop	\$355,871	\$177,936	2028
Anonymous on request	To be decided	Academic Street	\$77,000	\$38,500	2030
Jagadish Thakkar & Friends	Maharshi Vyas Marg	Roadway	\$54,000	\$27,000	2028
Shree Popatlal Shah Smarak Trust	To be decided	Lake front development	\$63,000	\$31,500	2021
Avinash and Ajit Gulanikar	To be decided	Faculty Housing	\$193,000	\$96,500	2028
Grand Total			\$8,202,176	\$4,050,508	

We at Dakshana Foundation follows a naming right donation model where a donor can contribute 50% of total cost of any building and we appreciate the donation in the form of a signage and few words about the person to whom donor wants to dedicate it to.

We are thankful to our generous donors for their contributions.

Honorific Names Granted

Building Name	Location	Purpose	Construction Cost	Completion
Charles T. Munger Hall	JNV Bengaluru Urban, Bengaluru	Lecture Halls	\$493,000	2,016
Sergio Marchionne Block	Dakshana Valley, Pune	Dakshana HQ	\$427,000	2,017
Grand Total			920,000	

*To be constructed in 2 phases.

NAMING RIGHTS FOR BUILDINGS AT DAKSHANA

Available Naming Rights for Proposed Buildings

Naming Rights Available at Dakshana Valley (Buildings)			
Building	Cost	Naming Rights	Completion Estimate
Arrival and Pavilion Block	\$1,349,000	\$674,500	2030
Open Air Amphitheatre	\$1,115,000	\$557,500	2030
Hostel No. 1	\$1,584,000	\$792,000	2028
Hostel No. 2	\$1,584,000	\$792,000	2028
Hostel No. 3	\$1,584,000	\$792,000	2028
Hostel No. 4	\$1,584,000	\$792,000	2031
Hostel No. 5	\$1,584,000	\$792,000	2031
Hostel No. 6	\$1,584,000	\$792,000	2033
Hostel No. 7	\$1,584,000	\$792,000	2033
Hostel No. 8	\$1,584,000	\$792,000	2035
Hostel No. 9	\$1,584,000	\$792,000	2035
Lecture Hall	\$341,000	\$170,500	2034
Library	\$610,000	\$305,000	2028
Staff Apartment Bldg. 1	\$607,000	\$303,500	2028
Staff Apartment Bldg. 2	\$607,000	\$303,500	2028
Staff Apartment Bldg. 3	\$607,000	\$303,500	2031
Staff Apartment Bldg. 4	\$607,000	\$303,500	2034
Faculty Apartment Bldg. 2	\$193,000	\$96,500	2028
Faculty Apartment Bldg. 3	\$193,000	\$96,500	2028
Faculty Apartment Bldg. 4	\$193,000	\$96,500	2028
Faculty Apartment Bldg. 5	\$193,000	\$96,500	2028
Faculty Apartment Bldg. 6	\$385,000	\$192,500	2030
Grand Total	\$21,256,000	\$10,628,000	

Available Naming Rights for Proposed Infrastructure

Naming Rights Available at Dakshana Valley (Infrastructure)			
Projects	Cost	Naming Rights	Completion Estimate
Indoor sports Arena	\$176,000	\$88,000	2028
Solar Farm	\$550,000	\$275,000	2029
Lake 2	\$396,000	\$198,000	2029
Lake 4	\$605,000	\$302,500	2028
Main Road	\$387,000	\$193,500	2028
Sec. Road	\$198,000	\$99,000	2028
Loop Road 2	\$79,000	\$39,500	2028
Grand Total	\$2,391,000	\$1,195,500	

Dakshana Valley Capacity Expansion Plan 2022-2035

Expansion Phase	Year Of Intake	Capacity
Phase 1	2022	588
Phase 2	2028	1020
Phase 3	2030	1572
Phase 4	2032	2124
Phase 5	2035	2676

We seek funds to expand Dakshana Valley to accommodate 2700 Scholars

LECTURE HALL

DONOR'S NAME : INDIRA FOUNDATION

R.G. MANUDHANE EXCELLENCE HALL



LECTURE HALL

DONOR'S NAME : INDIRA FOUNDATION

R.G. MANUDHANE EXCELLENCE HALL



LECTURE HALL

R.G. MANUDHANE EXCELLENCE HALL



LECTURE HALL

DONOR'S NAME : SOOD FAMILY

PREM NATH AND KAUSHALAYA DEVI SOOD HALL



LECTURE HALL

DONOR'S NAME : INDIRA FOUNDATION

INDIRA MANUDHANE INNOVATION HALL



LECTURE HALL

DONOR'S NAME : INDIRA FOUNDATION

JASUBHAI MEHTA COLLABORATION HALL



LECTURE HALL

DONOR'S NAME : INDIRA FOUNDATION

TARABEN J. MEHTA DETERMINATION HALL



LECTURE HALL

DONOR'S NAME : INDIRA FOUNDATION

R.G. MANUDHANE PERSEVERENCE HALL



LECTURE HALL

DONOR'S NAME : INDIRA FOUNDATION

R.G. MANUDHANE CONTINUOUS LEARNING HALL





HOSTEL

DONOR'S NAME : INDIRA FOUNDATION

TARABEN J. MEHTA GIRLS HOSTEL



COMPUTER LAB

DONOR'S NAME : Mr. Sanjiv Shah

The Induben Ramji Shah Hall



*Currently used as a lecture Hall which is planned to be refurbished into a computer Lab

COMPUTER LAB

DONOR'S NAME : UNITED OVERSEAS BANK

UOB MY DIGITAL SPACE



HEAD QUARTERS BLOCK

SERGIO MARCHIONNE BLOCK



Honorific naming right

KITCHEN AND DINING BLOCK

DONOR'S NAME : SOOD FAMILY

WALAITIRAM AND PADMAVATI SOOD DINING HALL



KITCHEN AND DINING BLOCK

DONOR'S NAME : SOOD FAMILY

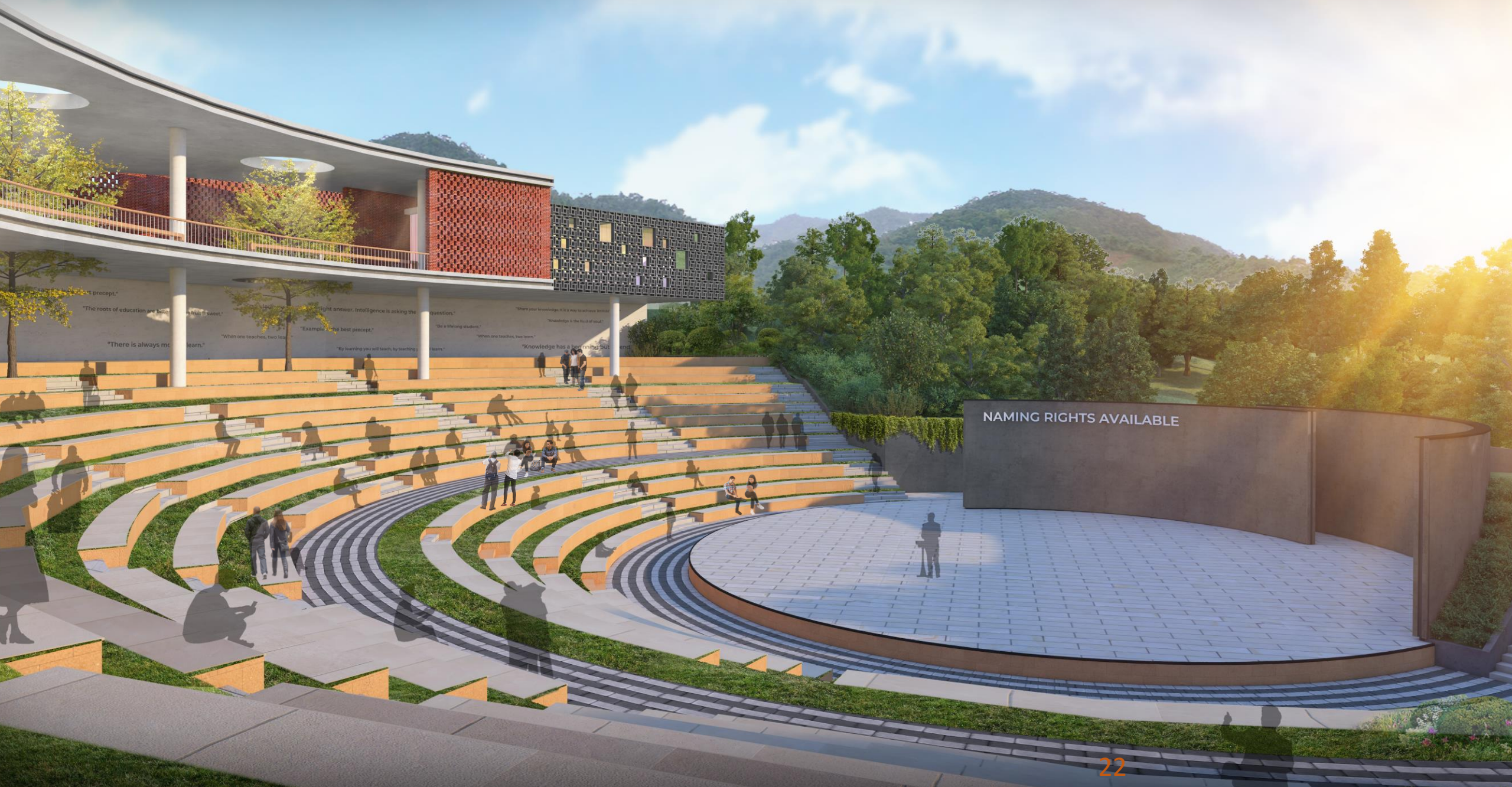
WALAITI RAM AND PADMAVATI SOOD DINING HALL



LEGACY PAVILION - NAMING RIGHTS AVAILABLE

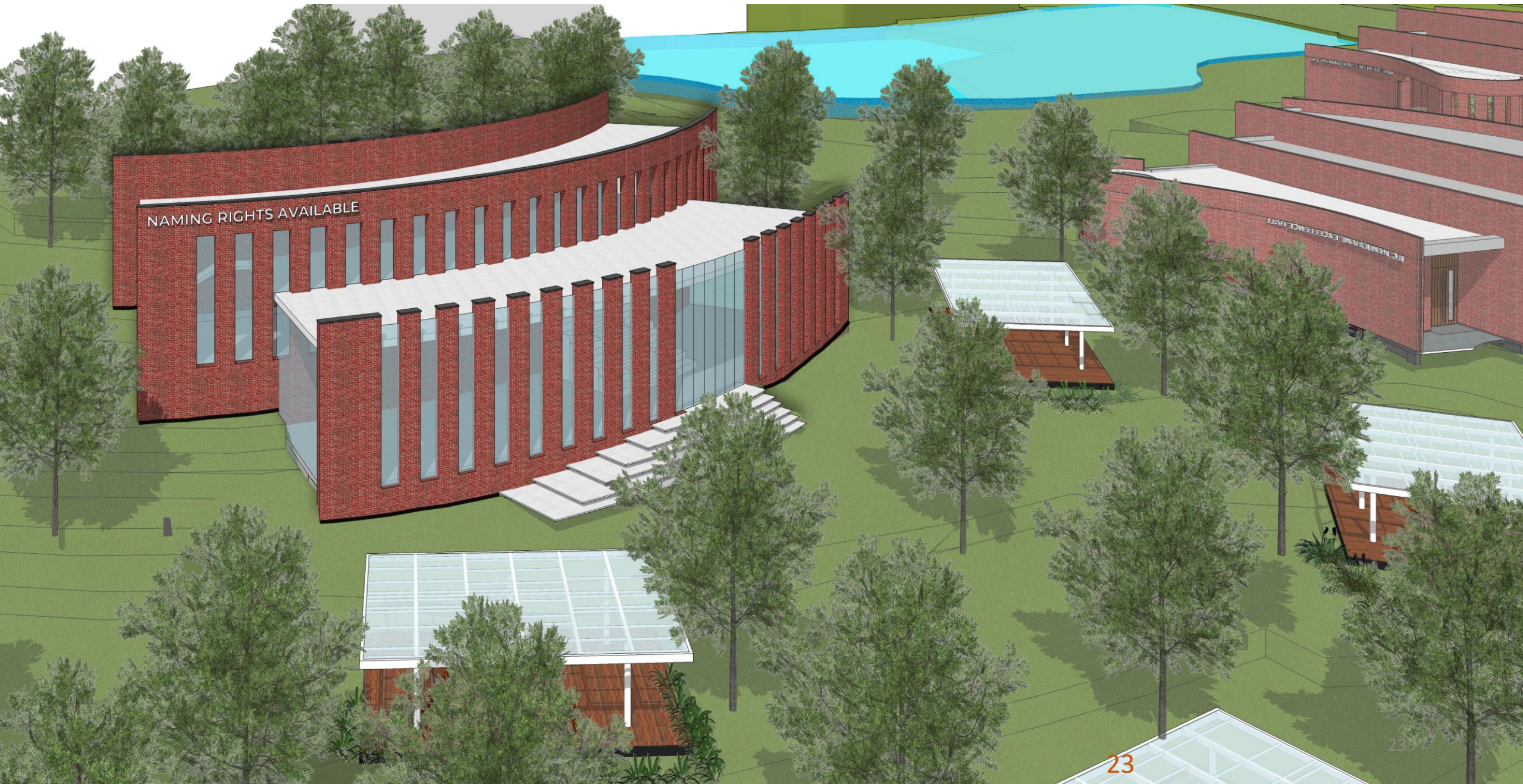


AMPHITHEATRE – NAMING RIGHTS AVAILABLE



NAMING RIGHTS AVAILABLE

LIBRARY BLOCK - NAMING RIGHTS AVAILABLE



HOSTEL BLOCKS- NAMING RIGHTS AVAILABLE (9 BLOCKS)

- *Positioning the Donor's name on top of Roof.*
- *Visible from various high points in valley.*



Reference Image

HOSTEL BLOCKS- NAMING RIGHTS AVAILABLE (9 BLOCKS)

- *Highlighting the Donor's Name over a Blank Canvas.*
- *Visually Distinct as placed over a blank wall.*
- *Easy to Identification as placed close to human eye level.*



HOSTEL BLOCKS- NAMING RIGHTS AVAILABLE (9 BLOCKS)

- *Providing segregated space for each hostels' Donor's name.*
- *Integrated in landscape.*
- *Easy identification as placed at an eye level of passerby.*



HOSTEL VIEW



LAKE DEVELOPMENT – NAMING RIGHTS AVAILABLE

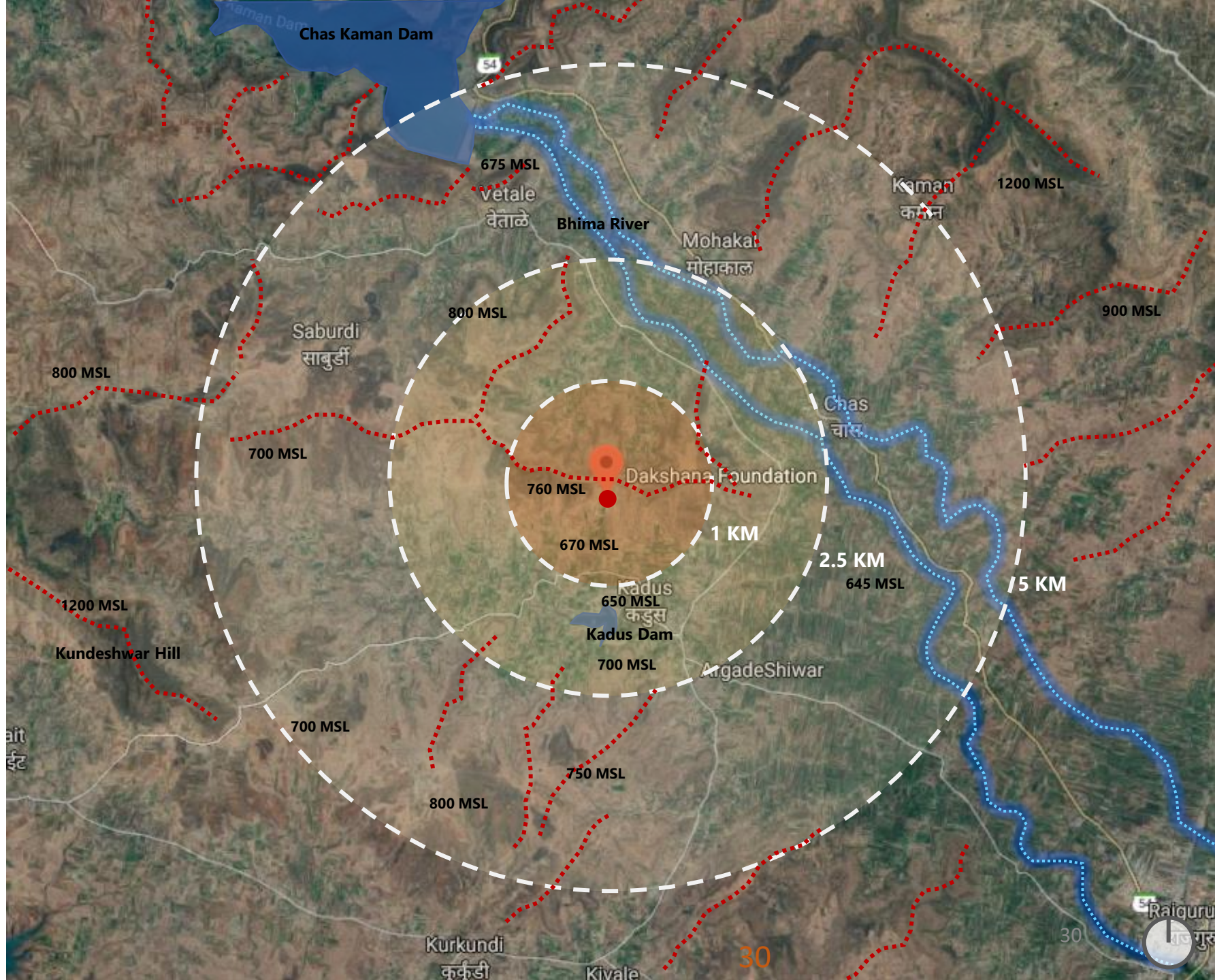
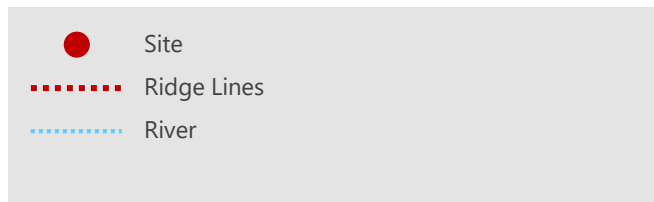
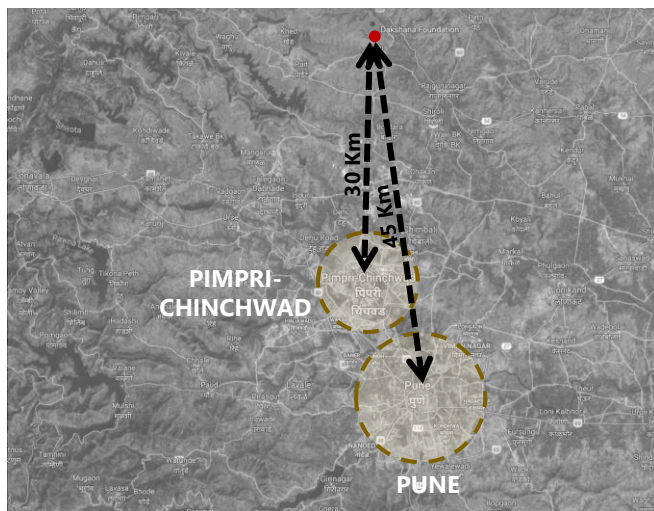


COMPREHENSIVE PLAN FOR DAKSHANA VALLEY

SITE CONTEXT | LOCATION

Inference:

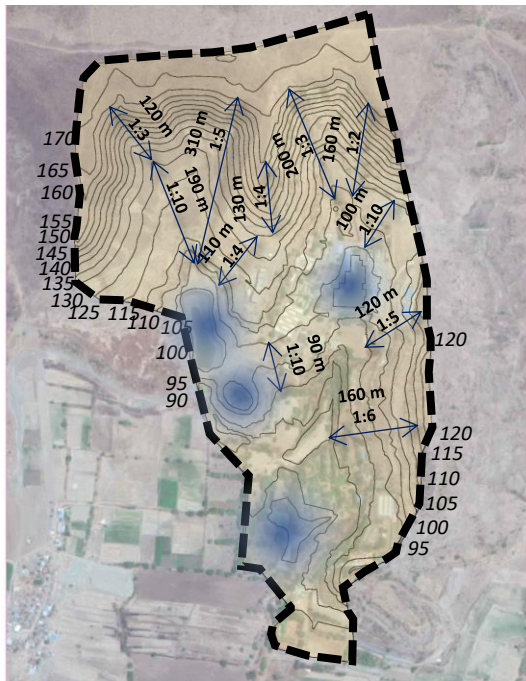
- The Site is located in the outskirts of Major Cities like **Pune and Pimpri-Chinchwad**.
- The Site is situated in a valley in **Khed** surrounded by hills in all sides.
- It is in close proximity to water bodies such as the **Kadus Dam and Bhima River**
- The Site is situated in one of the valley in **Sayagaon** which has a **slope more than 100m** from the ridge of the surrounding hills.
- It has unobstructed views towards the ridges on the northern, eastern and western side, while the prominent ones being the southern side towards the **Kadus Dam**.



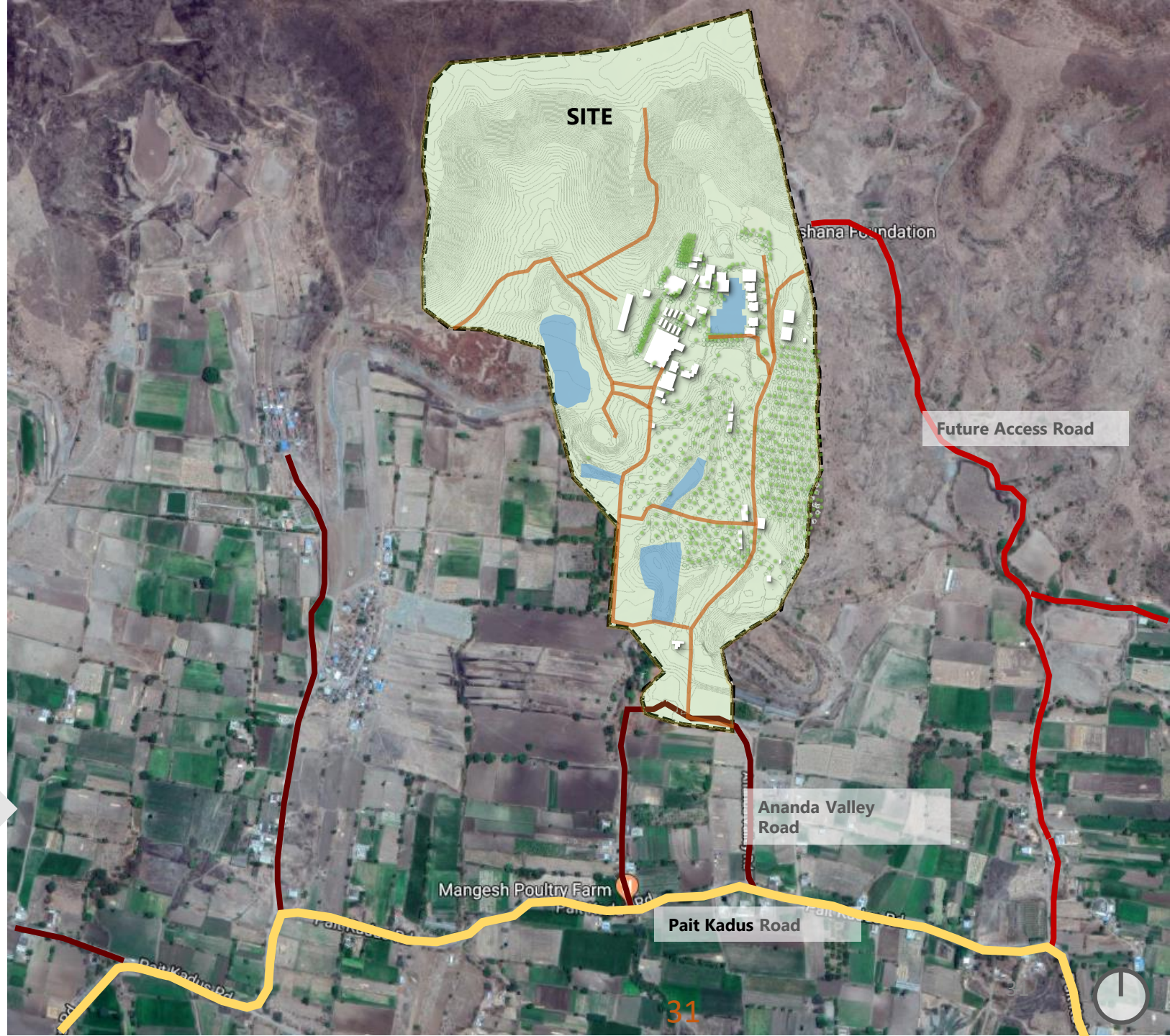
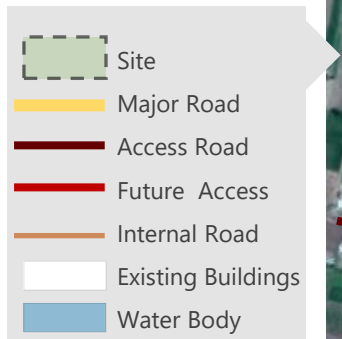
SITE CONTEXT | SITE SURROUNDING

Inference:

- **Site Area :** 109 Acres (4,41,107 sqm.)
- **Access :** The Site is accessible from the south by an internal road (6m) (Ananda valley Road) connected to **Pait-Kadus Main Road**. The site consists of existing internal 'Kuchha' roads which connects all the buildings on site.
- **Terrain :** Site sloping from North to South
- **Site Surroundings :** The Site is surrounded by hills on the northern and eastern side and mostly by agricultural lands on all other sides.



Slope Analysis with low points on site



SITE CONTEXT | SITE IMAGES



VIEW 05



VIEW 06



VIEW 07



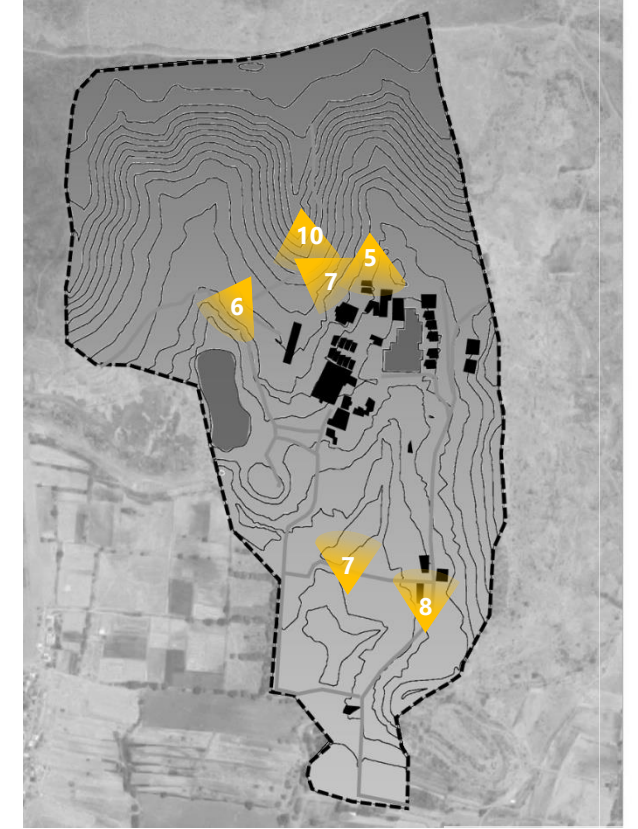
VIEW 08



VIEW 09



VIEW 10

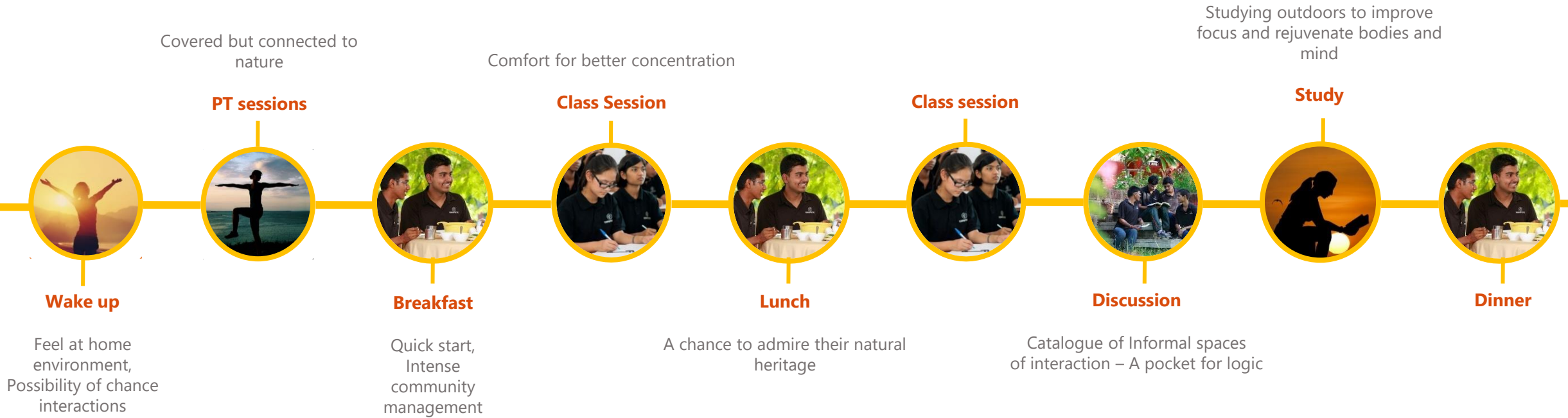


KEY PLAN

Inference

- View 5: Maintaining the essence of campus planning by providing courts and informal interaction spaces
- View 6 & 7: Preserving existing water bodies to help creating comfortable environments
- View 8: Trying to maintain the long winding site access that breaks away from regular cityscapes

SITE CONTEXT | DAILY CYCLE – 24HRS X 7DAYS



DESIGN PHILOSOPHY

The design **responds to Client Brief, Climate & Context** by pushing the boundaries of conventional benchmarks for sustainability & cost...placing the **user at the center** of the design process.

SUSTAINABILITY



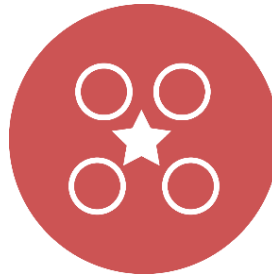
- Views : Unobstructed and Maximized Views towards valley
- Microclimate : 5-7°C Reduction in Perceptible Temperature
- Energy Efficiency : 72% reduction in EPI ~25 kWh/sq.m./yr. targeted through passive design strategies
- Ecology : Preservation of 109 acres Biodiversity, Natural Water Channels/Reservoirs and Terrain
- Net Zero Campus : Net Zero Energy | Net zero Water | Net Zero Waste

OPTIMISATION



- Topography : Minimizing Cut and Fill
- Infrastructure : Service Tunnels integrated with Road/Pathway planning to respect the existing site terrain

UNIQUENESS



- Legacy : Inscription of every Scholar's imprint onto the wall design of the Legacy pavilion
- Studying (Outdoors) : Integration of Outdoor studying spaces in the Landscape
- Studying (Indoor) : Year-round naturally lit and ventilated Machans for studying / informal teaching
- Materials : Local Materials, Art and Craft integrated in Design

LIVABILITY



- Layout Design : >90% Daylight (Zero Glare) | >90% Cross Ventilation | 50% Reduction in Heat Gain | Acoustic comfort
- Fitness : 82 X 45 M Football Field & Cricket Ground | Indoor Sports – 1 Basketball and 4 badminton courts | 300 m Running Track | 3 x 400 m and 800 m jogging trails | 2 basketball & 6 badminton courts | Yoga Decks
- Recreation & Events : 3000 capacity Amphitheatre | 1392 capacity Dining / Multipurpose halls

SUSTAINABILITY



- **Views** : Unobstructed and Maximized Views towards valley
- **Microclimate** : 5-7°C Reduction in Perceptible Temperature
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- **Net Zero Campus** : Net Zero Energy | Net zero Water | Net Zero Waste

SUSTAINABILITY | VIEWS

Unobstructed and Maximized Views towards valley



1. View to valley: Strategically placing blocks on terrain areas results in greater visibility

2. Panoramic View: Designing the campus to capture the clear panoramic views of the valley



View A : Preserving the existing vistas and avenues



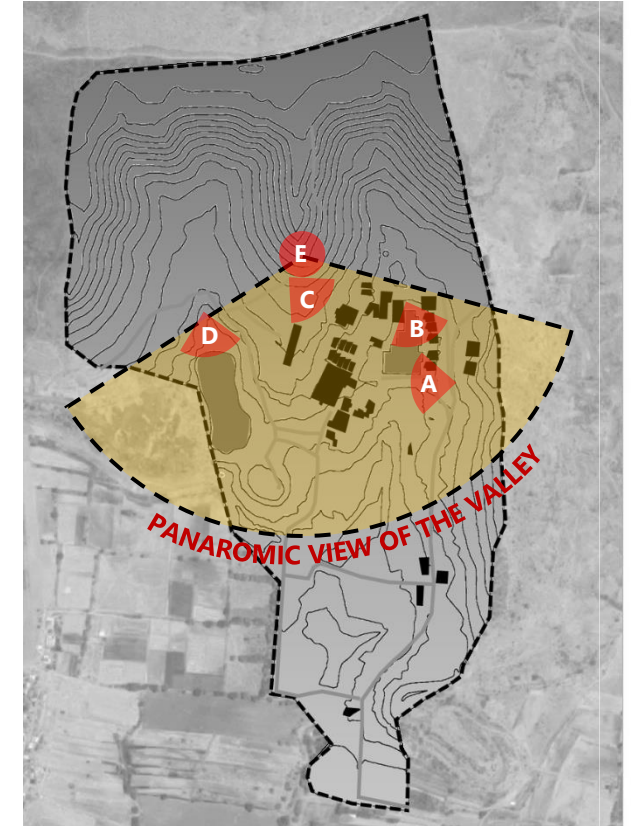
View B : Taking advantage of the existing lakes for enhanced internal views



View C : Strategic placement of the blocks considering the existing development for visibility



View D : Taking advantage of the existing lakes for enhanced internal views



Key Plan



View E : Designing the campus to capture the clear panoramic views of valley

SUSTAINABILITY | MICROCLIMATE

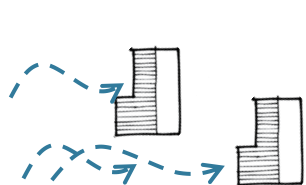
5-7°C Reduction in Perceptible Temperature

Pune has a predominantly **Warm-Humid climate**.
(varying from hot-dry to warm-humid periods during the year)

There is also a **distinct warm-humid season during the months of May-September**.

Tend to remain below 30°C for most of the year – 8 months.

Thermal comfort can be achieved by passive strategies for 85% of the year

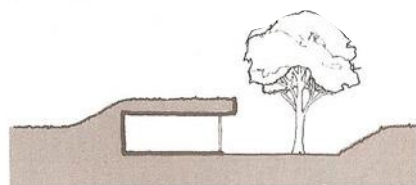


- Wind Movement:**

Aligning the buildings along E-W with no obstruction to increase wind movement and maintain the comfort level outdoors, also to facilitate cross ventilation indoors

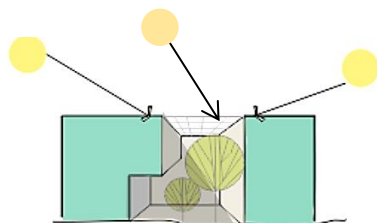


- Vegetation:** Preserving the natural vegetation to provide comfort outdoors and indoors during hot summer period, planning the vegetation to facilitate wind movement and provide shading.

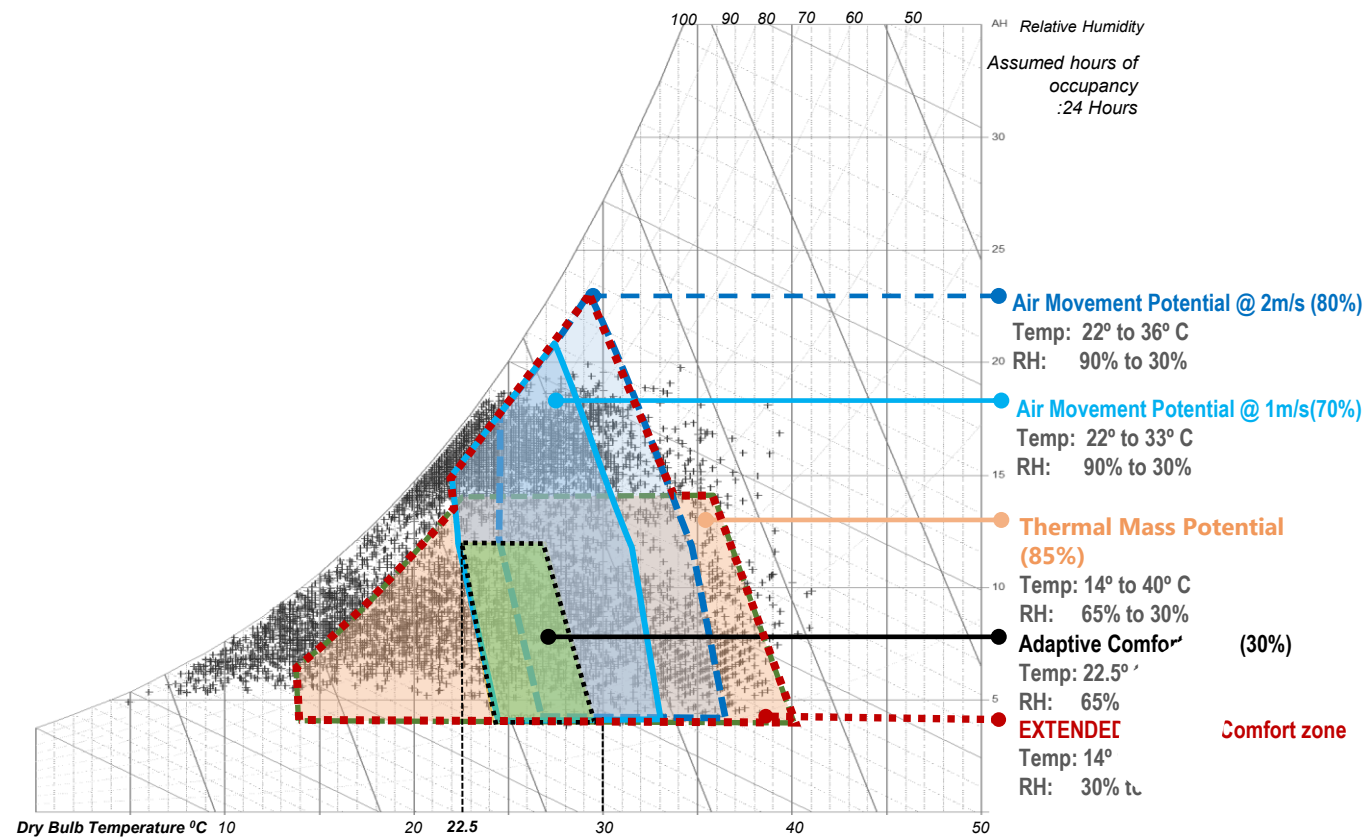


- Thermal Banking:**

Increasing the thermal mass potential of the envelope by simple earth berm techniques to keep the indoor temperature low



- Solar Shading:** Planning & designing the buildings with respect to sun angles which can optimise the amount of solar heat gain and visible light that is admitted into a building



Inference :

- Non-Air Conditioned Spaces:** Thermal comfort may be achieved for up to **85%** of the annual occupancy period by thermal mass strategy
- Open Space orientation :** High Humidity in most part of the year. Streets/ openings should be oriented to allow prevailing winds during the warm & humid months
- Air-Conditioned Areas:** Heat loads may be significantly reduced by employing passive strategies
- Thermal Mass and Solar Shading:** The structure could be kept cool during the hotter summer months by utilizing Thermal mass and Solar Shading techniques

72% Lesser energy than certified green building benchmarks through passive design and microclimate creation

BASE PERCENTAGE
OF 100 %

BEE

Baseline EPI

BUREAU OF ENERGY
EFFICIENCY

EPI: Energy Performance
Index
on primary energy
consumption (unit:
kWh/sq.m/yr)

PERCENTAGE OF
REDUCTION

35 %



39 %



41 %



55 %



72 %



dakshana

BASELINE
EPI

90
kWh/sq.m/yr

LALIT SURI INSTITUTE,
FARIDABAD

58
kWh/sq.m/yr

VIDYASHILP ACADEMY,
BANGALORE

55
kWh/sq.m/yr

BRITISH SCHOOL
NEW DELHI

53
kWh/sq.m/yr

IILM
GREATER NOIDA

40
kWh/sq.m/yr

DAKSHANA VALLEY
SCHOOL

25
kWh/sq.m/yr

SUSTAINABILITY | EXISTING MASTERPLAN

Minimum Intervention

Existing built-up area

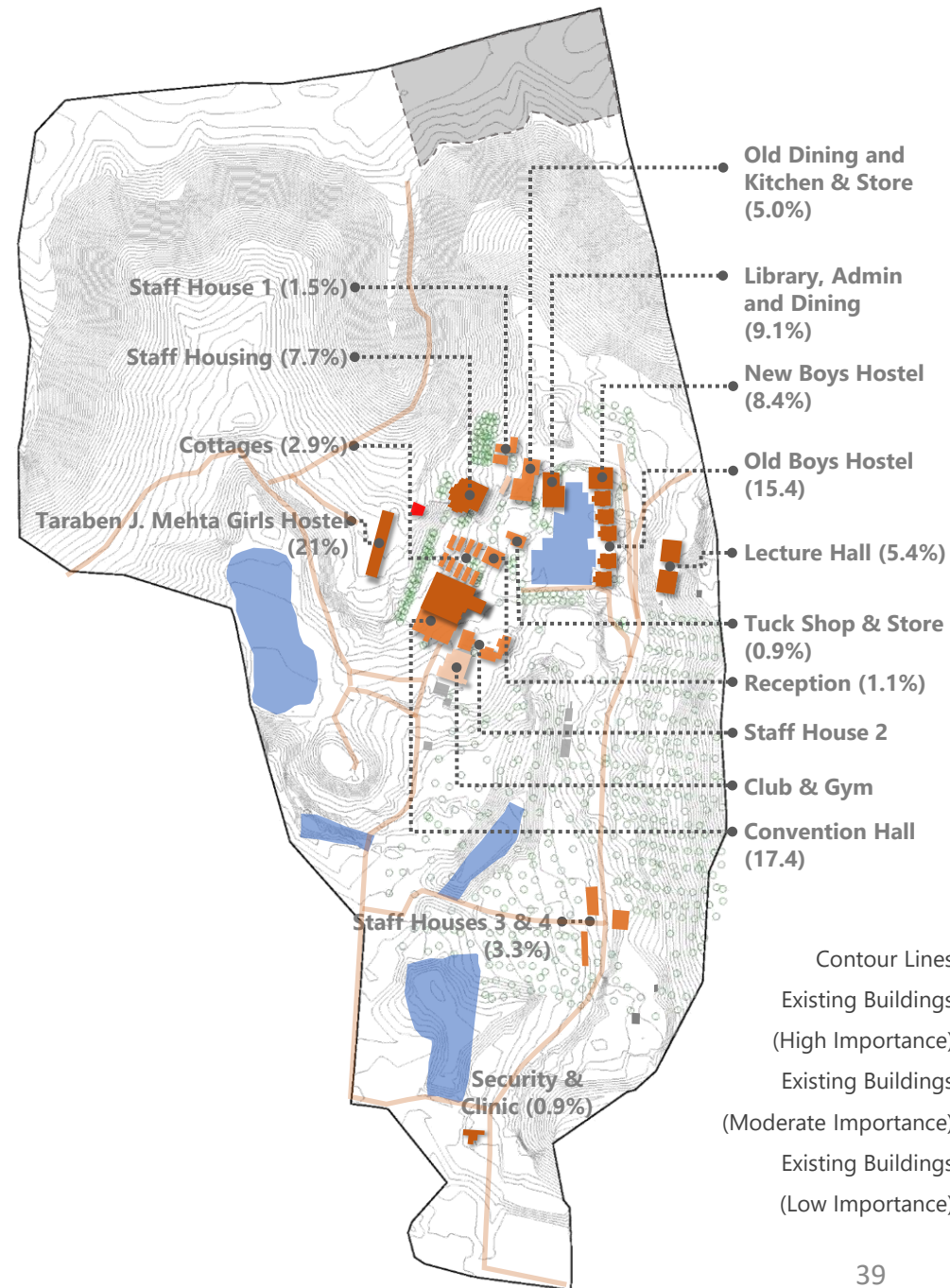
16,079 sqm. (1,73,073 sqft.)

Built-up to be demolished

Multipurpose Hall (half)	1,090 sqm.	8.3%
Club & Gym	0 sqm.	0%
Staff House 2	0 sqm.	0%
Reception	148 sqm.	1.1%
Tuck Shop & Store	110 sqm.	0.9%
Old Dining Hall	340 sqm.	2.5%
Kitchen & Store	293 sqm.	2.3%
Cottages	352 sqm.	2.6%
Staff House 1	190 sqm.	1.5%
Staff House 3 & 4	406 sqm.	3.1%
Total	2,929 sqm.	22.3%

Note : Buildings already worn-out (Club & Gym etc.) are not included in area calculations

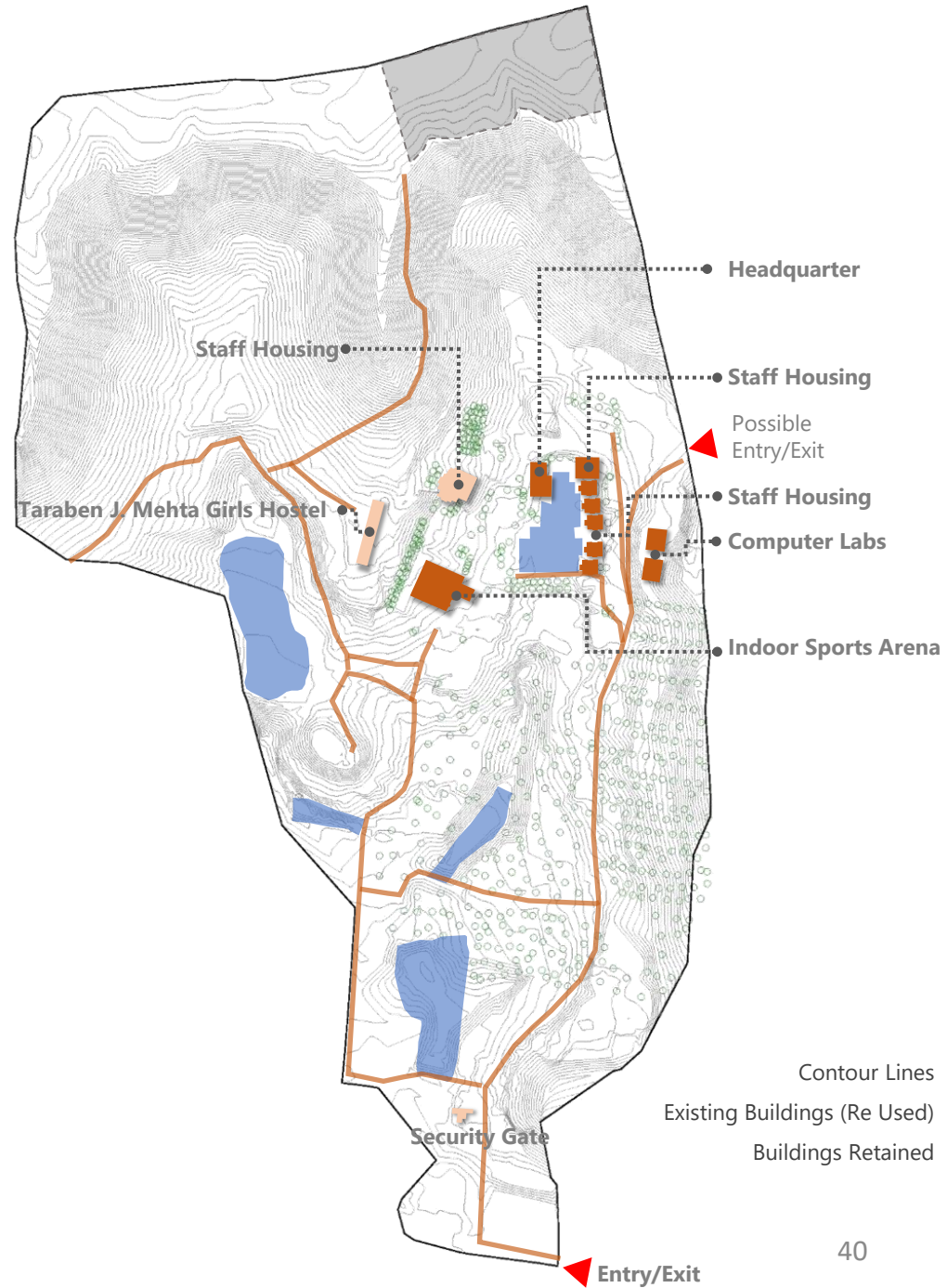
Planning to retain 77.7 % of the existing built-up



Refurbished Buildings

Built-up to be refurbished/retained

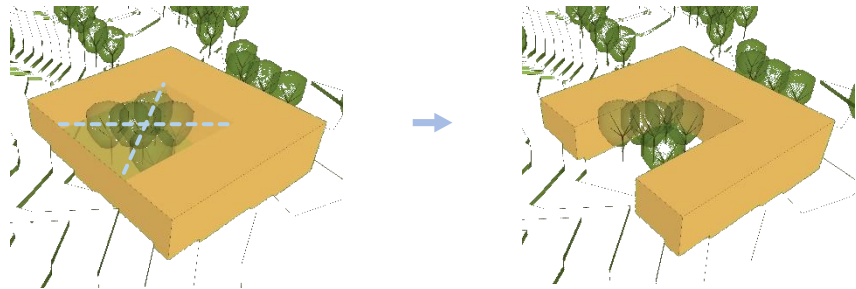
OLD USE	NEW USE	AREA	
Lecture Hall	Computer Labs	676 sqm.	5.1%
Old Boys Hostel	Faculty Housing	1924 sqm.	14.6%
New Boys Hostel	Faculty Housing	1055 sqm.	7.8%
Admin, Library and Dining	Headquarter	1135 sqm.	8.6%
Staff Housing	Staff Housing	959 sqm.	7.4%
Security Gate	Security Gate	114 sqm.	0.9%
Multipurpose Hall (half)	Indoor Sports Arena	1,090 sqm.	8.3%
Taraben J. Mehta Girls Hostel	Taraben J. Mehta Girls Hostel	3,345 sqm.	25.3%
Total		10,298 sqm.	77.7%



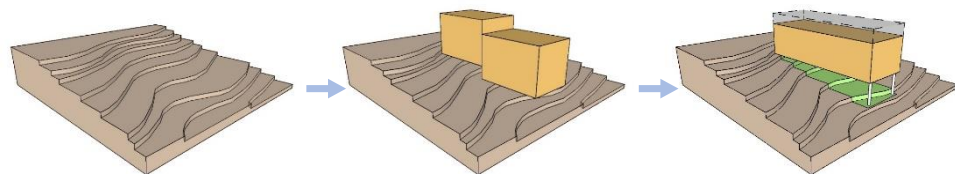


Preservation of 109 acres Biodiversity & Natural Water Channels/Reservoirs

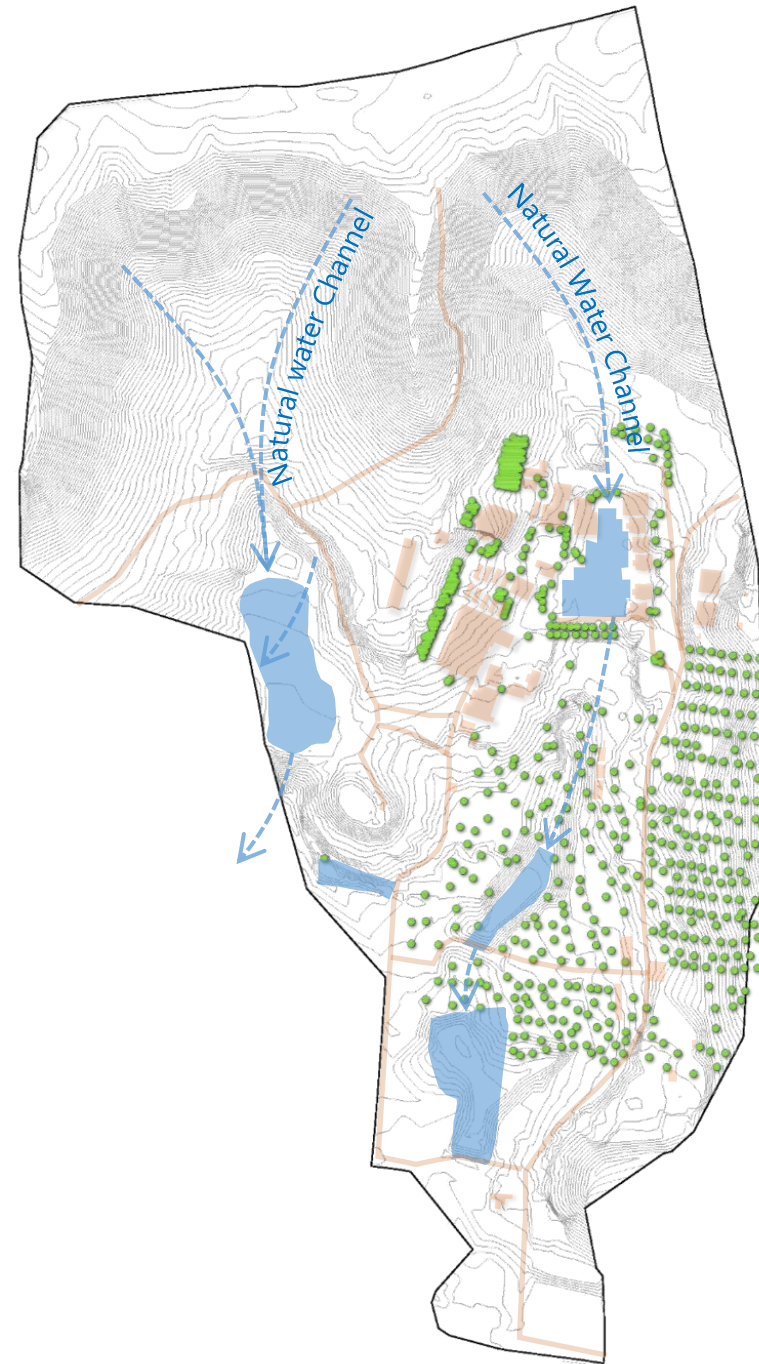
1. Conserving maximum of **Vegetation** on site
2. Minimizing on cutting down of trees
3. Built mass to be designed to benefit from **existing green areas**
4. Conserving the existing man-made and **seasonal water bodies** on site
5. Respecting the **natural slope of rainwater flow**



Flora: Preserving the existing vegetation on site and designing around the vegetation to reduce tree cutting



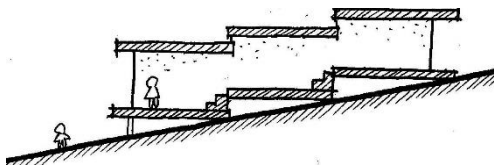
Terrain: Utilizing the terrain to naturally form activity areas below the building | Built volume optimization



- Contour Lines —
- Trees ○
- Water Flow - - -
- Water Bodies ■

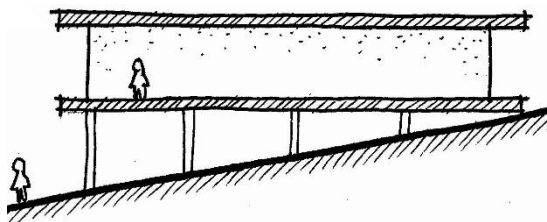


Preservation of Terrain



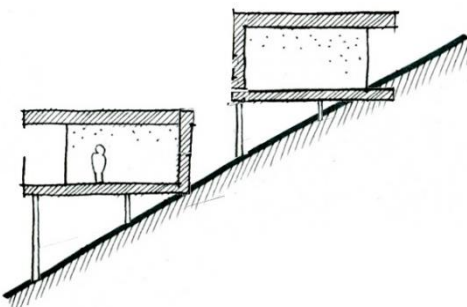
Gentle Slope (1:6 - 1:10)

Large building footprint like **classrooms** could be arranged on such gentle gradient to minimize excess cut and fill.



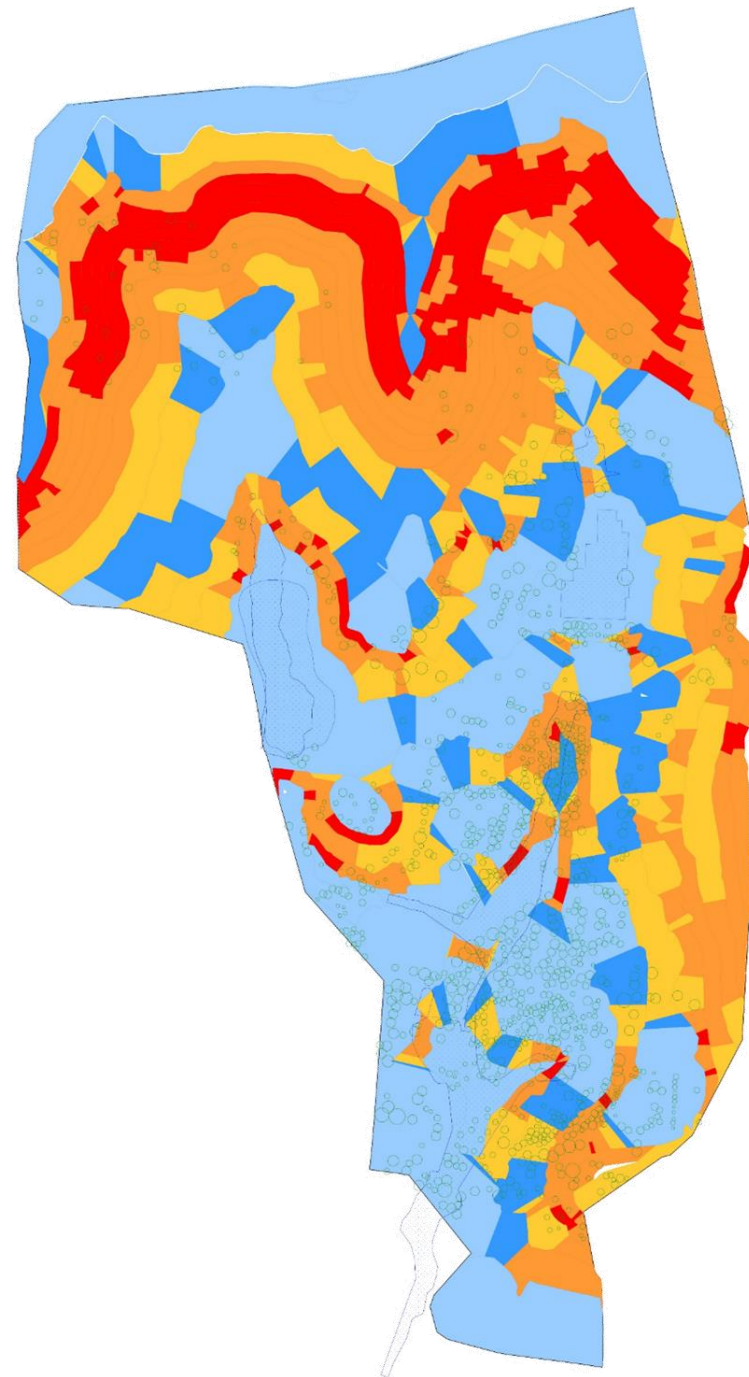
Moderate Slope (1:4 - 1:6)

Building spaces such as **dining halls** and **large gathering** buildings could be placed to get covered under space for other activities.



Steep slope (1:2 - 1:6)

Smaller modules such as **hostel blocks** could be arranged on steeper slopes to avoid disrupting natural terrain and for better visibility.



Slope Analysis

<math>< 1:2</math>	Red
1:2 - 1:4	Orange
1:4 - 1:6	Yellow
1:6 - 1:8	Light Blue
1:8 - 1:10	Dark Blue



SUSTAINABILITY | BUILDABLE ZONE

Preservation of 109 acres Biodiversity, Natural Water Channels/Reservoirs and Terrain

1. Retaining the existing buildings that are structurally stable to minimize demolition on site

2. Conserving Trees and Vegetation on Site

3. Conserving the Water Bodies and respecting the natural rainwater drainage

Saving existing man-made and seasonal water bodies on site and Integrating buildings with natural slope of rainwater flow

4. Being conscious of the Site Terrain

Minimize cut and fill

Site Area

109 Acres (4,41,107 sqm.)

Permissible Built-up area

FSI @ 1.0= 109 Acres (4,41,107 sqm.)

Buildable zone area

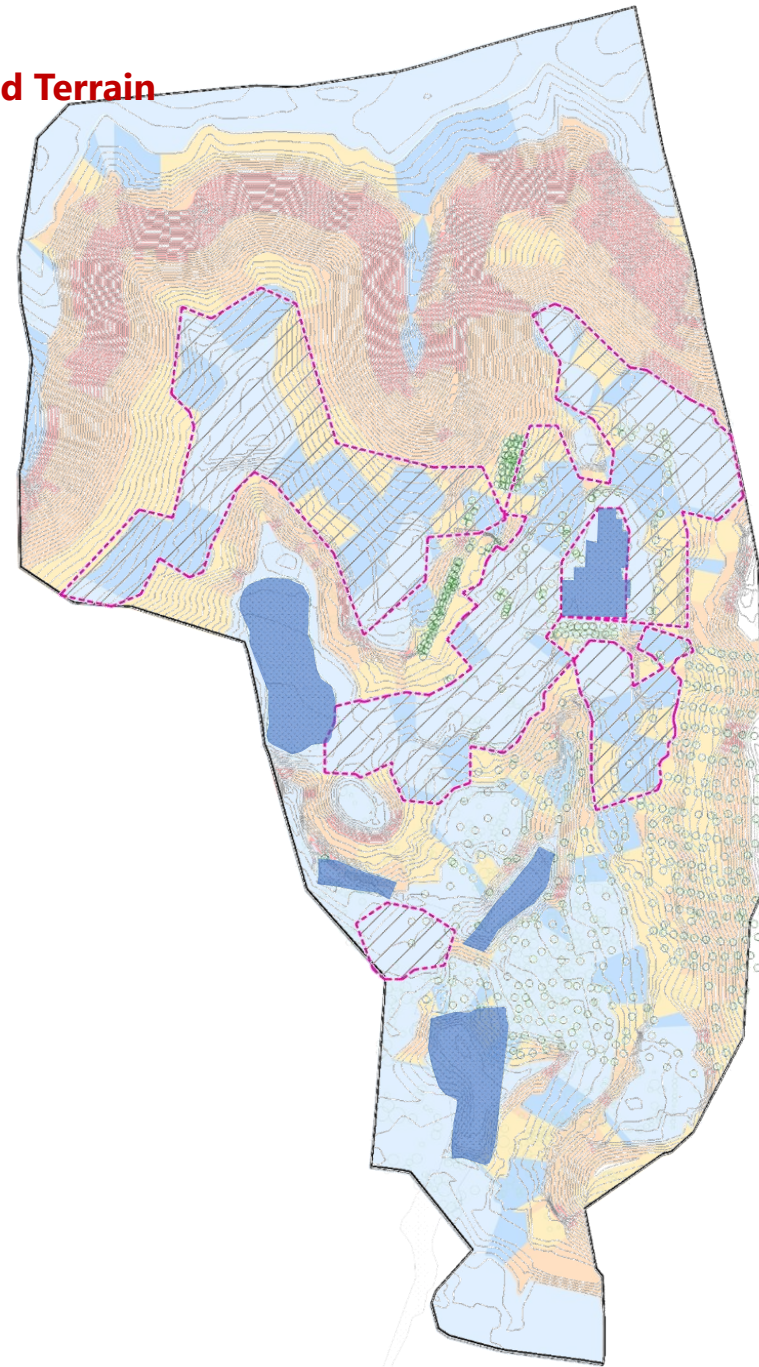
As per zoning = 24 Acres (97,350 sqm.)

Total Occupancy Load (as per NBC)

No. of People = 2933

Occupancy Load = 15 sqm. per person

Total Occupancy Load = 11 Acres. (44,000 sqm. approx.)



Buildable Zone - - - - -



Arrival Pavilion

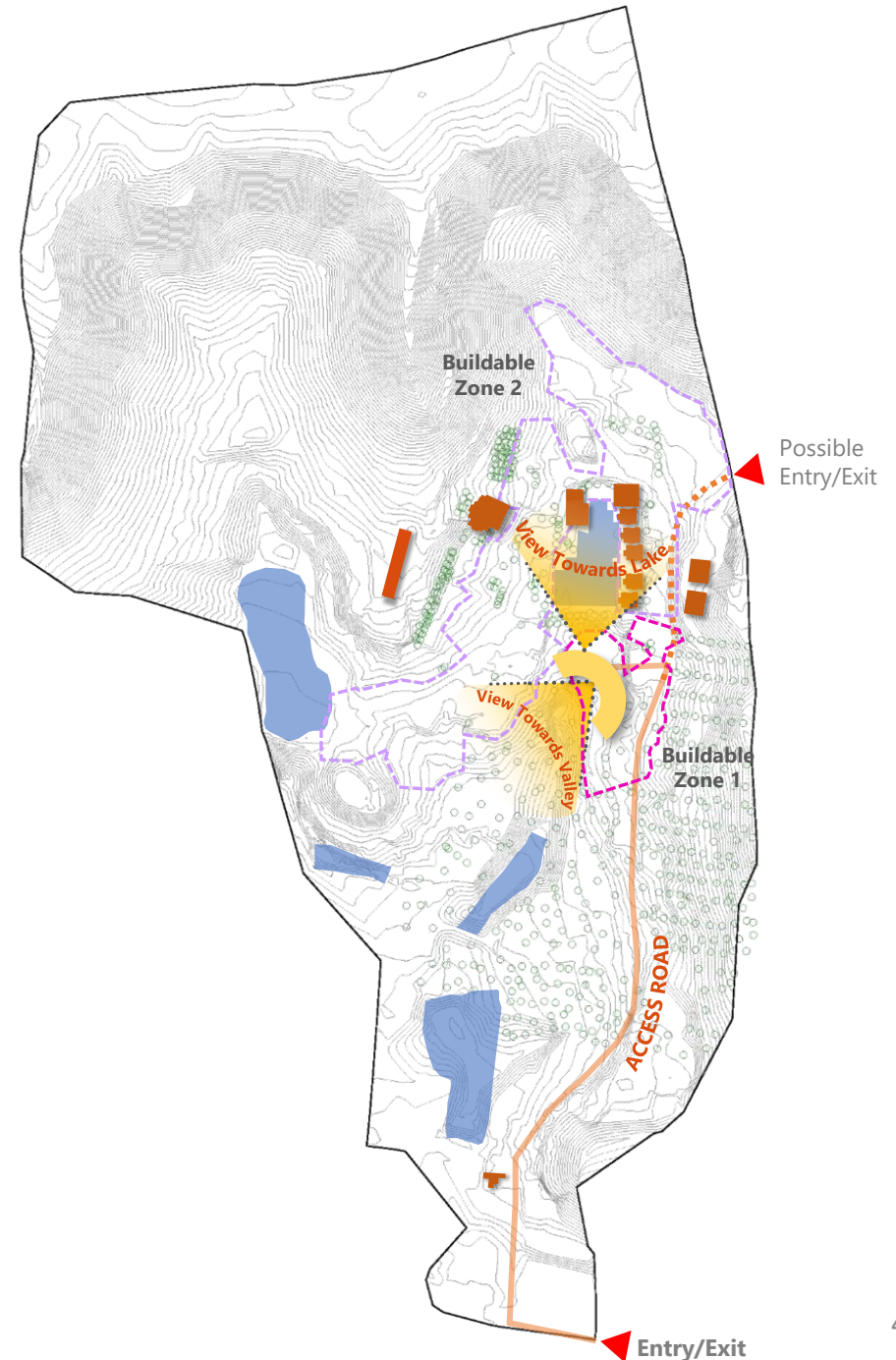
1. Arrival pavilion built to serve as an **entry point to the campus** for students and families.

2. The Arrival Pavilion Block is placed in the **buildable zone** next to the valley for views of the Valley and the Lake where the **curve shape** of the building that follows the **existing terrain** gives access to **view** towards greenery and appreciate the valley.

3. **Easy access** from both point of entrees.

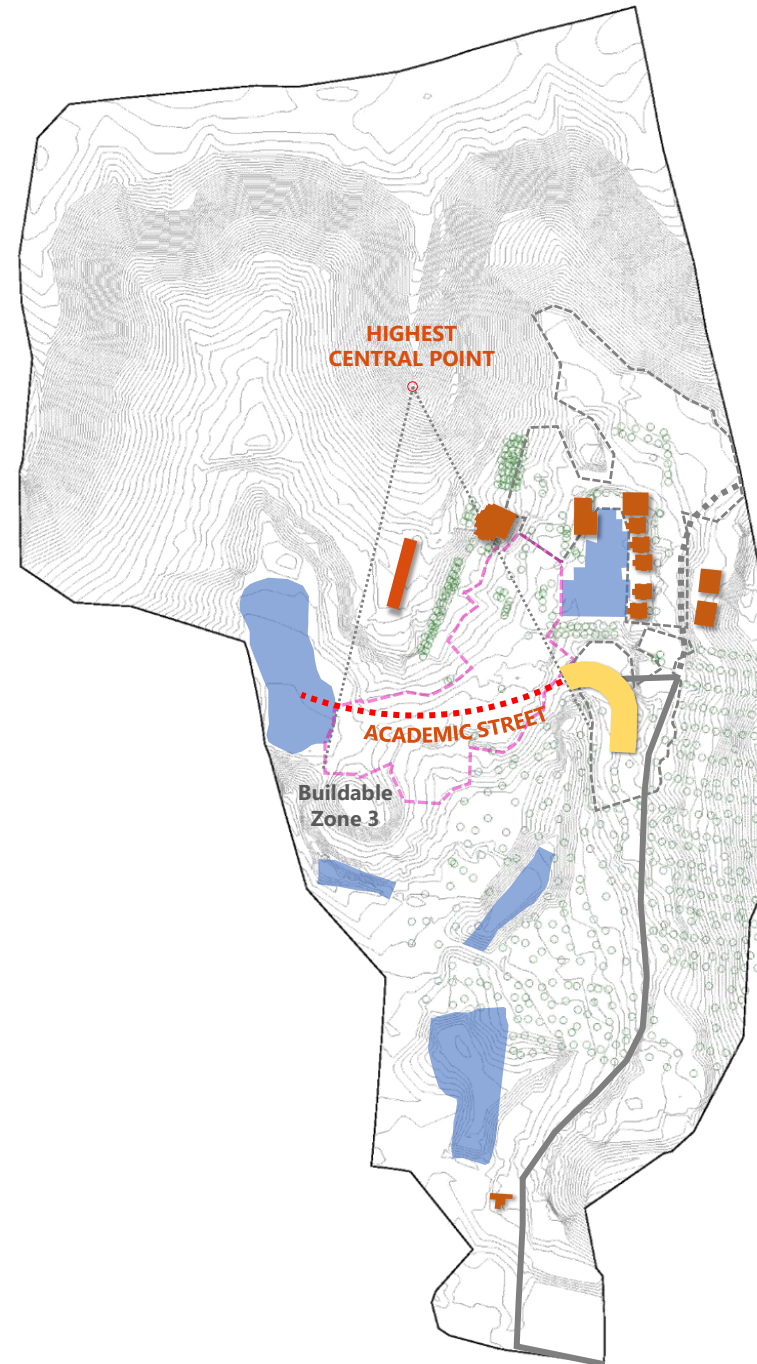
Parameters of the design :

- ✓ Arrival pavilion designed for accommodating 2700 total scholars and their family throughout a day on registration day
- ✓ Registration desk & Reception kiosk
- ✓ Administration office
- ✓ Seated waiting space
- ✓ Toilets



Academic Street

- 1. A street of a formal discourse** the serves as a key element to hold classrooms.
- 2.** Deriving an **Axis** from the highest central point on the site, that **starts from the Pavilion Block and terminating at the lake** to form the main Academic Street
- 3.** Utilizing the **Flattest Buildable Zone** on the site to respect the existing contours

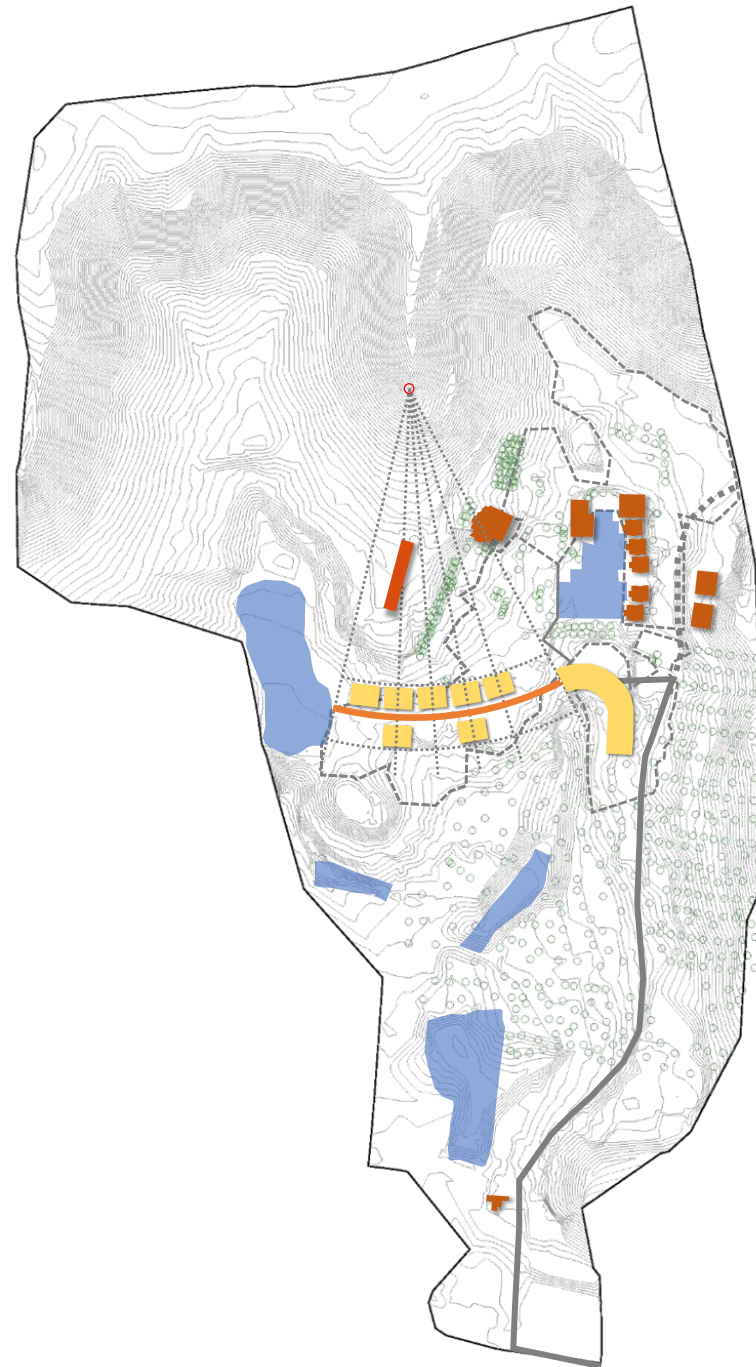


Academic Street

1. Following the main axis, **Classrooms** are placed along the Academic Street

Parameters of the design:

- ✓ Classrooms (7 nos. of 200 capacity each in 2 shifts)
- ✓ Tiered seating
- ✓ Crowd management
- ✓ Breakout spaces
- ✓ Discussion areas
- ✓ Toilet blocks shared between 2 classrooms
- ✓ Requires cross ventilation and ample daylight with zero glare
- ✓ Avoid using ceiling fans to reduce noise
- ✓ Acoustical buffer



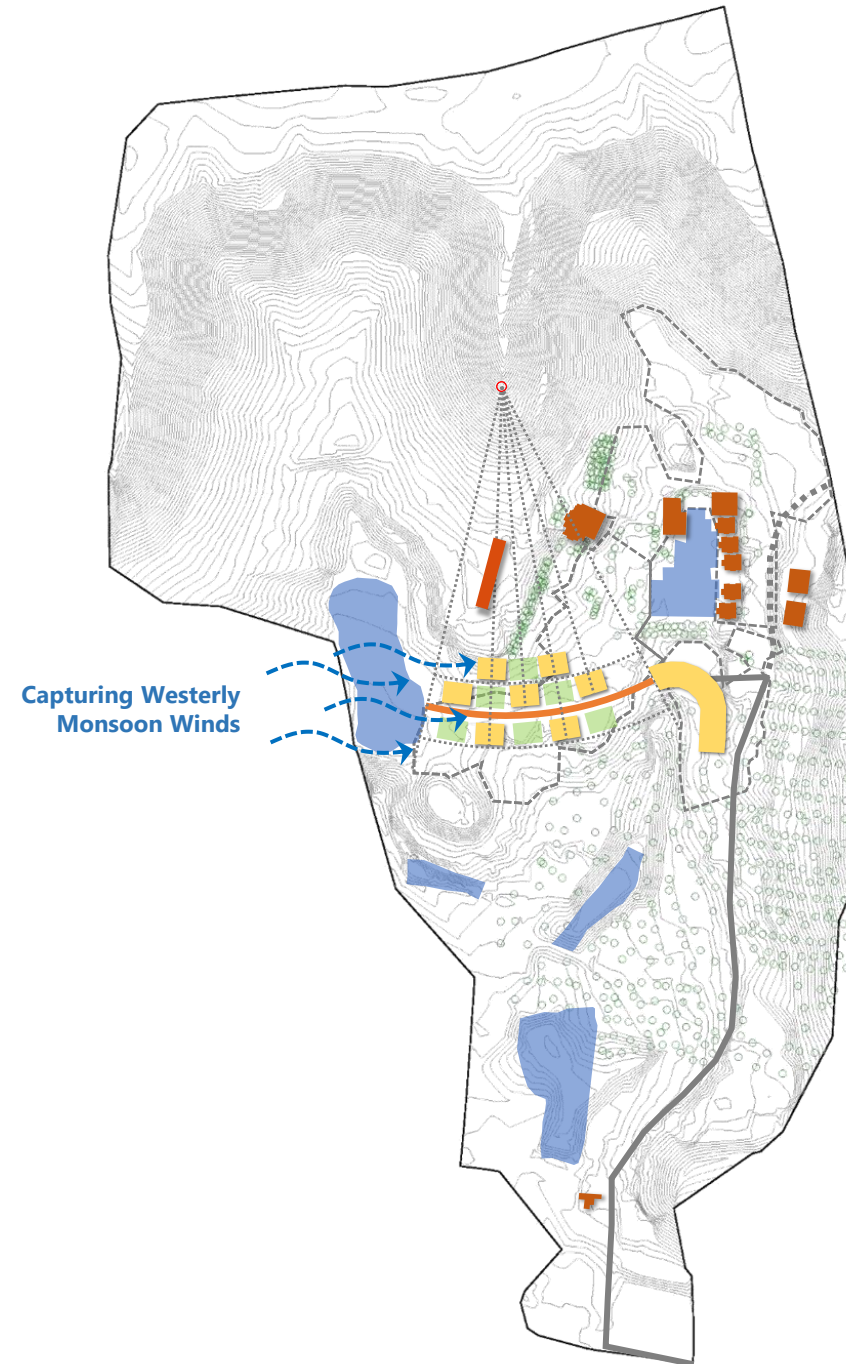
SUSTAINABILITY | MASTERPLAN

Classrooms

1. Classrooms are **split** to manage large crowd and bifurcate them to small groups by **avoiding overcrowding in the main street**

2. Optimizing the Classrooms for **cross ventilation and Natural Light** by providing courts

3. **Informal Discussion** areas after or before classes could happen in such courts



Informal Courts 



Dining Hall

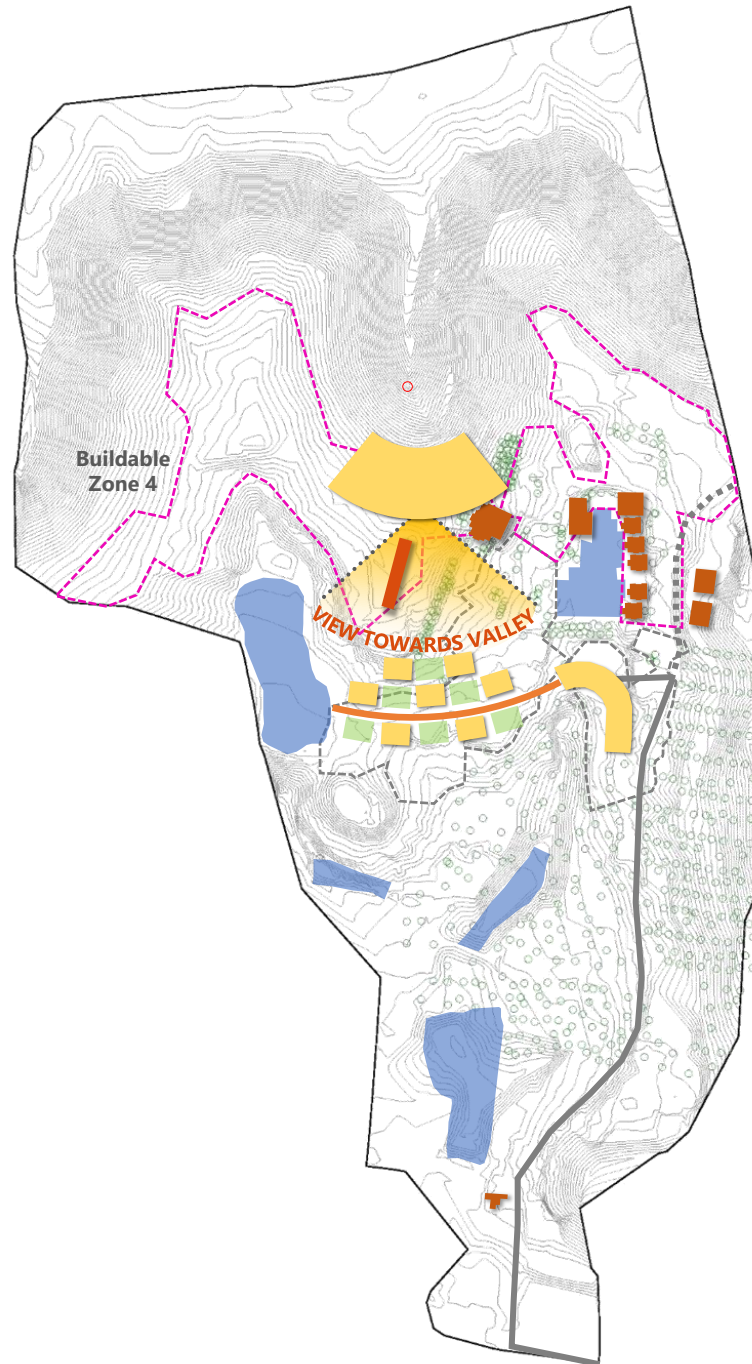
1. Dining being a central function needs to be located in the **center of the site**

2. Dining Block as a Barrier between **the two buildable zones** suitable for Boys and Girls Hostels

3. The **shape of the building** to capture the clear panoramic view of the site

Parameters of the design:

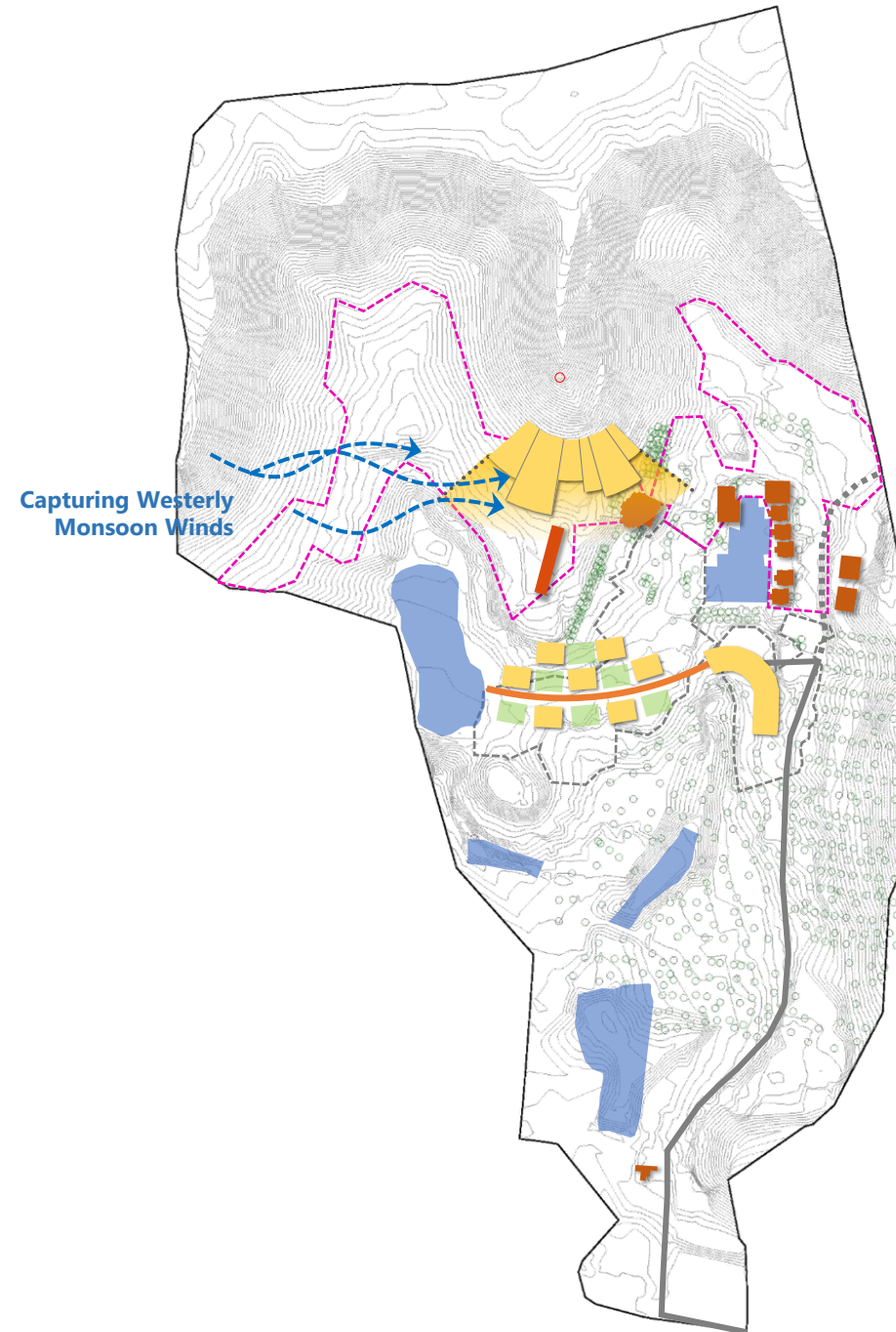
- ✓ Dining hall of capacity 2933 in 2 shifts (3 meals a day)
- ✓ Centrally located
- ✓ Storage facilities
- ✓ Easy Kitchen access
- ✓ Separate serving corridors
- ✓ Crowd management
- ✓ Easy access
- ✓ Requires cross ventilation and daylight
- ✓ Waste management



Dining Hall

1. Dining bay sizes reduced to cater **daylight and cross ventilation** also providing covered spaces underneath for other activities like yoga and PT

2. Clear view towards the valley to all the bays

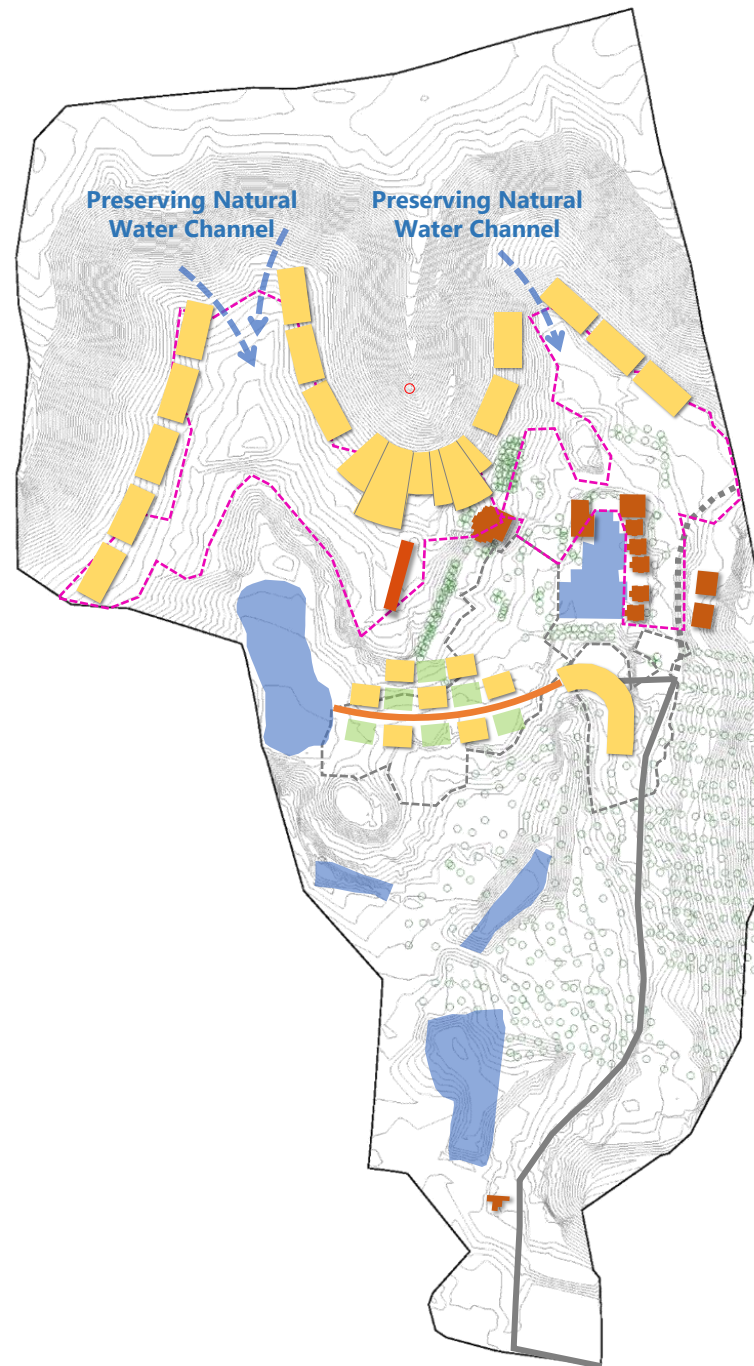


Hostel Blocks

1. Hostel Blocks placed in the **separate buildable zones** on each side of the hill and close proximity to dining
2. Buildings aligned to the contours to **minimize Cut and Fill**
3. Maintain **rainwater** drainage corridors

Parameters of the design:

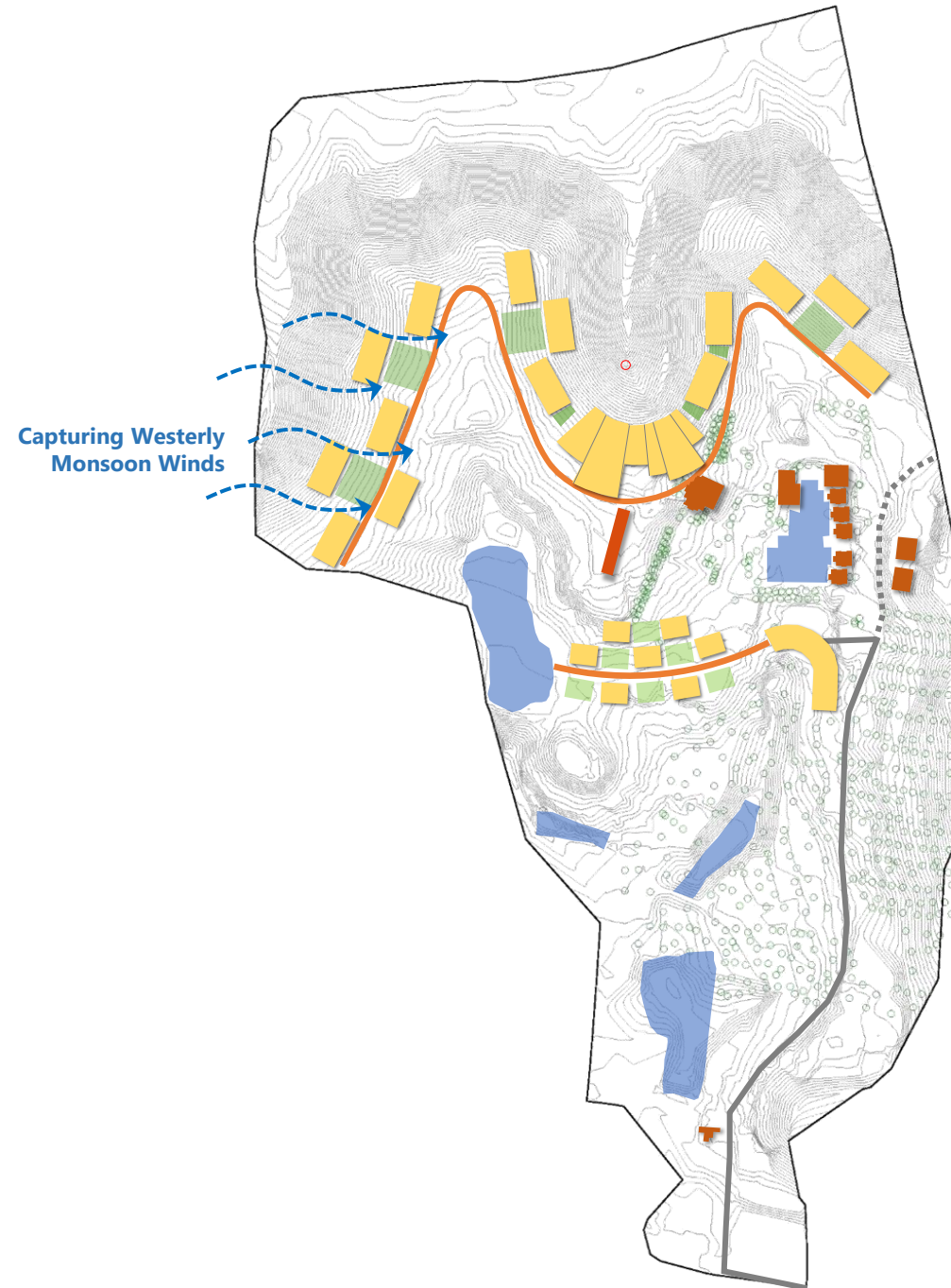
- ✓ Hostel room shared between 6 students with bunk beds and attached toilets for 2712 students in total (1620 boys and 1092 girls)*
- ✓ Clubbed studying spaces inside the room
- ✓ Storage for their shoes, bags, dining utensils and luggage
- ✓ Internal break out spaces such as courtyards
- ✓ Requires cross ventilation



SUSTAINABILITY | MASTERPLAN

Hostel Courtyards

1. Courts and Green Spaces are created by staggering the blocks for informal/**chance interactions** and discussions also providing **dedicated spaces for studying**



MASTERPLAN – OLD PROGRAM

Program

1. Security Cabin + Existing medical facility
2. Entrance Pavilion
Reception
Offices
Parking
3. Open air amphitheater
4. Classrooms for 200 students
5. Computer Labs for 400 systems
6. Faculty/Admin Staff Housing
7. Staff rooms & Staff offices
8. Library – to be confirmed in Phase-3**
9. Staff Housing
10. Dining Hall for 1300 students
11. Girls Hostel
12. Boys Hostel
13. Service Staff Housing
14. Solar farming (1.8 acres) – Area to be confirmed by MEP
15. Warehouse
16. Indoor Sports
17. Playground
18. CEO Residence**
19. Taraben J. Mehta Girls Hostel: 192 pax + 95pax computer lab + 4000sqft study space

**Tentative locations

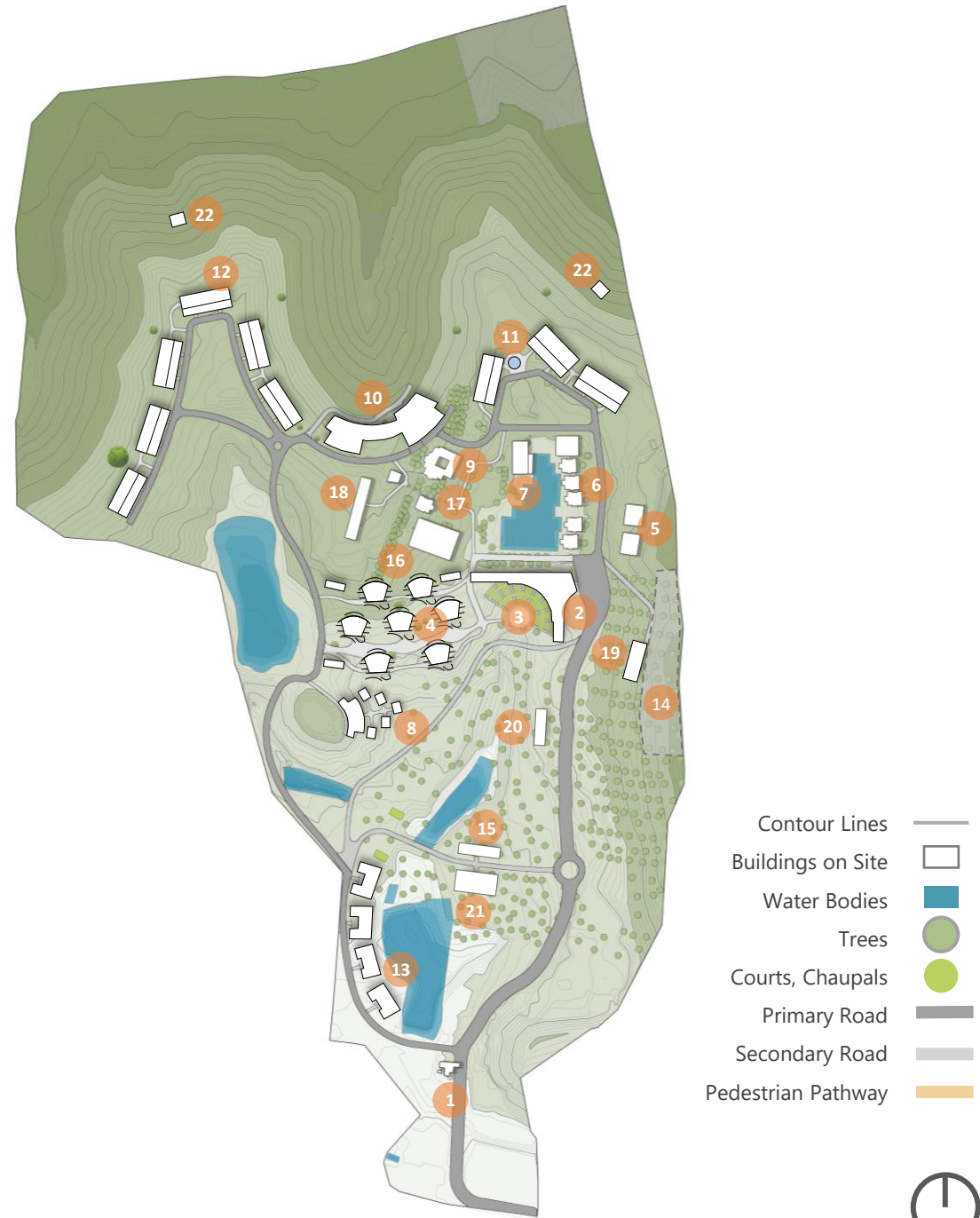


MASTERPLAN

Program

1. Security Cabin
2. Entrance Pavilion
Reception
Offices
Parking
3. Open air amphitheater
4. Lecture Hall for 200 students
5. Computer Labs for 300 systems
6. Faculty/Admin Staff Housing
7. Headquarter
8. Library – to be confirmed in Phase-3*
9. Staff Housing
10. Dining Hall for 1500 students
11. Girls Hostel
12. Boys Hostel
13. Service Staff Housing
14. Solar farming
15. Warehouse
16. Indoor Sports Arena
17. CEO Residence*
18. Taraben J. Mehta Girls Hostel: 192 pax + 95pax computer lab + 4000sqft study space
19. Substation
20. Sewage Treatment Plant*
21. Water Treatment Plant
22. Overhead Water Tanks

Note:
*Tentative locations





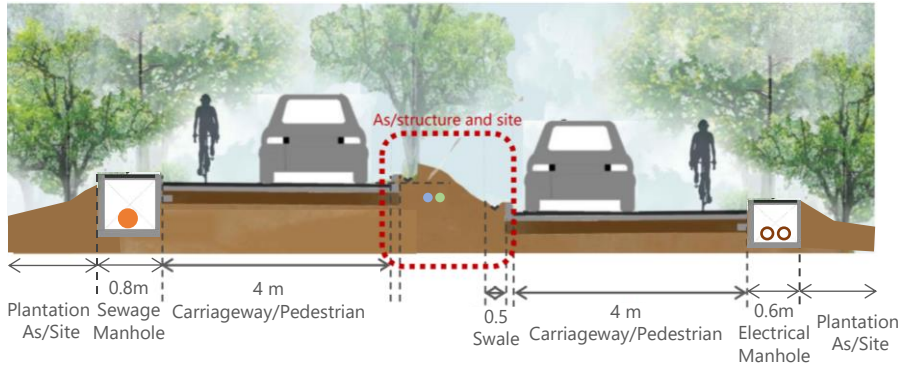
OPTIMISATION

- **Topography** : Minimizing Cut and Fill
- **Infrastructure** : Service Tunnels integrated with Road/Pathway planning to respect the existing site terrain

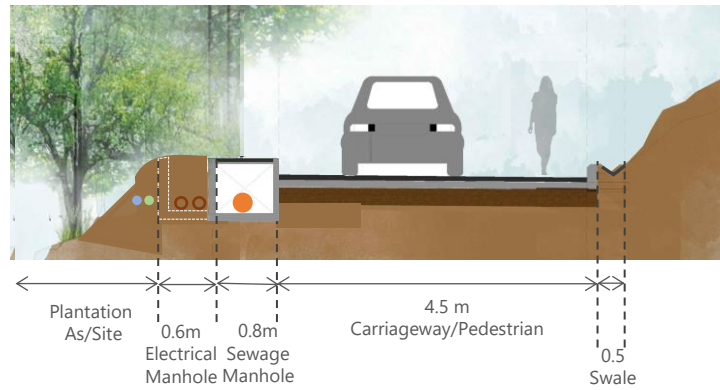
OPTIMISATION | INFRASTRUCTURE

Service Tunnels integrated with Road/Pathway planning to respect the existing site terrain

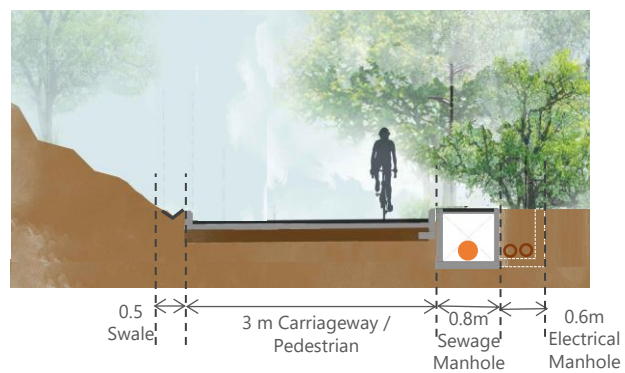
TYPE 1 – Vehicular Two way- Staggered



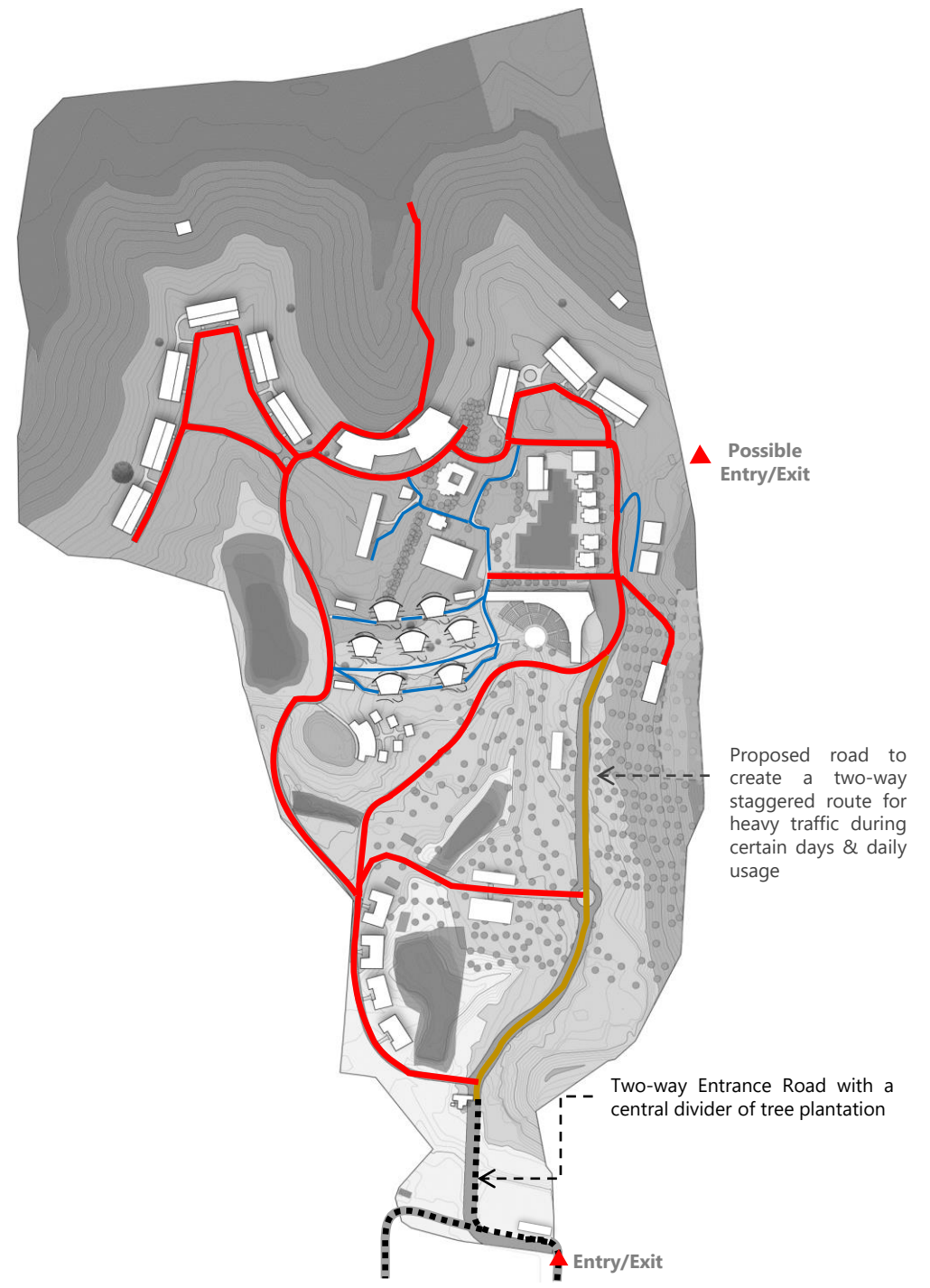
TYPE 2 – Vehicular ONE-WAY



TYPE 3 – Pedestrian/ e-mobility)



- Sewage Pipe
- Hume Pipe
- DWS Pipe
- FWS Pipe





- **Legacy** : Inscription of every Scholar's imprint onto the wall design of the Legacy pavilion
- **Studying (Outdoors)** : Integration of Outdoor studying spaces in the Landscape
- **Studying (Indoor)** : Year-round naturally lit and ventilated Machans for studying / informal teaching
- **Materials** : Local Materials, Art and Craft integrated in Design

UNIQUE | LEGACY PAVILION

Inscription of every Scholar's imprint onto the wall design of the Legacy pavilion

1. Element of surprise: A grand entrance in the front further opens up towards a view giving an element of surprise to the students and families which portrays the **character and heritage of the campus.**

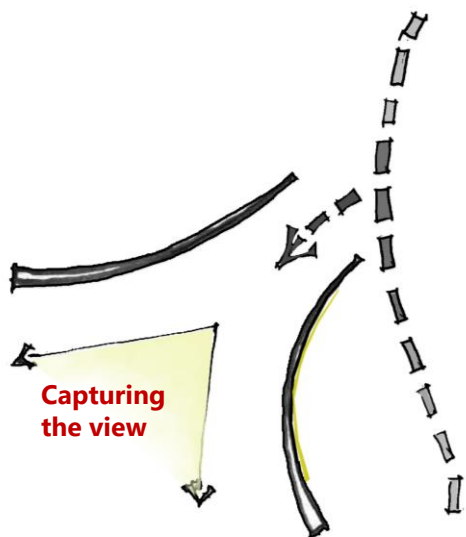
2. Management: Design to control the movement of **large crowds** on days like registration of students.

Built Volume required (as per NBC/Codes)

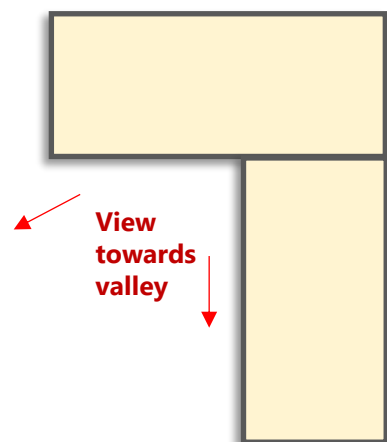
Total Built Up Area (including gathering space, Administration)	1,680 sqm. (18,080sq. ft.)
Gathering space required for registration on one day for 4500 moving population (1300 x 3.5 students with families) @1.8 sqm	1,080 sqm (600 pax at a time)
Amphitheatre (for 2,800 population) @ 0.99 sqm	2,584 sqm



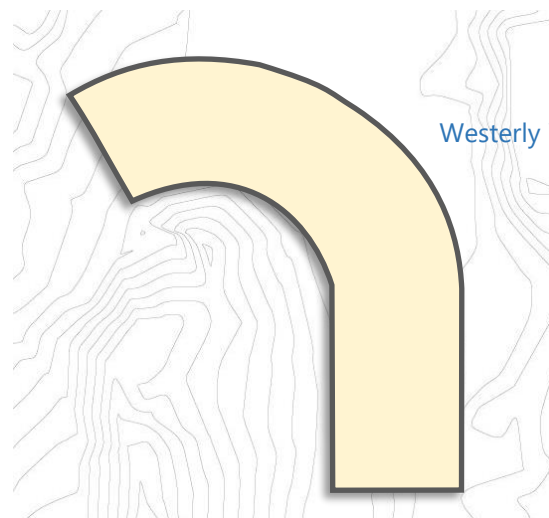
Reference images for Arrival pavilion



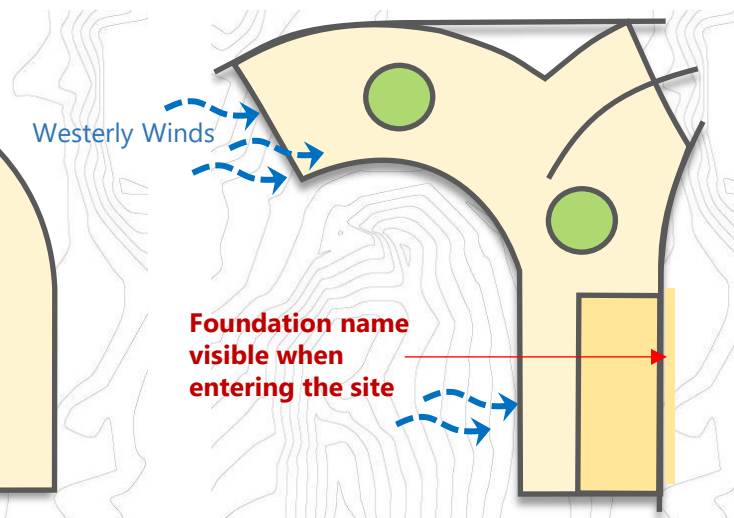
Element of surprise



Form with respect to views



Form with respect to contours



Space segregation and alignment towards wind

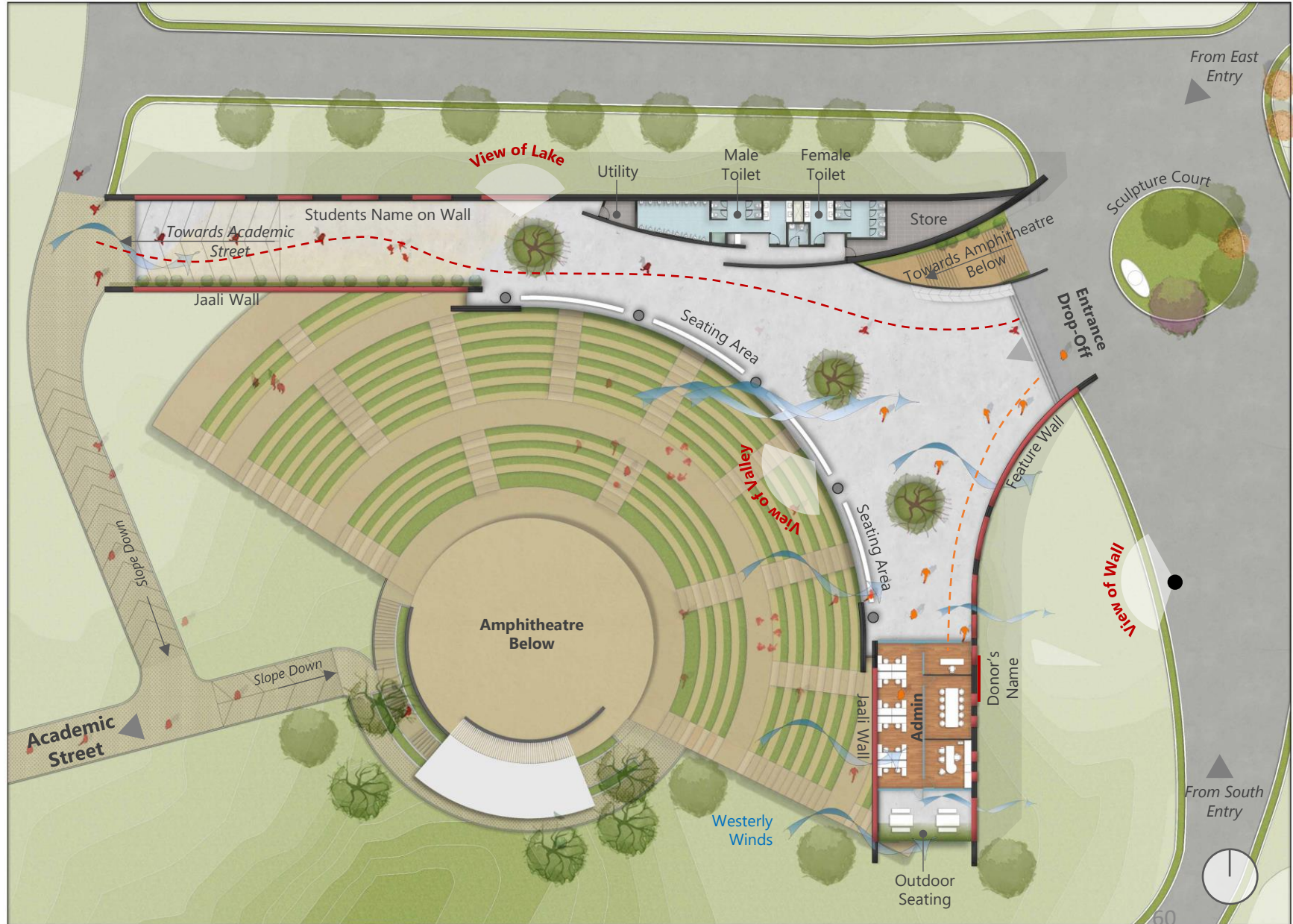


UNIQUE | LEGACY PAVILION

Inscription of every Scholar's imprint onto the wall design of the Legacy pavilion



REFERENCE IMAGES

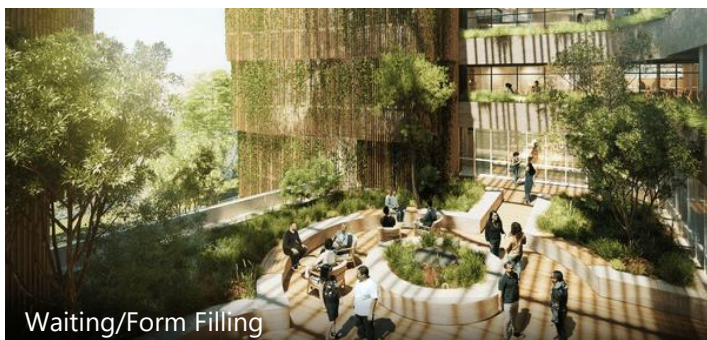


ENTRY LEVEL PLAN

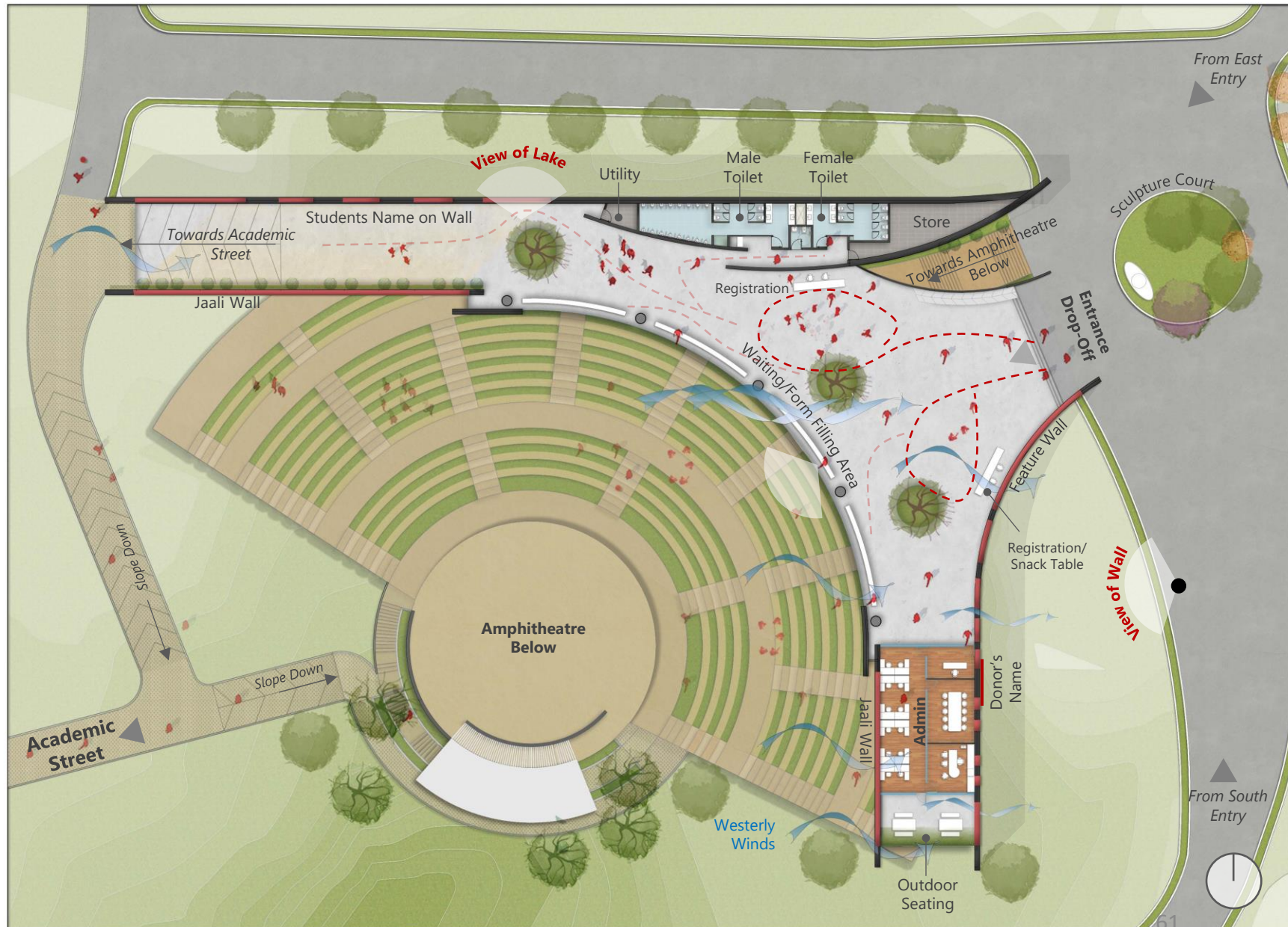
60 --- Student circulation - - - Staff Circulation

UNIQUE | LEGACY PAVILION - ARRIVAL EXPERIENCE | OPEN DAY

Place of Student Registration & First Impression of the Institute



REFERENCE IMAGES



ENTRY LEVEL PLAN

LEGACY PAVILION - ARRIVAL EXPERIENCE



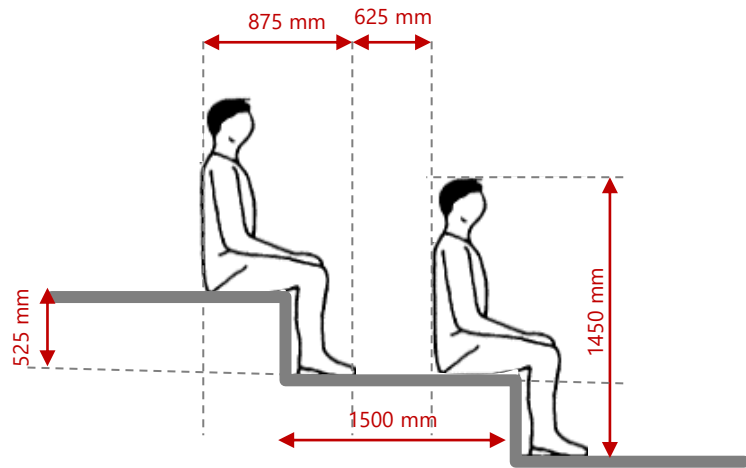
UNIQUE | EVENTS

Open air theatre : A grand amphitheater is required as per client's brief that holds a capacity of **3000 population** for gathering **1-2 times** a year for convocations, assembly and various other functions.

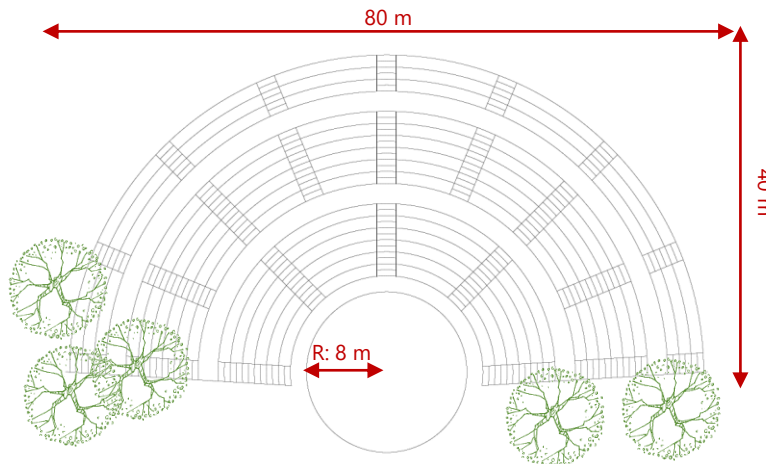
Design Criteria	Dimension
Maximum distance for audience from the front of the open stage (with spoken voice)	65.62ft (20 m)
Minimum width of seat without arms	1.5ft (0.45 m)
Minimum unobstructed aisle width	3.6ft (1 m)
Horizontal Distance on bench per person	1.5ft (0.45)
Clearance between each row	2.5ft (0.76 m)



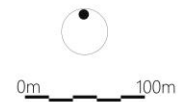
Reference Images



Typical Section of Amphitheatre seating



Plan (2600 pax)



UNIQUE | EVENTS

Functional Landscape to address to Social, Cultural & Recreational needs



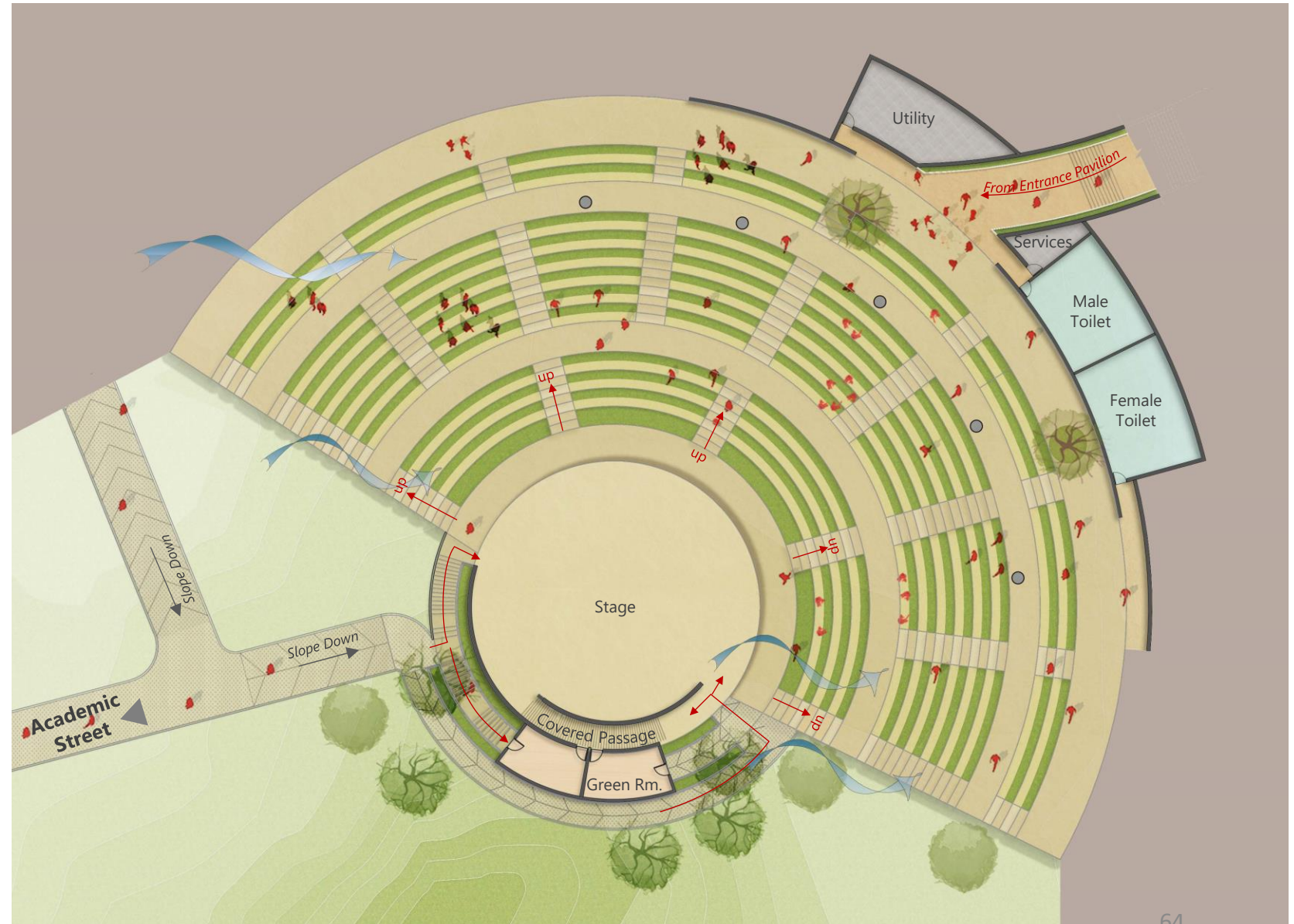
Learning - Individual Studying Spaces | Group Discussions



Recreation – Interaction Spaces | Social & Cultural activities | Meditation



Events – National Day | Annual Day



AMPHITHEATRE PLAN

UNIQUE | EVENTS
Amphitheater View



UNIQUE | LEGACY PAVILION – ART & CULTURE

History of the Institute | Display of Present Architecture & Infrastructure | Donor's Introductions
Inscription of every Scholar's imprint onto the wall design of the Legacy pavilion



"SHOWCASING THE TRANSFORMATION OF VALLEY"



Showcasing History of Valley



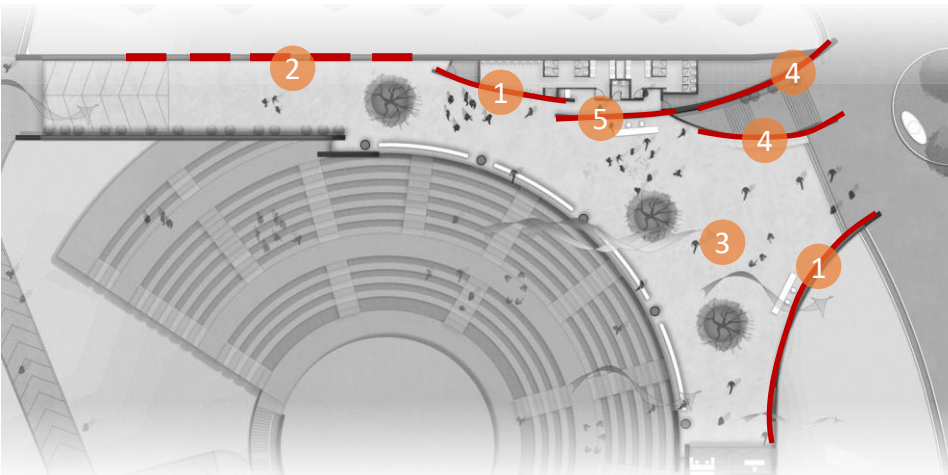
Foundation Philosophies



Information of all the Donors



Model Display of Valley



Top Scholars Display | Names Etched on Wall

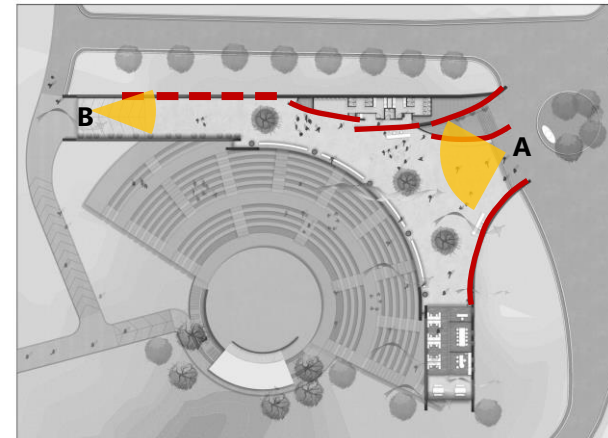


Pictures of People of Dakshana Valley

"SHOWCASING THE FOUNDATION IN VALLEY"

UNIQUE | LEGACY PAVILION – ART & CULTURE

History of the Institute | Display of Present Architecture & Infrastructure | Donor's Introductions
Inscription of every Scholar's imprint onto the wall design of the Legacy pavilion



UNIQUE | LEGACY PAVILION – CRAFT & DESIGN
Local/Natural Materials & Craft integrated in Design



ART OF EARTH ARCHITECTURE

Wood



Kota



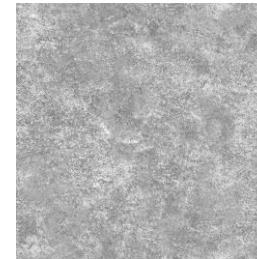
Shahabad Stone



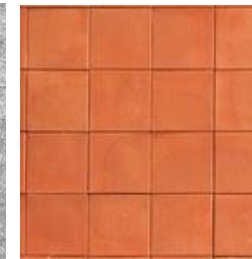
Basalt Stone



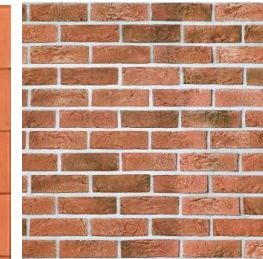
Concrete



Terracotta



Exposed Brick

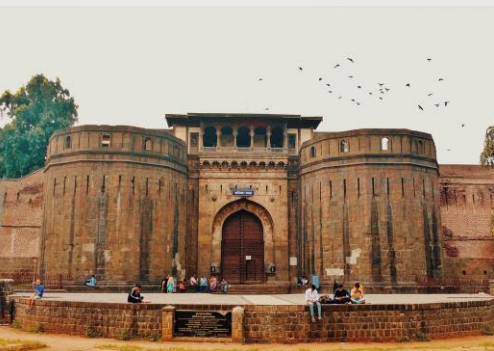


Granite Stone



Natural materials greatly influence the atmosphere it emanates and integrate with its surroundings.

"MATERIALS INSPIRED FROM LOCAL ARCHITECTURE AND LAND"



Grand Entrance of **Shaniwarwada Fort** - Form & Material Derivation



Courtyard Wadas of Pune – Use of **terracotta and stone.**



Abundant availability of **Basalt Stone** on Site



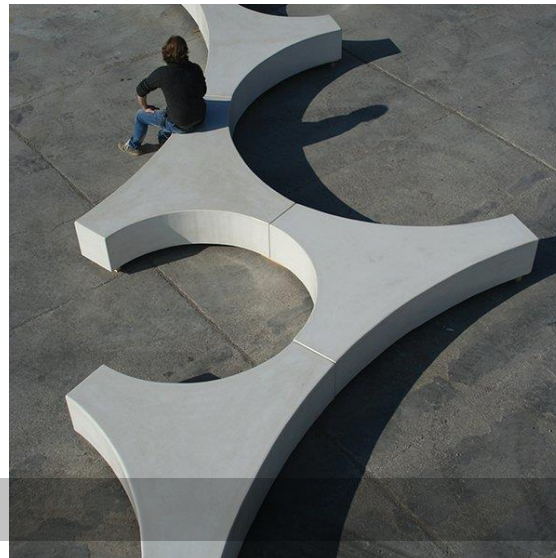
'Dindi Darwaja of wadas' – Huge **wooden doors** and smaller entries of Pune



Locally produced **Brick** giving out an Institutional Vibe.

UNIQUE | LEGACY PAVILION | ELEMENT OF SURPRISE

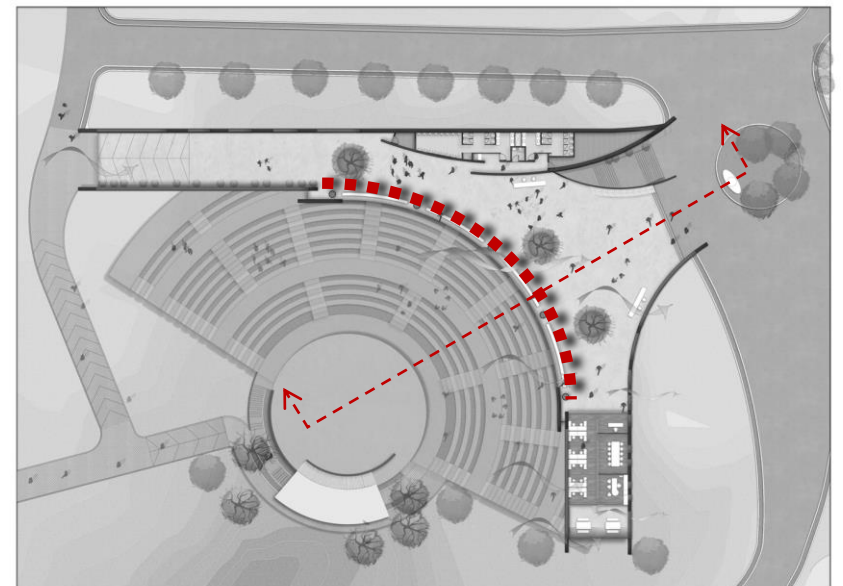
Waiting area with a panoramic view of the valley



Seating design to accentuate the form of the building

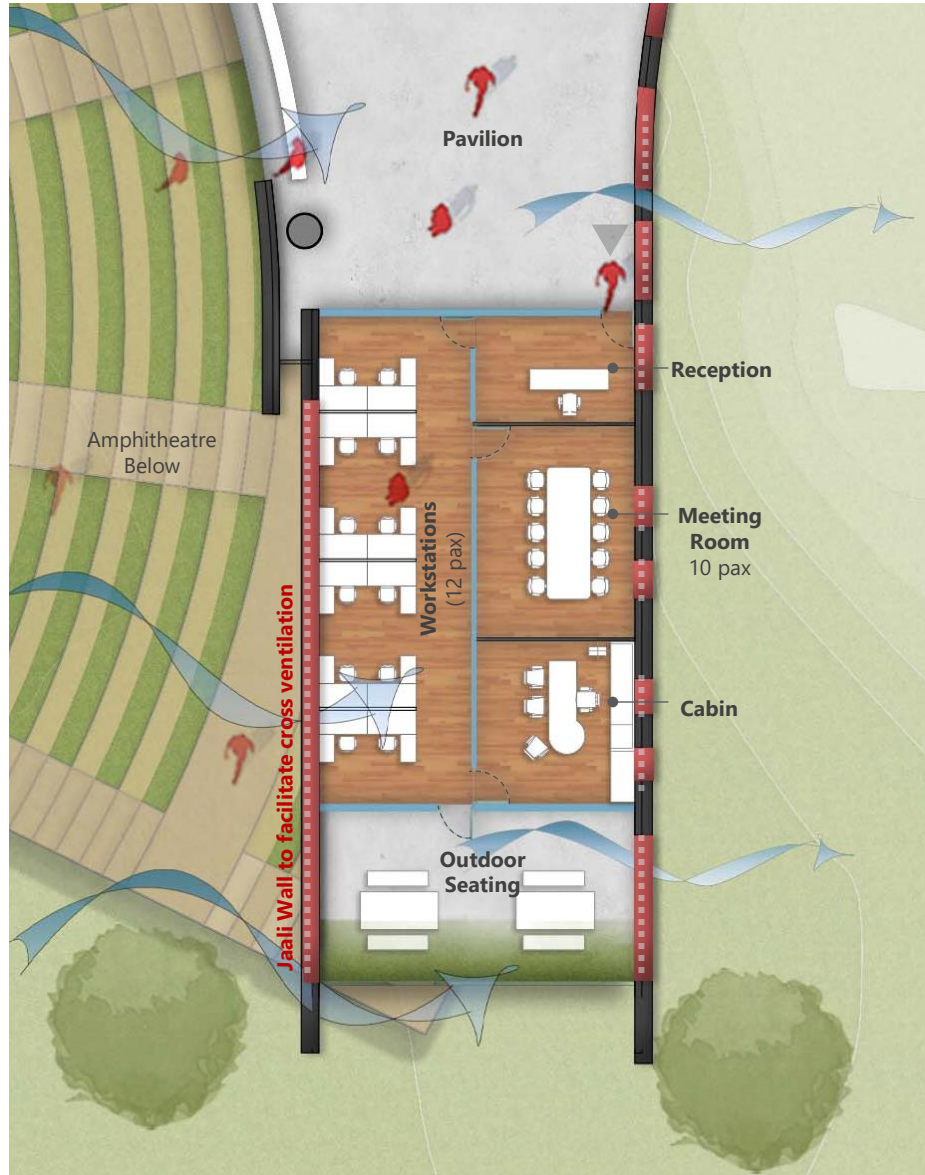


SCHEMATIC SECTION



KEY PLAN

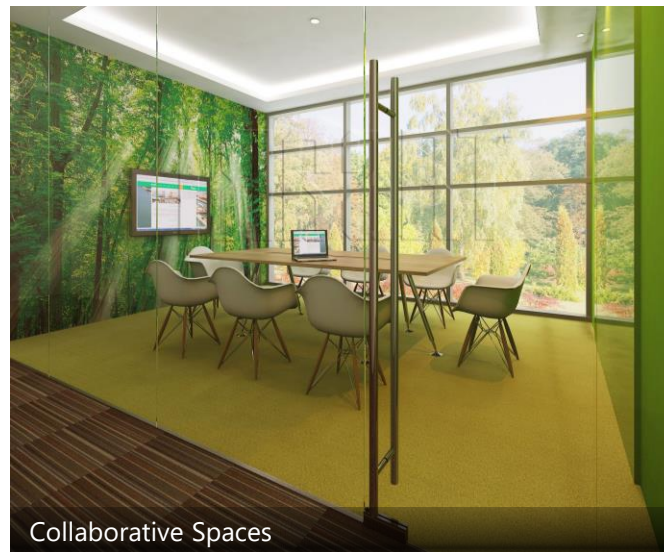
UNIQUE | LEGACY PAVILION | ADMINISTRATION
Panoramic View of the valley | Naturally Ventilated



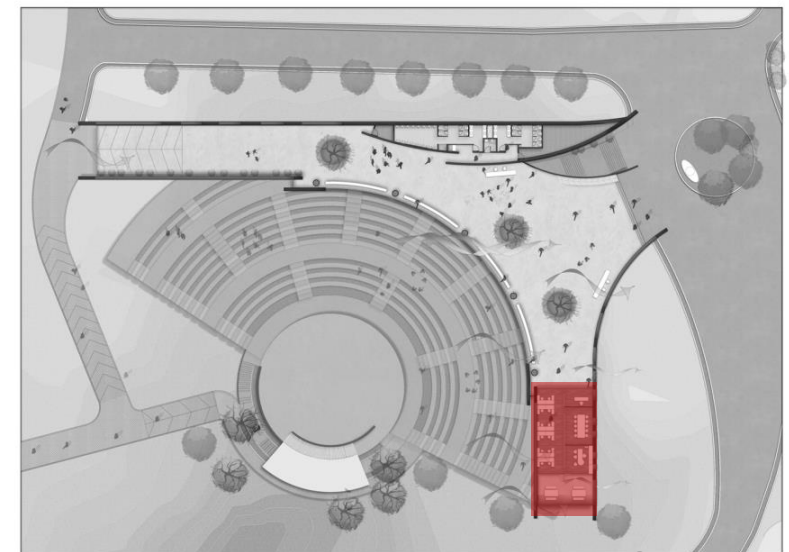
ADMIN FLOOR PLAN



Meeting Rooms



Collaborative Spaces



KEY PLAN

COST ESTIMATE | LEGACY PAVILION

Units	Total Unit area (sq.ft.)	Total Area (sq.ft.)	Category	Rate/sq.ft. (INR)	Estimate (INR)
1	22,500	22,500	Architecture	958	21,555,000
			MEP	685	15,412,500
			Structure	1,585	35,662,500
				3,228	72,630,000
			Add-on (taxes @18%, consultancy @ 3% and contractor @4% fees) @ 25%		18,157,500
			Total		90,787,500
			Furniture		7,87,500
			Signage		5,62,500
			Equipment		1,125,000
			Grand Total		91,912,500
Rate per sqft.		4,085			

Notes:

1. Combination of Granite and Kota stone considered for flooring.
2. 50% internal walls to be painted.
3. China mosaic tiles considered for terrace finishing
4. VRF air conditioning system considered for admin area.
5. Fire extinguishers considered in fire fighting systems.
6. Exposed concrete in combination with exposed brickwork considered for façade and roof finish.



Total Estimated Cost INR : 91,912,500
Total Estimated Cost USD: 1,225,500

COST ESTIMATE | AMPHITHEATRE

Units	Total Unit area (sq.ft.)	Total Area (sq.ft.)	Category	Rate/sq.ft. (INR)	Estimate (INR)
1	33,635	33,635	Architecture	359	12,074,965
			MEP	295	9,922,325
			Structure	1,084	36,460,340
				1,738	58,457,630
			Add-on (taxes @18%, consultancy @ 3% and contractor @4% fees) @ 25%		14,614,408
			Total		73,072,038
			Furniture		100,905
			Signage		840,875
			Equipment		2,018,100
			Grand Total		76,031,918
Rate per sqft.		2,261			

Notes:

1. Combination of Kota stone (75% @ Rs.250/sqft) and grass (25% @ Rs.30/sqft)
2. Internal and External painting considered for green room
3. Wiring, conduits and fixtures included (@ Rs.20/sq.ft.) in Electrical estimate.
4. Grade slab, toe wall and storm water drainage trenches (370 Rmt. considered at Rs. 15000/Rmt.) are considered for structural costing.

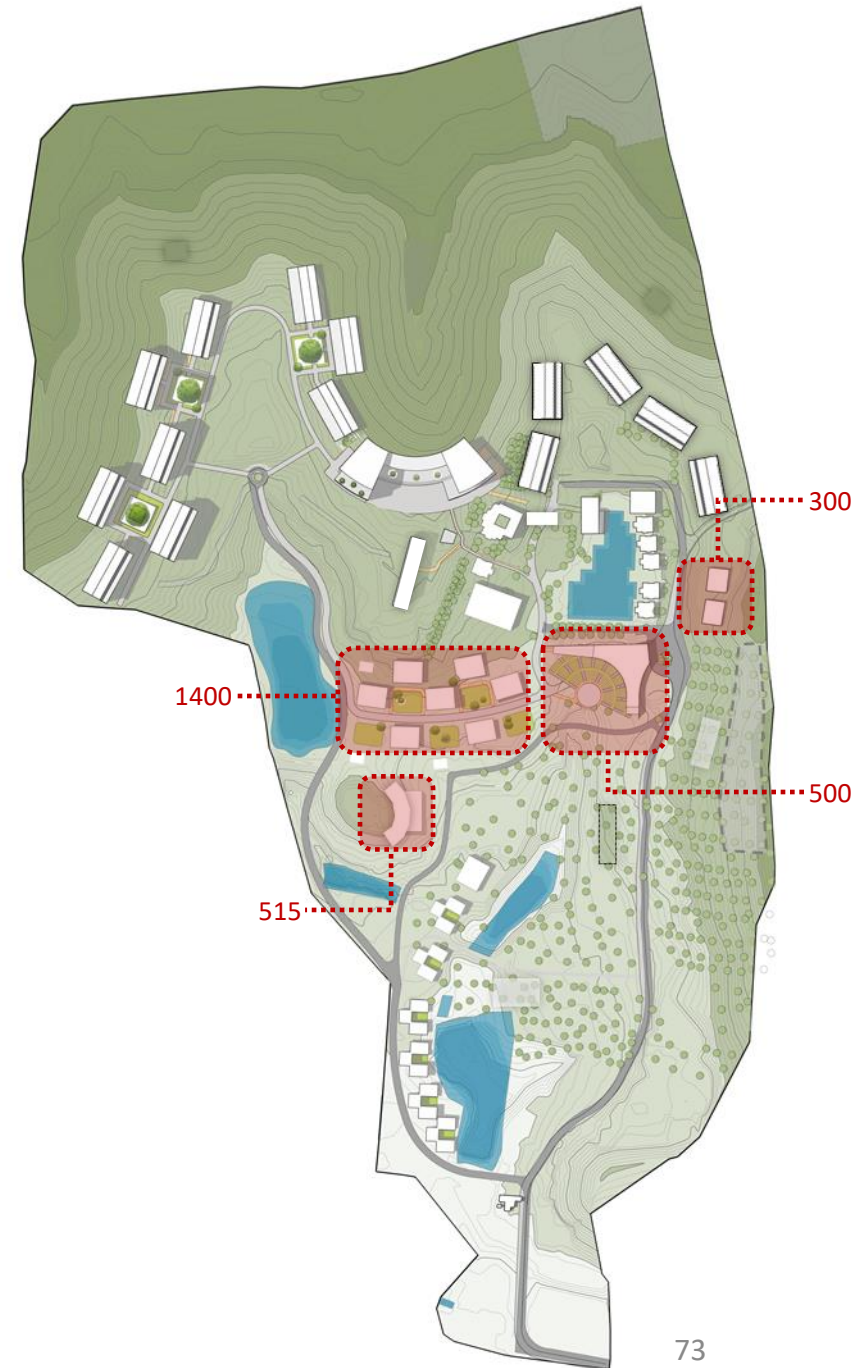
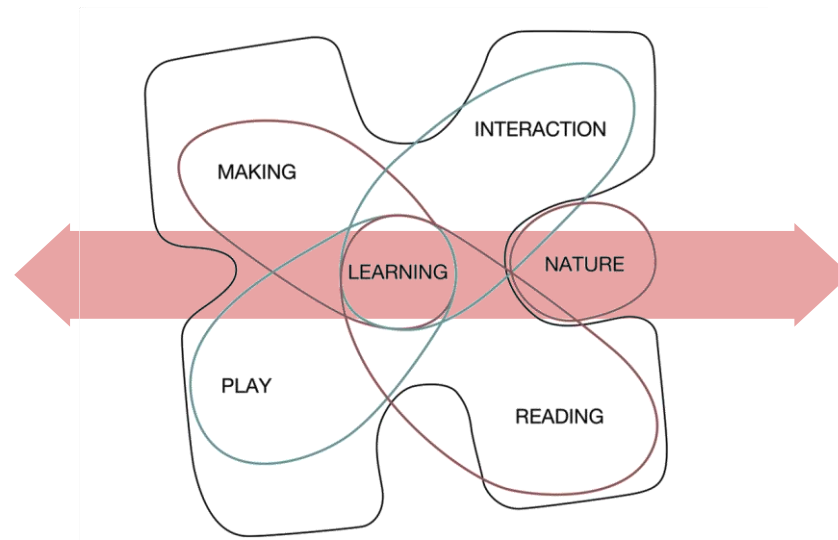


Total Estimated Cost INR : 76,031,918
Total Estimated Cost USD: 1,013,759

UNIQUE | SELF STUDY SPACES

Naturally Ventilated Reading Areas

SELF STUDY CAPACITY MATRIX	
Student capacity in the Campus	2712
Classroom	
Classroom Capacity	200
Number of Classrooms	7
Total capacity in Classroom (one-time)	1400
Computer Lab	
Computer lab capacity	150
Number of computer labs	2
Total capacity in Computer labs	300
<i>Remaining students in the campus (to be provided space for self-study)</i>	<i>1012</i>
Pavilion Building (covered spaces)	515
Library *	500



UNIQUE | STUDYING OUTDOORS

Integration of Outdoor studying spaces in the Landscape



Walking
Discussions



Self Studying Spaces
For **an individual**



Discussion spaces
For **2 to 4** Scholars



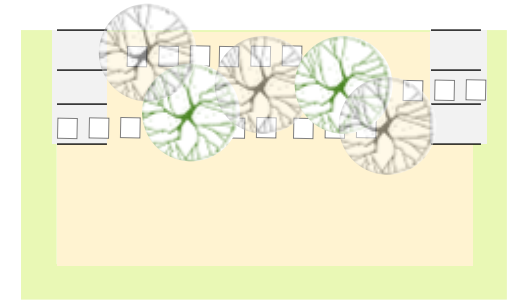
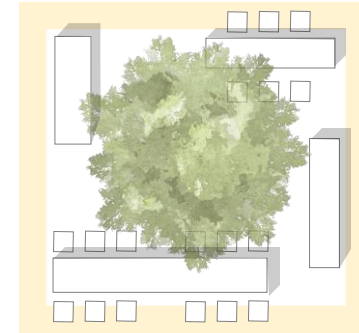
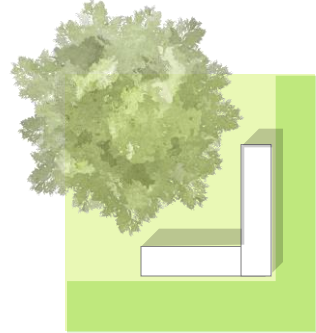
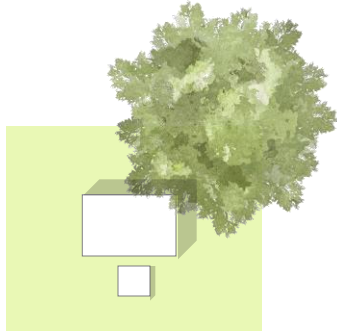
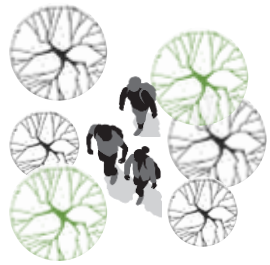
Group Discussion spaces
For **2 to 8** Scholars



Informal Teaching Sessions
For **5 to 20** Scholars



Outdoor Performance spaces
For **20 to 35** Scholars



UNIQUE | STUDYING OUTDOORS

Integration of Outdoor studying spaces in the Landscape



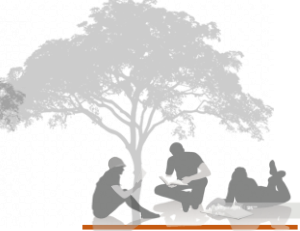
“Creating Outdoor study spaces to increase motivation & concentration, also reducing stress levels in Scholars.”



Walking Discussions



Self Studying Spaces For **an individual**



Discussion spaces For **2 to 4** Scholars



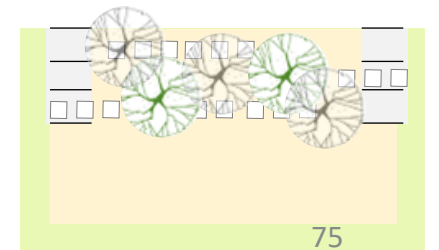
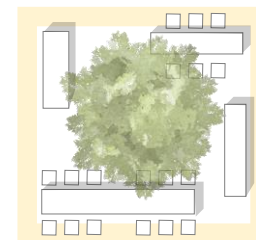
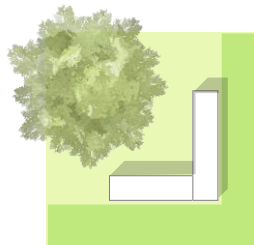
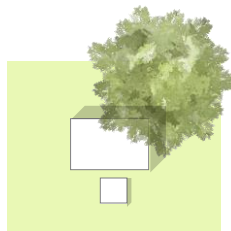
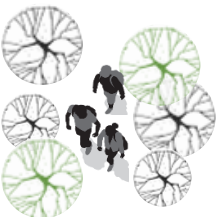
Group Discussion spaces For **2 to 8** Scholars



Informal Teaching Sessions For **5 to 20** Scholars



Outdoor Performance spaces For **20 to 35** Scholars



UNIQUE | KNOWLEDGE CENTRE

A journey within and outside the building to simulate the road map for realizing the dream of every scholar

1. Design to Focus: Modern library inspired from traditional studying spaces that focuses on people while **celebrating the exchange of knowledge.**

2. Feature Building: Featuring a **transparent and open ground floor,** the new repository of knowledge creates a strong connection with the valley, becoming a mediator between the scholar and self study zones.

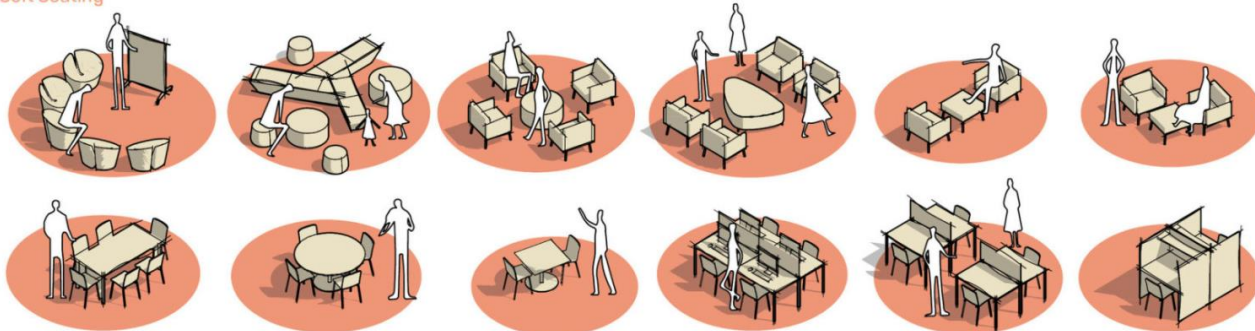
Built Volume required (as per client)

Total Built Up Area	740 sqm (8,000 sqft)
Main Building	250 pax
Outdoor Seating	250 pax



Reference images for Knowledge Centre

Soft Seating



Hard Seating (Tables & Chairs)

More Social/Collaborative

More Focused/Individual

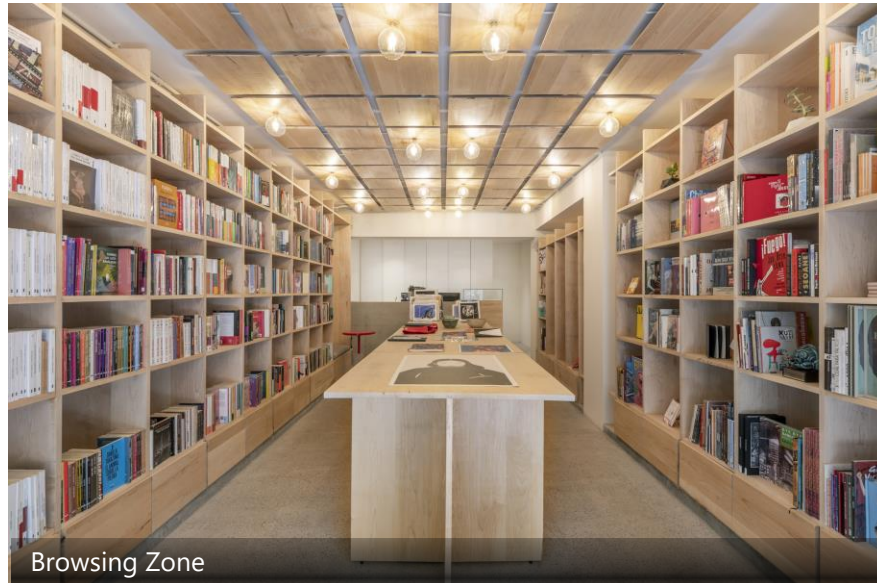


UNIQUE | LIBRARY INTERIORS

Unique Reading zones to enhance focus, productivity and encouragement



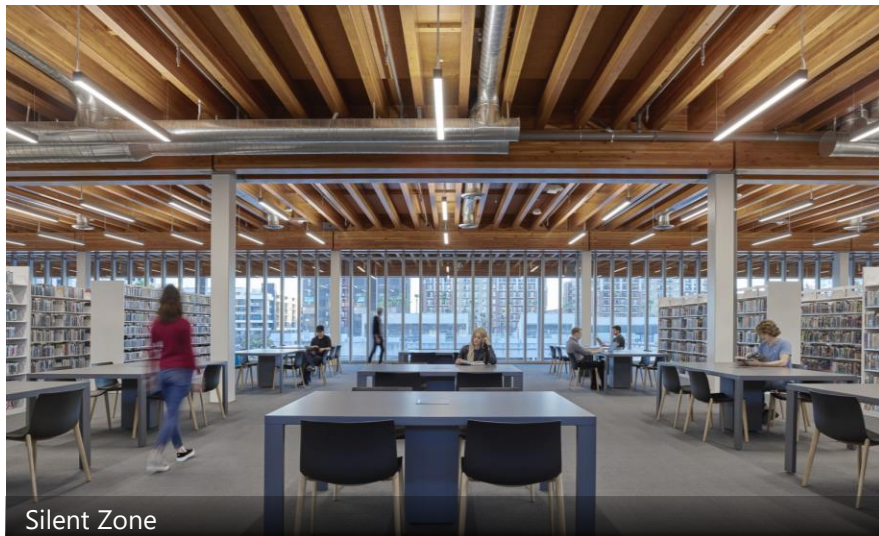
Collaborative Reading Space



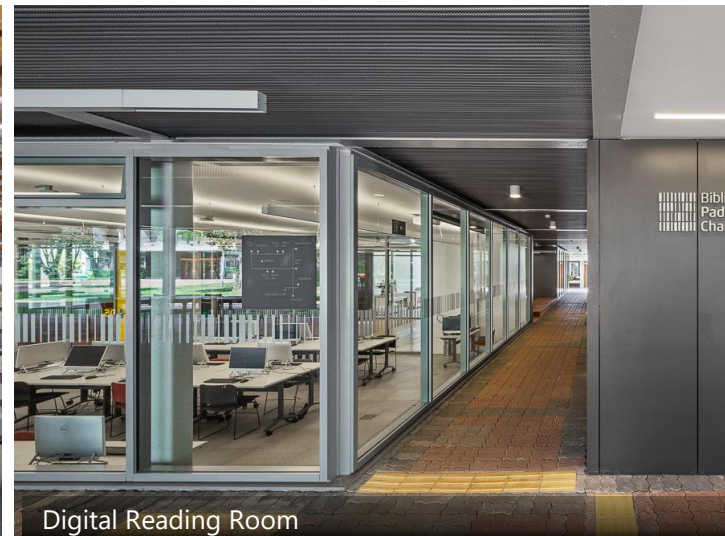
Browsing Zone



Reading space integrated in circulation areas



Silent Zone



Digital Reading Room



Isolation Pods for focus studies

UNIQUE | LIBRARY EXTERIOR
Façade design to respond the context

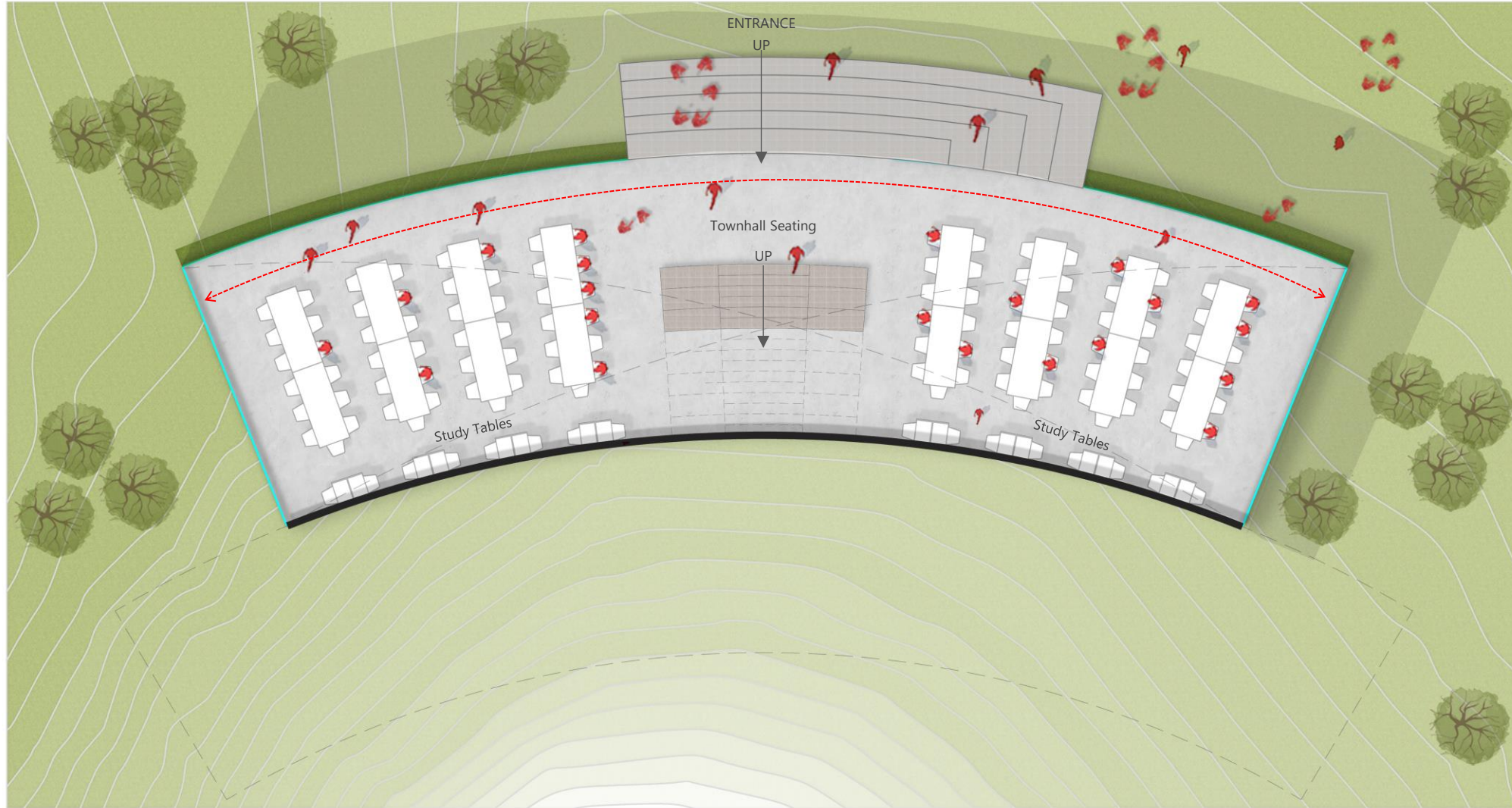


UNIQUE | KNOWLEDGE CENTRE

Library Building- Ground Floor



Reference images



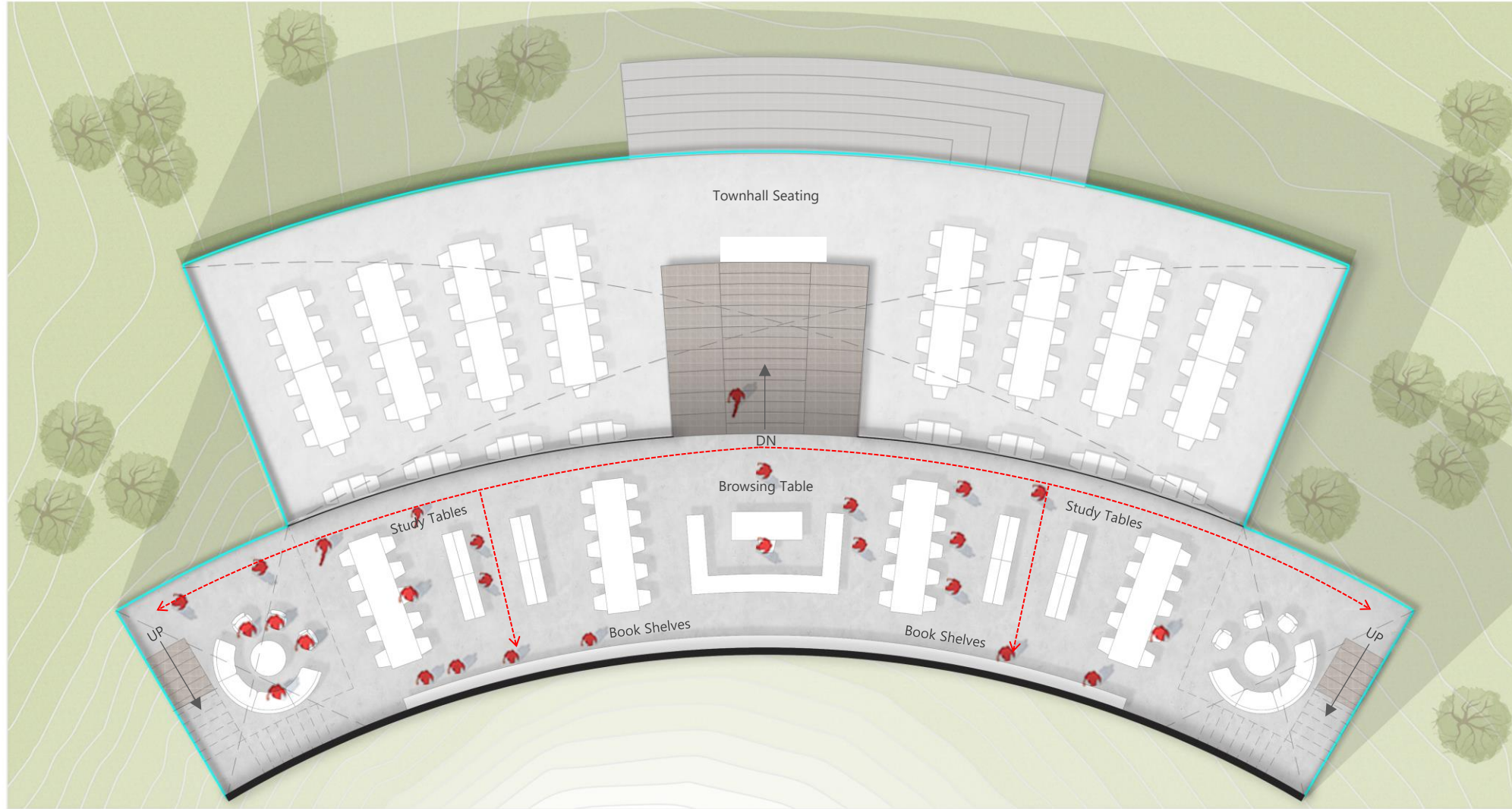
Total Capacity : 148 Pax

UNIQUE | KNOWLEDGE CENTRE

Library Building- First Floor



Reference images

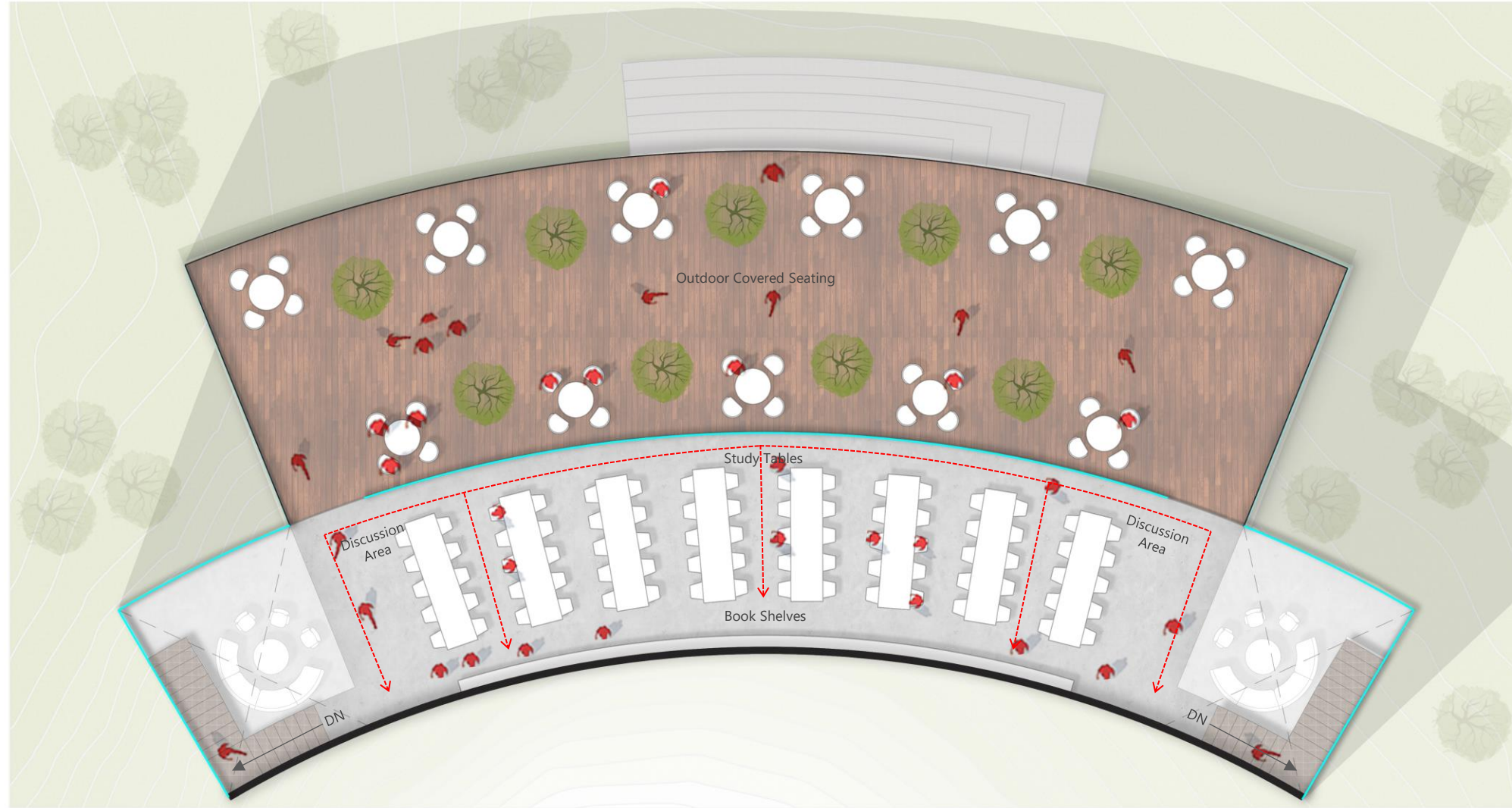


Total Capacity : 54 Pax

UNIQUE | KNOWLEDGE CENTRE Library Building- Second Floor



Reference images

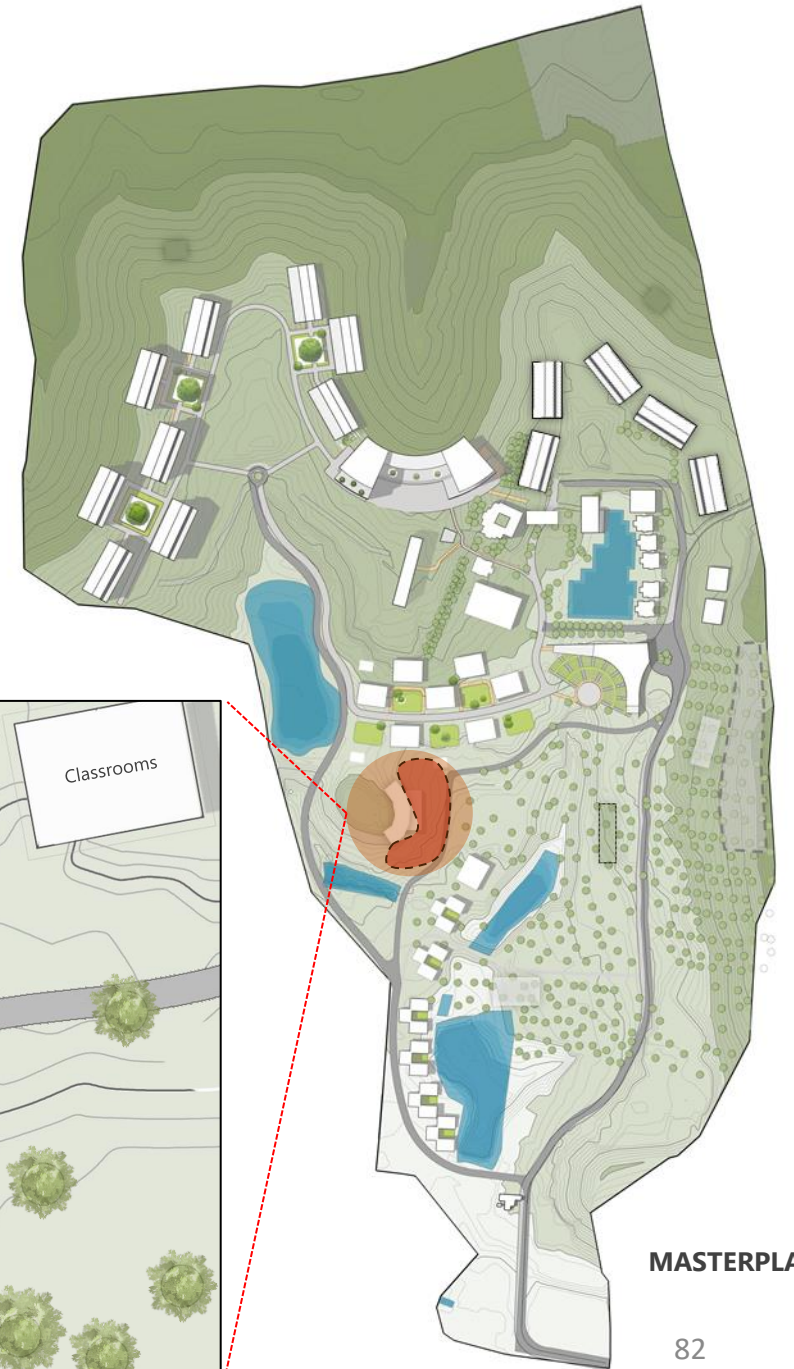


Total Capacity : 124 Pax

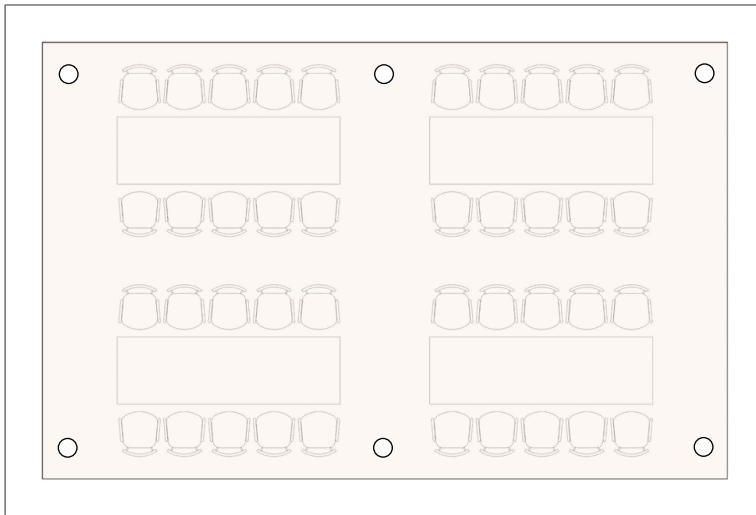
UNIQUE | KNOWLEDGE CENTRE
Library Building – Outdoor Seating



Reference images

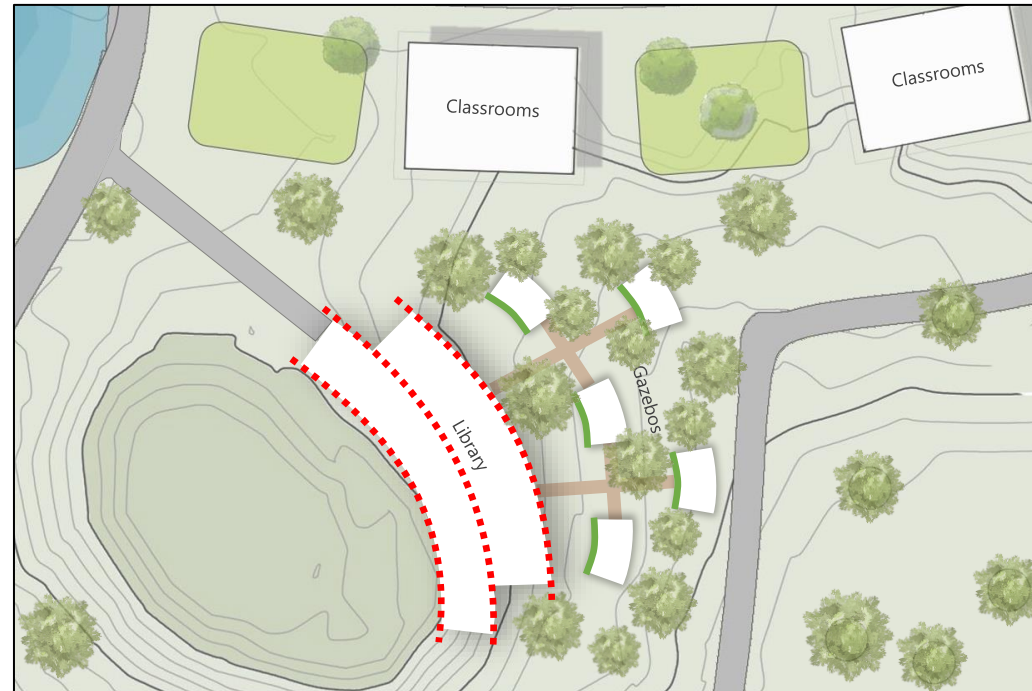


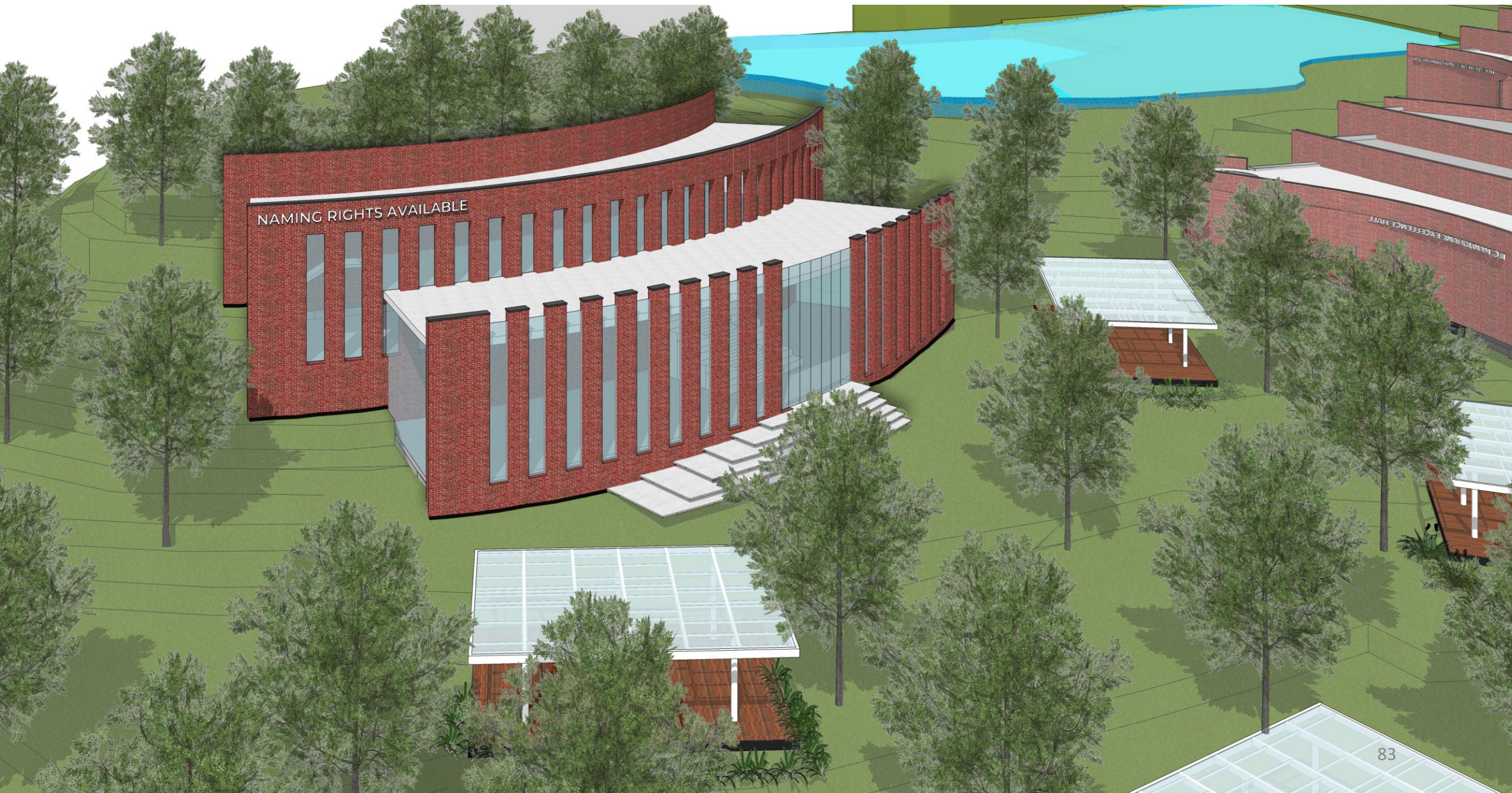
MASTERPLAN



TYPICAL GAZEBO PLAN

- Legend
- Roads
 - Green Wall





LIVABILITY



- **Layout Design** : >90% Daylight (Zero Glare) | >90% Cross Ventilation | 50% Reduction in Heat Gain |Acoustic comfort
- **Fitness** : 3 x 400 m and 800 m jogging trails | 2 basketball & 6 badminton courts | Yoga Decks
- **Recreation & Events** : 3000 capacity Amphitheatre | 1500 capacity Dining / Multipurpose halls
- **Landscape** : Sensitivity to seasonal variation

1. Zero Glare classroom:

The classrooms are designed with high window sills to cut off glare and facilitate cross ventilation through out the day.

2. Tiered and Angular seating:

For better visibility to all the students

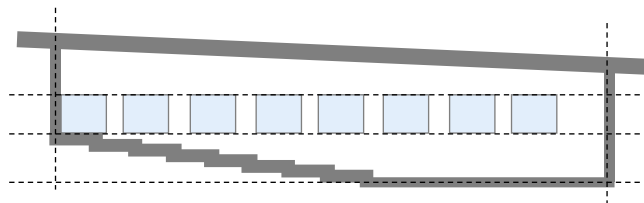
Built Volume required (as per NBC/Codes)

Total Built Up Area (based on 200 per class Population @3 sqm per person)	3,285 sqm. (35,350 sq. ft.)
--	-----------------------------

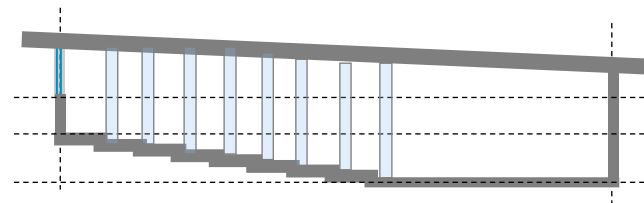
No. of new modules required (Running in 2 Shifts)	7 (24 X 18 m)
---	---------------



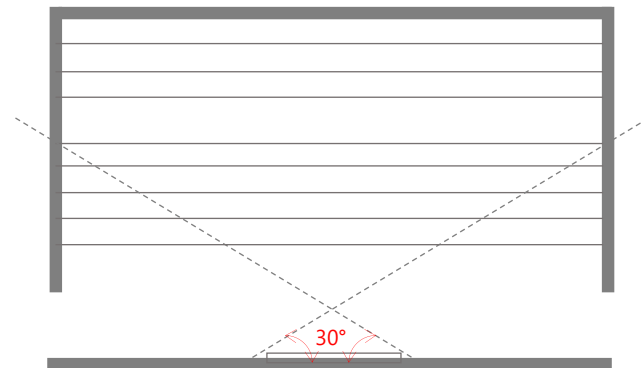
Reference images for Classroom windows



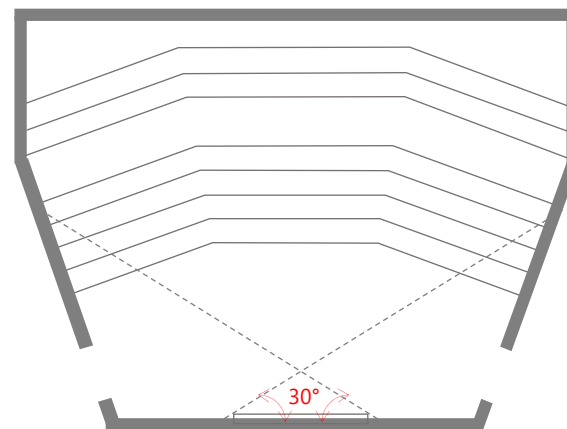
Tiered seating with window sill @ 1.44 m as per existing, problem of glare and zero ventilation



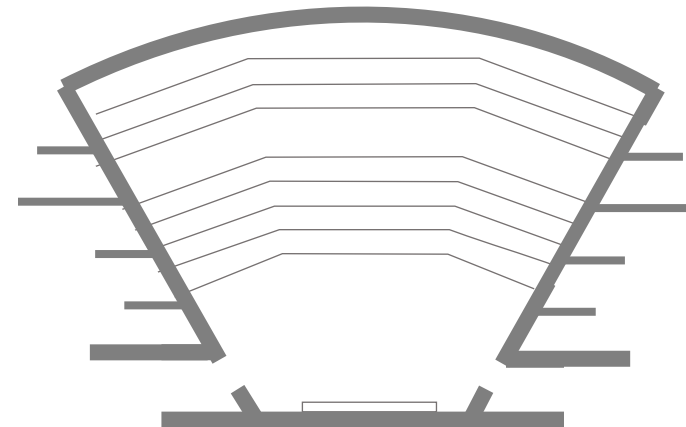
Strip windows along with Fins for Zero glare and cross ventilation



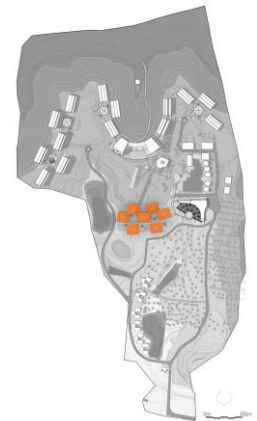
Difficulty viewing the board in linear arrangement



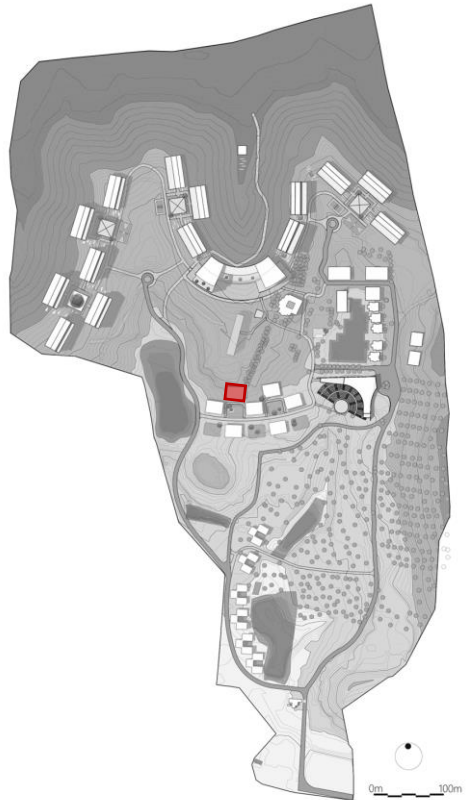
Arrangement of seats with respect to visibility angles



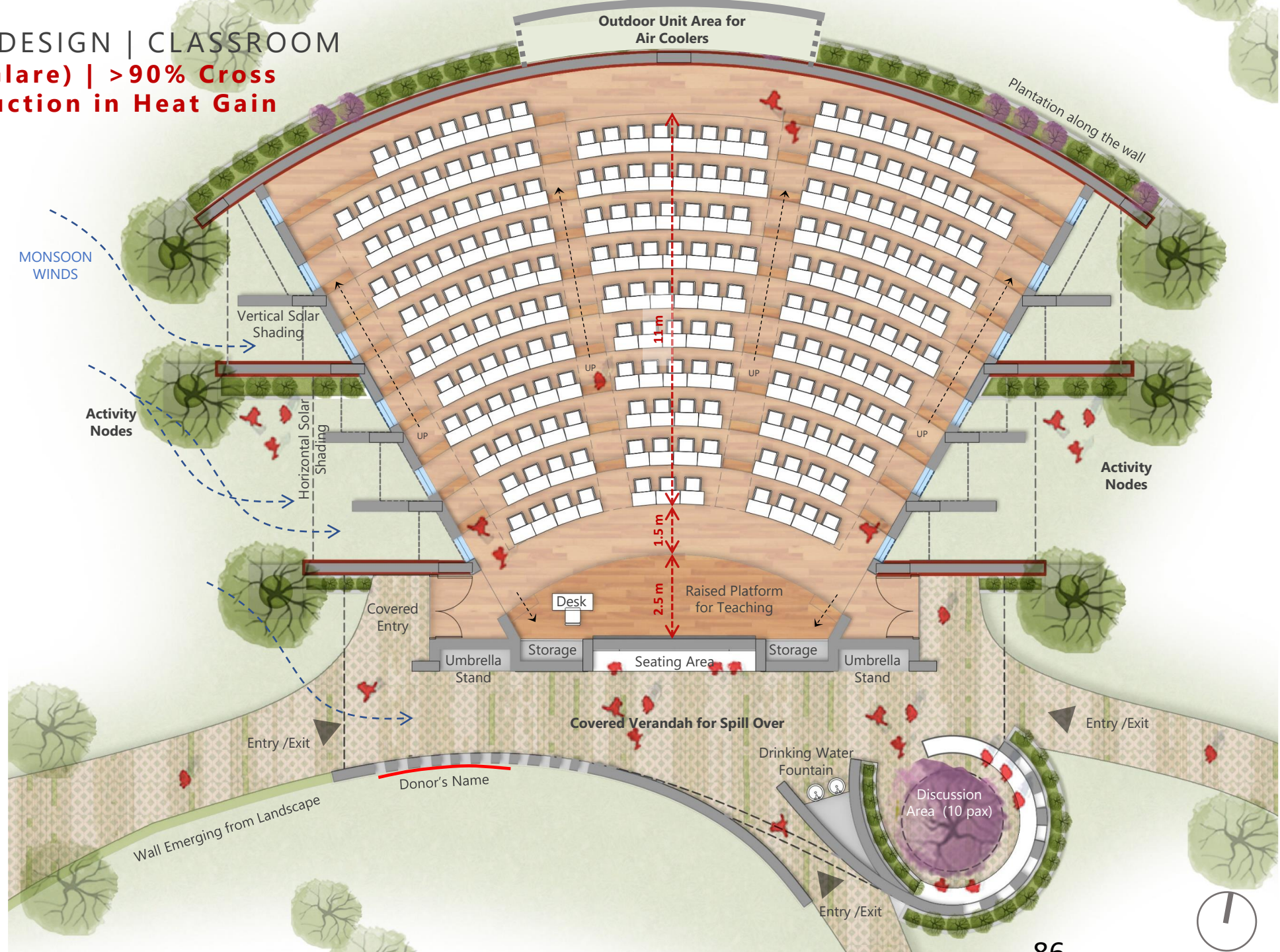
Reduce overcrowding and noise travel by introducing buffer space near entrance



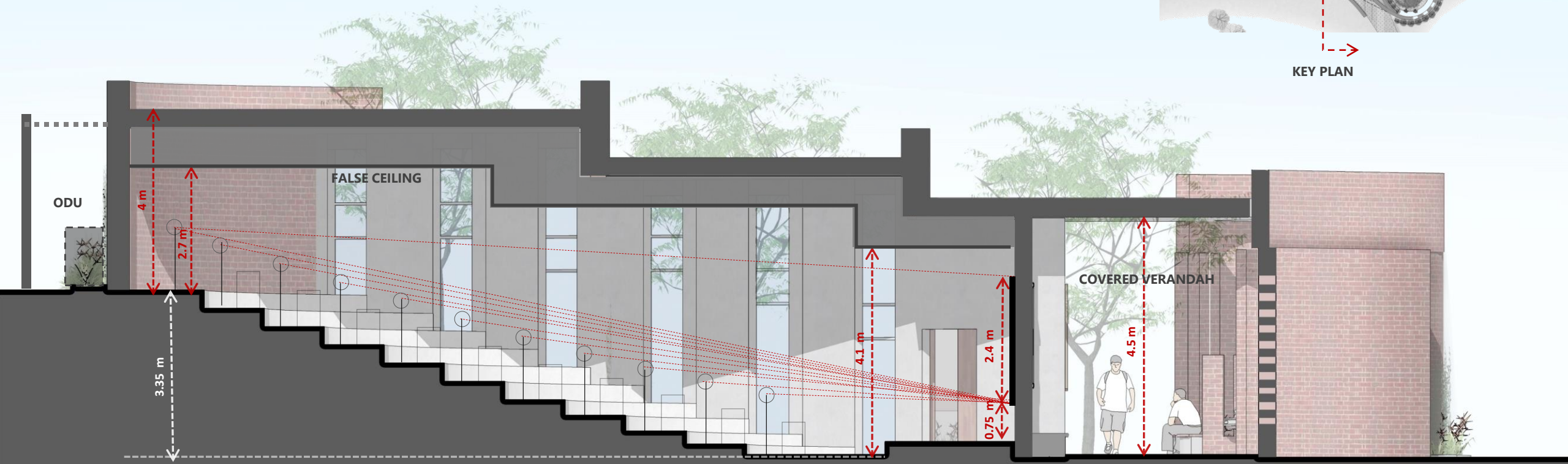
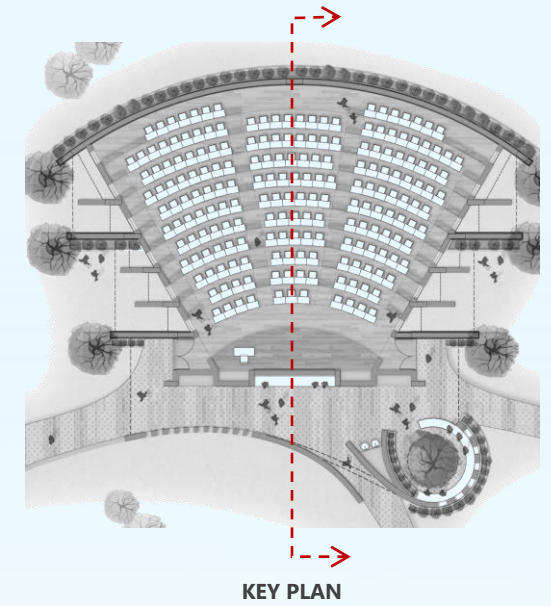
LIVABILITY | LAYOUT DESIGN | CLASSROOM
>90% Daylight (Zero Glare) | >90% Cross Ventilation
| 50% Reduction in Heat Gain
| Acoustic comfort



LOCATION PLAN

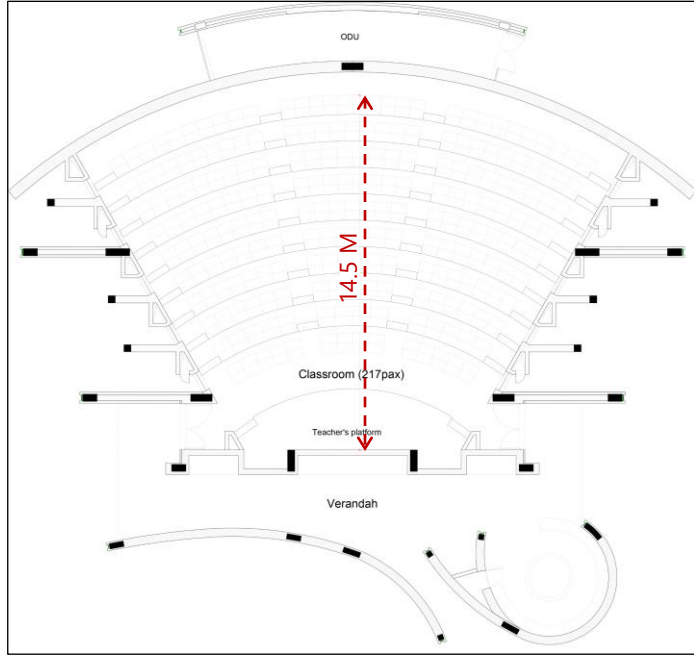


LIVABILITY | LAYOUT DESIGN | CLASSROOM



LIVABILITY | CLASSROOM | Revised

>90% Daylight (Zero Glare) | >90% Cross Ventilation | 50% Reduction in Heat Gain | Acoustic comfort
AREA: 4,700 SQFT

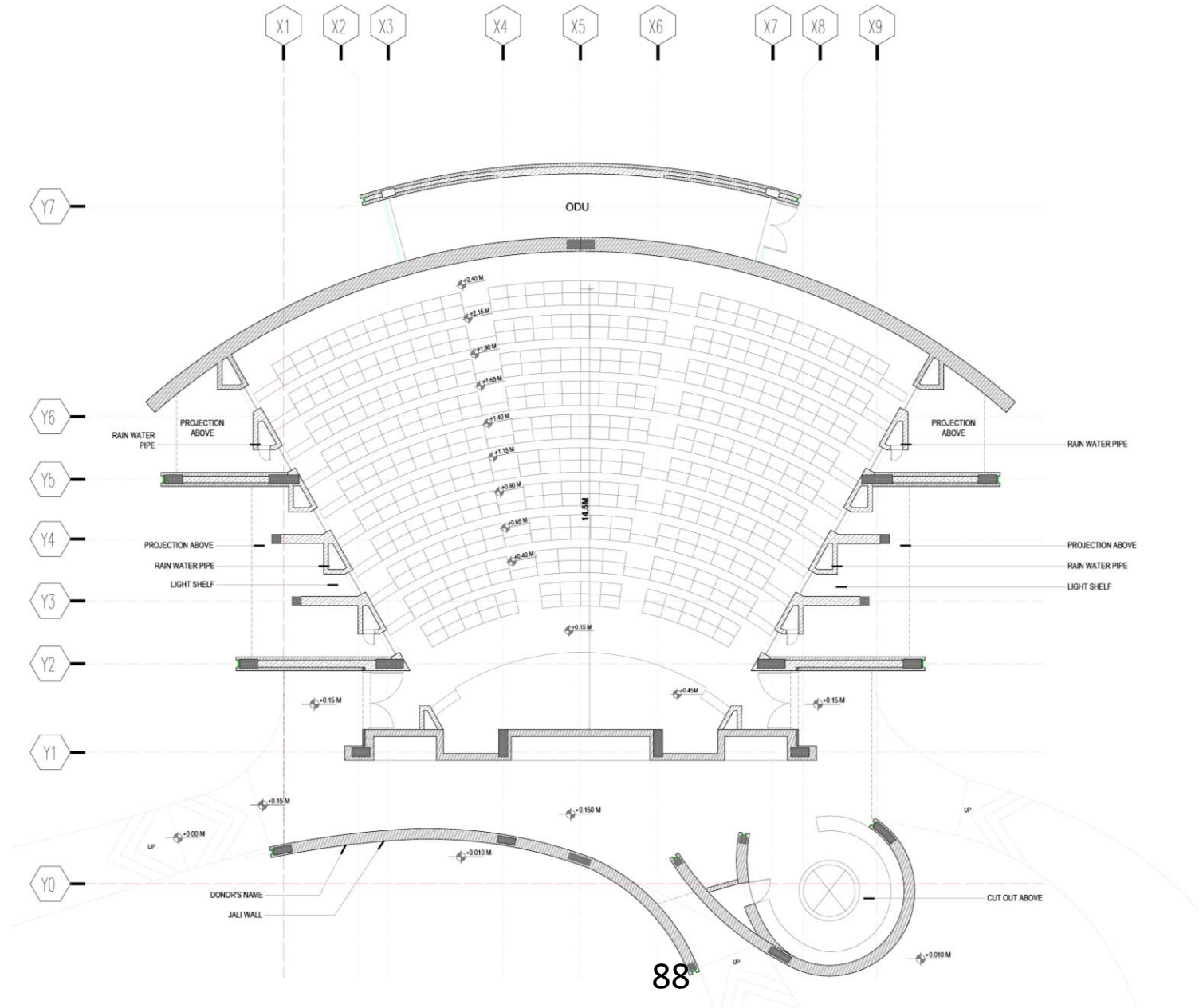


REVISED SEATING

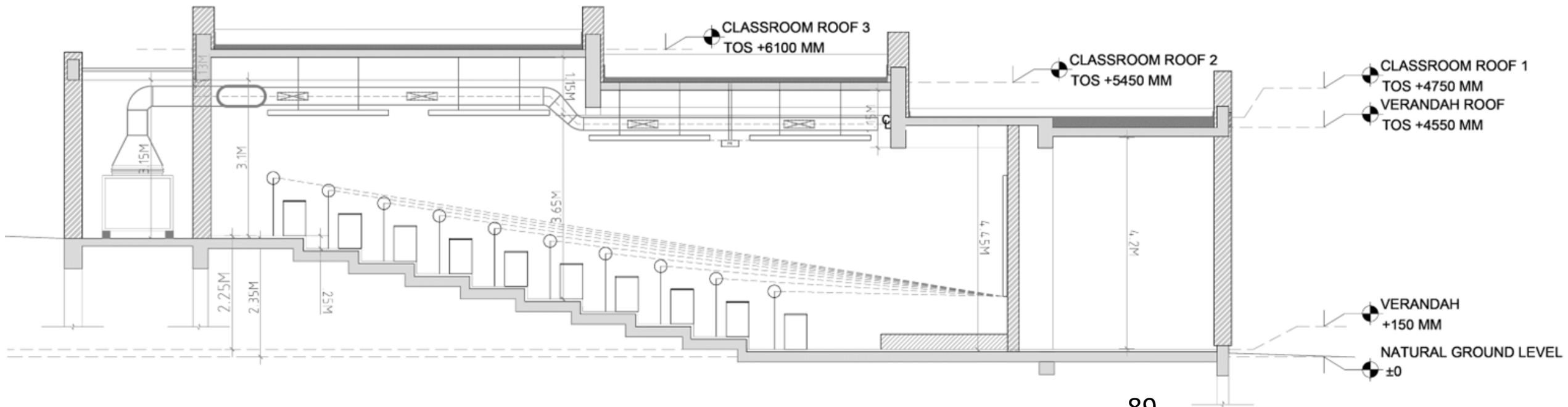
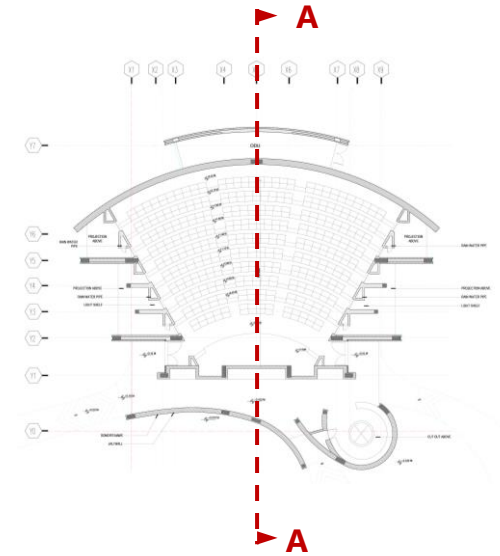
Capacity – 217 pax
Built-up area – 4700 sqft.

Specifications:

1. Number of rows - **10**
2. Average width of table for one student – **650mm**
3. Vision distance for last row – **14.77m**

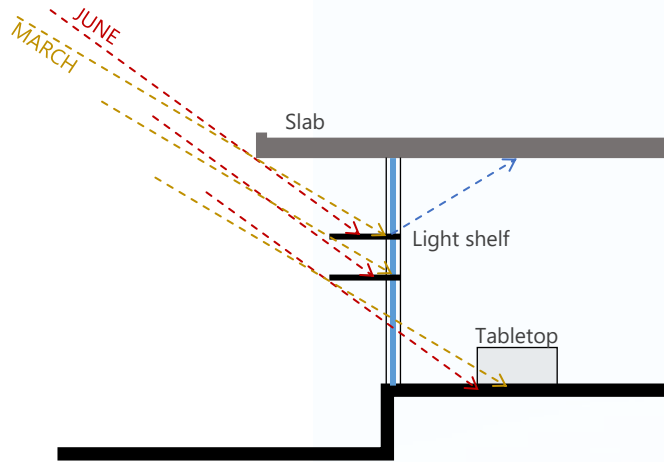


LIVABILITY | LAYOUT DESIGN | CLASSROOM
Section AA

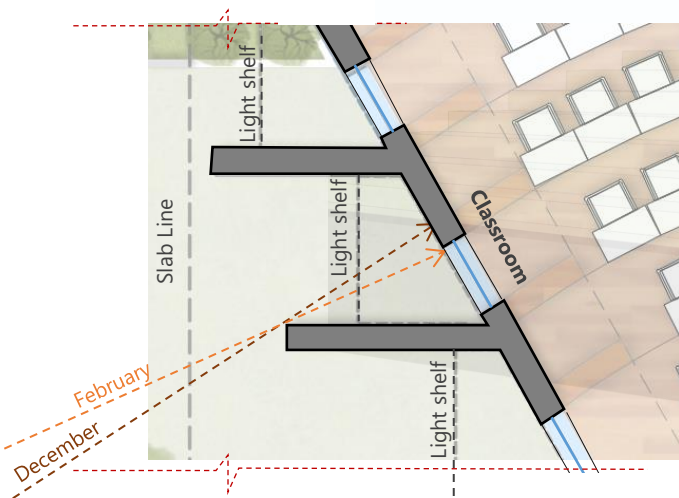


LIVABILITY | LAYOUT DESIGN | CLASSROOM

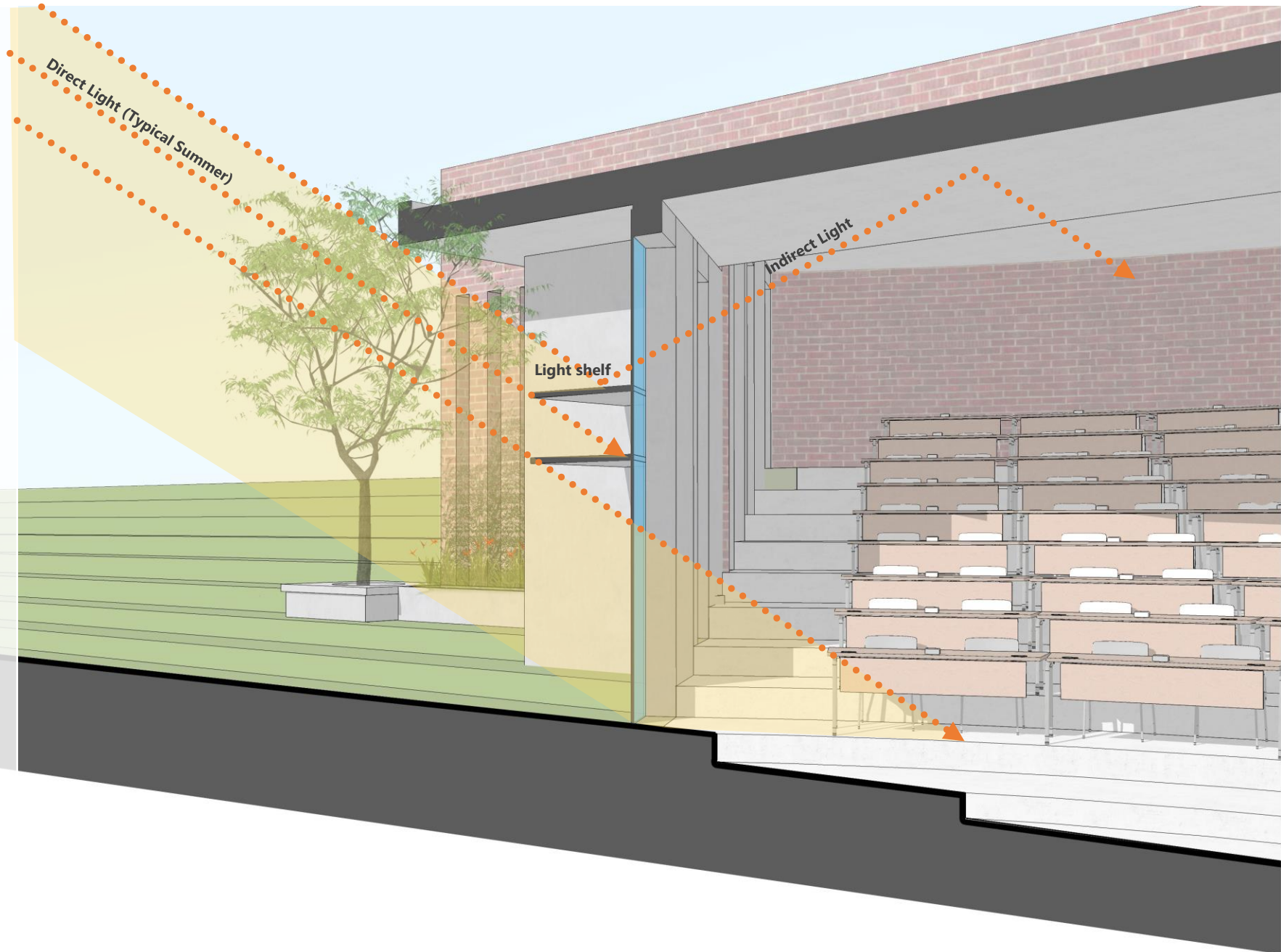
>90% Daylight (Zero Glare)



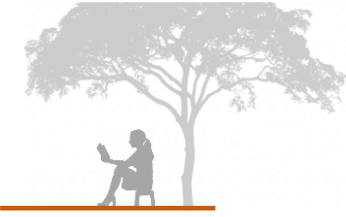
Detail – Section showing Horizontal Shading Elements to cut off harsh sun from **high summer sun** (26 – 36° Altitude Angle)



Detail – Plan showing Vertical Shading Elements to cut off harsh sun from **low winter sun**

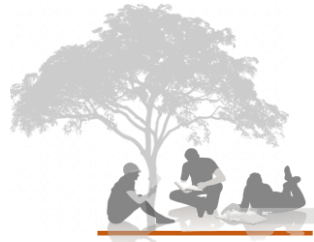


Activity Nodes in Landscape



Self Studying Spaces

For **an individual**



Discussion spaces

For **Larger Group** of Scholars



CLASSROOM VIEW



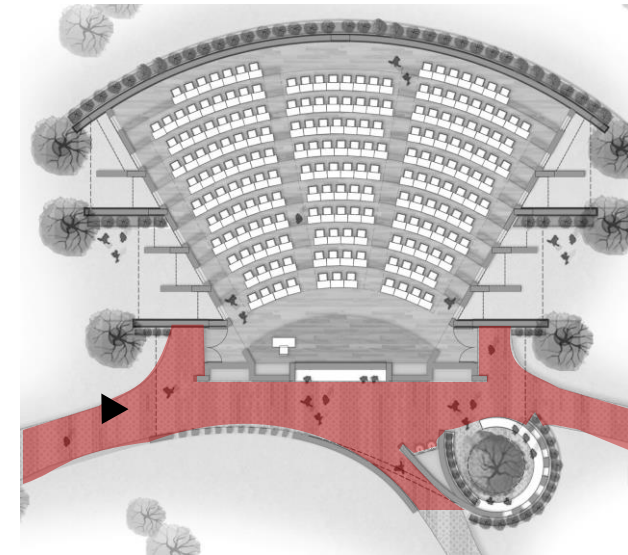
Covered verandah as spill over



VIEW OF VERANDAH

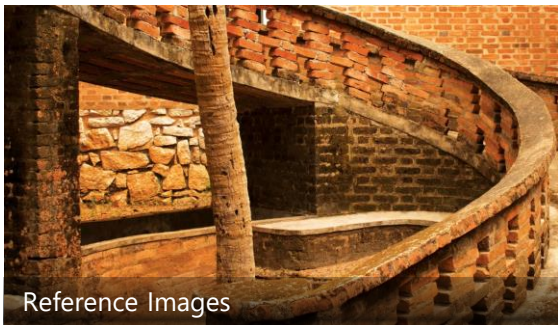


Reference Images of Jaali Wall for Verandah



KEY PLAN

LIVABILITY | CLASSROOM | CATALOGUE OF SPACES
Focused Discussion Areas



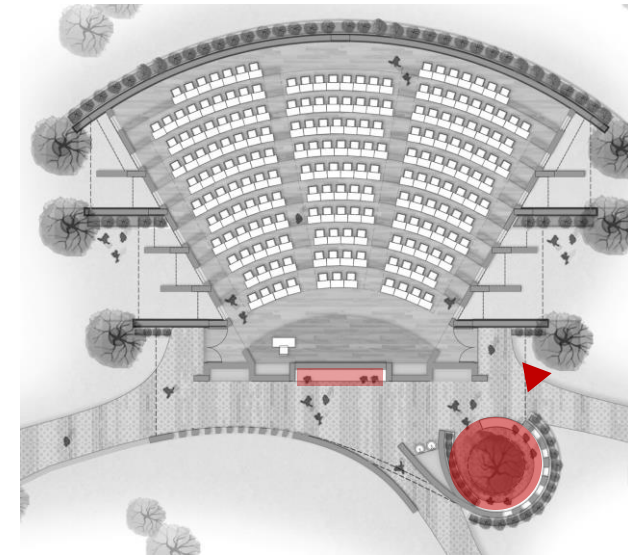
Reference Images



VIEW OF DISCUSSION COVE



INSPIRED FROM TRADITIONAL CHAUPALS



KEY PLAN

LIVABILITY | CLASSROOM | CATALOGUE OF SPACES

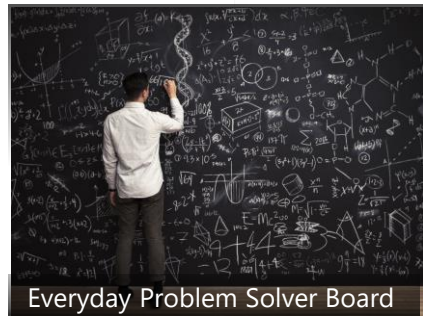
Information Zone



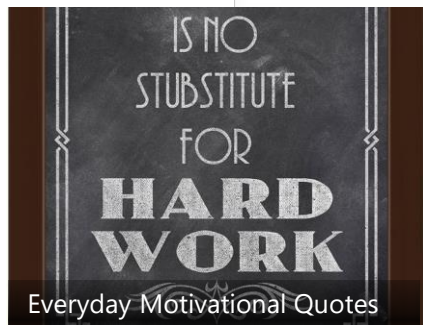
Educational Information



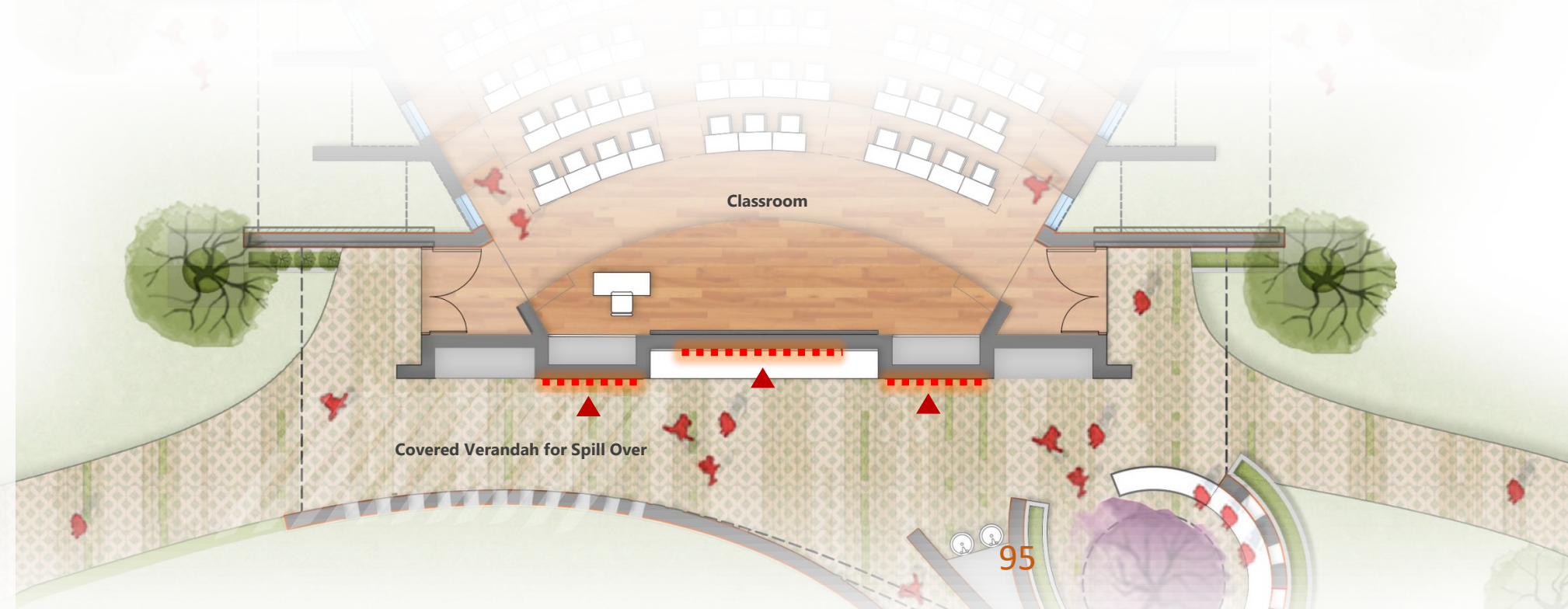
Spotlight Boards



Everyday Problem Solver Board



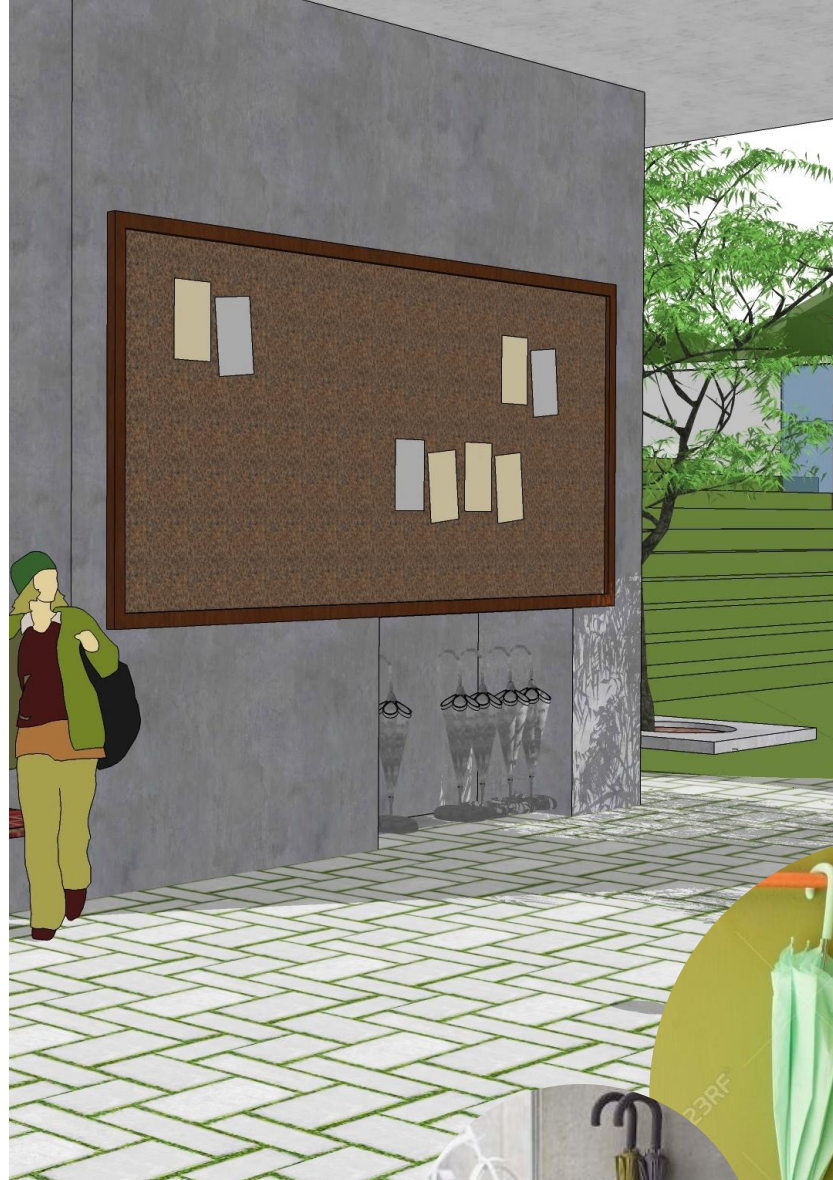
Everyday Motivational Quotes



Classroom

Covered Verandah for Spill Over

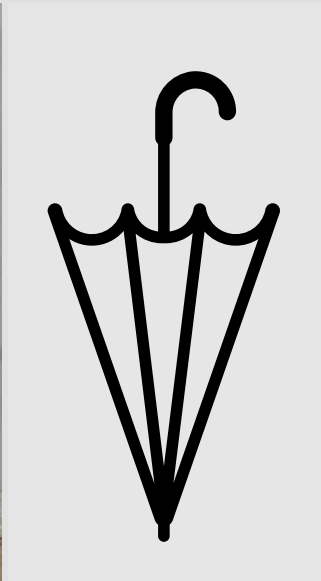
Umbrella stand and Water Fountain



SIGNAGE | OTHER AREAS
WAYFINDING SIGNAGE



Sanitizer Area



Umbrella Stand



Other Icons inside Classroom



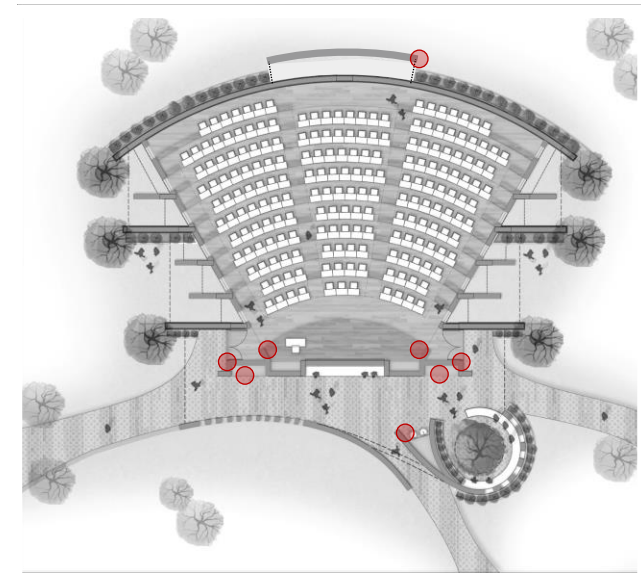
Service Area/ODU



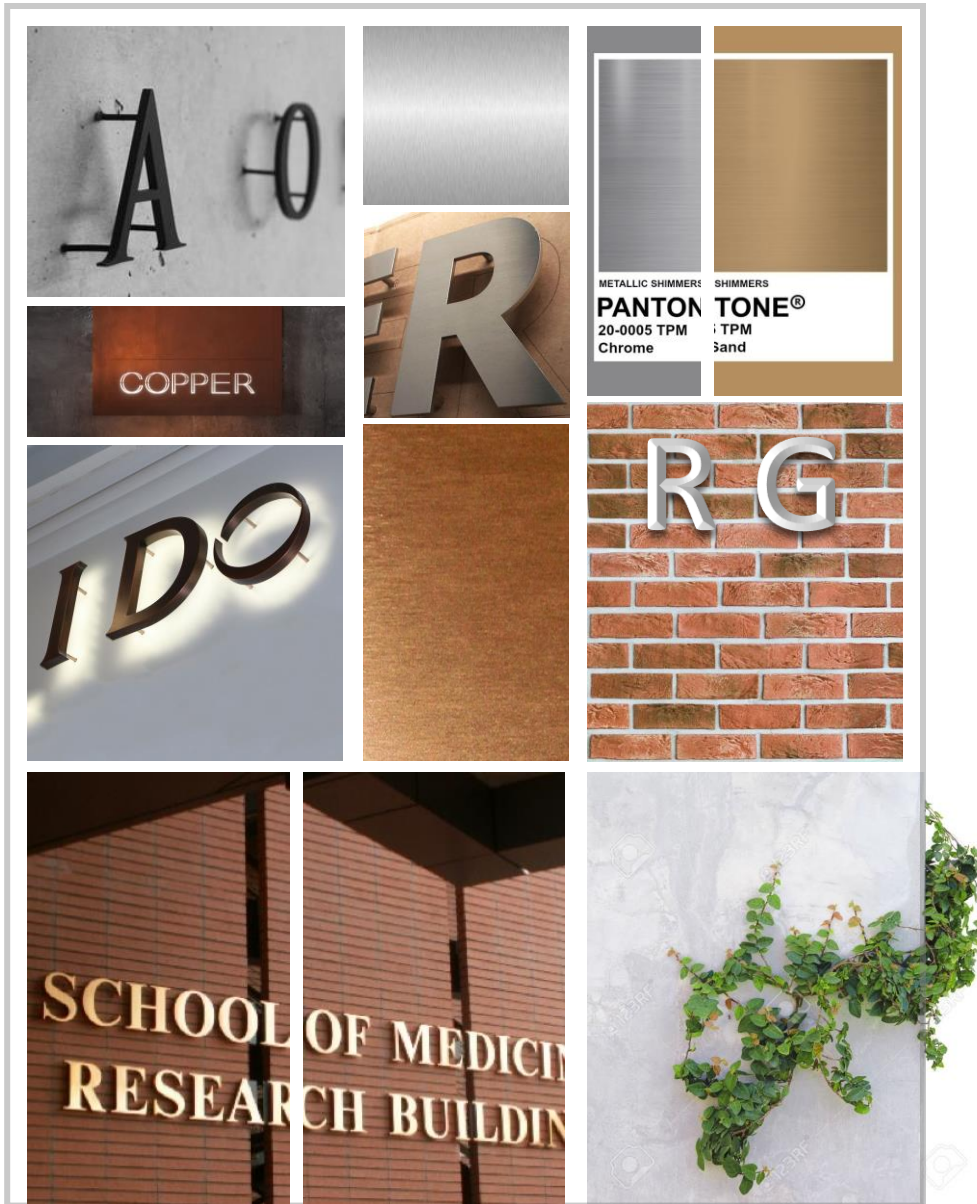
Drinking Water



Dustbin



IMPRESSION OF DONOR'S NAME



R.G. MANUDHANE EXCELLENCE HALL *(Montserrat font)*

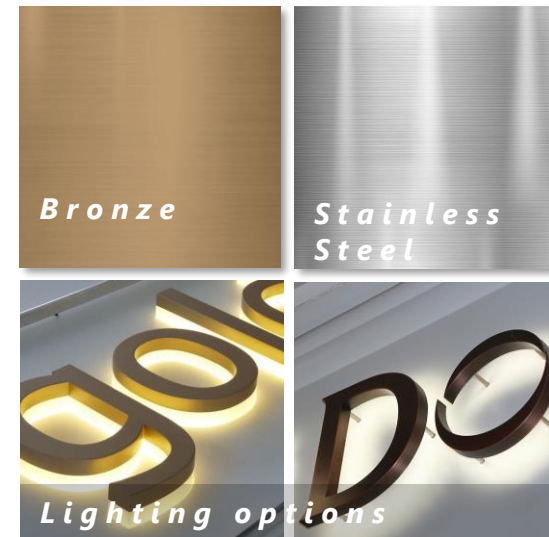
Note: Size, color and material to be finalized post mockup/samples on site



Signage Proposed in Montserrat font



plaque Proposed



THE R.G. MANUDHANE EXCELLENCE HALL

Dedicated to the memory of

Ramnarayan G. Manudhane
 1921 - 2012

who inspired and exemplified the relentless
 pursuit of excellence



Option 1: Cut in SS Plate



Option 2: Engraved in SS Plate



Reference on Brick

THE VISION ENHANCEMENT CLINIC

funded in loving memory of

Indira Manudhane
 1932 - 1976

Her compassion & love touched many hearts

Reference by Client



SIGNAGE | DESIGN INTENT
DONOR'S NAME

R.G. MANUDHANE EXCELLENCE HALL



R.G. MANUDHANE EXCELLENCE HALL

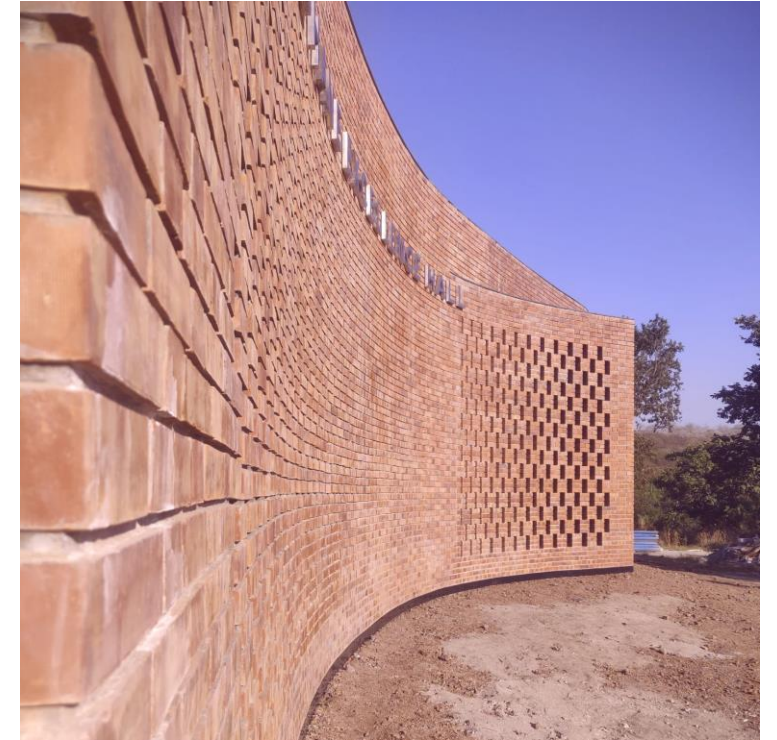


R.G. MANUDHANE EXCELLENCE HALL

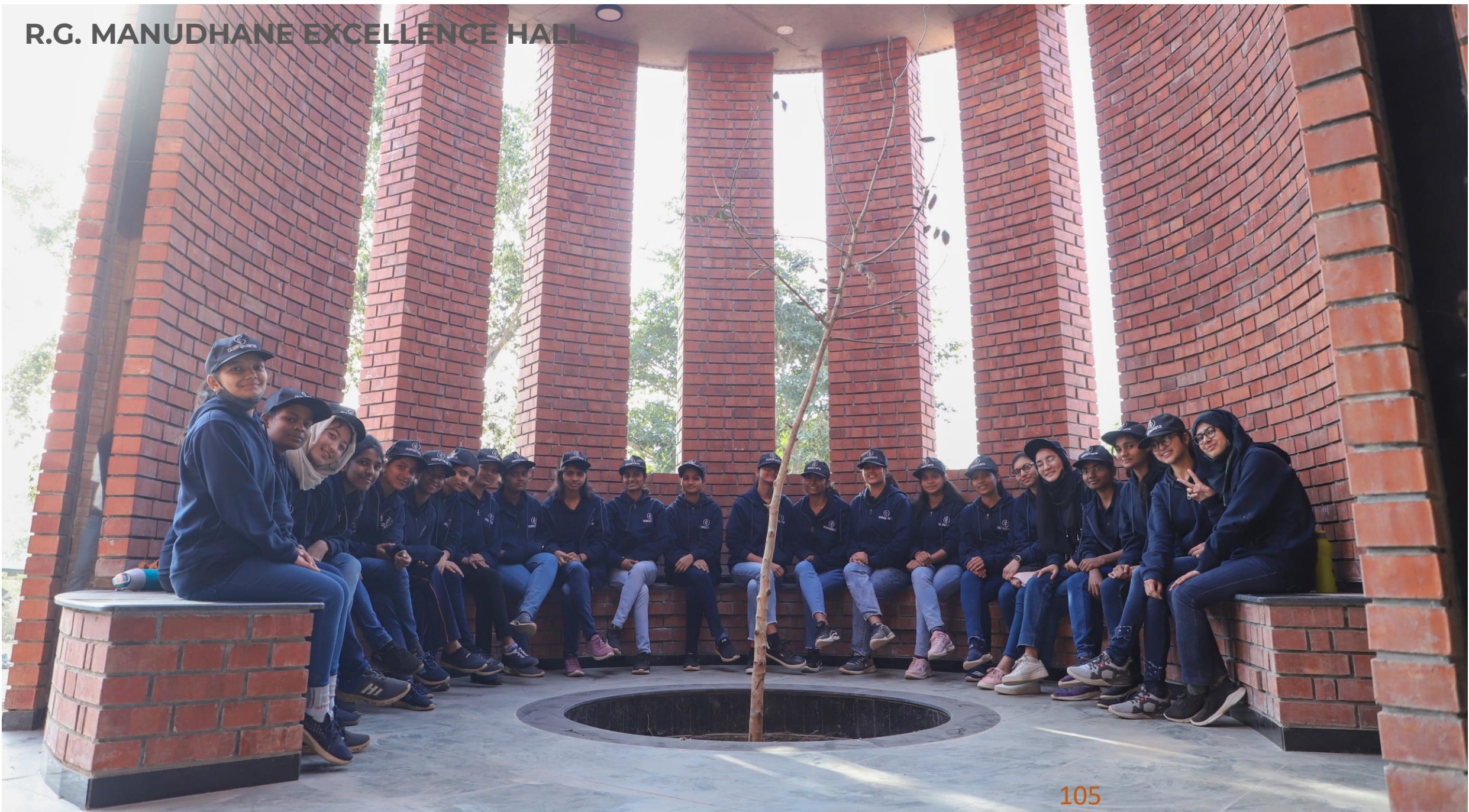
R.G. MANUDHANE EXCELLENCE HALL



R.G. MANUDHANE EXCELLENCE HALL



R.G. MANUDHANE EXCELLENCE HALL









COST ESTIMATE

Units	Total Unit area (sq.ft.)	Total Area (sq.ft.)	Category	Rate/sq.ft. (INR)	Estimate (INR)
1	5,000	5,000	Architecture	1,120	5,600,000
			MEP	350	1,750,000
			Structure	1,560	7,800,000
				3,030	15,150,000
			Add-on (taxes @18%, consultancy @ 3% and contractor @4% fees) @ 25%		3,787,500
			Total		18,937,500
			Furniture		2,500,000
			Signage		250,000
			Equipment		1,500,000
			Grand Total		23,187,500
			Rate per sqft.		4,638

Notes:

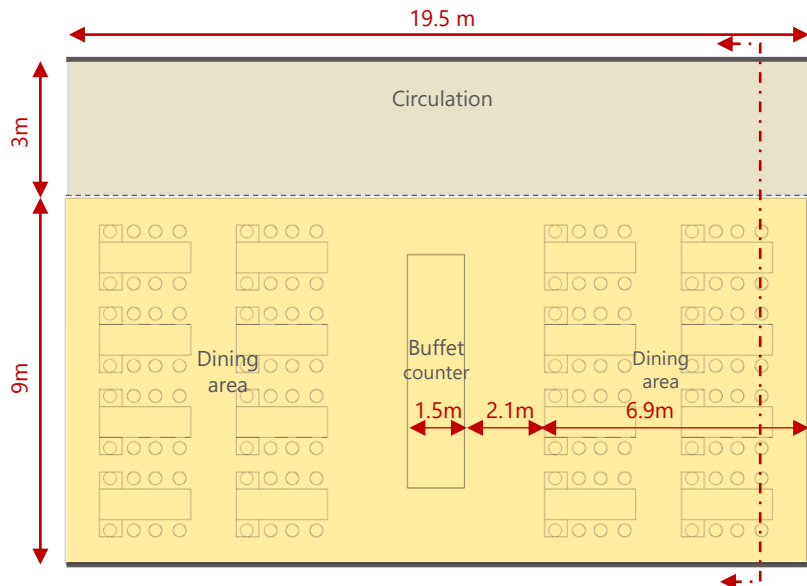
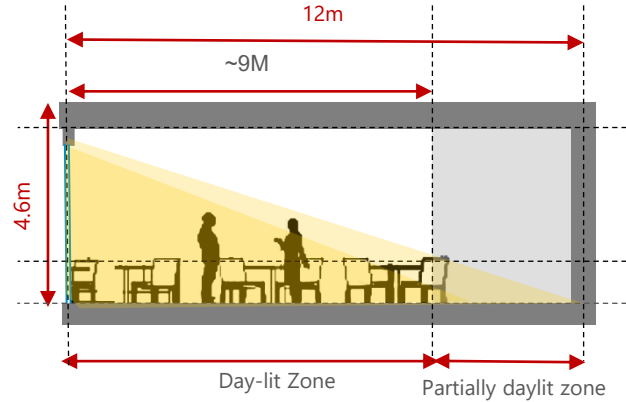
1. Combination of Granite and Kota stone considered for flooring.
2. Façade work includes the exposed bricks, mortar and labour.
3. Air washer system with heat and sound insulation in ducts is considered for ventilation.
4. Fire extinguishers considered in fire fighting systems.
5. L-angle (50*50*4) for exposed brickwork considered in structural metal work.
6. Students seating, Teacher's pedestal, door and cabinets considered in furniture.
7. All AV equipments and Green board considered in equipment.



Total Estimated Cost INR : 25,671,225

Total Estimated Cost USD: 342,283

1. Optimal Daylight : 13m depth based on optimal daylight penetration inside the dining hall including 4m circulation space for students.

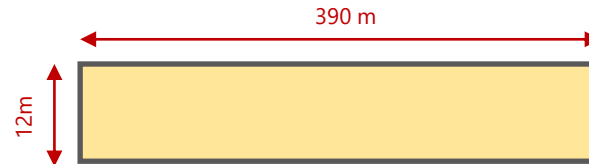


Module of Dining

Built Volume required (as per NBC/Codes)

Total Built Up Area
(based on 1,300 Population @3.5 sqm per person including kitchen) 4,505 sqm. (48,500 sq. ft.)

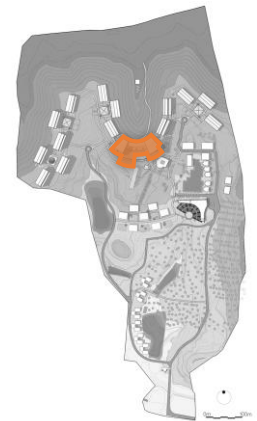
No. of modules required for dining (for 1300 population) 10 (12 X 19.5 m)



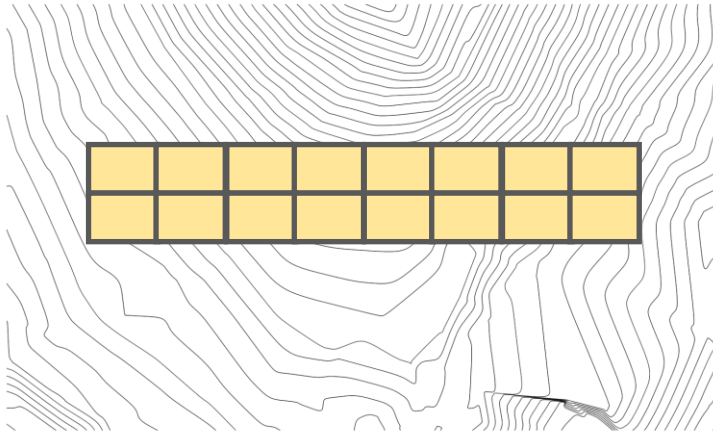
7,800 sq. m . (83,960 sq. ft.) Floor Plate Area for dining hall @390m Length



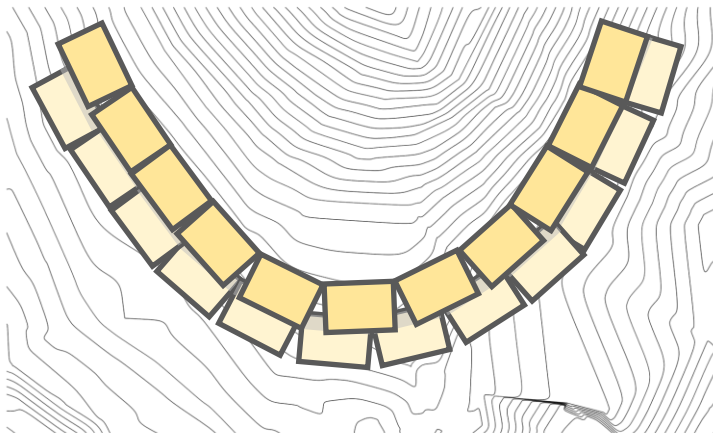
Reference images



2. Built Volume on site with respect to view and contours divided in 2 levels to reduce the corridor length



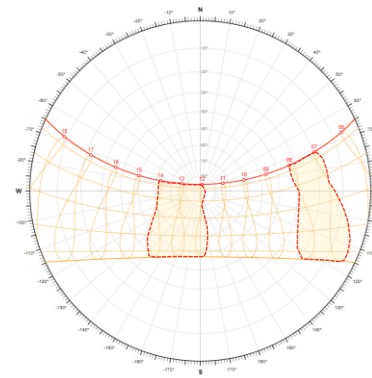
Modules placed on site, no relation to the existing contour



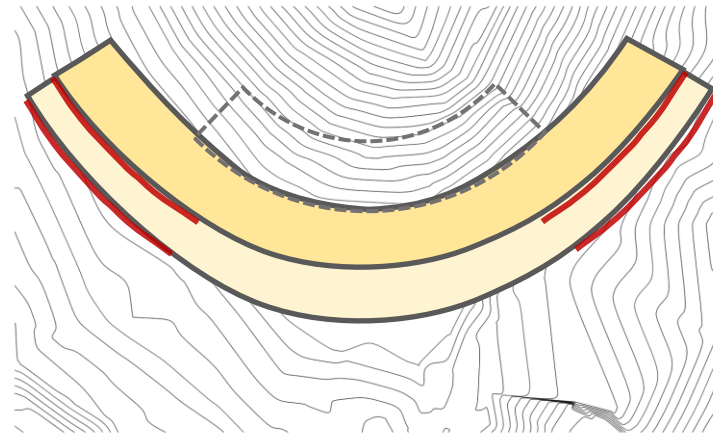
Orienting the modules as per contours

3. Orientation with respect to sun path:

Since the dining space is being used for a brief time in early morning & afternoon it is preferred to orient the longer side of the buildings towards south which helps in minimal Shading and in creating shaded Recreational Courts & Walkways.



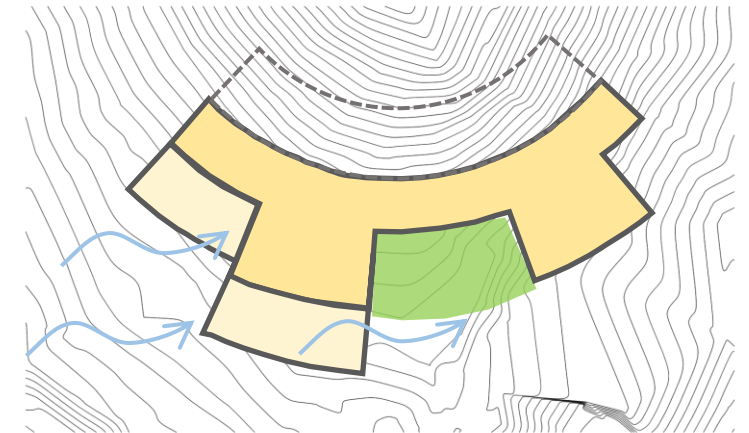
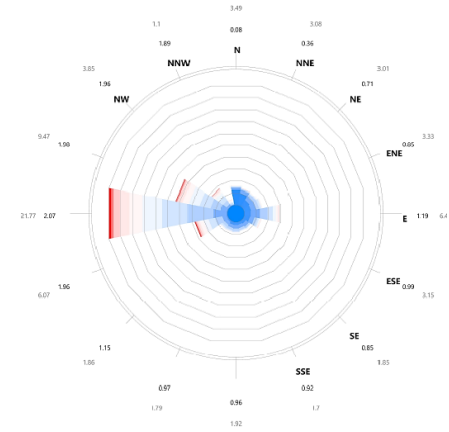
Occupied Hours:
7am-8am
12pm-2pm
8pm-9pm



Minimizing large Surfaces exposed to East-West low sun angles

4. Orientation with respect to Wind Direction:

High relative humidity for most part of the year. Need for increasing Air-movement, large openings to be provided on East and West facade to capture to westerly winds and facilitate cross ventilation

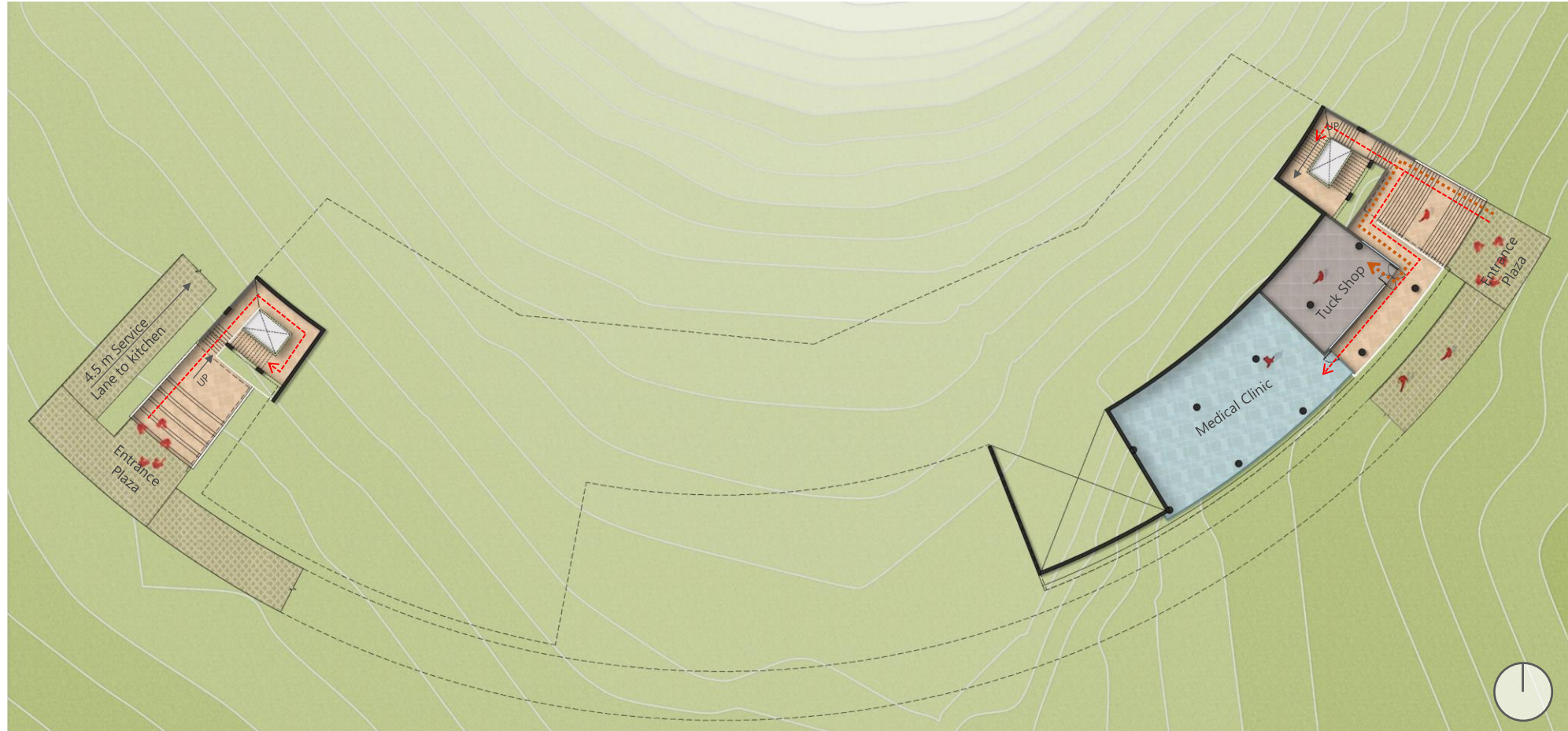
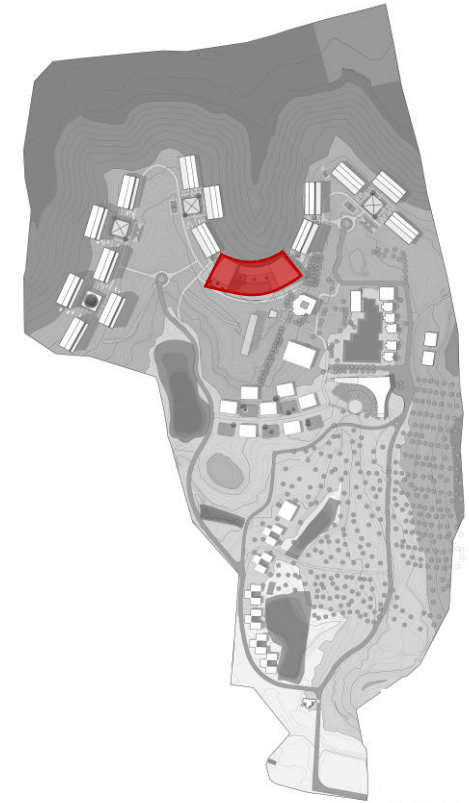


Maximizing cross ventilation indoors



LIVABILITY | LAYOUT DESIGN | DINING HALL

>90% Daylight (Zero Glare) | >90% Cross Ventilation | 50% Reduction in Heat Gain

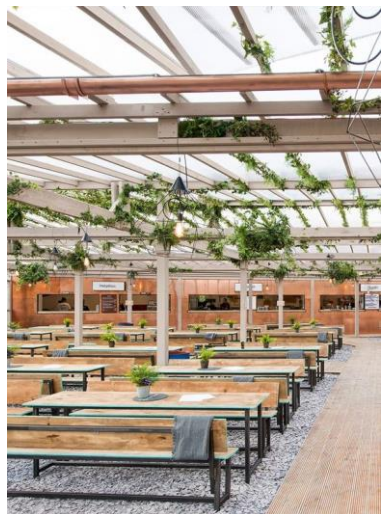


GROUND FLOOR PLAN

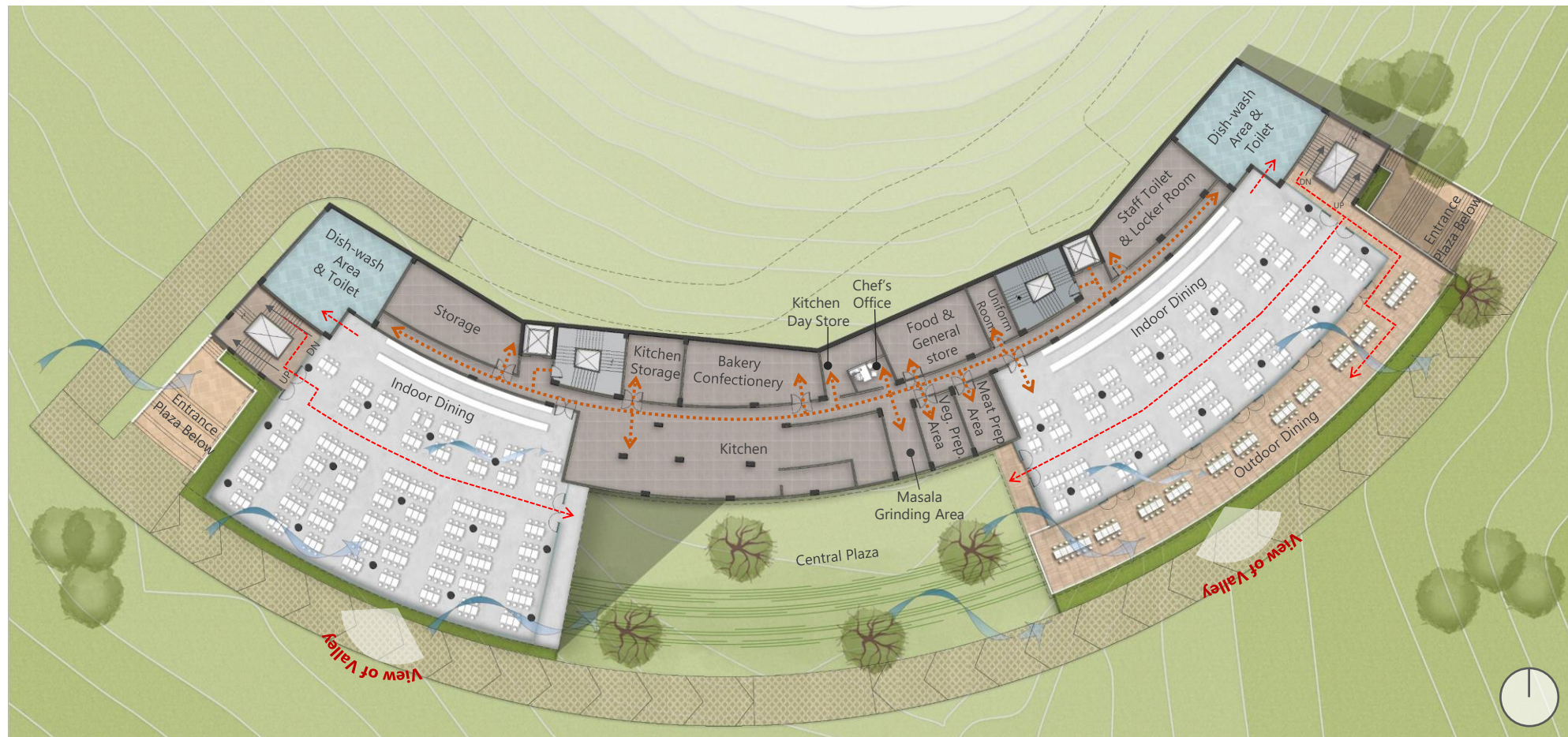
- Legend
- ←- - - - - Service Circulation
 - ←- - - - - Students' circulation

LIVABILITY | LAYOUT DESIGN | DINING HALL

>90% Daylight (Zero Glare) | >90% Cross Ventilation | 50% Reduction in Heat Gain



Reference images for Landscape inclusion



FIRST FLOOR PLAN

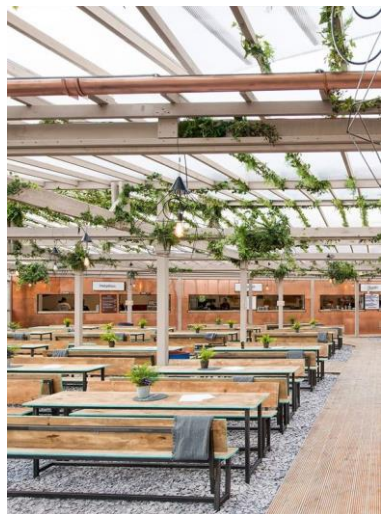
Total Capacity : 746 Pax

Legend

- ← - - - - - Service Circulation
- ← - - - - - Students' circulation

LIVABILITY | LAYOUT DESIGN | DINING HALL

>90% Daylight (Zero Glare) | >90% Cross Ventilation | 50% Reduction in Heat Gain



Reference images for Landscape inclusion



SECOND FLOOR PLAN
Total Capacity : 752 Pax

Legend

←- - - - - Service Circulation

←- - - - - Students' circulation
114

LIVABILITY | DINING HALL | CATALOGUE OF SPACES

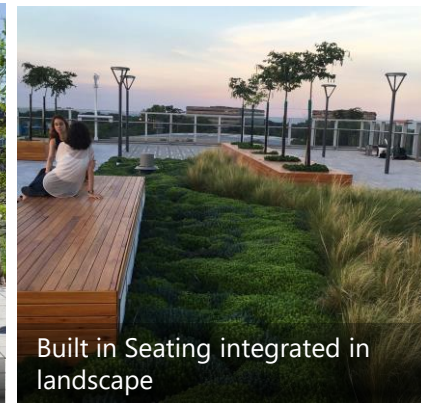
Terraces & Plazas as Social Engagement Zone



Landscape Reference



Reference for Seating



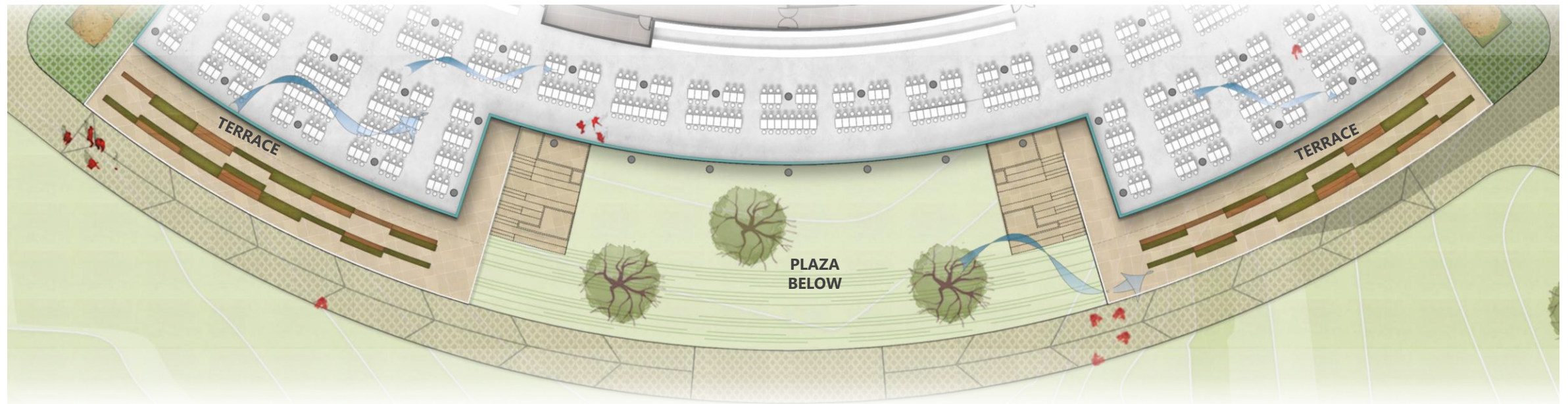
Built in Seating integrated in landscape



Group Discussion Areas



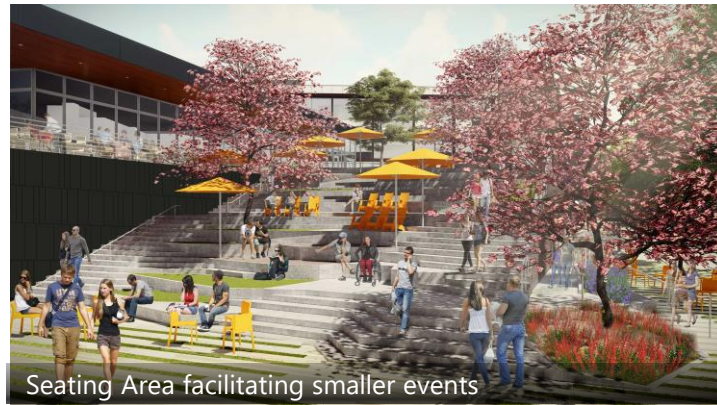
Faculty-Student Interaction Zone



LIVABILITY | DINING HALL | CATALOGUE OF SPACES
VERTICAL CIRCULATION AS INTERACTION SPACES



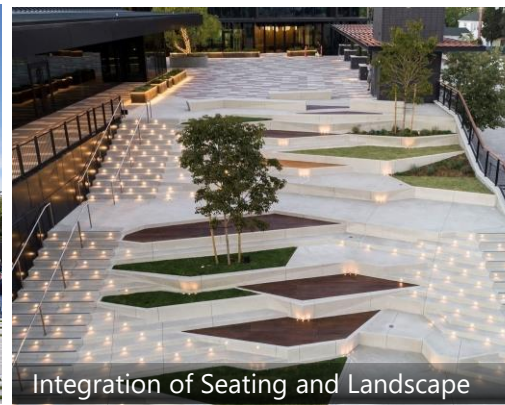
Social Zones integrated with Circulation spaces



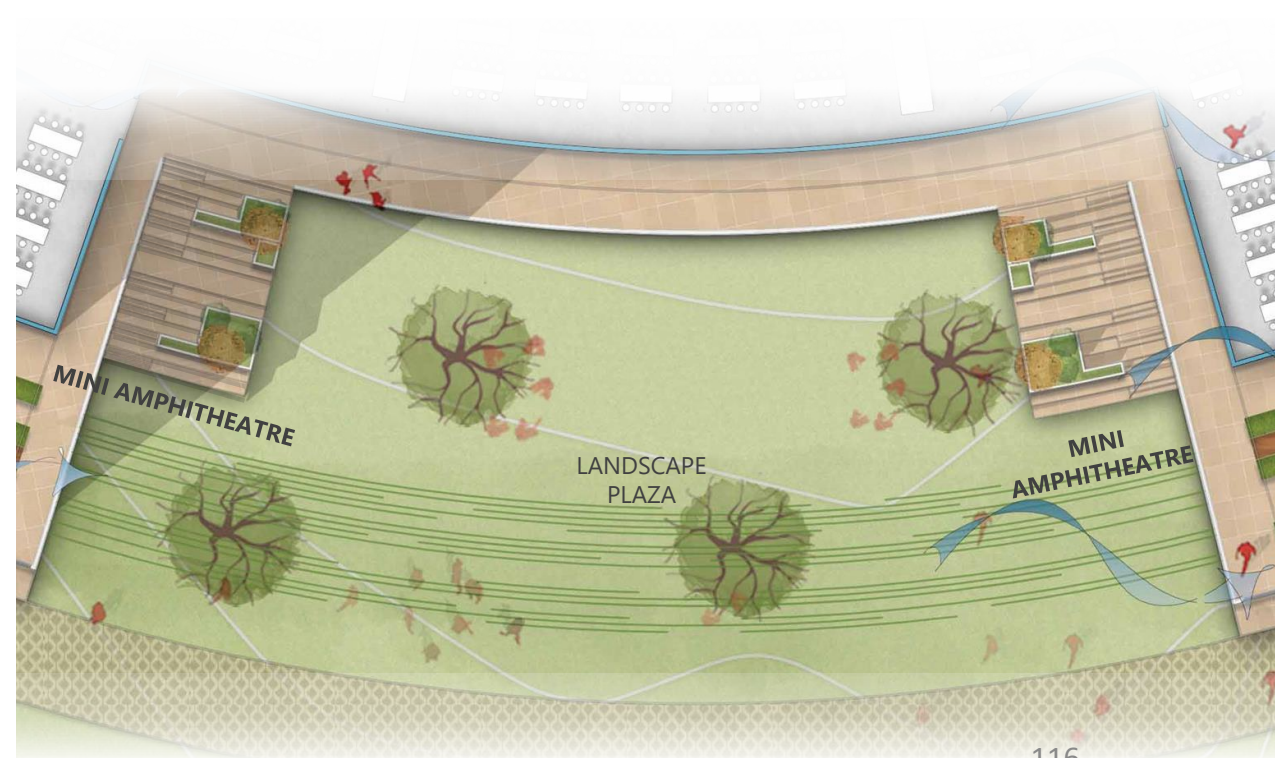
Seating Area facilitating smaller events



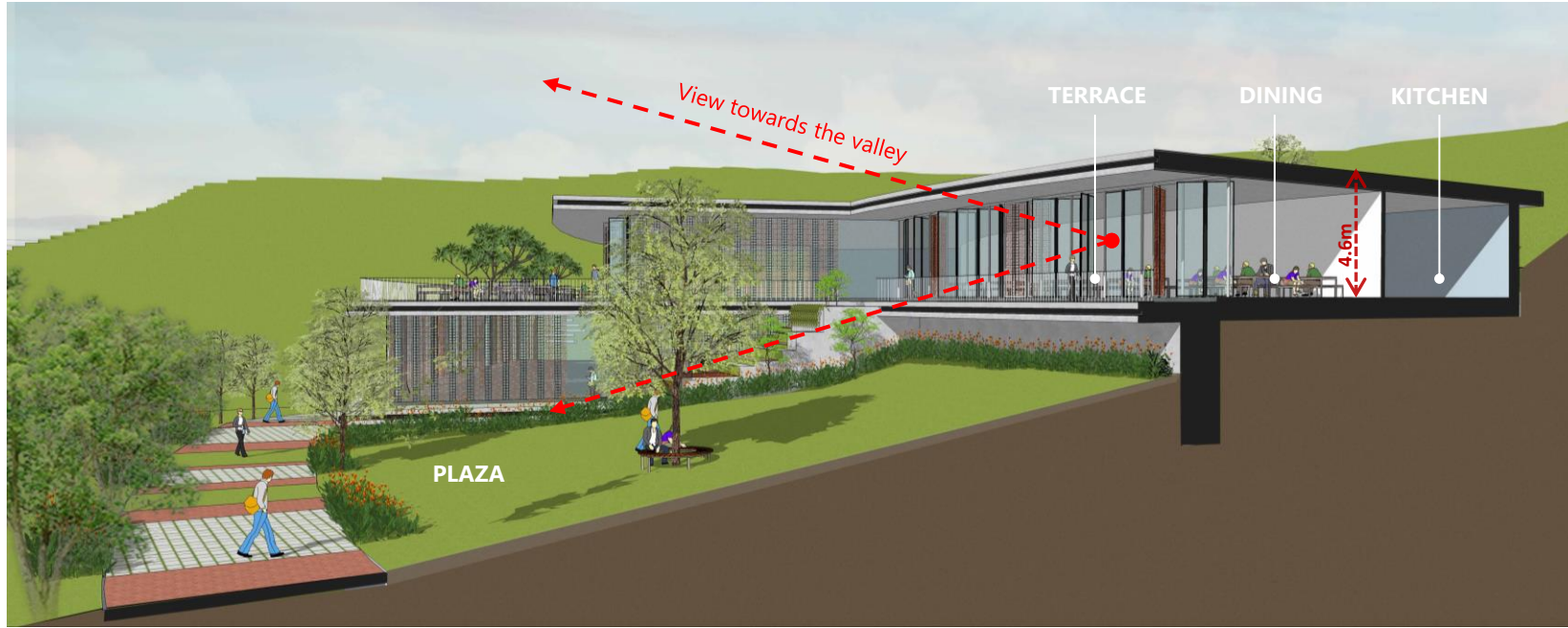
Mini Amphitheatre



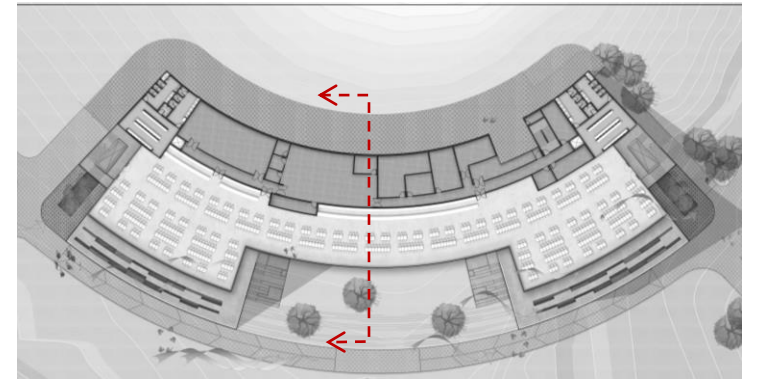
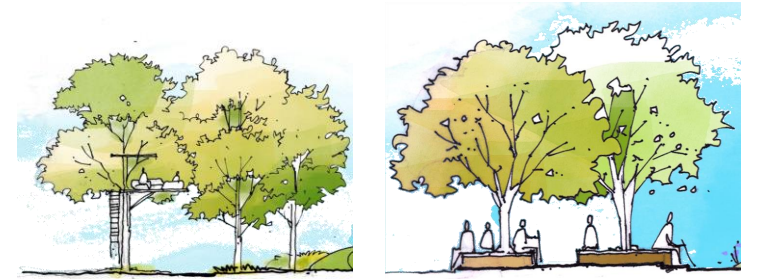
Integration of Seating and Landscape



Central Plaza



SCHEMATIC SECTION





Outdoor Terrace



DINING HALL VIEW



COST ESTIMATE

Units	Total Unit area (sq.ft.)	Total Area (sq.ft.)	Category	Rate/sq.ft. (INR)	Estimate (INR)
1	60,000	60,000	Architecture	840	50,400,000
			MEP	825	49,500,000
			Structure	1,335	80,100,000
				3,000	180,000,000
			Add-on (taxes @18%, consultancy @ 3% and contractor @4% fees) @ 25%		45,000,000
			Total		225,000,000
			Furniture		9,000,000
			Signage		1,500,000
			Equipment		53,620,000
			Grand Total		289,120,000
			Rate per sqft.		4,819

Notes:

1. Combination of Granite and Kota stone considered for flooring.
2. Façade work includes Glass and Jaali (MS/terracotta).
3. False ceiling only for kitchen area considered.
4. Added Rs. 50 for Light fixtures and Rs. 40 for Bathroom fixtures.
5. Fire extinguishers considered in fire fighting systems.
6. Considered Rs. 5000/student for furniture for 1425 people (whole dining capacity).
7. The cost of Phase-1 construction is on 60% of total area of building. This proportion is subject to change in detail level planning.

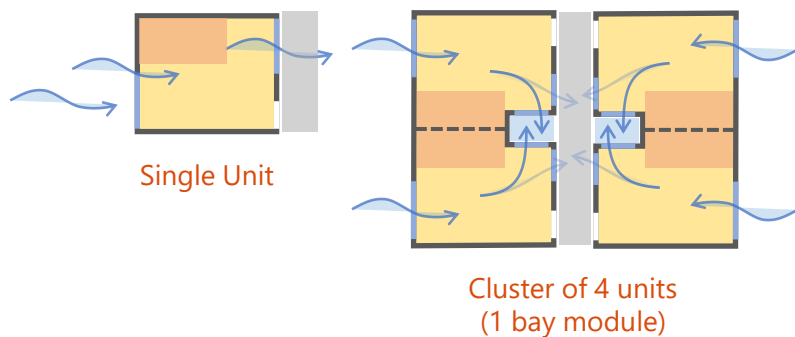


Total Estimated Cost INR : 289,120,000

Total Estimated Cost USD: 3,854,933

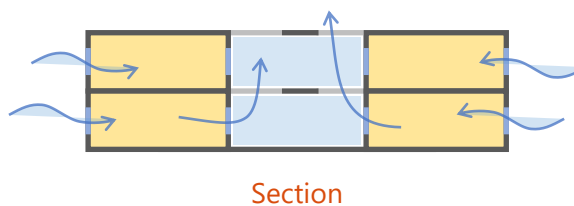
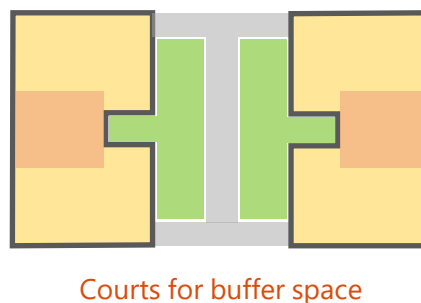
1. Orienting the built mass with respect

to wind direction: Due to high relative humidity openings are oriented towards E-W which facilitates in cross ventilation



2. Arranging the

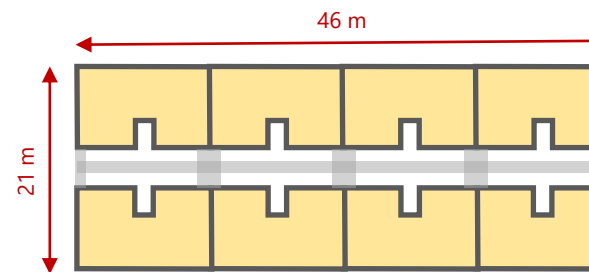
units with respect to circulation: Shaded courts and corridors



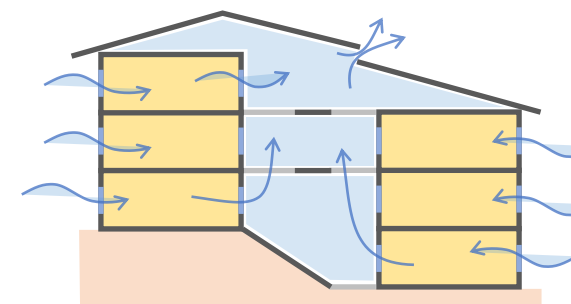
Built Volume required (as per NBC/Codes)

Total Built Up Area (based on 2,600 Population @10 sqm per person)	26,040 sqm. (2,80,296 sq. ft.)
--	--------------------------------

No. of units required (for 2600 population)	650 (16 units per floor)
---	--------------------------



16 units (64 pax) per floor plate



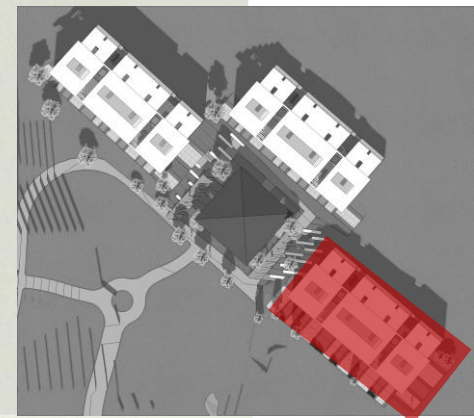
LIVABILITY | LAYOUT DESIGN | HOSTEL CLUSTER PLAN

>90% Daylight (Zero Glare) | >90% Cross Ventilation | 50% Reduction in Heat Gain



GROUND FLOOR PLAN

Hostel rooms : 15 Nos. (180 Pax) + Warden/Faculty room)



KEY PLAN

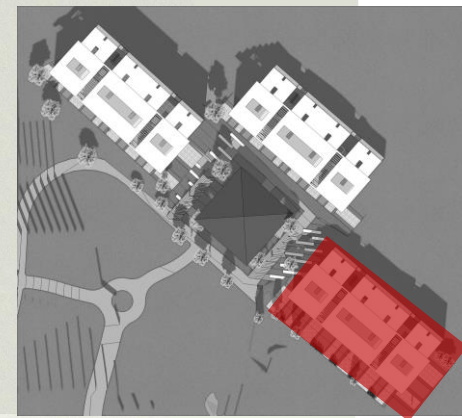


LIVABILITY | LAYOUT DESIGN | HOSTEL CLUSTER PLAN

>90% Daylight (Zero Glare) | >90% Cross Ventilation | 50% Reduction in Heat Gain



TYPICAL FLOOR PLAN

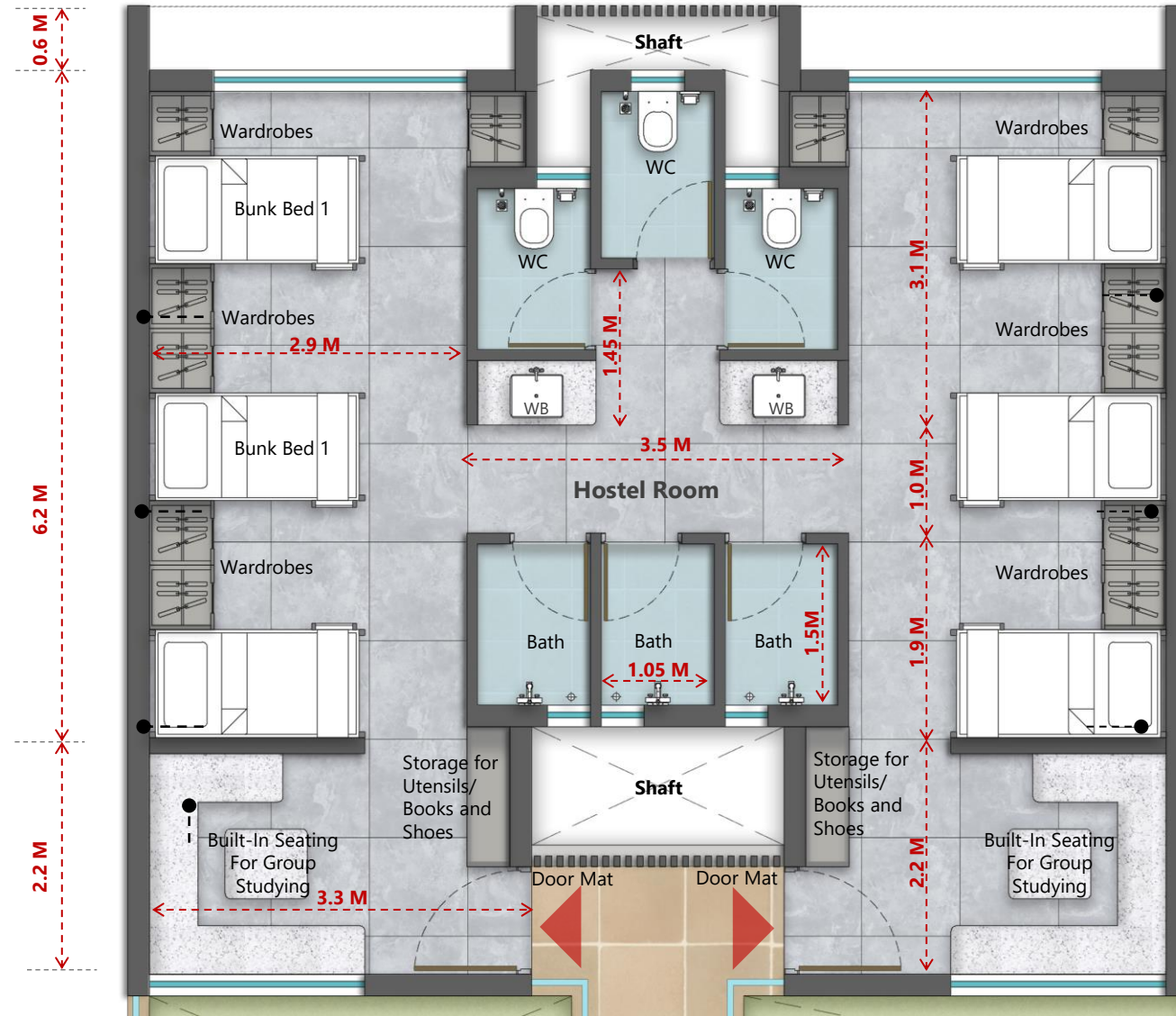


KEY PLAN



LIVABILITY | LAYOUT DESIGN | HOSTEL UNIT

>90% Daylight (Zero Glare) | >90% Cross Ventilation | 50% Reduction in Heat Gain

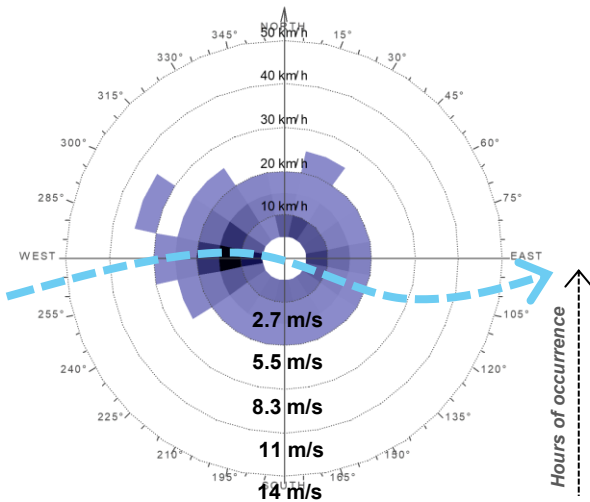


UNIT PLAN – 12 PAX



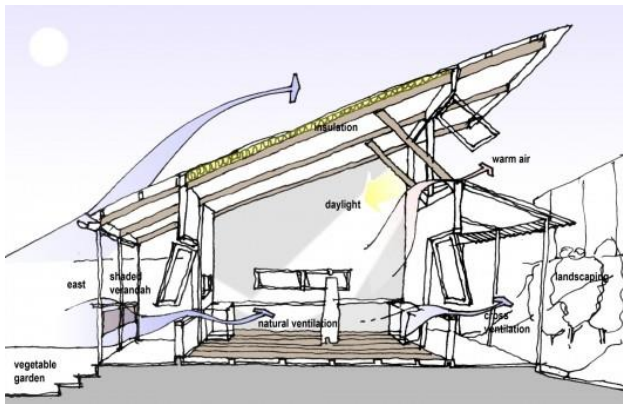
REFERENCE IMAGES

LIVABILITY | LAYOUT DESIGN | HOSTEL
 >90% Cross Ventilation | 50% Reduction in Heat Gain



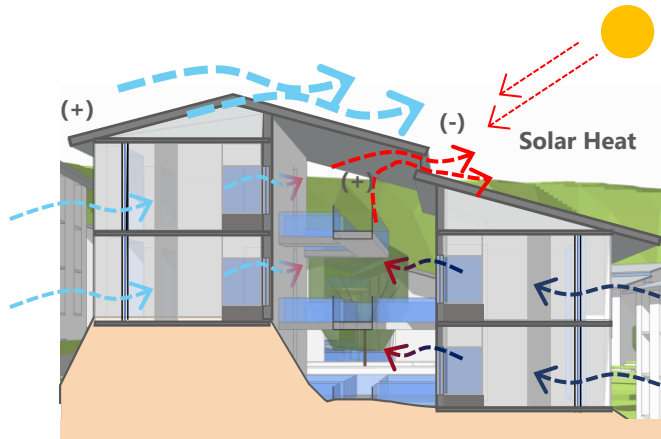
Annual Wind Chart:

Desirable wind direction: West
 Western winds can be utilized for achieving physiological comfort during periods of high humidity



Convective Cooling:

Differences in the density of warmer and cooler air creates the differences in pressure that moves the air. Uses the principles that hot air rises – the "stack effect"



Typical Section of Hostel showing the Bernoulli Effect- temperature changes inside a building can exhaust air out of higher placed openings through convection currents.

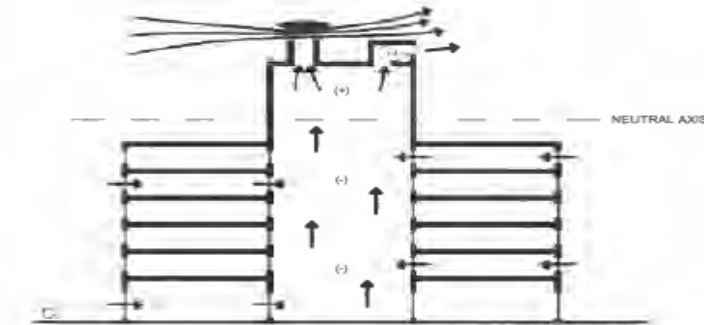
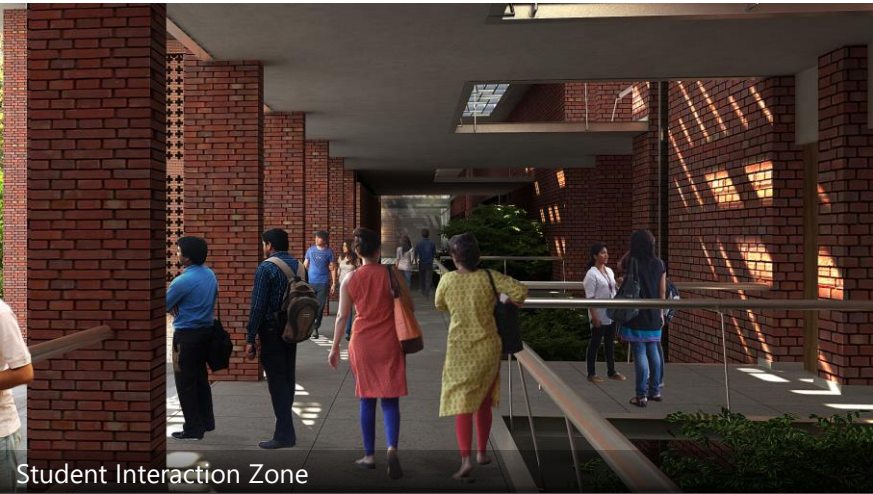


Figure 10.5m The stack effect causes negative pressure in the lower part of a space, positive pressure in the upper part, and zero pressure in between (top drawing). If this space were the atrium of a multistory building, the hot air would enter the upper floors (middle). To avoid this problem, the neutral axis must be raised by increasing the height of the atrium and using wind and/or exhaust fans (bottom).





Reference image of Corridor



Student Interaction Zone

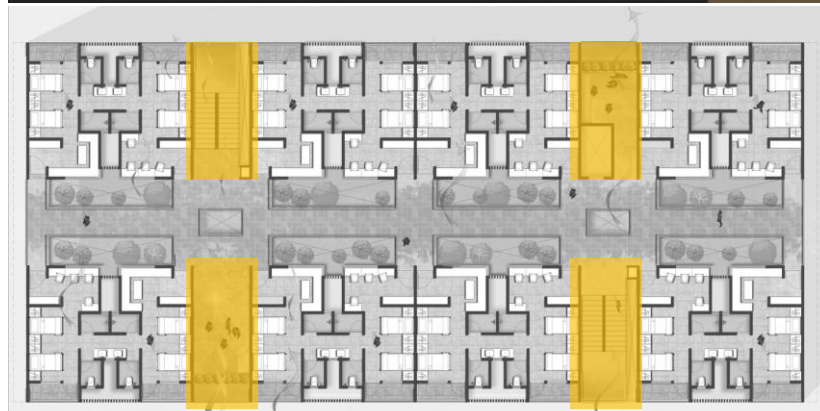


SCHEMATIC SECTION

LIVABILITY | HOSTEL | CATALOGUE OF SPACES
Multiple Level Community Terraces



Intermediate terraces at multiple levels act as community terraces

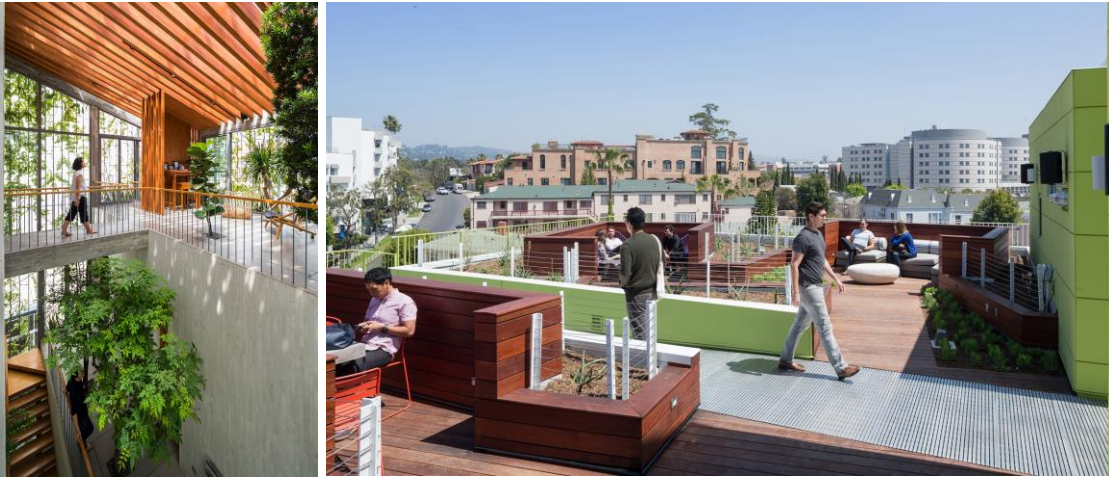


TYPICAL FLOOR PLAN & SECTION SHOWCASING THE TERRACES

REFERENCE IMAGES

LIVABILITY | HOSTEL | CATALOGUE OF SPACES

Studying Space at Terrace



REFERENCE IMAGES

TOP FLOOR PLAN & SECTION SHOWCASING THE TERRACE

LIVABILITY | HOSTEL | UTILITY
Utility spaces integrated in Design



Garbage Bins integrated into design



Current Affairs – Notice Board Area



Modular Design Facilitates to reuse the same space as utility areas.



LOCATION PLAN

Signage Option - 1

- *Highlighting the Donor's Name over a Blank Canvas.*
- *Visually Distinct as placed over a blank wall.*
- *Easy to Identification as placed close to human eye level.*



LIVABILITY | HOSTEL | SIGNAGE

Signage Option - 2

- Positioning the Donor's name on top of Roof.
- Visible from various high points in valley.



LIVABILITY | HOSTEL | SIGNAGE

Signage Option - 3

- *Providing segregated space for each hostels' Donor's name.*
- *Integrated in landscape.*
- *Easy identification as placed at an eye level of passerby.*



HOSTEL VIEW



COST ESTIMATE

Units	Total Unit area (sq.ft.)	Total Area (sq.ft.)	Category	Rate/sq.ft. (INR)	Estimate (INR)
1	28,688	28,688	Architecture	921	26,421,648
			MEP	630	18,073,440
			Structure	1,250	35,860,000
				2,801	80,355,088
			Add-on (taxes @18%, consultancy @ 3% and contractor @4% fees) @ 25%		20,088,772
			Total		100,443,860
			Furniture		4,514,000
			Signage		460,000
			Equipment		2,398,133
			Grand Total		107,815,993
			Rate per sqft.		3,758

Notes:

1. Combination of Ceramic tiles and Kota stone considered for flooring.
2. 1/4 of the total external wall area considered for Façade work which includes exposed bricks and terracotta jaalis.
3. Added Rs. 50 for Light fixtures and Rs. 40 for Bathroom fixtures.
4. Air washer system is considered for ventilation.
5. Fire extinguishers considered in fire fighting systems.
6. Furniture considerations - Bunk bed @ Rs. 11,000 + Storage Unit @ Rs. 12000



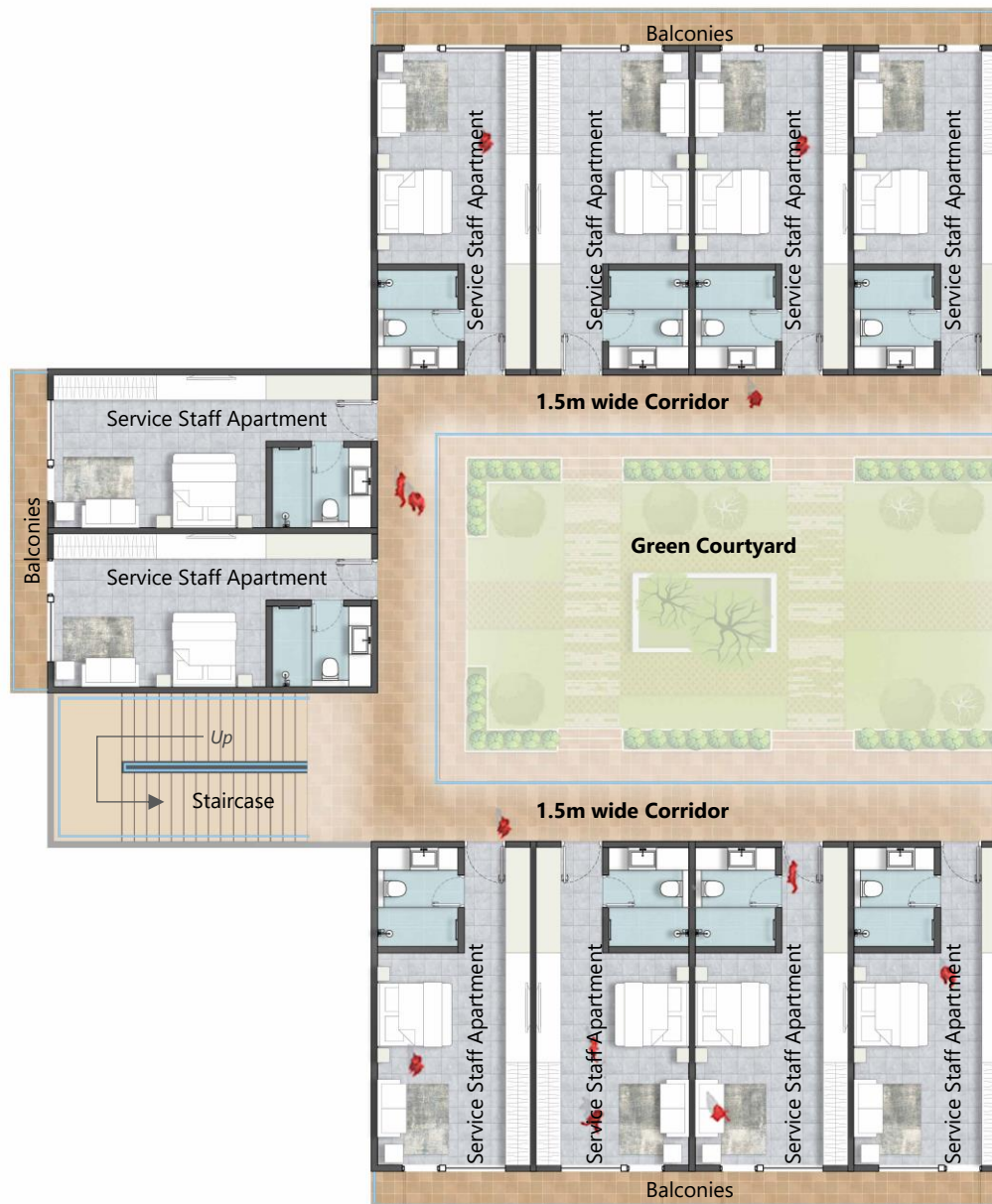
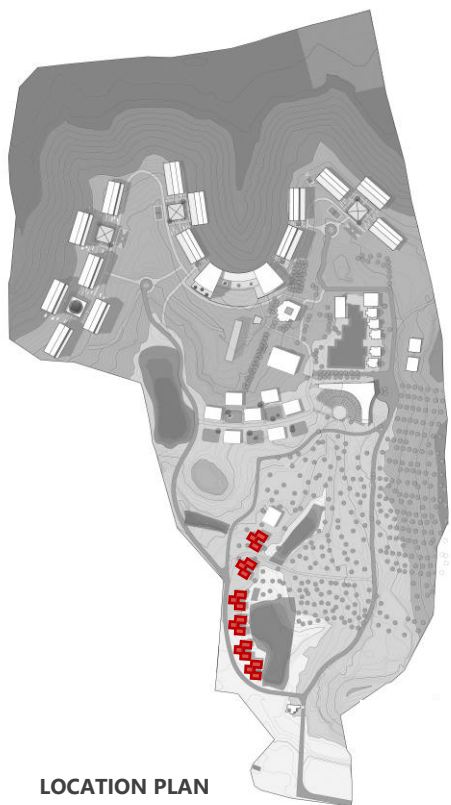
Total Estimated Cost INR : 107,816,000

Total Estimated Cost USD: 1,438,000

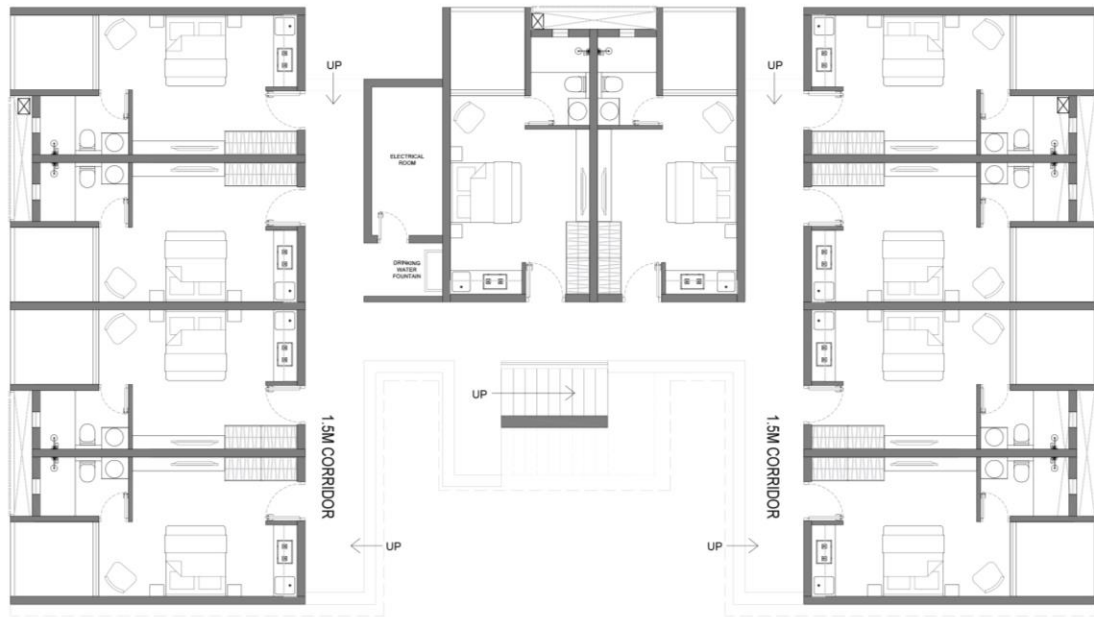
276 scholar + 1BHK for Warden

LIVABILITY | LAYOUT DESIGN | SERVICE STAFF APARTMENTS

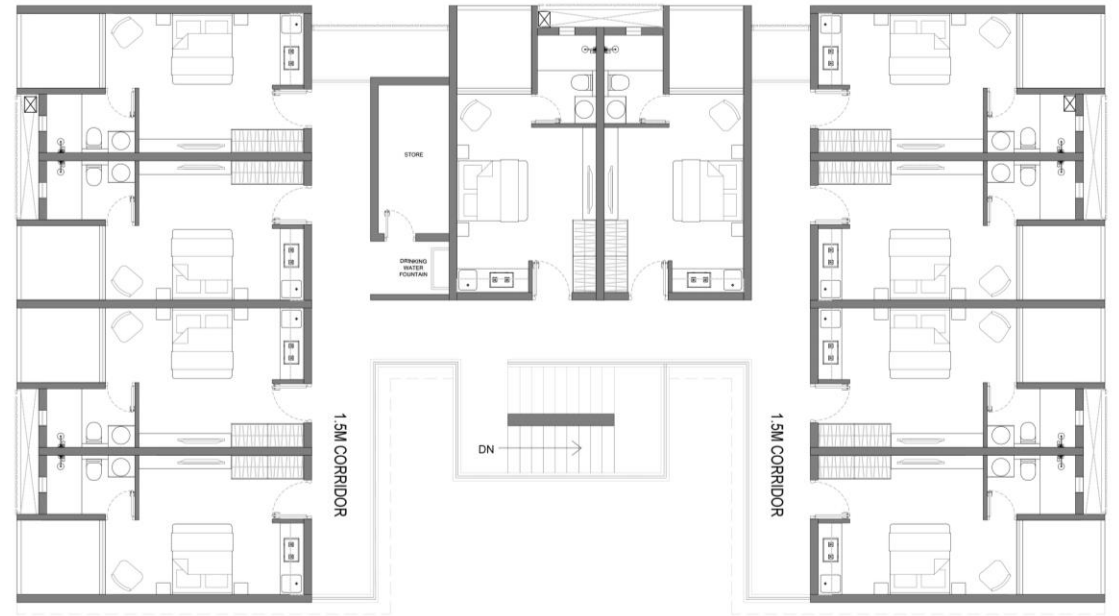
>90% Daylight (Zero Glare) | >90% Cross Ventilation | 50% Reduction in Heat Gain



LIVABILITY | SERVICE STAFF HOUSING | SD-1 DRAWINGS
Type 1 – Floor Plans



Ground Floor



Typical Floor

LIVABILITY | SERVICE STAFF HOUSING | SD-1 DRAWINGS
Type 2 – Floor Plans



Ground Floor



Typical Floor

COST ESTIMATE

Units	Total Unit area (sq.ft.)	Total Area (sq.ft.)	Category	Rate/sq.ft. (INR)	Estimate (INR)
1	14,070	14,070	Architecture	610	8,582,700
			MEP	520	7,316,400
			Structure	1,160	16,321,200
				2,290	32,220,300
			Add-on (taxes @18%, consultancy @ 3% and contractor @4% fees) @ 25%		8,055,075
			Total		40,275,375
			Furniture		
			Signage		310,000
			Equipment		775,000
			Grand Total		41,360,375
Rate per sqft.		2,940			

Notes:

1. Combination of Ceramic tiles and Kota stone considered for flooring.
2. Added Rs. 50 for Light fixtures and Rs. 40 for Bathroom fixtures.
3. One to one split unit considered for ventilation.
4. Fire extinguishers considered in fire fighting systems.

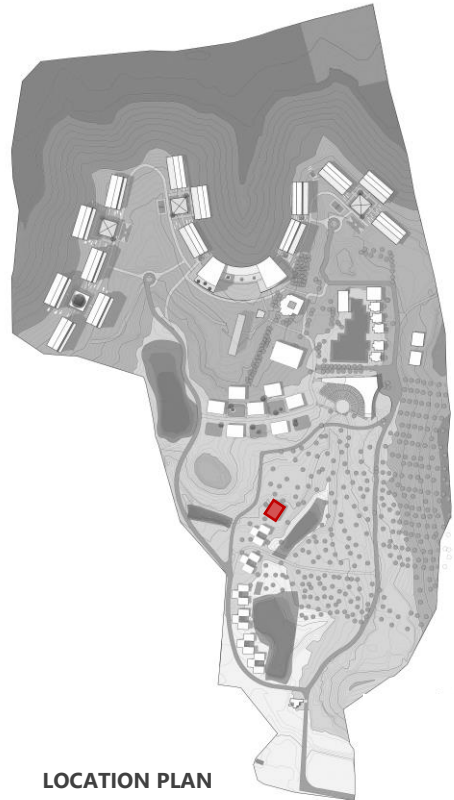


Total Estimated Cost INR : 41,360,000
Total Estimated Cost USD: 552,000

LIVABILITY | UTILITY | WAREHOUSE

Area : 5000 sqft

Reference images for green wall over storage and indoors sports building



LOCATION PLAN



COST ESTIMATE

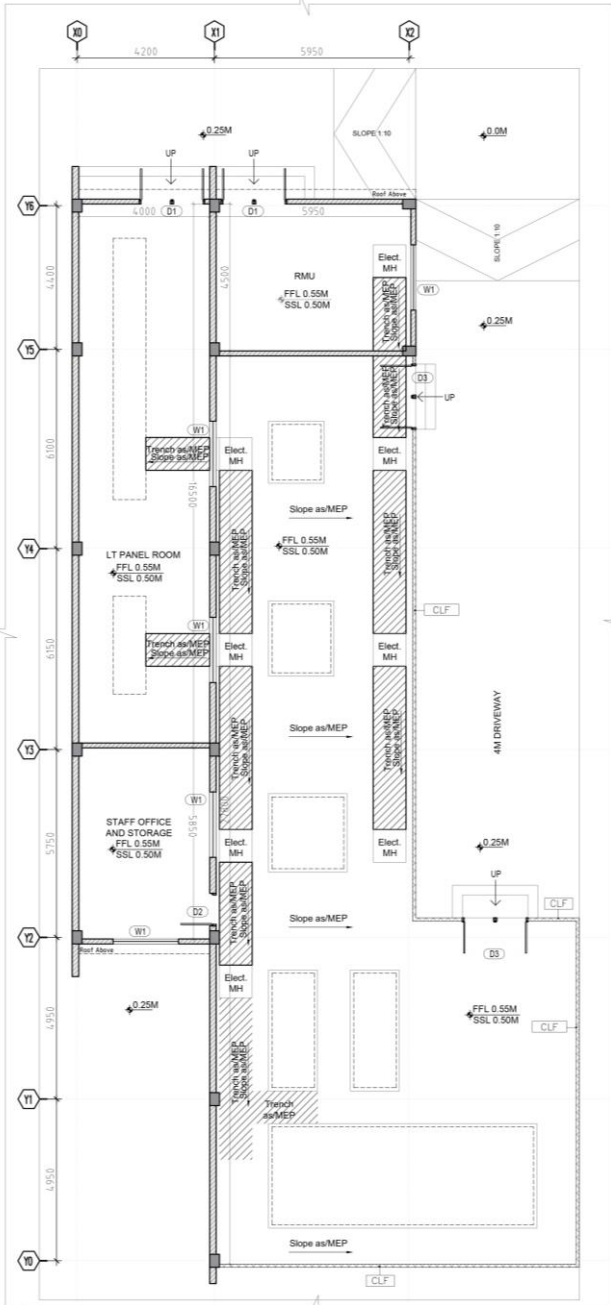
Phase 2 units	Total Unit area (sq.ft.)	Total Area (sq.ft.)	Category	Rate/sq.ft. (INR)	Estimate (INR)
1	5,000	5,000	Architecture	470	23,50,000
			MEP	710	35,50,000
			Structure	1,430	71,50,000
				2,610	1,30,50,000
			Add-on (taxes @18%, consultancy @ 3% and contractor @4% fees) @ 25%		23,49,000
			Total		1,63,12,500
			Furniture		
			Signage		
			Equipment		
			Grand Total		1,63,12,500
Rate per sqft.		3,263			

Notes:

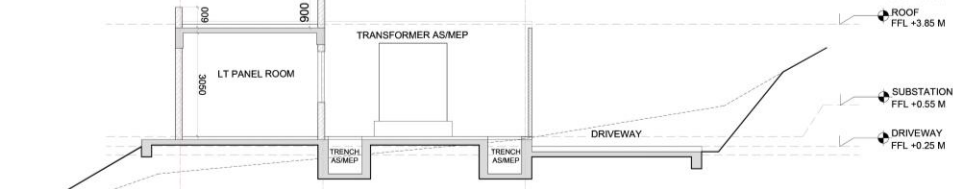
1. Kota stone considered for flooring.
2. Added Rs. 50 for Light fixtures.
3. Fire extinguishers considered in fire fighting systems.
4. Large span structural framework considered.

Total Estimated Cost INR : 16,300,000

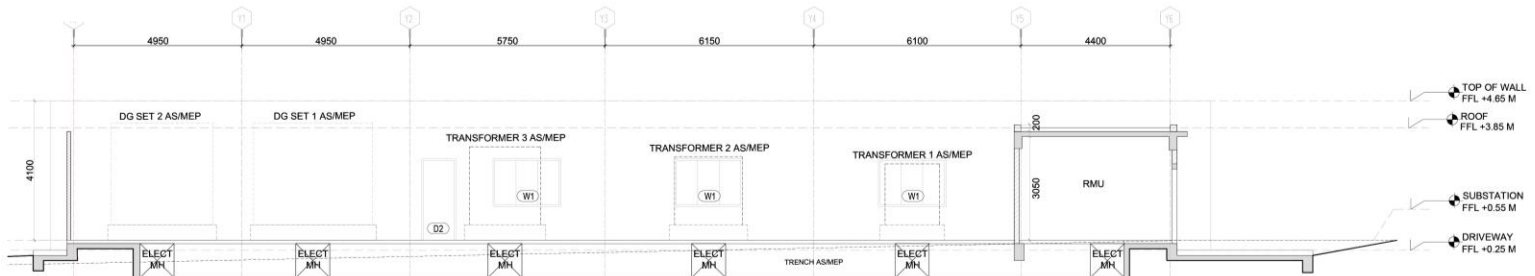
Total Estimated Cost USD: 217,000



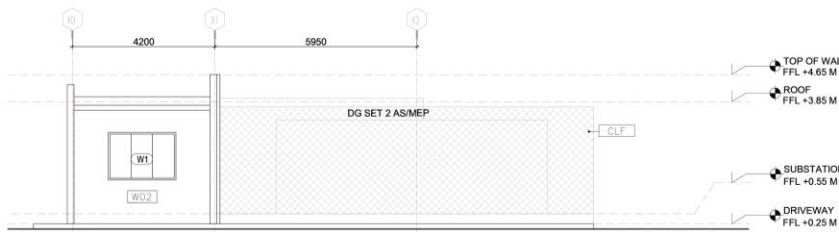
Ground Floor Plan



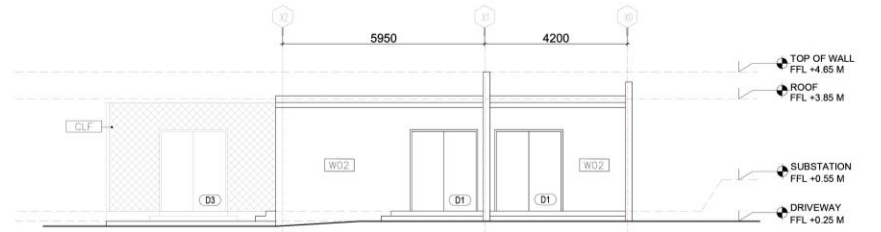
Section A



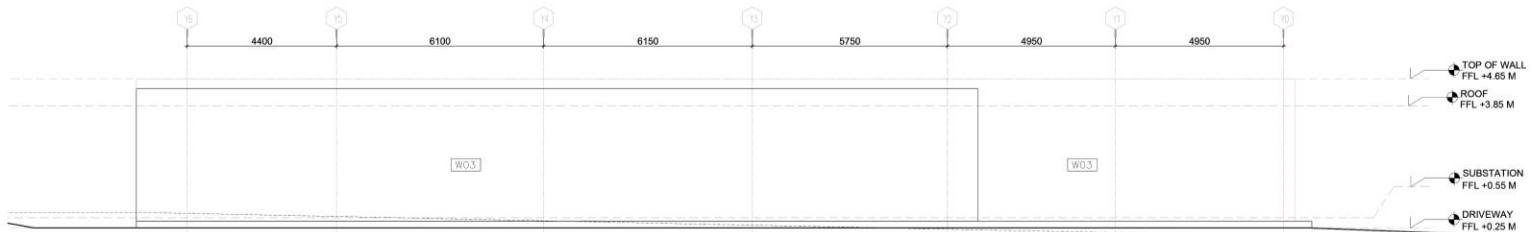
Section B



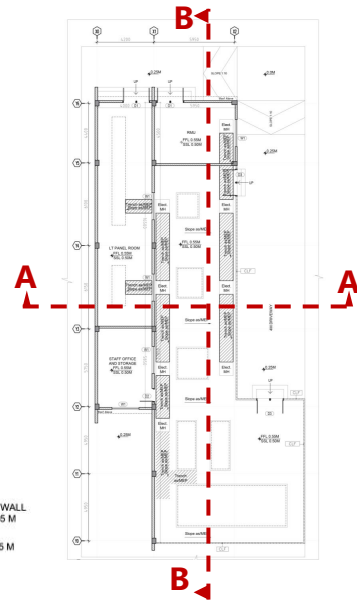
North Elevation



South Elevation

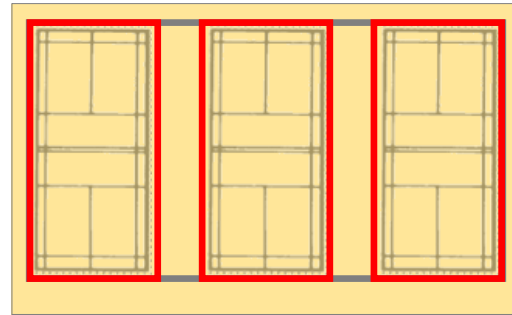
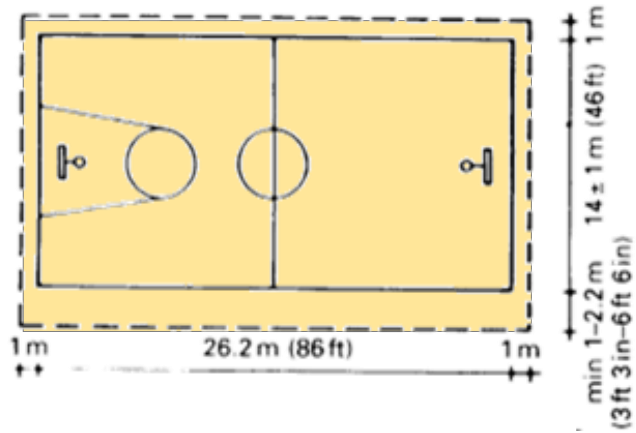


East Elevation



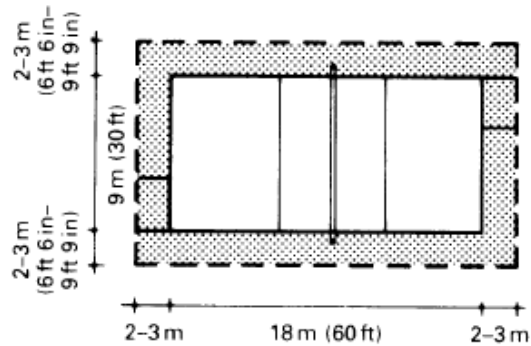
LIVABILITY | FITNESS AMENITIES

- ✓ As per client, outdoor sports facility is included in the master planning.
- ✓ **2 Basketball courts | 6 Badminton Courts**
- ✓ **3 x 400 m jogging trail and 800 m jogging trail**
- ✓ **Courts** provided near **machans** one in each valley so that the **storing facility** for respective sports could be arranged below the machans
- ✓ **Cricket Pitch** overlapped with **Football ground and 300 m running track**

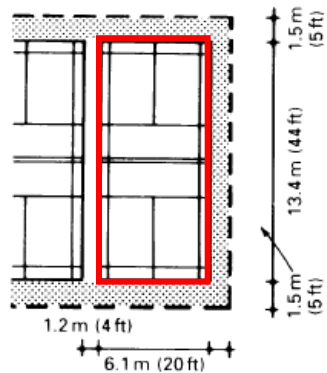


3 badminton courts fit in 1 basketball court

Basketball: Minimum height 7 m



Volleyball



Badminton: Minimum height 7.6 m

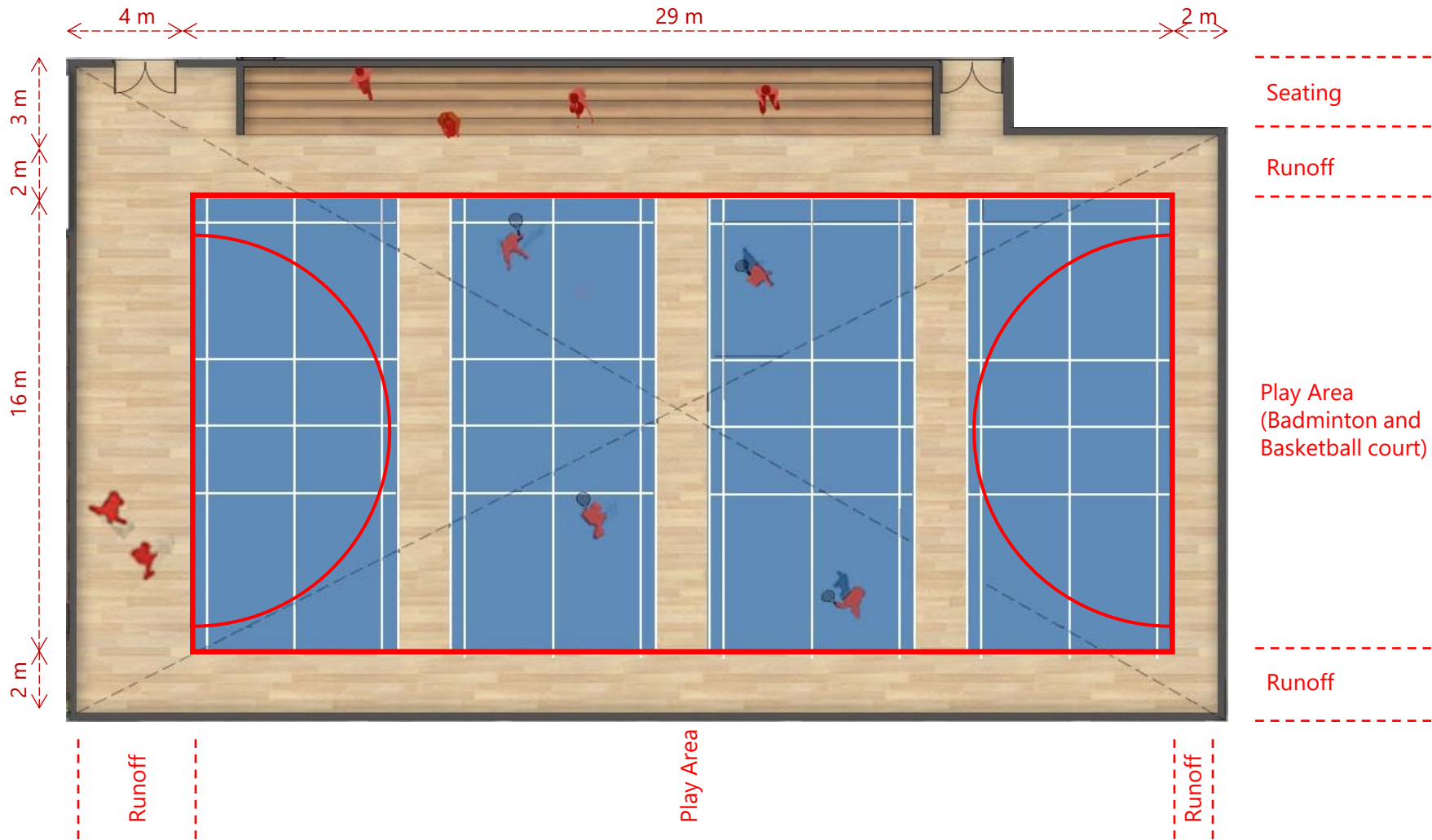


Legend

- 400 M Jogging Trail
- 800 M Jogging Trail
- Basketball Courts
- Volleyball Courts

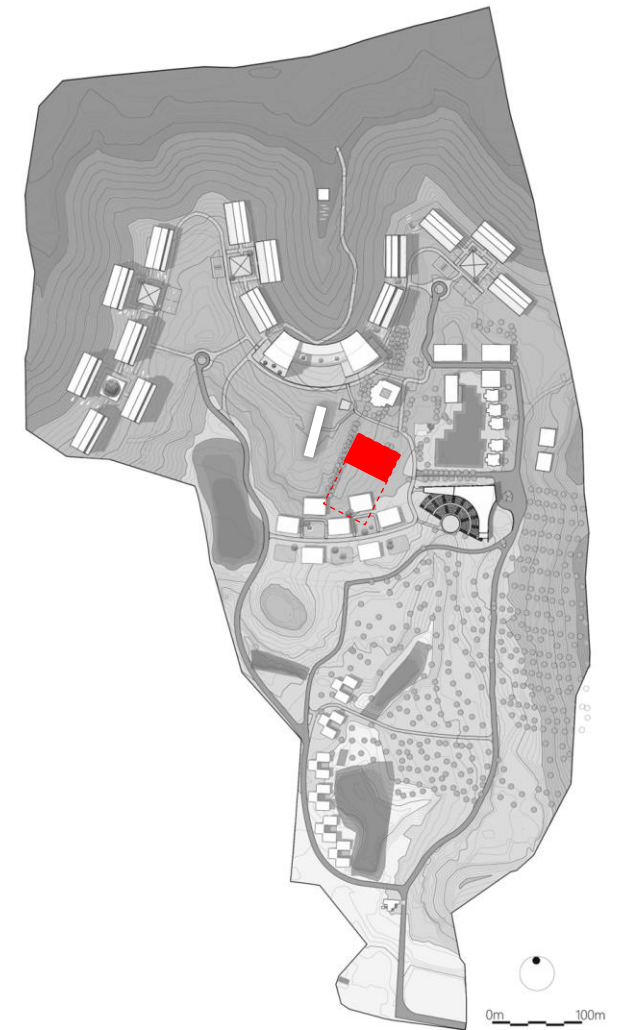
LIVABILITY | FITNESS AMENITIES

Proposed Size – 35m x 23m



Badminton Courts : 6.5 m X 13.5 m
 Basketball Court : 29 m X 16 m

The proposed indoor sports area will take approximately 40 % of the existing floor area in the building (marked in red in the master plan).



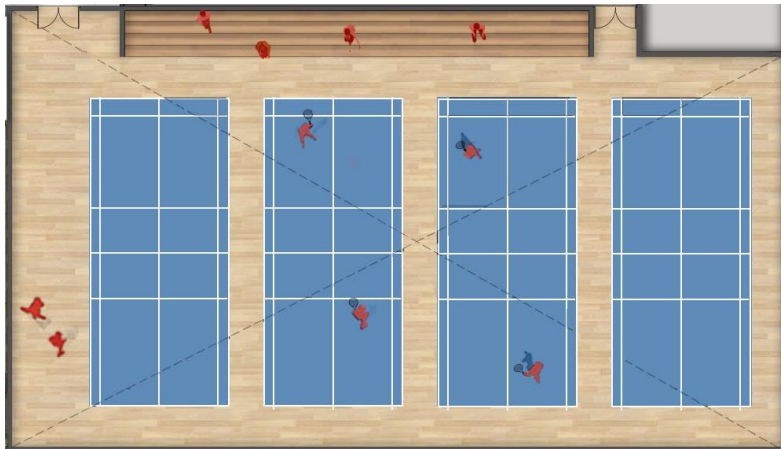
Proposed Location for Indoor Sports Facility

COST ESTIMATE

Units	Total Unit area (sq.ft.)	Total Area (sq.ft.)	Category	Rate/sq.ft. (INR)	Estimate (INR)
1	9,000	9,000	Architecture	405	3,645,000
			MEP	720	6,480,000
			Structure	800	7,200,000
				1,925	17,325,000
			Add-on (taxes @18%, consultancy @ 3% and contractor @4% fees) @ 25%		4,331,250
			Total		21,656,250
			Furniture		1,200,000
			Signage		500,000
			Equipments		2,200,000
			Grand Total		25,556,250
		Rate per sqft.	2,840		

Notes:

1. Kota considered for flooring.
2. 2m glass panels along the longer walls on top.
3. Assumed – existing light fixtures to be retained.
4. Roof to be changed only after evaluation.
5. Optional external painting considered in the estimate.



Total Estimated Cost INR : 25,556,000
Total Estimated Cost USD: 340,000

REFURBISHMENT UNITS

LIVABILITY | COMPUTER LAB

Design Scheme 1

Area : 3,635 sqft.

Design Notes: Removal of steps

1. Even flooring and easy movement for all.
2. Increase in number of seats.
3. Ease of trunking.

Capacity – 200pax

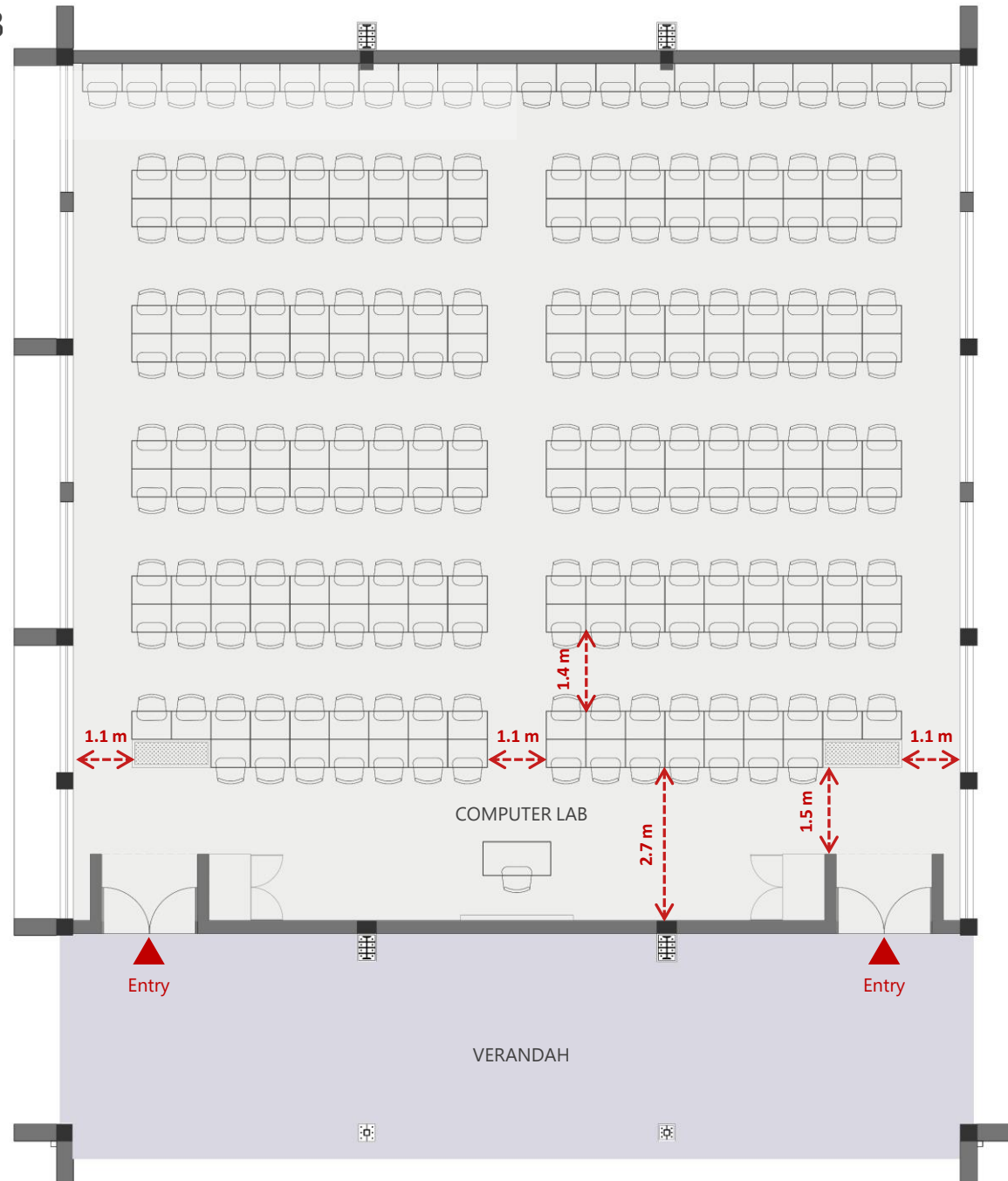


Table size – 700mm x 500mm

Chair size – 550mm x 450mm

Teacher's desk – 1500mm x 600mm

Storage Unit size – 1100mm x 750mm

White board size – 2400mm x 1200mm



Reference Images for Furniture

LIVABILITY | COMPUTER LAB

Design Scheme 2

Area : 3,635 sqft.

Design Notes: Retaining the tiered seating

1. Ease of visibility towards the white board.
2. Cost cutting on flooring and demolition.

Capacity – 164pax

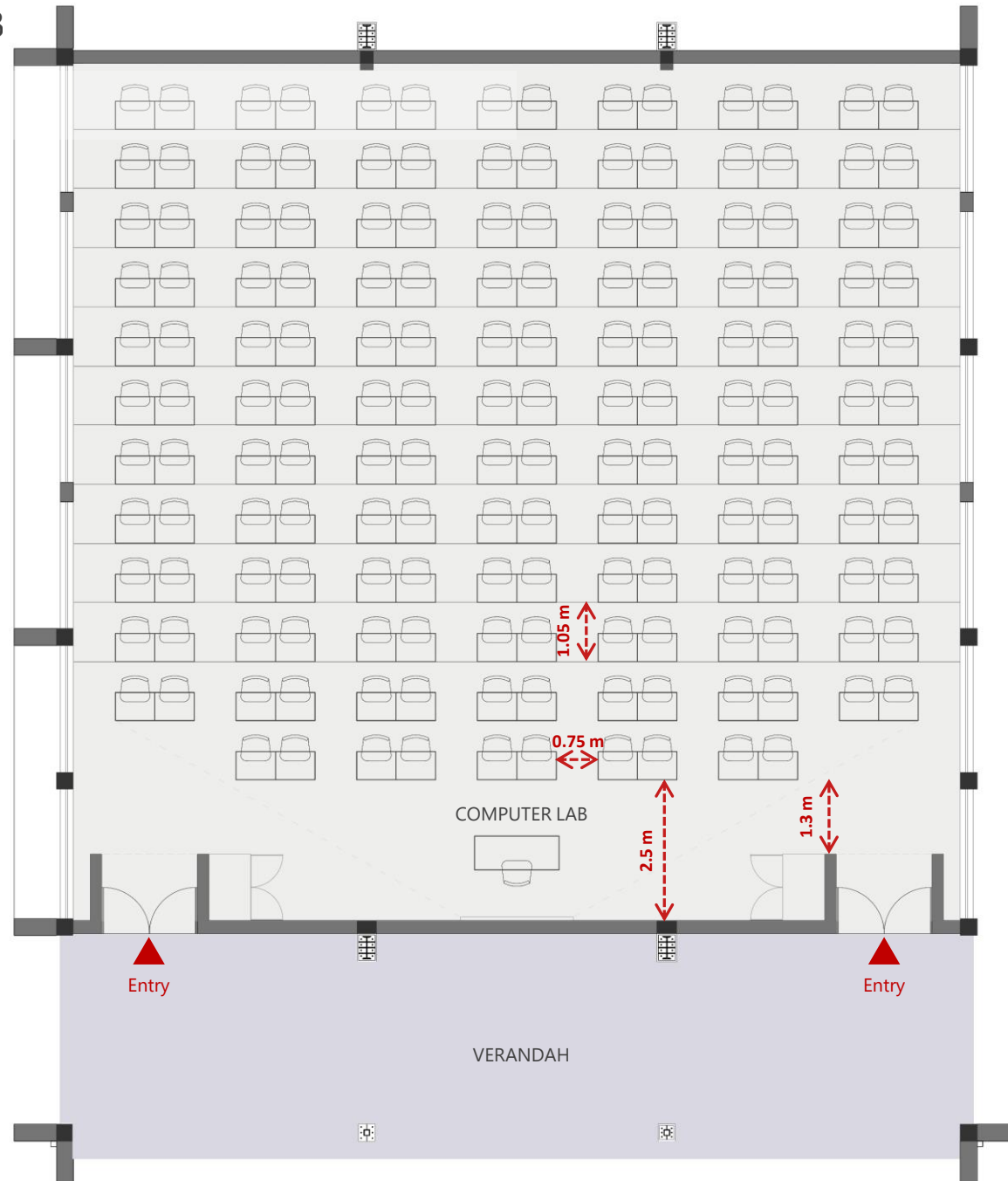


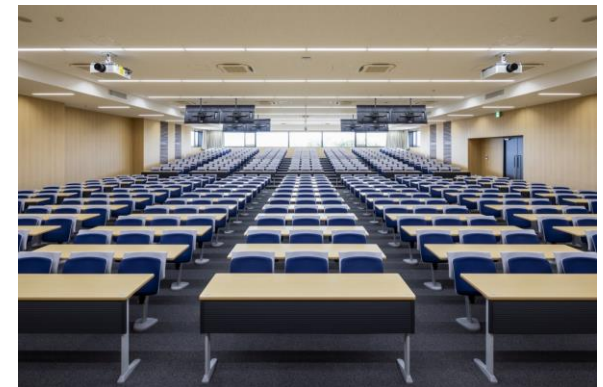
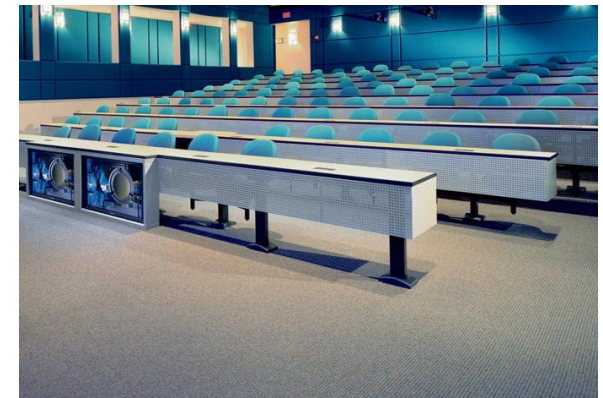
Table size – 700mm x 500mm

Chair size – 550mm x 450mm

Teacher's desk – 1500mm x 600mm

Storage Unit size – 1100mm x 750mm

White board size – 2400mm x 1200mm



Reference Images for Furniture

LIVABILITY | COMPUTER LAB
Façade Option 2



MASTERPLAN PHASING | EXISTING

Population

Population	Total		Phase-1		Phase-2		Phase-3		Phase-4		Phase-5		Phase-6	
	Proposed	Existing	Proposed	Existing	Proposed	Existing	Proposed	Existing	Proposed	Existing	Proposed	Existing	Proposed	Existing
Students	2124	588		588	444	588	540	1092	360	1632	360	1992	360	2352
Faculty / Admin Staff	59	35		35	18	35	11	53	10	64	10	74	10	84
Service Staff	83	44		44	31	44	13	75	13	88	13	101	13	114
Total Population	2933		667		1160		1784		2167		2550		2933	

Building Blocks

Blocks	Total		Phase-1		Phase-2		Phase-3		Phase-4		Phase-5		Phase-6	
	Proposed	Existing	Proposed	Refurbish	Proposed	Refurbish	Proposed	Refurbish	Proposed	Refurbish	Proposed	Refurbish	Proposed	Refurbish
Students	2000	600			500		400		400		400		400	
Classrooms @200 students	7	2 ^(a)	1		2	2 ^(a)	1		1		1		1	
Hostels	14	8			5		3		2		2		2	
Dining Hall	1				0.6		0.4							
Arrival Pavilion/Admin	1						1							
CEO Residence	1				1									
Faculty Offices		1				1								
Faculty Housing						6 ^(b)								
Service staff Housing	6				3		3							
Open Amphitheatre	1						1							
Library	1						1							
Warehouse	1						1							
Indoor sports arena (Multipurpose hall)		1						1						
Medical Clinic		1 ^(c)			1									
Tuck Shop		1 ^(c)			1									
Water Reservoir			1				1							

Total Population : 2,933 people

- Note :
- (a) Existing Classrooms to be converted into Computer labs
 - (b) Boys Hostels converted to faculty housing in Phase 2
 - (c) Existing Clinic and Tuck Shops to be de-functionalized/demolished.



MASTERPLAN PHASING | PHASE -1

Population

Population	Total		Phase-1		Phase-2		Phase-3		Phase-4		Phase-5		Phase-6	
	Proposed	Existing	Proposed	Existing	Proposed	Existing	Proposed	Existing	Proposed	Existing	Proposed	Existing	Proposed	Existing
Students	2124	588		588	444	588	540	1092	360	1632	360	1992	360	2352
Faculty / Admin Staff	59	35		35	18	35	11	53	10	64	10	74	10	84
Service Staff	83	44		44	31	44	13	75	13	88	13	101	13	114
Total Population	2933		667		1160		1784		2167		2550		2933	

Building Blocks

Blocks	Total		Phase-1		Phase-2		Phase-3		Phase-4		Phase-5		Phase-6	
	Proposed	Existing	Proposed	Refurbish	Proposed	Refurbish	Proposed	Refurbish	Proposed	Refurbish	Proposed	Refurbish	Proposed	Refurbish
Students	2000	600			500		400		400		400		400	
Classrooms @200 students	7	2 ^(a)	1		2	2 ^(a)	1		1		1		1	
Hostels	14	8			5		3		2		2		2	
Dining Hall	1				0.6		0.4							
Arrival Pavilion/Admin	1						1							
CEO Residence	1				1									
Faculty Offices		1				1								
Faculty Housing						6 ^(b)								
Service staff Housing	6				3		3							
Open Amphitheatre	1						1							
Library	1						1							
Warehouse	1						1							
Indoor sports arena (Multipurpose hall)		1						1						
Medical Clinic		1 ^(c)			1									
Tuck Shop		1 ^(c)			1									
Water Reservoir			1				1							

- Note :
- (a) Existing Classrooms to be converted into Computer labs
 - (b) Boys Hostels converted to faculty housing in Phase 2
 - (c) Existing Clinic and Tuck Shops to be de-functionalized/demolished.



Legend

Proposed

0m 151 100m

MASTERPLAN PHASING | PHASE-2

Population

Population	Total		Phase-1		Phase-2		Phase-3		Phase-4		Phase-5		Phase-6	
	Proposed	Existing	Proposed	Existing	Proposed	Existing	Proposed	Existing	Proposed	Existing	Proposed	Existing	Proposed	Existing
Students	2124	588		588	444	588	540	1092	360	1632	360	1992	360	2352
Faculty / Admin Staff	59	35		35	18	35	11	53	10	64	10	74	10	84
Service Staff	83	44		44	31	44	13	75	13	88	13	101	13	114
Total Population	2933		667		1160		1784		2167		2550		2933	

Building Blocks

Blocks	Total		Phase-1		Phase-2		Phase-3		Phase-4		Phase-5		Phase-6	
	Proposed	Existing	Proposed	Refurbish	Proposed	Refurbish	Proposed	Refurbish	Proposed	Refurbish	Proposed	Refurbish	Proposed	Refurbish
Students	2000	600			500		400		400		400		400	
Classrooms @200 students	7	2 ^(a)	1		2	2 ^(a)	1		1		1		1	
Hostels	14	8			5		3		2		2		2	
Dining Hall	1				0.6		0.4							
Arrival Pavilion/Admin	1						1							
CEO Residence	1				1									
Faculty Offices		1				1								
Faculty Housing						6 ^(b)								
Service staff Housing	6				3		3							
Open Amphitheatre	1						1							
Library	1						1							
Warehouse	1						1							
Indoor sports arena (Multipurpose hall)		1						1						
Medical Clinic		1 ^(c)			1									
Tuck Shop		1 ^(c)			1									
Water Reservoir			1				1							

- Note :
- (a) Existing Classrooms to be converted into Computer labs
 - (b) Boys Hostels converted to faculty housing in Phase 2
 - (c) Existing Clinic and Tuck Shops to be de-functionalized/demolished.



CONSTRUCTION TIMELINE – PHASE 2

Phase	Sub-Phase	Buildings	Start Date	End Date
Phase-2	A	Classroom – 2 nos. Dining Hall – Half Hostel – 2 nos.	October 2022	Dec 2024
	B	Hostel – 1 nos. Service Staff Housing – 1 nos. CEO Residence – 1 no.	Jan 2023	Dec 2024
	C	Refurbishment Units: Faculty Housing (Existing Boys' Hostel) Headquarters Computer Labs (Existing Classroom)	june 2023	Dec 2024



MASTERPLAN PHASING | PHASE-3

Population

Population	Total		Phase-1		Phase-2		Phase-3		Phase-4		Phase-5		Phase-6	
	Proposed	Existing	Proposed	Existing	Proposed	Existing	Proposed	Existing	Proposed	Existing	Proposed	Existing	Proposed	Existing
Students	2124	588		588	444	588	540	1092	360	1632	360	1992	360	2352
Faculty / Admin Staff	59	35		35	18	35	11	53	10	64	10	74	10	84
Service Staff	83	44		44	31	44	13	75	13	88	13	101	13	114
Total Population	2933		667		1160		1784		2167		2550		2933	

Building Blocks

Blocks	Total		Phase-1		Phase-2		Phase-3		Phase-4		Phase-5		Phase-6	
	Proposed	Existing	Proposed	Refurbish	Proposed	Refurbish	Proposed	Refurbish	Proposed	Refurbish	Proposed	Refurbish	Proposed	Refurbish
Students	2000	600			500		400		400		400		400	
Classrooms @200 students	7	2 ^(a)	1		2	2 ^(a)	1		1		1		1	
Hostels	14	8			5		3		2		2		2	
Dining Hall	1				0.6		0.4							
Arrival Pavilion/Admin	1						1							
CEO Residence	1				1									
Faculty Offices		1				1								
Faculty Housing						6 ^(b)								
Service staff Housing	6				3		3							
Open Amphitheatre	1						1							
Library	1						1							
Warehouse	1						1							
Indoor sports arena (Multipurpose hall)		1						1						
Medical Clinic		1 ^(c)			1									
Tuck Shop		1 ^(c)			1									
Water Reservoir			1				1							

- Note :
- (a) Existing Classrooms to be converted into Computer labs
 - (b) Boys Hostels converted to faculty housing in Phase 2
 - (c) Existing Clinic and Tuck Shops to be de-functionalized/demolished.



MASTERPLAN PHASING | PHASE-4

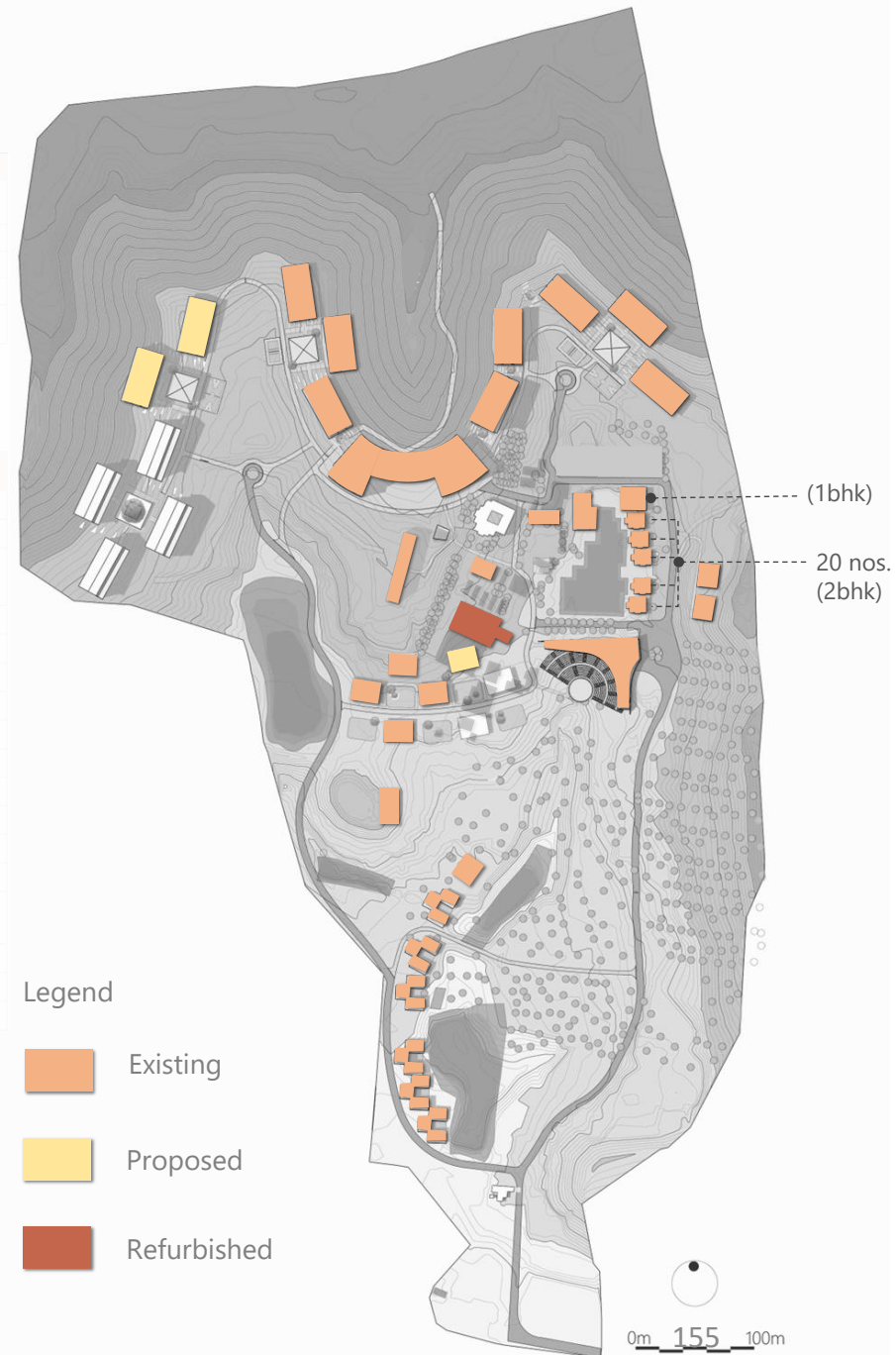
Population

Population	Total		Phase-1		Phase-2		Phase-3		Phase-4		Phase-5		Phase-6	
	Proposed	Existing	Proposed	Existing	Proposed	Existing	Proposed	Existing	Proposed	Existing	Proposed	Existing	Proposed	Existing
Students	2124	588		588	444	588	540	1092	360	1632	360	1992	360	2352
Faculty / Admin Staff	59	35		35	18	35	11	53	10	64	10	74	10	84
Service Staff	83	44		44	31	44	13	75	13	88	13	101	13	114
Total Population	2933		667		1160		1784		2167		2550		2933	

Building Blocks

Blocks	Total		Phase-1		Phase-2		Phase-3		Phase-4		Phase-5		Phase-6	
	Proposed	Existing	Proposed	Refurbish	Proposed	Refurbish	Proposed	Refurbish	Proposed	Refurbish	Proposed	Refurbish	Proposed	Refurbish
Students	2000	600			500		400		400		400		400	
Classrooms @200 students	7	2 ^(a)	1		2	2 ^(a)	1		1		1		1	
Hostels	14	8			5		3		2		2		2	
Dining Hall	1				0.6		0.4							
Arrival Pavilion/Admin	1						1							
CEO Residence	1				1									
Faculty Offices		1				1								
Faculty Housing						6 ^(b)								
Service staff Housing	6				3		3							
Open Amphitheatre	1						1							
Library	1						1							
Warehouse	1						1							
Indoor sports arena (Multipurpose hall)		1						1						
Medical Clinic		1 ^(c)			1									
Tuck Shop		1 ^(c)			1									
Water Reservoir			1				1							

- Note :
- (a) Existing Classrooms to be converted into Computer labs
 - (b) Boys Hostels converted to faculty housing in Phase 2
 - (c) Existing Clinic and Tuck Shops to be de-functionalized/demolished.



MASTERPLAN PHASING | PHASE-5

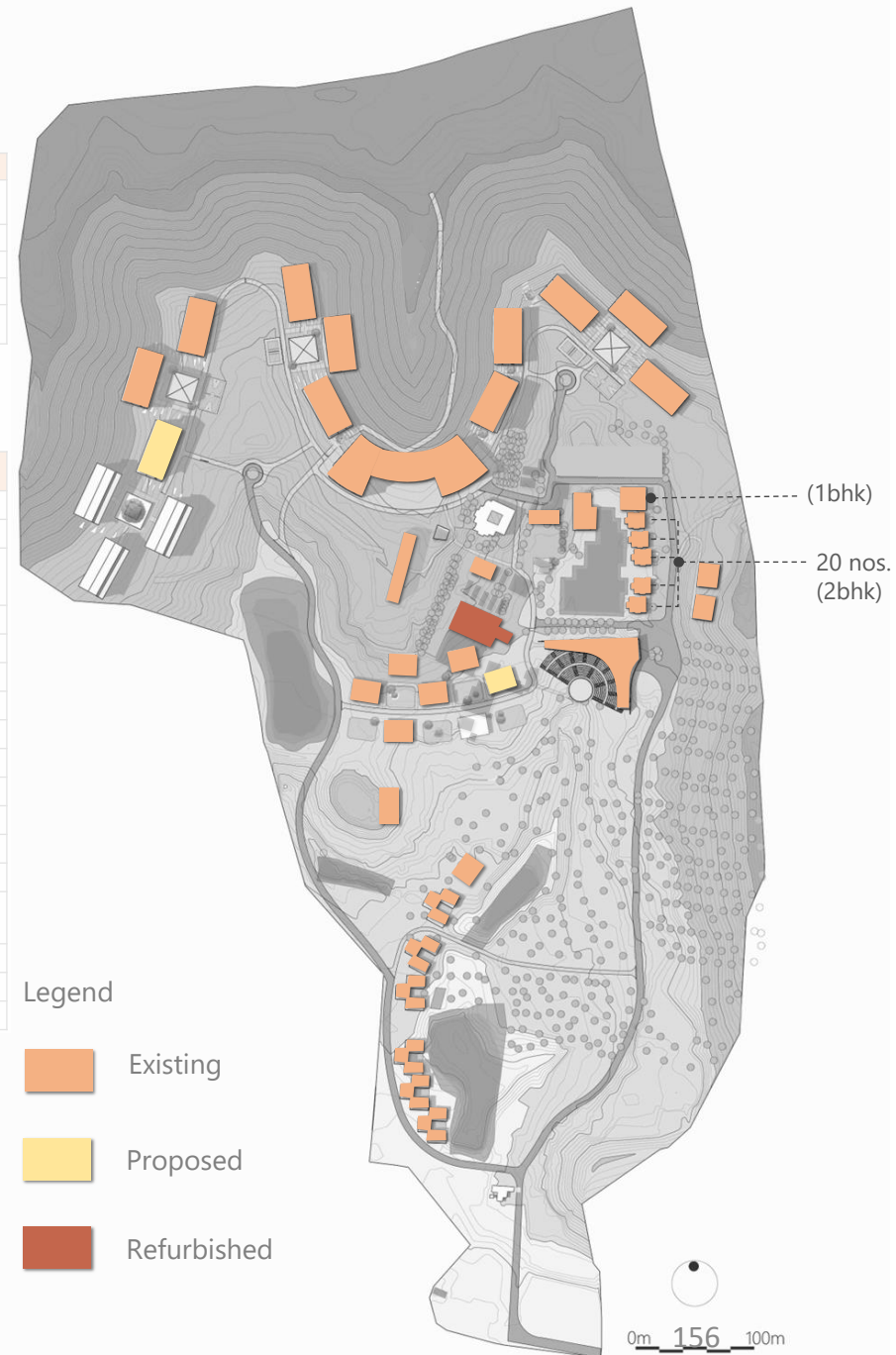
Population

Population	Total		Phase-1		Phase-2		Phase-3		Phase-4		Phase-5		Phase-6	
	Proposed	Existing	Proposed	Existing	Proposed	Existing	Proposed	Existing	Proposed	Existing	Proposed	Existing	Proposed	Existing
Students	2124	588		588	444	588	540	1092	360	1632	360	1992	360	2352
Faculty / Admin Staff	59	35		35	18	35	11	53	10	64	10	74	10	84
Service Staff	83	44		44	31	44	13	75	13	88	13	101	13	114
Total Population	2933			667	1160		1784		2167		2550		2933	

Building Blocks

Blocks	Total		Phase-1		Phase-2		Phase-3		Phase-4		Phase-5		Phase-6	
	Proposed	Existing	Proposed	Refurbish	Proposed	Refurbish	Proposed	Refurbish	Proposed	Refurbish	Proposed	Refurbish	Proposed	Refurbish
Students	2000	600			500		400		400		400		400	
Classrooms @200 students	7	2 ^(a)	1		2	2 ^(a)	1		1		1		1	
Hostels	14	8			5		3		2		2		2	
Dining Hall	1				0.6		0.4							
Arrival Pavilion/Admin	1						1							
CEO Residence	1				1									
Faculty Offices		1				1								
Faculty Housing						6 ^(b)								
Service staff Housing	6				3		3							
Open Amphitheatre	1						1							
Library	1						1							
Warehouse	1						1							
Indoor sports arena (Multipurpose hall)		1						1						
Medical Clinic		1 ^(c)			1									
Tuck Shop		1 ^(c)			1									
Water Reservoir			1					1						

Note : (a) Existing Classrooms to be converted into Computer labs
 (b) Boys Hostels converted to faculty housing in Phase 2
 (c) Existing Clinic and Tuck Shops to be de-functionalized/demolished.



MASTERPLAN PHASING | PHASE-6

Population

Population	Total		Phase-1		Phase-2		Phase-3		Phase-4		Phase-5		Phase-6	
	Proposed	Existing	Proposed	Existing	Proposed	Existing	Proposed	Existing	Proposed	Existing	Proposed	Existing	Proposed	Existing
Students	2124	588		588	444	588	540	1092	360	1632	360	1992	360	2352
Faculty / Admin Staff	59	35		35	18	35	11	53	10	64	10	74	10	84
Service Staff	83	44		44	31	44	13	75	13	88	13	101	13	114
Total Population	2933			667	1160		1784		2167		2550		2933	

Building Blocks

Blocks	Total		Phase-1		Phase-2		Phase-3		Phase-4		Phase-5		Phase-6	
	Proposed	Existing	Proposed	Refurbish	Proposed	Refurbish	Proposed	Refurbish	Proposed	Refurbish	Proposed	Refurbish	Proposed	Refurbish
Students	2000	600			500		400		400		400		400	
Classrooms @200 students	7	2 ^(a)	1		2	2 ^(a)	1		1		1		1	
Hostels	14	8			5		3		2		2		2	
Dining Hall	1				0.6		0.4							
Arrival Pavilion/Admin	1						1							
CEO Residence	1				1									
Faculty Offices		1				1								
Faculty Housing						6 ^(b)								
Service staff Housing	6				3		3							
Open Amphitheatre	1						1							
Library	1						1							
Warehouse	1						1							
Indoor sports arena (Multipurpose hall)		1						1						
Medical Clinic		1 ^(c)				1								
Tuck Shop		1 ^(c)				1								
Water Reservoir			1					1						

- Note :
- (a) Existing Classrooms to be converted into Computer labs
 - (b) Boys Hostels converted to faculty housing in Phase 2
 - (c) Existing Clinic and Tuck Shops to be de-functionalized/demolished.



PHASE-2 AREA STATEMENT – CONSTRUCTION

Sr no.	Area	Nos.	Floors	Capacity per module	Area (sq.ft.)	Remarks
New Construction						
1	Class room	2	G+1	200	10,100	Running in 2 shifts
2	Dining + Kitchen	0.6	G+1	1,425	36,000	Dining will be run in double shift for students - total population of valley being ~2821. Client to confirm on Faculty /staff seating nos.
3	Hostels	3	G+2	276	86,065	276 students (6 sharing X 46 rms) + 2 Faculty in 1BHK + 1 Laundromat
4	Staff Housing Block	2	G+2	30	25,834	
5	CEO Residence	1	G		2,000	
6	Medical Clinic	1	G	18	2000	15 bed capacity
7	Tuck Shop	1	G		1,000	
Refurbishment						
1	Headquarter - Admin & Staff Rooms, Library	1	G+2	79	12,212	
2	Faculty Housing (Old Boys Hostel to be refurbished)	5	G+1	4	20,707	4 nos. - 2bhk per block , 5 members maximum in each family
3	Faculty Housing (New Boys Hostel to be refurbished)	1	G+2	12	11,360	12 nos. - 1bhk per block, 2 members maximum in each family
4	Computer Labs	2	G	200	7,272	Old classrooms to be refurbished
TOTAL					214,550	

Total New Construction: 163,000 sq. ft.

Refurbishments : 51,550 sq. ft.

Note:

*Pavilion Block and Amphitheatre are not included in area.

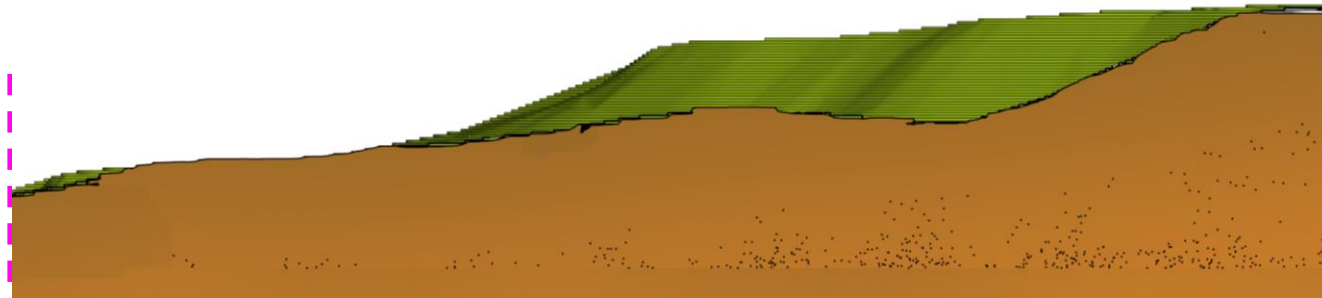


LANDSCAPING

SITE APPRISAL | ELEVATION MAPPING

INFERENCES

1. **Sloping from North to south**, the slope becomes gradual as we move towards the south
2. The southern part of the site give many opportunities for water catchment as many local low points are visible.

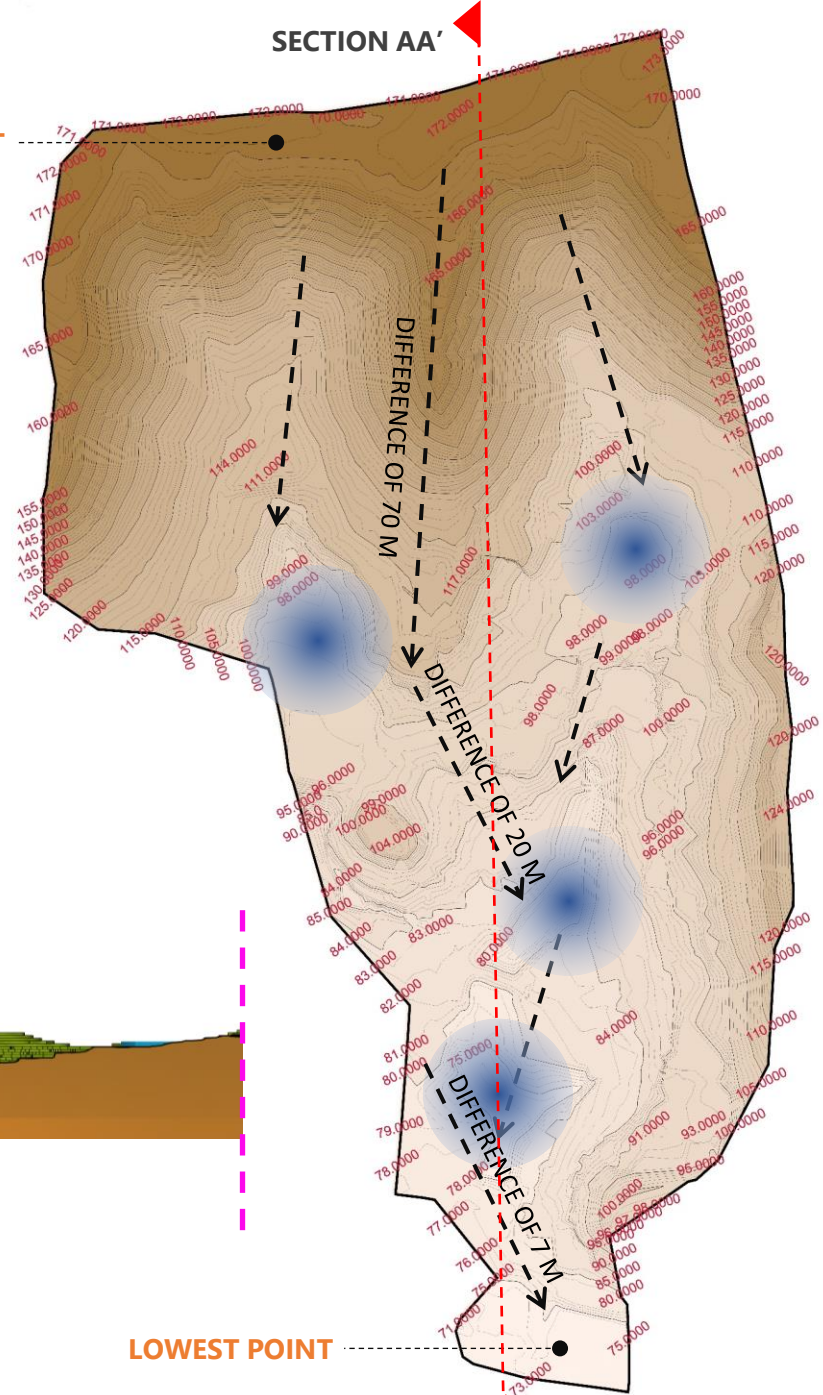


SECTION AA'



SECTION AA' PART 2

HIGHEST POINT



LOWEST POINT






SITE APPRISAL | SLOPE ANALYSIS

INFERENCES

1. Slope stabilization strategies using the planting to be applied to hold the soil in the uplands.
2. The zones in slope less than 1:6 can be used as functional purposes
3. The lowest zone on site can be used for Orchards and Urban farming as the will have accumulation of most fertile soils
4. The lake edges to be planted with aquatic/ sub emergent species that can sustain even when the water is less . The character of the water bodies to be dynamic throughout the year.

LEGEND

-  **Functional Green zones** so the water coming from the valleys can be absorbed
-  **Layered planting** with dense lower and middle story planting to reduce the speed of the gushing water coming from higher region
-  **Urban farming zone** as the soil would be very fertile after being driven from the valleys to the plains

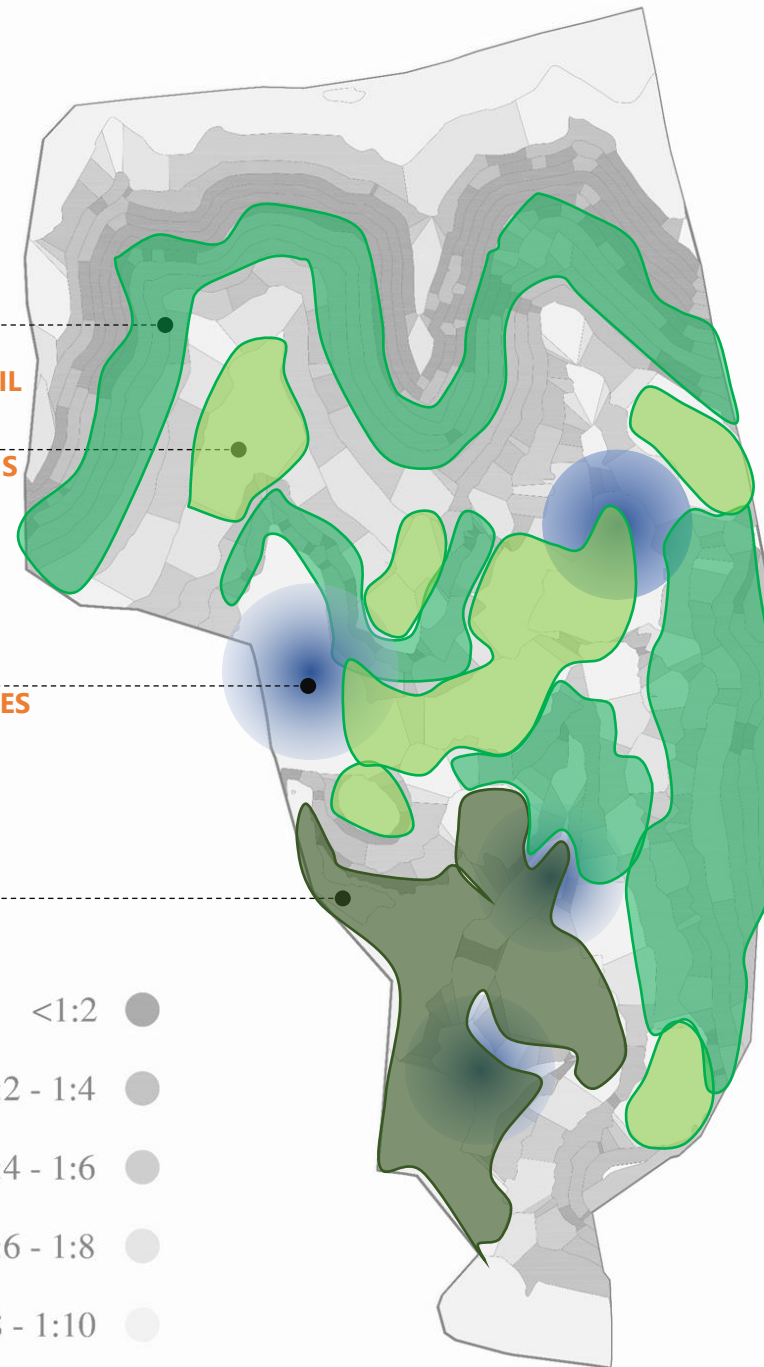
DENSE LAYERED PLANTING TO STABILIZE THE SOIL

FUNCTIONAL GREENS/ GARDENS

WATER CATCHMENT ZONES

FARMING ZONE

- <1:2 ●
- 1:2 - 1:4 ●
- 1:4 - 1:6 ●
- 1:6 - 1:8 ●
- 1:8 - 1:10 ●



SITE APPRISAL | EXISTING VEGETATION ANALYSIS



SUMMERS



MONSOONS

Inference

In summers, the land has no / very little vegetation on the hills. The entire landscape is dry and prone to erosion.

In monsoons, the entire site turns lush and green



Gulmohur



Ashoka



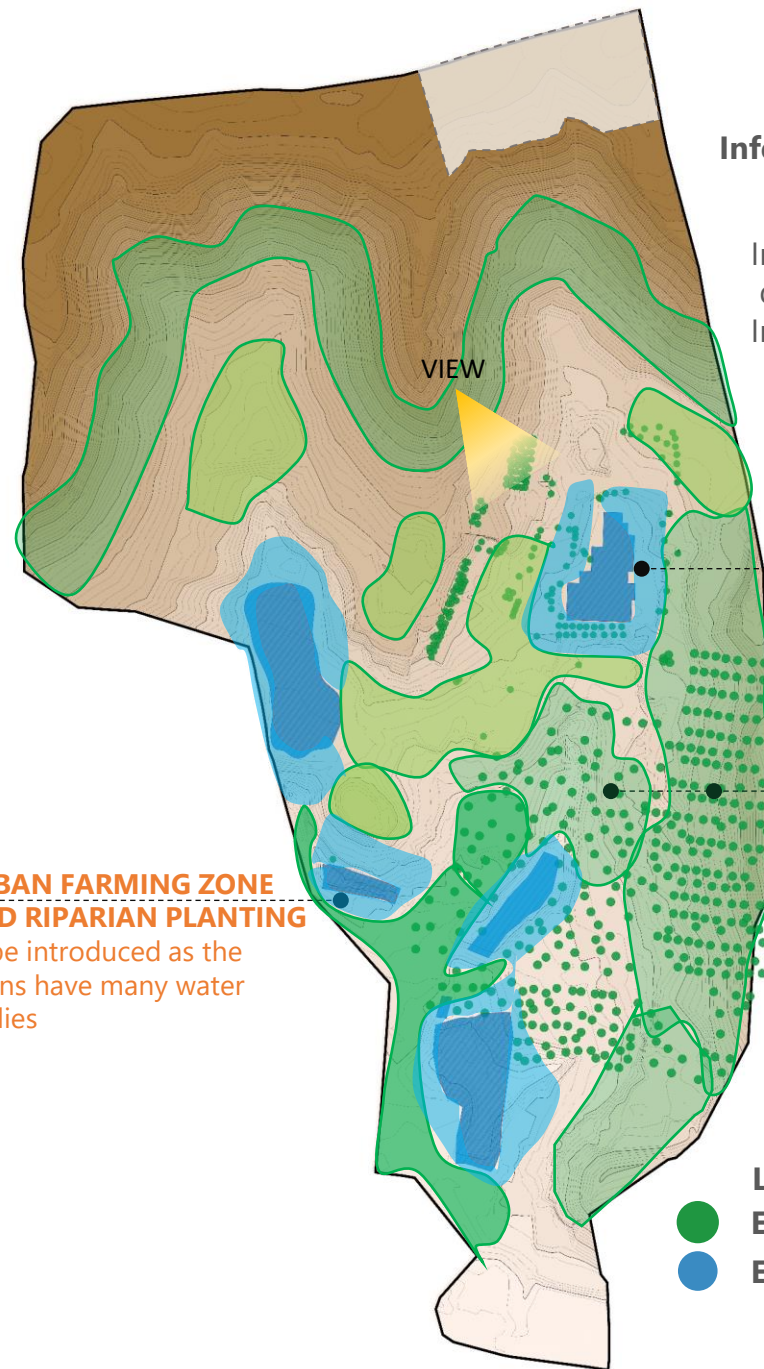
Acacia nilotica, Acacia catechu



Pongamia pinnata



Forest consists dense planting of many species primarily Eucalyptus, Neem Acacias, Ficus



Inference : The existing

Inference dense planting in valleys
In winters the

RIPARIAN PLANTING
to be introduced to create sustainable ecosystem

EXISTING FOREST TO BE RETAINED & BARREN PATCHES TO BE INCLUDED WITHIN THE FOREST BY DENSIFYING THEM.

URBAN FARMING ZONE AND RIPARIAN PLANTING
to be introduced as the plains have many water bodies

LEGEND

- Existing trees
- Existing water bodies



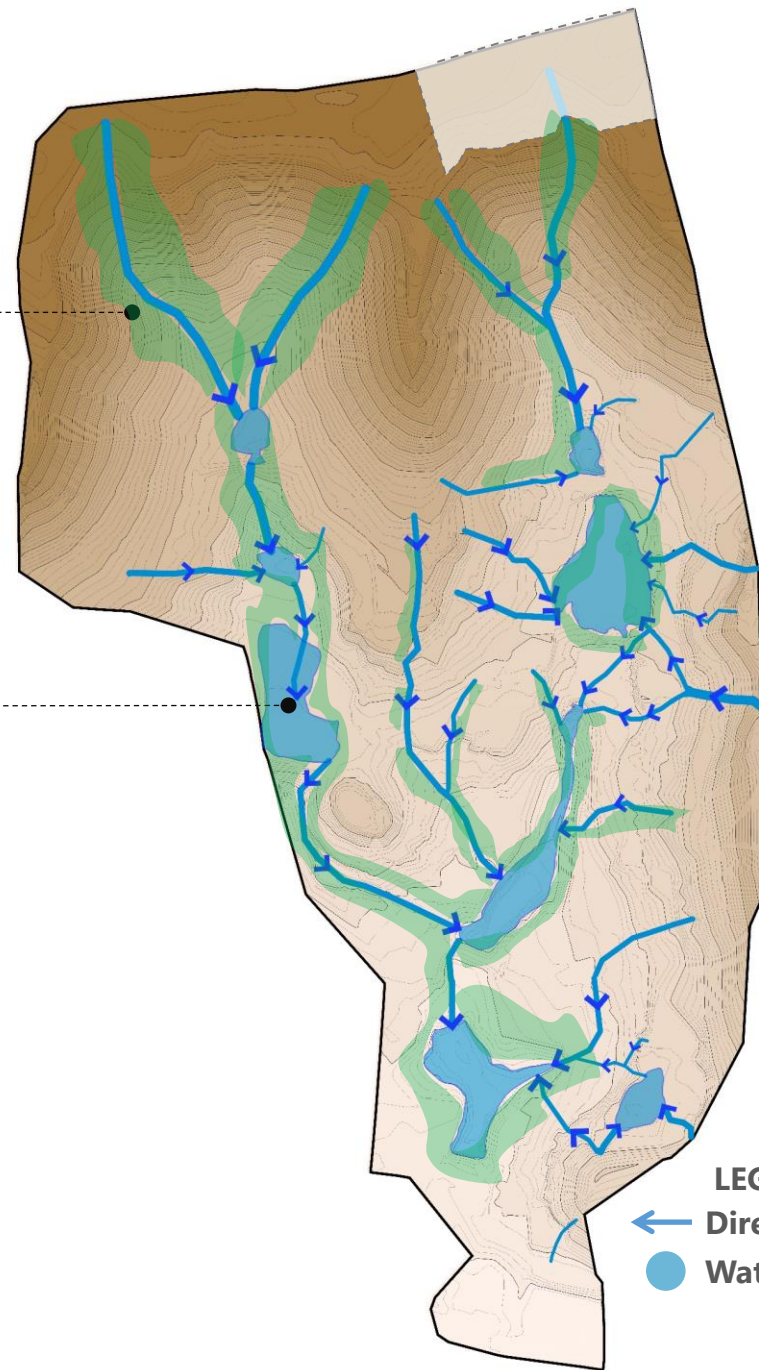
SITE APPRISAL | WATERSHED MAPPING

INFERENCES

1. The site offers an opportunity to channelize and connect the various local catchment zones and create a water harvesting system for lean periods
2. The water collected can be used for irrigation in the orchards and the urban farming round the year.

Dense natural greens near the valley lines as the moisture in the valleys is the max for the vegetation to flourish

Water Tolerant / Riparian species near water bodies



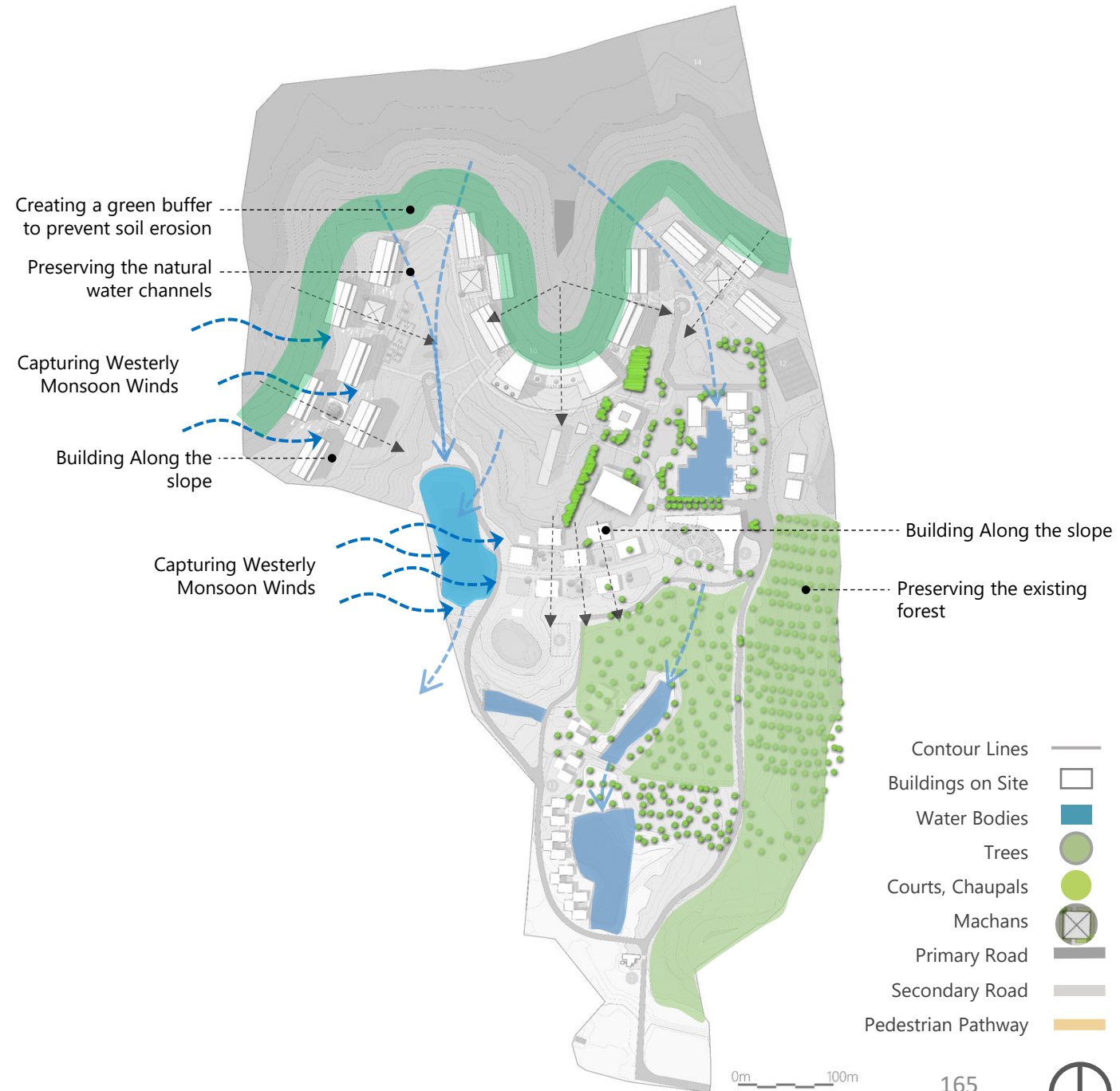
LEGEND
← Direction of water drainage
● Water catchment zones



ARCHITECTURE APPRAISAL

INFERENCE

1. The building blocks area placed respecting the site topography and vegetation footprint.
2. The Courtyard planning provides an opportunity to create interactive landscape spaces for the classrooms, hostels and dining area.
3. Proximity of the lake to the classrooms allows the lake to be enabled as an integrated learning zone
4. The planning of the architectural blocks preserves the natural drainage systems and gives an opportunity to channelize and connect the water catchment zones through bio-swales
5. The placement of courtyards and open spaces allows one to be visually connected to the expansive landscape beyond the site boundaries as well
6. The existing vegetation have been preserved which creates an opportunity to create forest trails, nature walks and to educate about the existing ecology



LANDSCAPE MASTERPLAN | DRAINAGE STRATEGY

OVERALL STRATEGY

- The seasonal water bodies are channelized and connected to the larger water bodies.
- Retention zones are proposed as rain gardens to allow the percolation in ground and recharge water tables
- Peripheral bio swales capture the gushing storm water thereby reducing the flash flooding

LEGEND

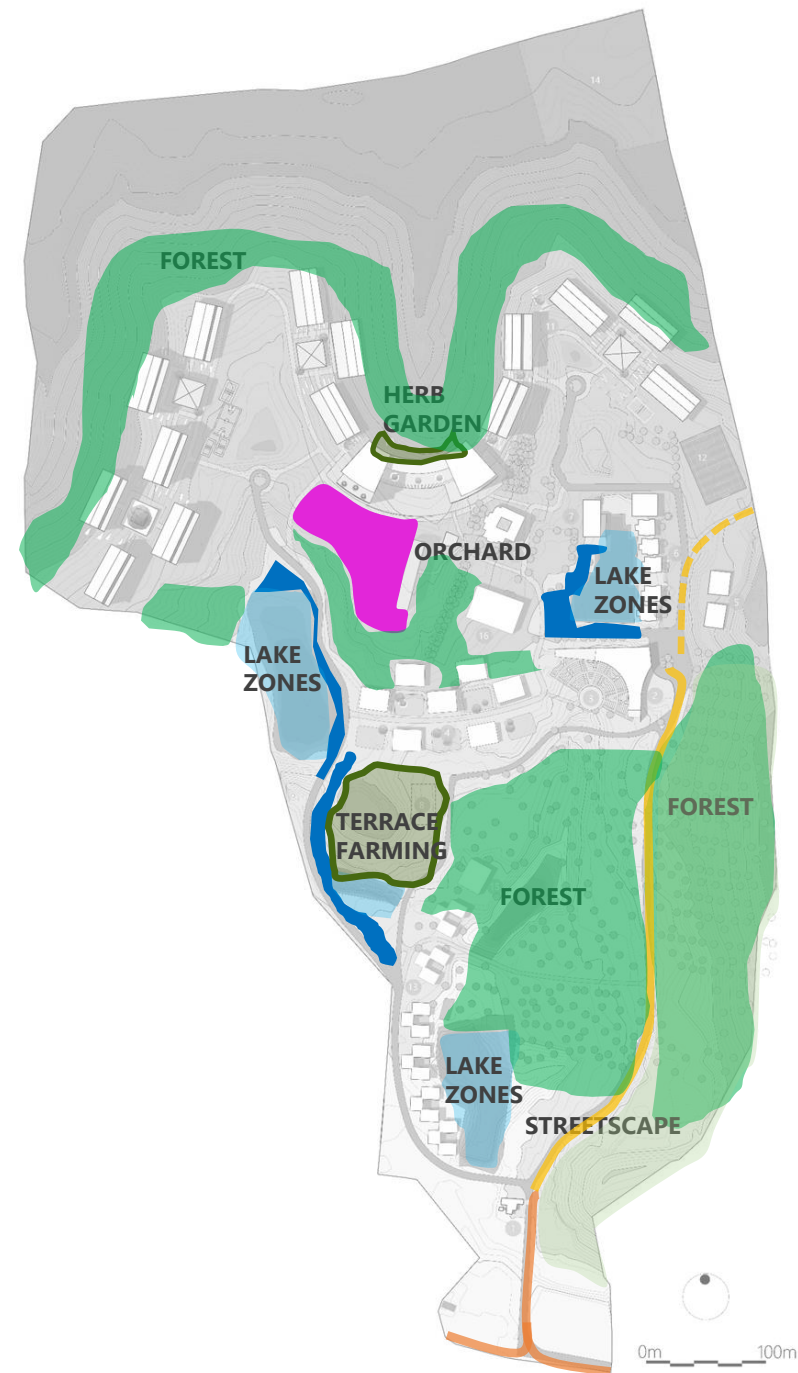
- Perennial Waterbody
- Seasonal Waterbody
- PHASE 1 Construction
- PHASE 1 Construction
- PHASE 3 Construction
- REFURBISHED
- 2M Wide .5M Deep Bio swale (Type A)
- 2M Wide 1 M Deep Ditch (Type B)
- 2M Wide .5 M Bio swale (Type C)
- Culvert
- ➔ Direction of flow



MATCHLINE

LANDSCAPE ZONING

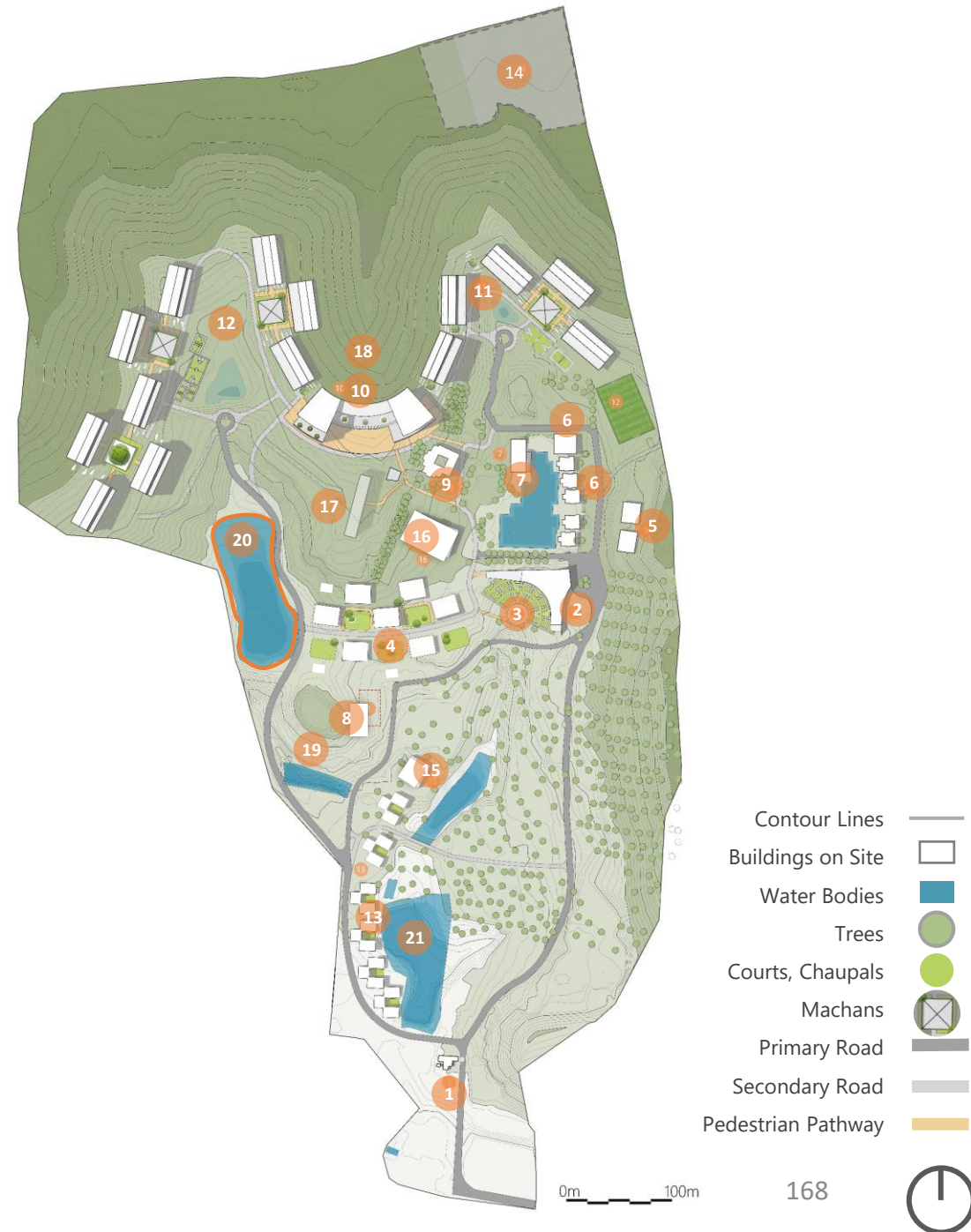
1. STREETScape – circulation
2. WATER WAYS – drainage strategy
3. LAKE ZONES – catchment areas
4. FOREST ZONES
5. TERRACE FARMING & HERB GARDEN
6. ORCHARD
7. BUILDING COURTS



MASTERPLAN

Program

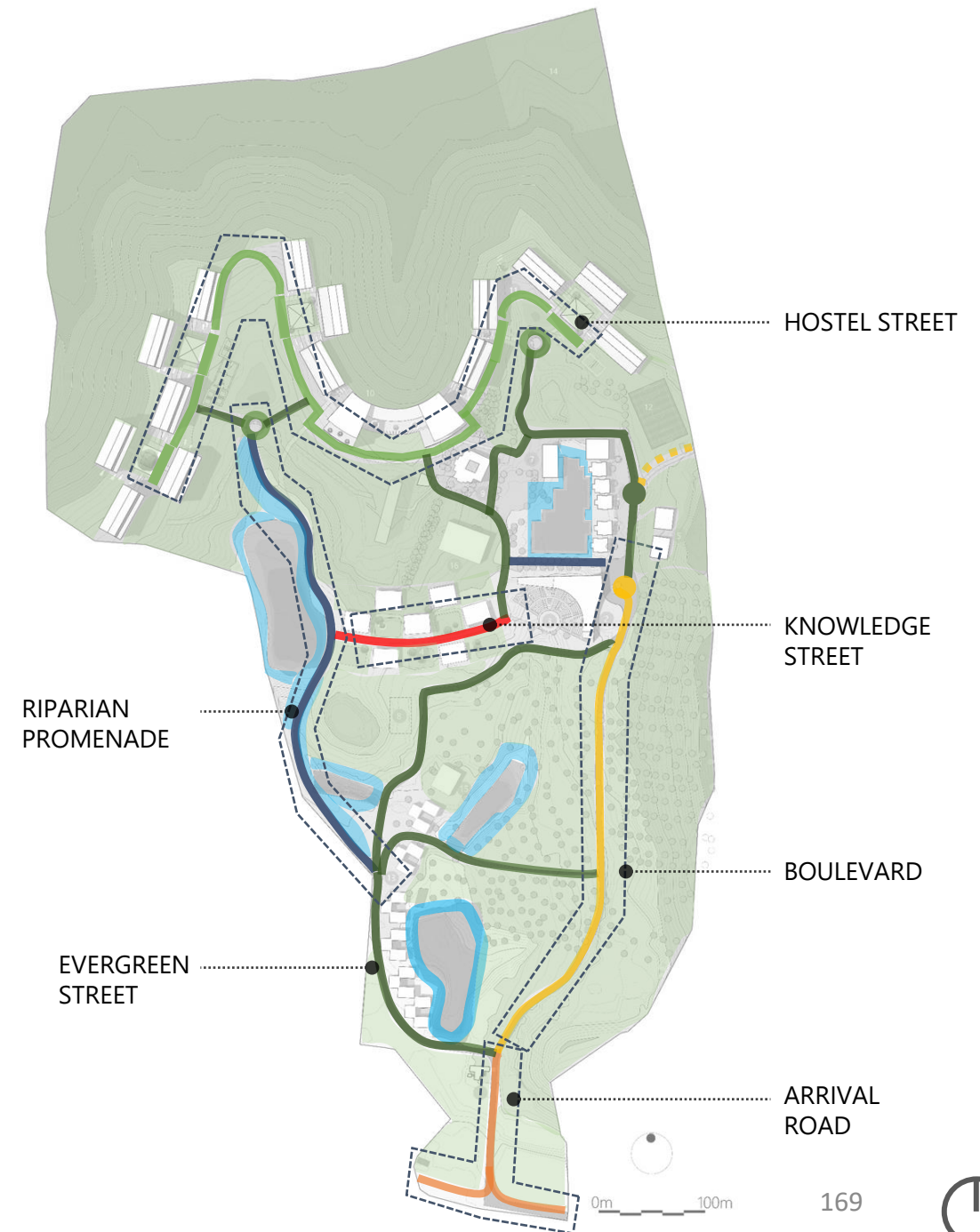
1. Security Cabin + Existing medical facility
2. Entrance Pavilion
Reception
Offices
Parking
3. Open air amphitheater
4. Classrooms for 200 students
5. Computer Labs for 400 systems
6. Faculty/Admin Staff Housing
7. Library, Staff rooms & Staff offices
8. Library
9. Indoor Games, Shops, Infirmary
10. Dining Hall for 1300 students
11. Girls Hostel
12. Boys Hostel
13. Service Staff Housing*
14. Solar farming (1.8 acres) – Location to be optimized
15. Warehouse
16. Indoor Sports
17. Orchards
18. Herb Garden
19. Urban farming terrace
20. Nature Trail along the lake
21. Boardwalk along the lake



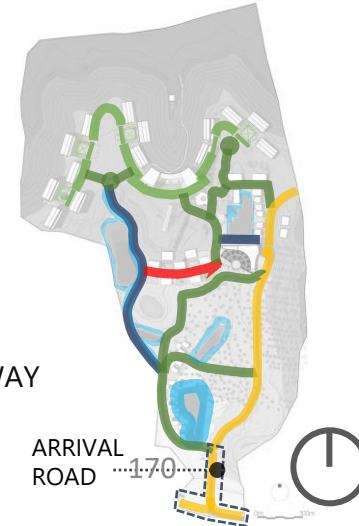
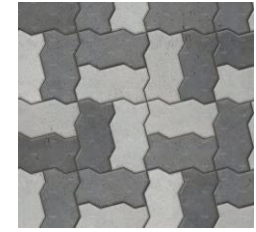
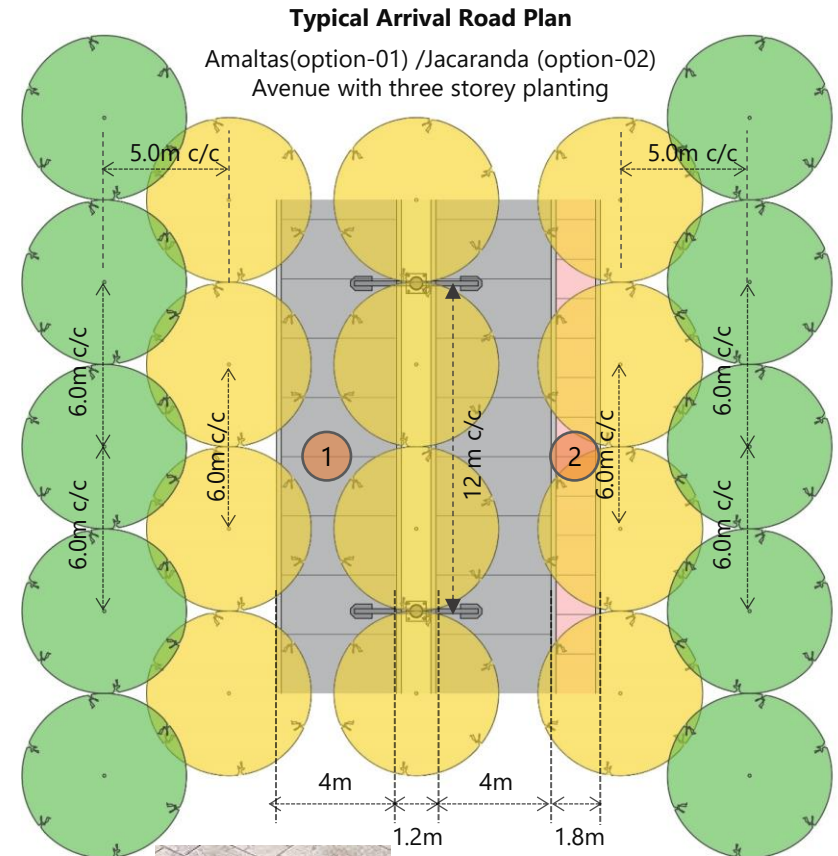
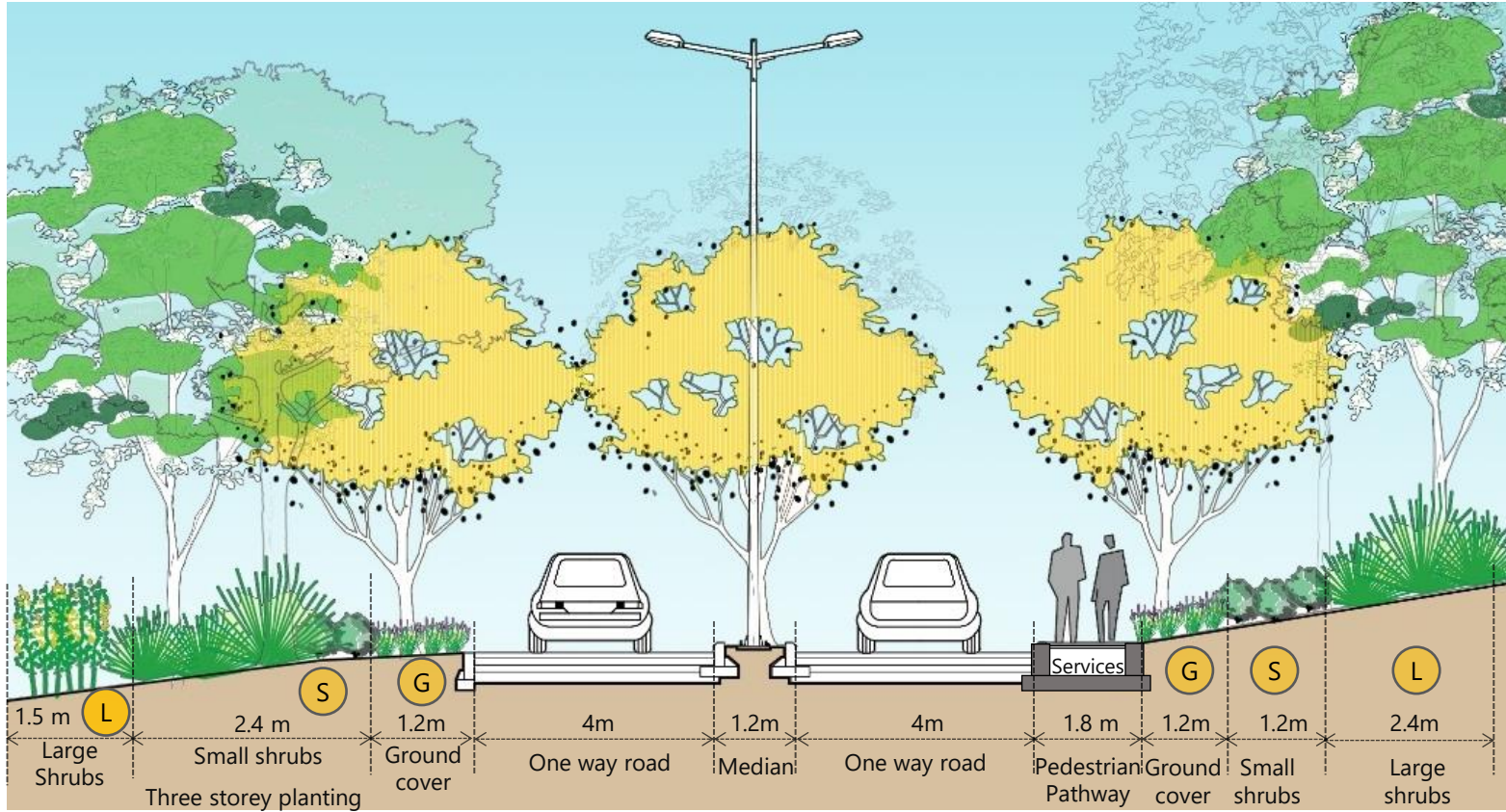
LANDSCAPE MASTERPLAN | STREETSCAPE

INTEGRATING SERVICES & DRAINAGE

- **Arrival Road** Entry zone to the site needs to be highlighted to create an arrival experience. Two-way road with median, feature planting and three storey planting along the both side.
- **Boulevard** Main road connecting the arrival and the academic zone. To be highlighted with seasonal variation creating a dynamic streetscape character which changes colours and texture all along year. 6m wide carriageway along with 1.5m of pathway
- **Knowledge Street** Fully pedestrianised street connecting the classrooms to be primarily be used by the students and the faculty members. 5m wide with evergreen trees along both side to provide shade in the hot summers
- **Riparian promenade** 6m wide road running along the lake and existing water channels. The existing water channels to be preserved and converted to bioswales which runs along the Lake street and connects the lakes
- **Hostel Street** 5m wide pedestrian street connecting the hostel blocks provided with seating at regular intervals. Planned as evergreen avenues for shade along with feature planting in front of hostel blocks and junctions
- **Evergreen Streets** 6m wide vehicular road along with 1.5m of pedestrian pathway connecting the staff housing planted with evergreen trees to provide shade throughout the hot summers



LANDSCAPE MASTERPLAN | ARRIVAL ROAD 275M LONG APPROX.



“The Amaltas Drive”

Celebrate Pune's
Unique History,
Culture And Flora
Along the wide
Approach road

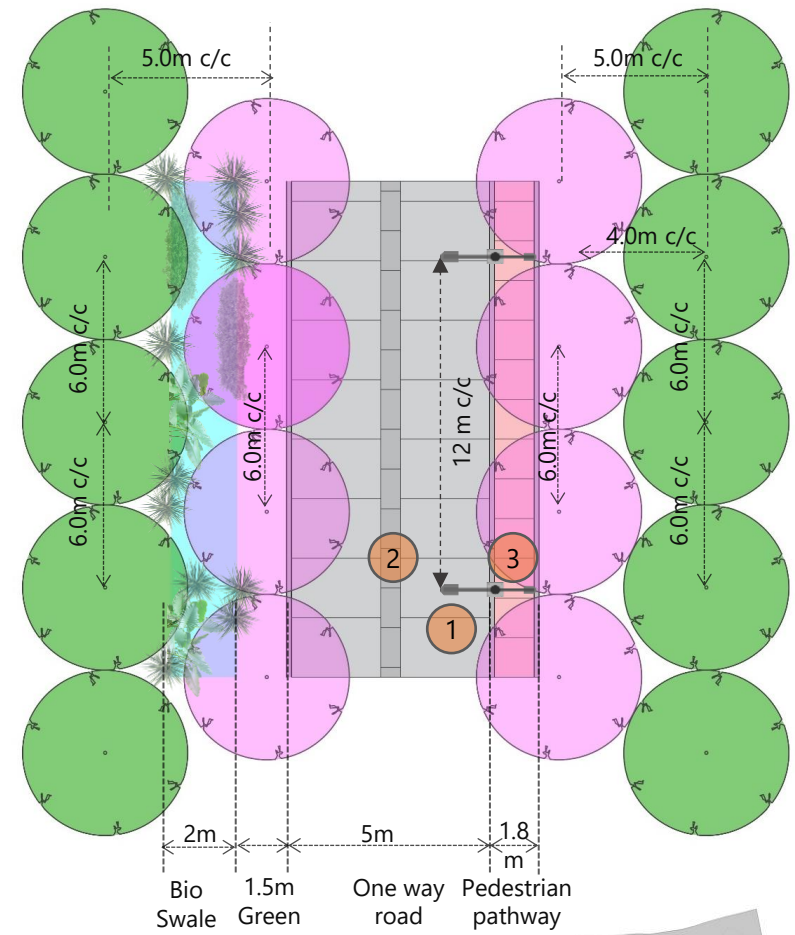
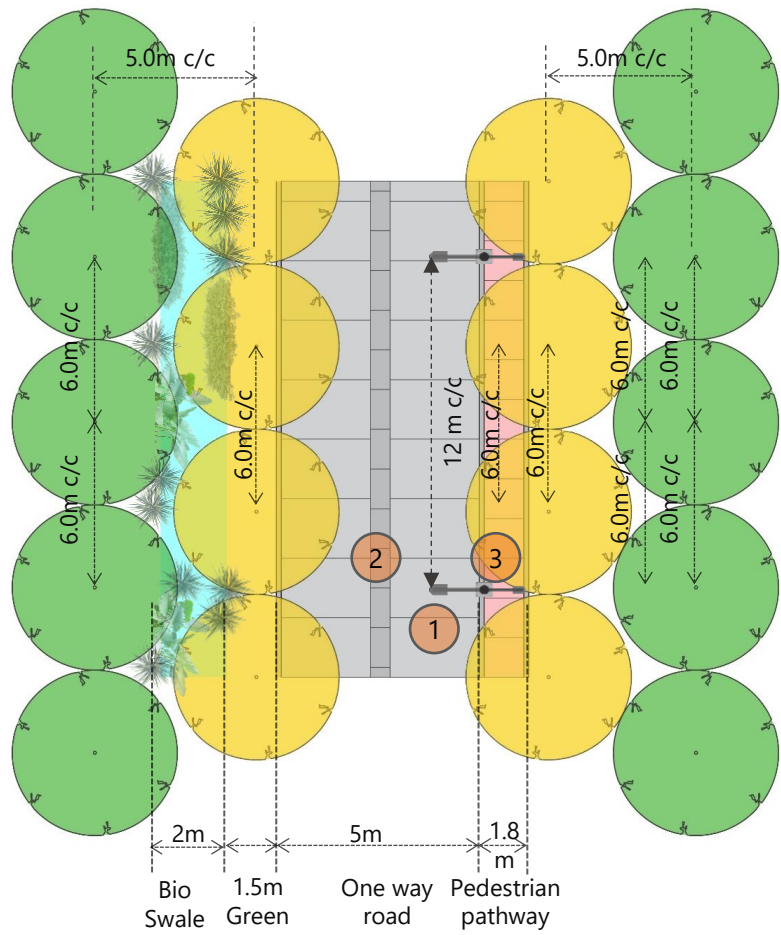
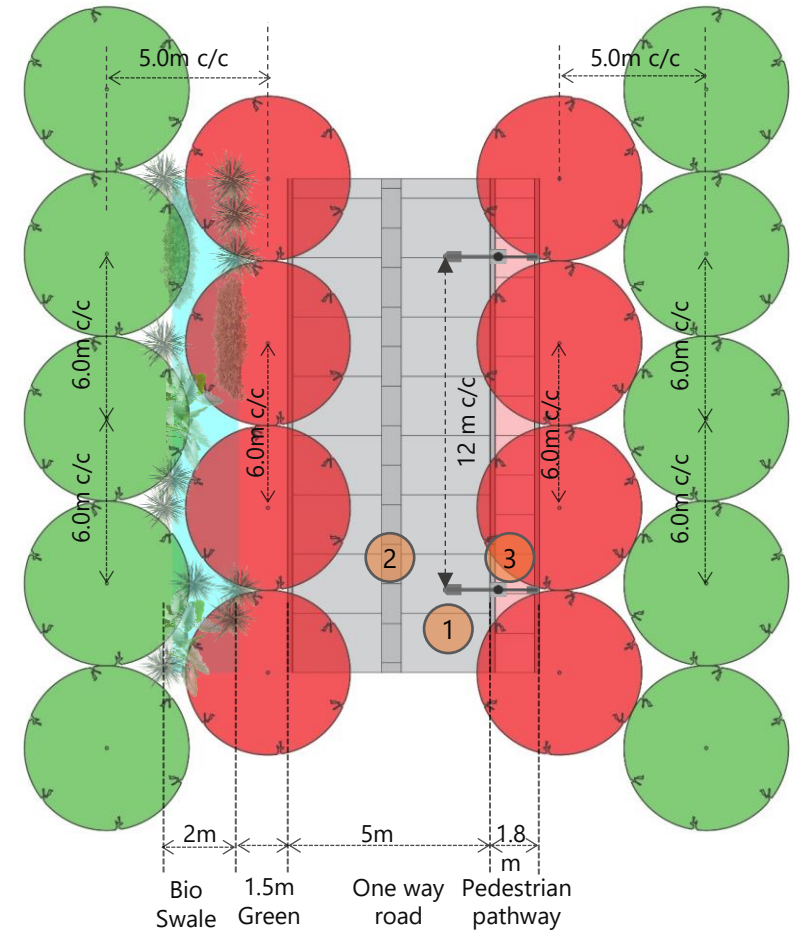


“The Jacaranda Blossom”

Celebrate Pune's
Unique History,
Culture And Flora
Along the wide
Approach road



LANDSCAPE MASTERPLAN | BOULEVARD



Delonix regia-
Gulmohur

Boulevard Feature Tree

The boulevard is divided in 3 parts and every part to have seasonal avenue tree to keep the boulevard blooming throughout the year



Peltophorum pterocarpum
Peela gulmohar



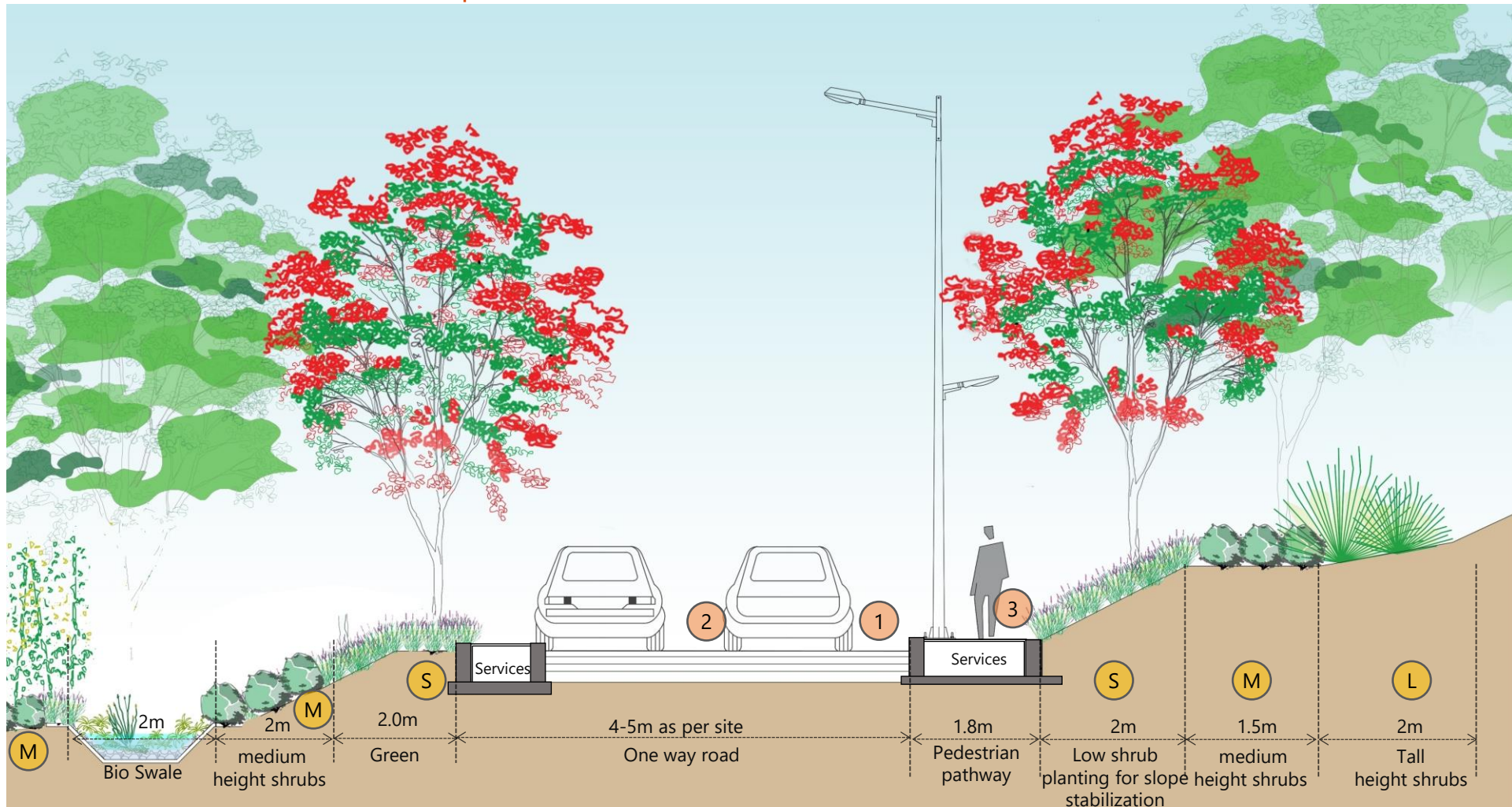
Bauhinia purpurea
Kachnar



BOULEVARD
173



LANDSCAPE MASTERPLAN | BOULEVARD



1 ROAD

Stamped concrete (Ashlar slate Pattern)



2 IN BETWEEN ROAD

Black Cobbles



3 PATHWAY

Concrete pavers



Nephrolepis biserrata aurea



Allamanda schottii compacta



Cymbopogon floxosus



Alpinia purpurata



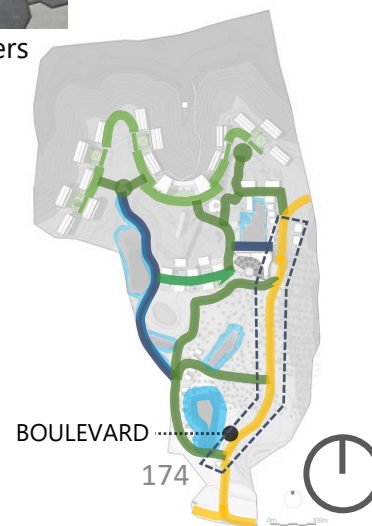
Canna x generalis



Tecoma gaudichaudi



Callistemon hybrid dwarf pink





Functional bio swales acting as places of play and interaction with changing character in each zone

LANDSCAPE MASTERPLAN | KNOWLEDGE STREET



Reference image

To make the knowledge street pedestrian friendly it is designed in cobbles/pavers.



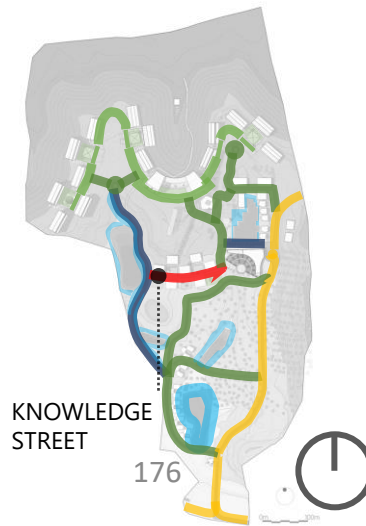
Stone cobbles



Pavers



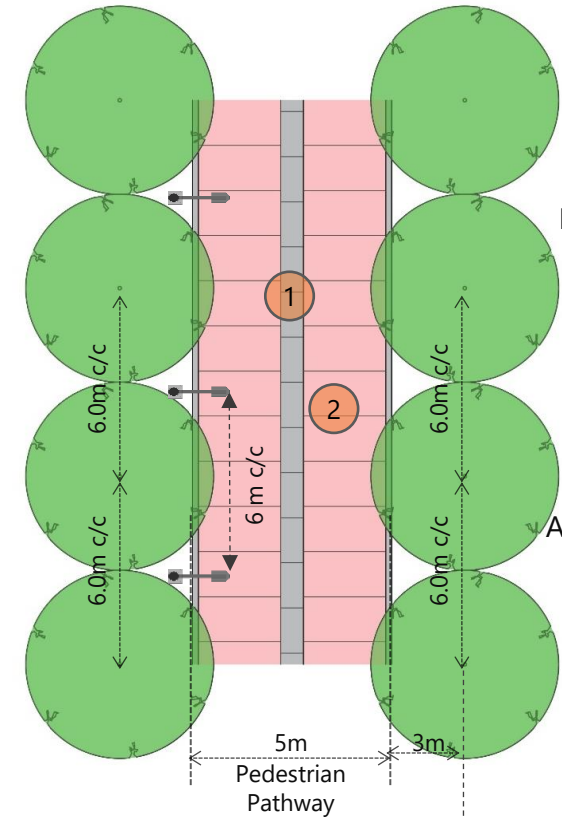
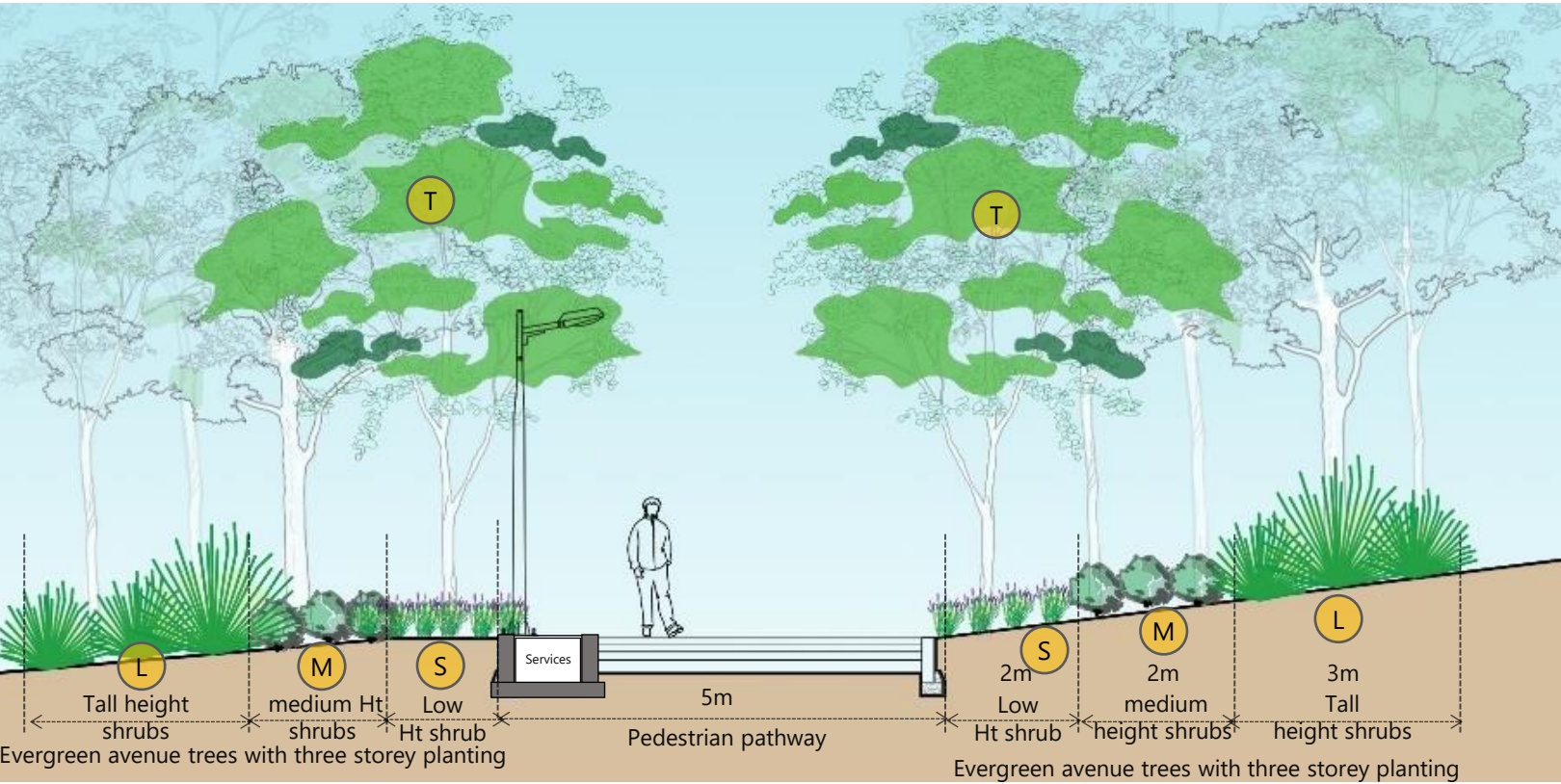
Plan



KNOWLEDGE STREET

176

LANDSCAPE MASTERPLAN | KNOWLEDGE STREET



Magnifera indica- Mango



Azadirachta indica-Neem



Neolamarckia cadamba- Kadamba

Typical Academic Lane Plan

Large evergreen trees to create a shaded canopy and make the lane user-friendly.



Chlorophytum cosmos vittatum



Dracaena deremensis warneckeii



Angelonia grandiflora



Clivia miniate - Bush lily



Tabernaemontana coronaria



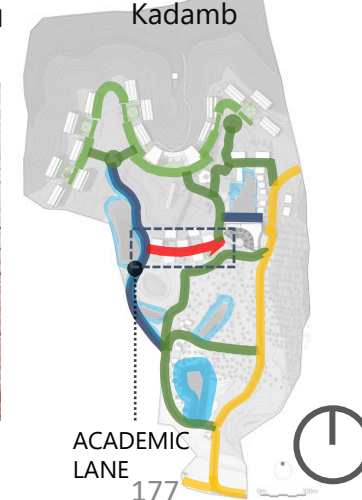
Callistemon hybrid dwarf pink



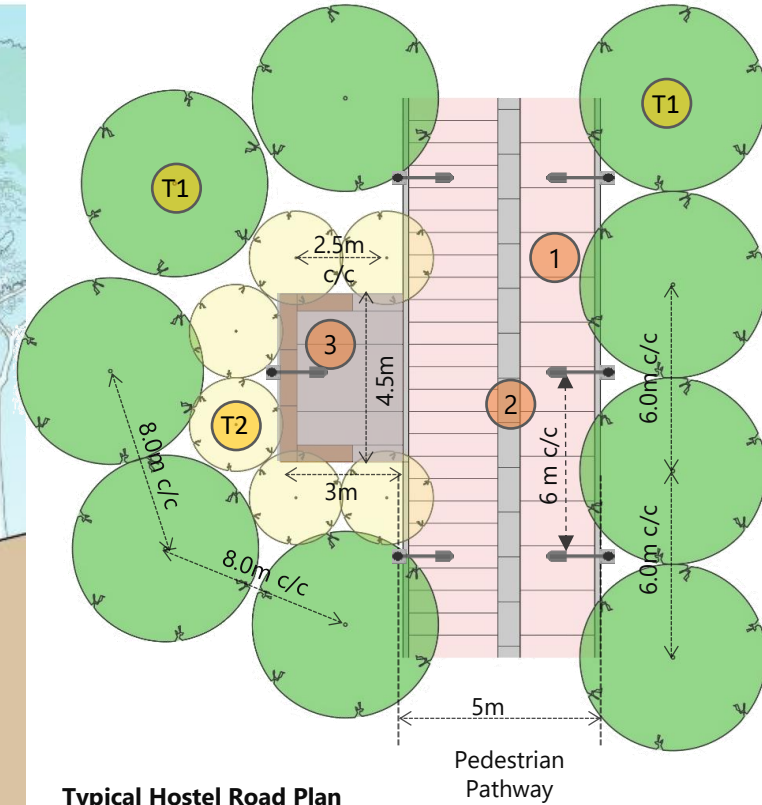
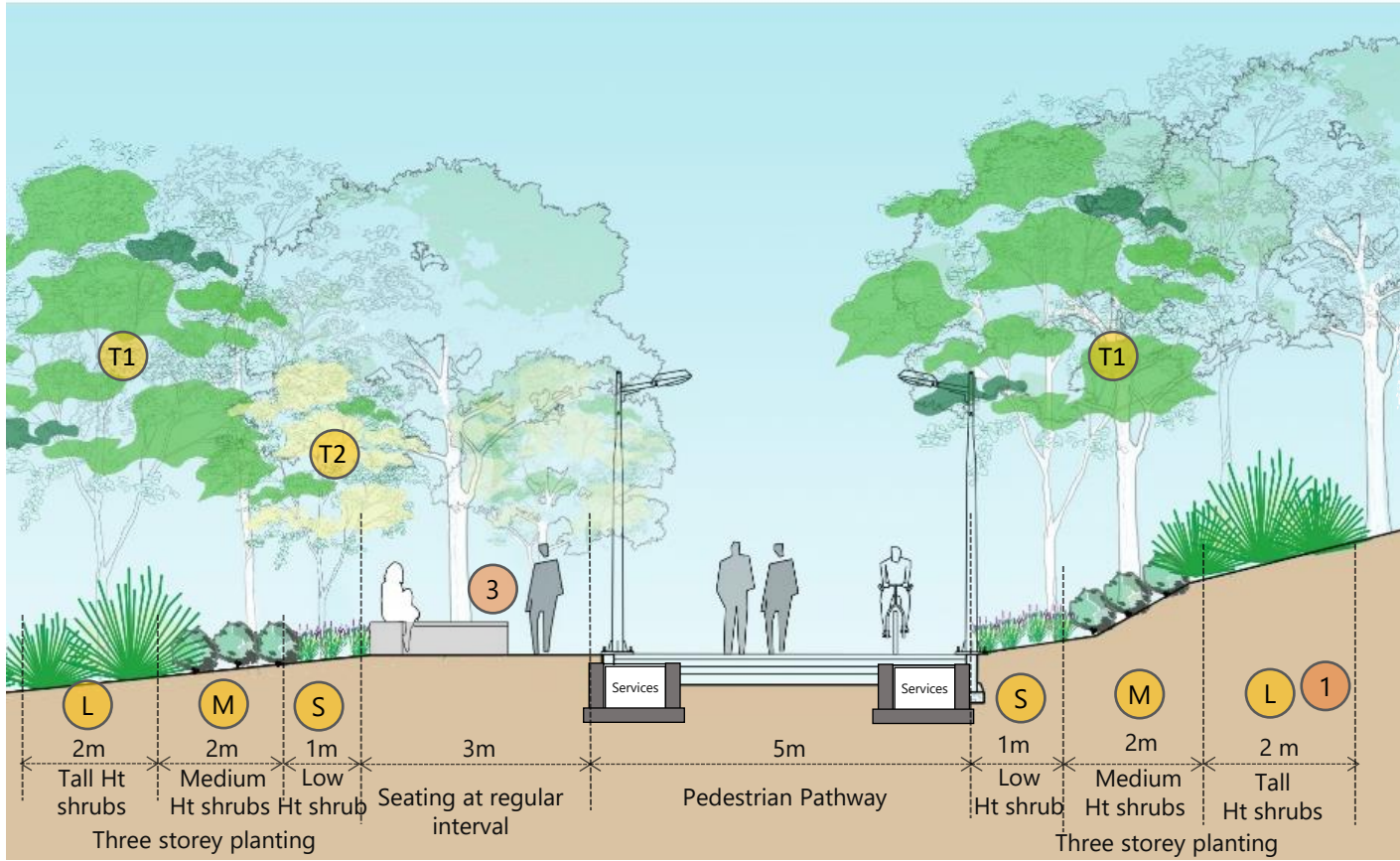
Stone cobbles



Red Pavers



LANDSCAPE MASTERPLAN | HOSTEL STREET



Red Pavers



Black Cobbles



Grey Granite

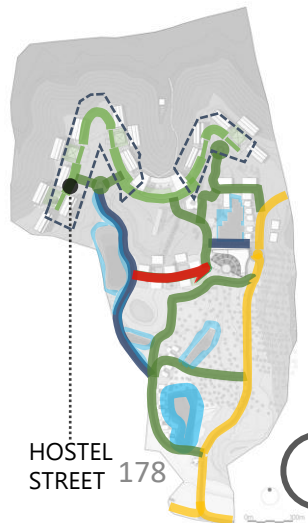
1

2

3

Typical Hostel Road Plan

Large trees with seating spaces having medium height trees and shrubs behind. Road used mainly for pedestrian and cycling.



HOSTEL STREET 178



Mitragyna parviflora - Kaim



Plumeria alba-Safed Champa



Dianella tasmanica variegata



Jasminum sambac



Clivia miniata - Bush Lily



Ixora chinensis - Ixora red



Tecoma gaudichaudi - Tecoma

LANDSCAPE MASTERPLAN | HOSTEL STREET



References



Pause points- along the hostel street



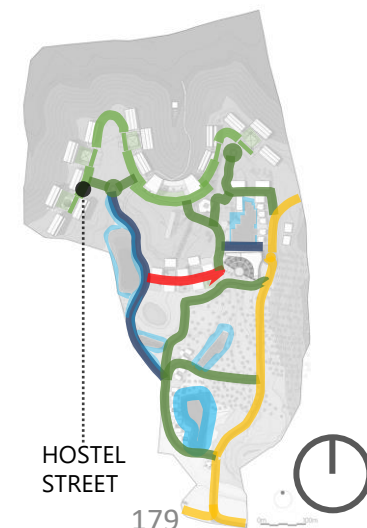
Stone cobbles



Pavers



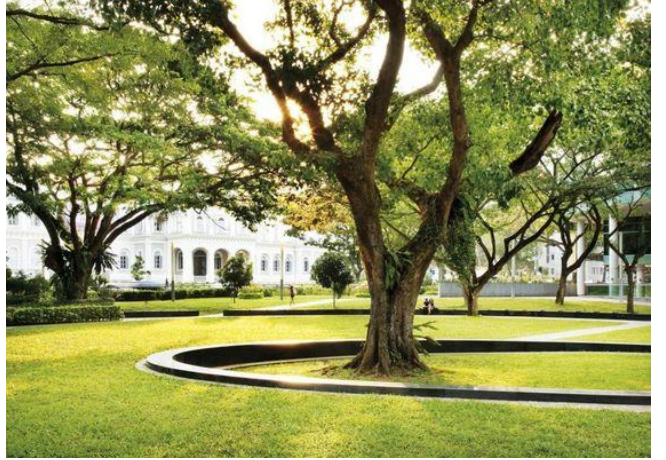
References



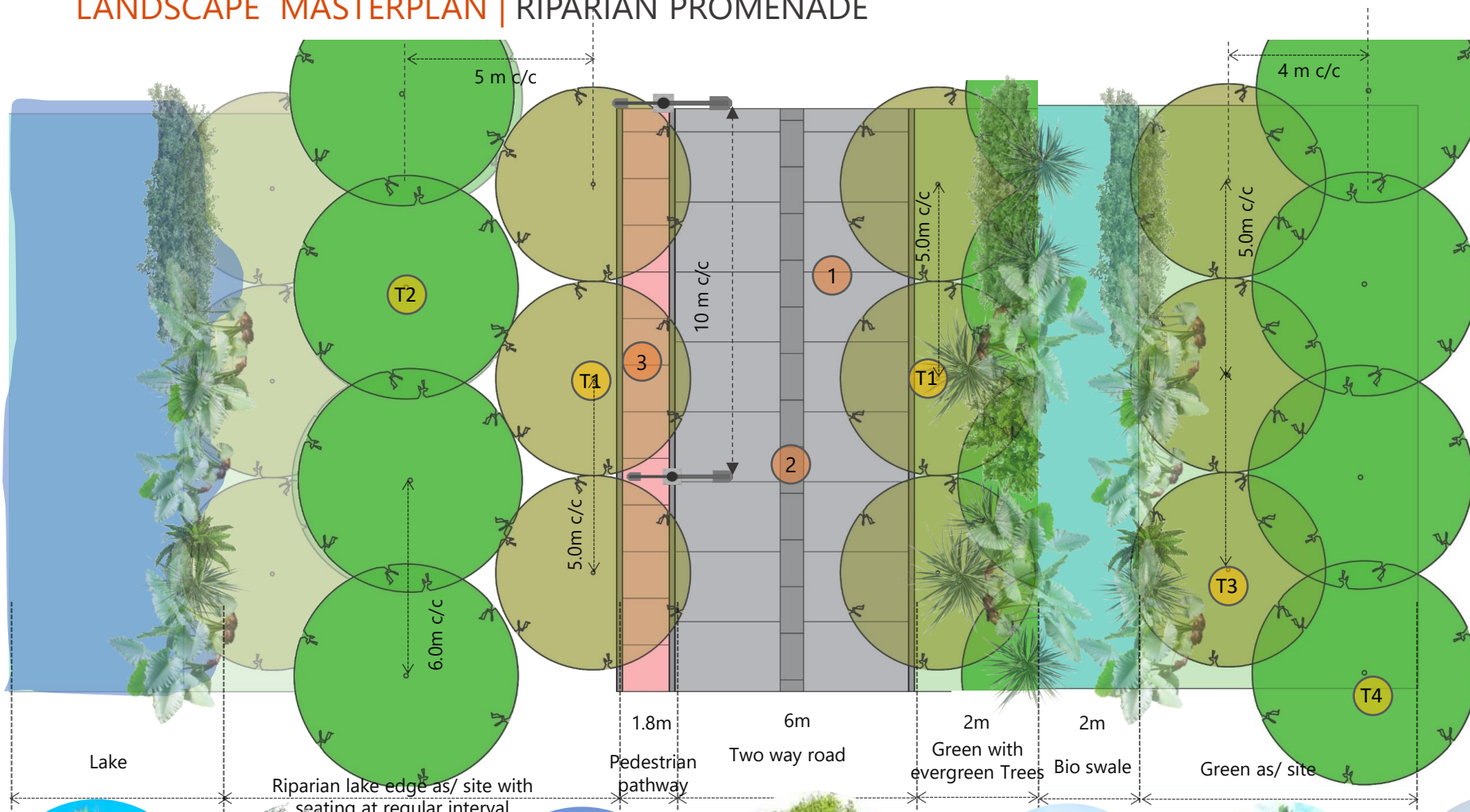
HOSTEL STREET

179

LANDSCAPE MASTERPLAN | PAUSE POINTS ALONG HOSTEL STREET



LANDSCAPE MASTERPLAN | RIPARIAN PROMENADE



Stamped concrete

1

ROAD



Black Cobbles

2

ROAD PATTERN



Grit finish

3

PATHWAY



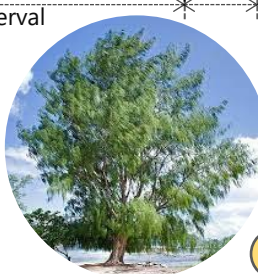
T1

Acacia auriculiformis-
Australian Babul



T1

Bauhinia purpurea
-Kachnar



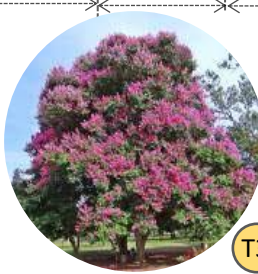
T2

Casuarina equisetifolia
Suru



T2

salix tetrasperma-
valunj



T3

Lagerstromia thorelii
-Dhayti



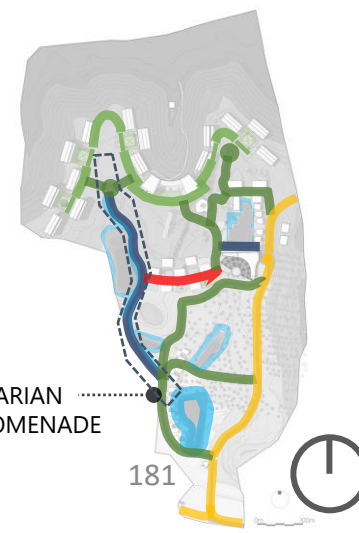
T3

Barringtonia asiatica
Tiwari



T4

Neolamarckia
cadamba-kadam

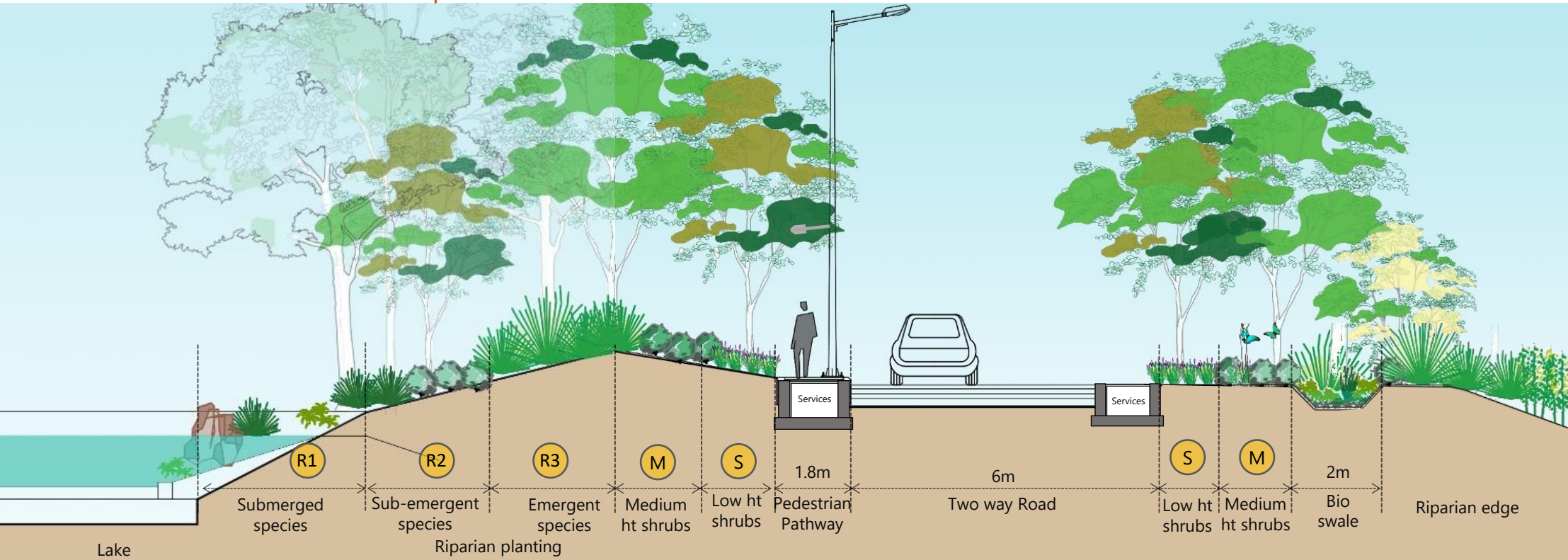


RIPARIAN
PROMENADE

181



LANDSCAPE MASTERPLAN | RIPARIAN PROMENADE



Nymphaea nouch ali

R1



Nymphaea alba

R1



Zantedeschia aethiopica

R1



Sagittaria latifolia

R2



Pontederia cordata

R2



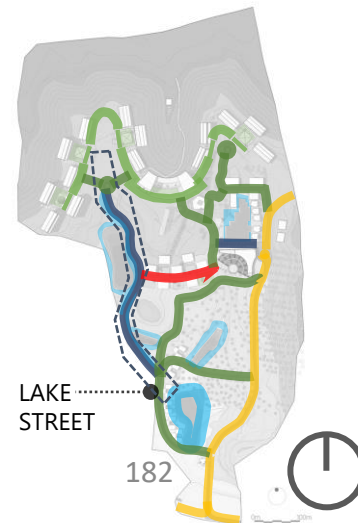
Aristida adscensionis

R3



Canna flacida

R3



Riparian edge planting is introduced along the **bio- swale** which improves the water quality and increases bio-diversity.

LAKE | Aquatic Plant palette



Colocasia R3



Water Lilies / Lotus R1



Iris Plant R1



Arrow Arum R1



Chara R1



cyprus papyrus R2



Cyperus Alternifolius R1



Thalia dealbata R3



Canna R3



Creeping Jenny Pond Plants R1



Forget me not Water plant R2



Joe Pye Weed R3



Yellow Water Snowflake R1

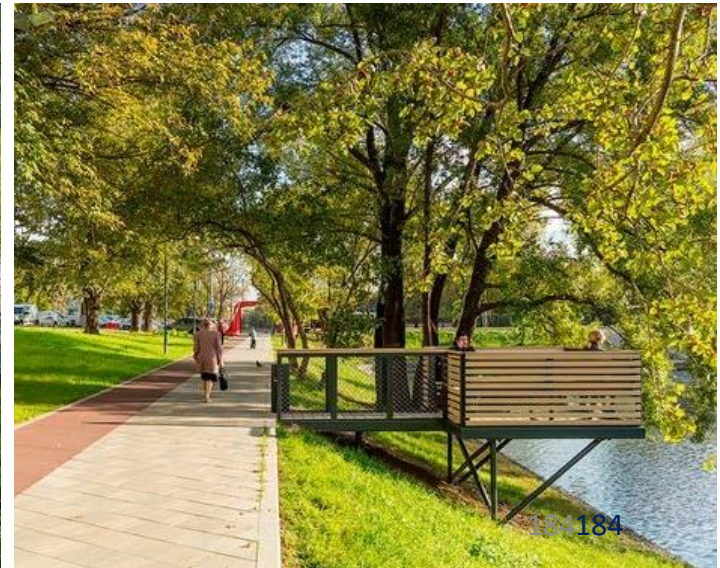


Sweet-Flag R2



Lavender Monkey Flower R2

LANDSCAPE MASTERPLAN | RIPARIAN PROMENADE



PLANTING STRATEGY | EVERGREEN AVENUES



NEOLAMARCKIA CADAMBA
(Kadam)



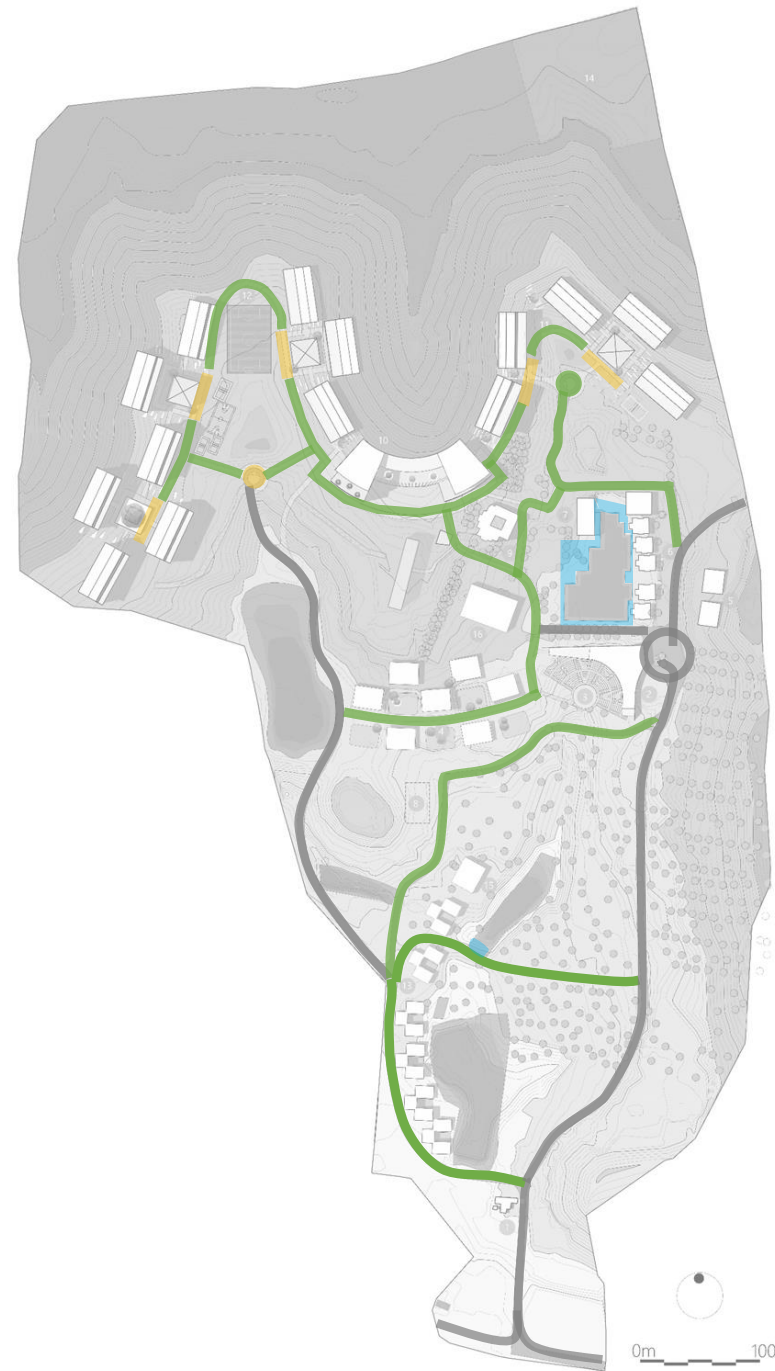
ALBIZZIA LEBBECK
(Sirish)

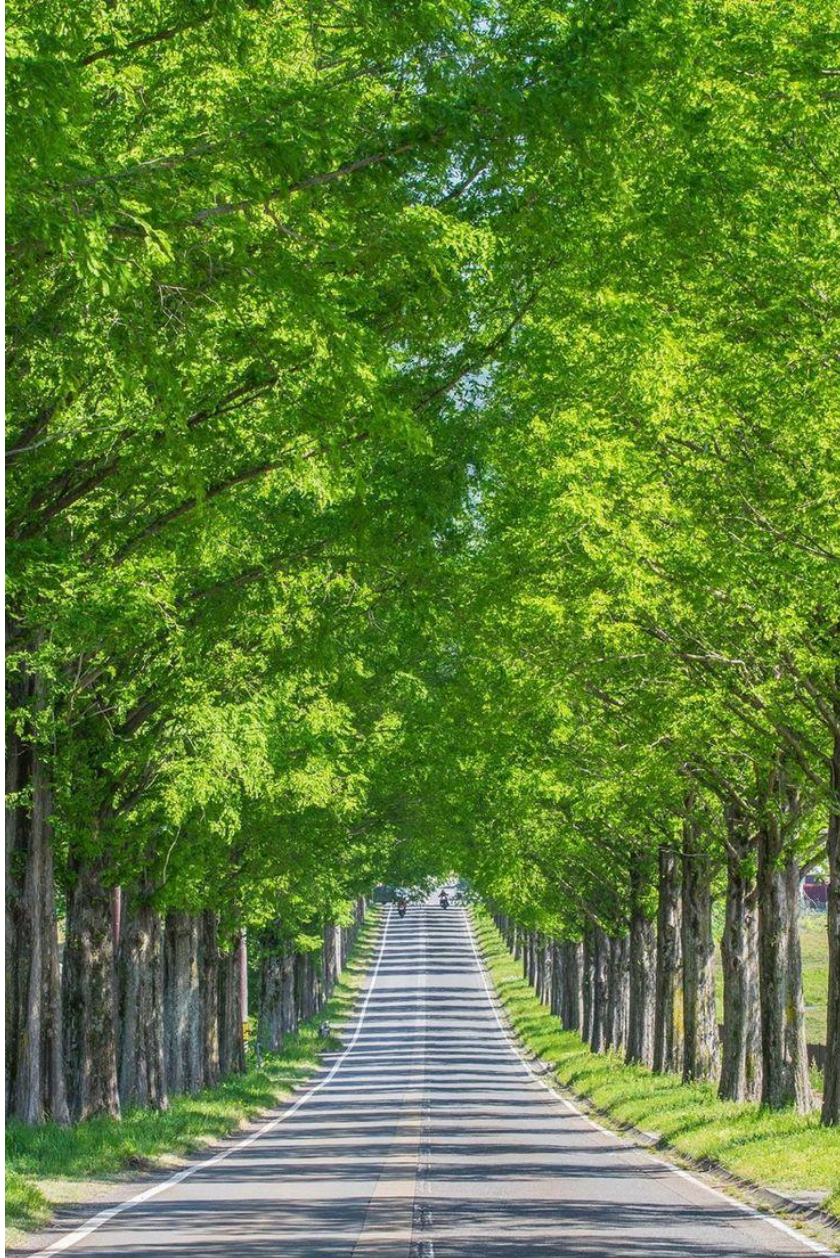


CALOPHYLLUM INOPHYLLUM
(Undi)



AZADIRACHTA INDICA
(Neem)





References



References

LANDSCAPE MASTERPLAN | FOREST | CONCERN ON EUCLAPTUS TREE PLANTATION ON SITE

Eucalyptus trees are an ecological liability

Many states have started phasing out of Eucalyptus trees. The site has many eucalyptus trees which should be removed.

DEMERITS OF EUCLAYPTUS TREE

Water consumption

A eucalyptus tree consumes **90 litres** of water a day. During summers and times of drought, its roots can go down up to 30ft

Effect on Kolar

Eucalyptus is being grown on more than 30,000 hectares in Kolar. Compared to 177m mean depth of groundwater, eucalyptus plantations have increased depth to 260m. Borewell yield within 1km of plantation reduced by more than 35 per cent in five years.

What the study says:

"It may not be wise to continue eucalyptus plantations in these districts in the larger interest of protecting the groundwater resources. It may be even necessary to ban its cultivation by law."

Previous legal action:

On February 27, 2014: Madras High Court (Madurai) Bench orders the Tamil Nadu Forest Department to **take action to "annihilate" eucalyptus plantations** along the Western Ghats

February 2011: Karnataka **Forest Department bans plantation of eucalyptus in Western Ghats and surrounding districts**

<https://www.thehindu.com/news/cities/bangalore/changes-in-law-needed-to-ban-eucalyptus-plantations/article7440926.ece>

Under the transplantation policy, 80% of the trees being felled for an approved project will be mandatory for translocation. A list of exotic species like **VILAYATI KIKAR, SUBABUL AND EUCLAYPTUS** will be given to **contractors to exclude them from the transplant list. "These species will be cut down and 80% of the remaining trees will be transplanted,"**

<https://timesofindia.indiatimes.com/city/delhi/delhi-ridge-under-siege-as-green-alien-invades/articleshow/60715205.cms>

<https://www.hindustantimes.com/delhi-news/delhi-draft-policy-caps-felling-of-local-tree-species-for-projects/story-dvOgMeGe7xaSAnibpEQXGK.html>

Species	Water consumed (litres/yr)
<i>Acacia auriculiformis</i>	1231.50
<i>Albizia lebbek</i>	1283.90
<i>Dalbergia sissoo</i>	1534.05
<i>Eucalyptus hybrid</i>	2526.35
<i>Pongamia pinnata</i>	459.15
<i>Syzigium cuminii</i>	1190.25



LANDSCAPE MASTERPLAN | FOREST ZONE



- LEGEND**
- Existing trees
 - Existing water bodies

Forest Vision

- Re-Densifying the existing forest-using Miyawaki technique as it is faster and economical
- Restoring native green cover on ecologically degraded patches of barren hills
- Densely planting the lower and middle storey to prevent topsoil erosion, which will facilitate the further planting

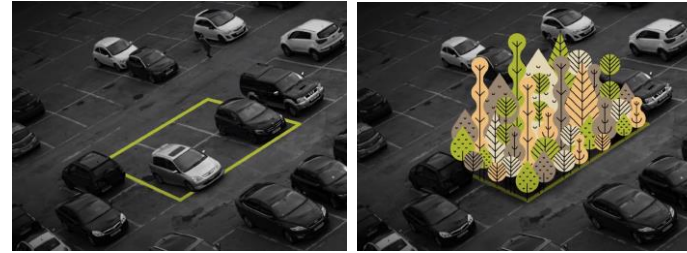
EXISTING FOREST TO BE RETAINED & BARREN PATCHES TO BE INCLUDED WITHIN THE FOREST BY DENSIFYING THEM.



LANDSCAPE MASTERPLAN | FOREST ZONE

Forest Vision

- Re-Densifying the existing forest-using Miyawaki technique as it is faster and economical
- Restoring native green cover on ecologically degraded patches of barren hills
- Densely planting the lower and middle storey to prevent topsoil erosion, which will facilitate the further planting



By using Miyawaki Technique we can create a forest of 300 plants in place of 6 car parking



Reference for Forest 1 (areas with gradual slopes)



MIYAWAKI TECHNIQUE OF CREATING FOREST

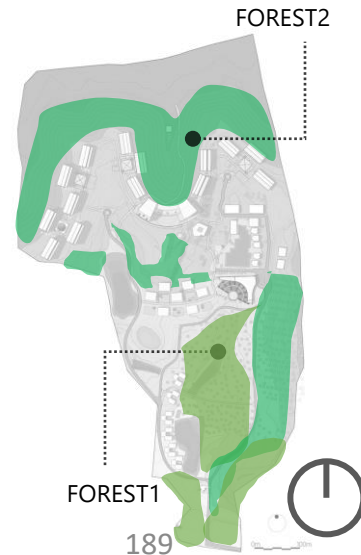
120800 SQM FOREST



(1) Seedlings are planted densely, 3 trees/m², and randomly (not in line), mixing as many native trees of potential natural vegetation as possible.

(2) Approximately 3 years after planting, natural selection among the seedlings allows the most adapted ones to develop quickly.

(3) By 15-20 years after planting, the early model of a dense mature forest will be established



LANDSCAPE MASTERPLAN | FOREST ZONE TREE LIST

अ.क्र.	वृक्षांचे स्थानिक नाव	वृक्षांचे शास्त्रीय नाव
१)	खैर	<i>Acacia catechu/Acacia sundra</i>
२)	हिवर	<i>Acacia leucophloea</i>
३)	बाभूळ	<i>Acacia nilotica</i>
४)	हळदू	<i>Adina cordofolia</i>
५)	बेल	<i>Aegle marmelos</i>
६)	शिरीष काळा	<i>Albizia amara</i>
७)	शिरीष	<i>Albizia lebbeck</i>
८)	किनई	<i>Albizia procera</i>
९)	सातवीण	<i>Alstonia scholaris</i>
१०)	रोहितक	<i>Amoora rohitaka/ Aphanamixis polystachia</i>
११)	रामफळ	<i>Annona reticulata</i>
१२)	महाधावडा	<i>Anogeissus acuminata</i>
१३)	धावडा	<i>Anogeissus latifolia</i>
१४)	फणस	<i>Arthocarpus heterophyllus</i>
१५)	कडूलिंब	<i>Azadirachta indica</i>
१६)	गोरखचिंच	<i>Adonsonia digitata</i>
१७)	देवसायर	<i>Bambox insigne</i>
१८)	नेवार	<i>Barringtonia acutangula</i>
१९)	रक्तकांचन	<i>Bauhinia purpurea</i>
२०)	आपटा	<i>Bauhinia racemosa</i>
२१)	सेमला कांचन	<i>Bauhinia semla</i>
२२)	पिवळा कांचन	<i>Bauhinia tomentosa</i>
२३)	कांचन	<i>Bauhinia variegata</i>
२४)	काटे सावर	<i>Bombax ceiba</i>

२५)	चारोळी	<i>Buchanania cochinchinensis</i>
२६)	पळस	<i>Butea monosperma</i>
२७)	उंडी	<i>Calophyllum inophyllum</i>
२८)	कुम्भा	<i>Careya arborea</i>
२९)	वहावा	<i>Cassia fistula</i>
३०)	हिरवा सायर	<i>Ceiba pentandra</i>
३१)	सोनसावर	<i>Cochlospermum religiosum</i>
३२)	भोकर	<i>Cordia dichotoma</i>
३३)	दहीवण	<i>Cordia macleodii</i>
३४)	बुरगुंड	<i>Cordia wallichii</i>
३५)	वायवर्ण	<i>Crataeva nurvala / Adansonii</i>
३६)	नारळ	<i>Cocus nucifera</i>
३७)	वाडगा/कलाबश	<i>Ciescemia cujete</i>
३८)	फणशी	<i>Dalbergia lanceolaria</i>
३९)	सिसम	<i>Dalbergia latifolia</i>
४०)	सिसू	<i>Dalbergia sissoo</i>
४१)	करमळ (मोटा)	<i>Dillenia ceiba/ Indica</i>
४२)	टेमरू	<i>Diospyros malabarica</i>
४३)	पुत्रंजीवा	<i>Drypetes roxburghii</i>
४४)	टेंभूर्णी	<i>Dyospyros embriopteris</i>
४५)	रूद्राक्ष	<i>Elaeocarpus sphaericus</i>
४६)	रानपांगारा	<i>Erythrina stricta</i>
४७)	बुच पांगारा	<i>Erythrina suberose</i>
४८)	पांगारा	<i>Erythrina variegata</i>
४९)	पायपर	<i>Ficus amplissima</i>
५०)	पायर	<i>Ficus amottiana</i>
५१)	खरोटी	<i>Ficus asperimma</i>
५२)	वड	<i>Ficus bengalensis</i>
५३)	रबर	<i>Ficus elastica</i>

LANDSCAPE MASTERPLAN | FOREST ZONE TREE LIST

५४)	उंबर	<i>Ficus glomerata</i>
५५)	उंबर काळा	<i>Ficus hispida</i>
५६)	नांदुक	<i>Ficus microcarpa</i>
५७)	पिंपळ	<i>Ficus religiosa</i>
५८)	पिंपरण	<i>Ficus tsiela</i>
५९)	कृष्णवड	<i>Ficus krishnae</i>
६०)	शिवण	<i>Gmelina arborea</i>
६१)	फालसा	<i>Grewia asiatica</i>
६२)	धामण	<i>Grewia tiliaefolia</i>
६३)	वारस पिवळा	<i>Heterophragma adenophyllum</i>
६४)	अंजन	<i>Hardwickia binata</i>
६५)	पांढरा कुडा	<i>Holarhena antidysenterica</i>
६६)	वावळ	<i>Holoptelia integrifolia</i>
६७)	मोहगणी/खाया	<i>Khaya grandis</i>
६८)	तामण	<i>Lagerstromia reginea/ Speciosa</i>
६९)	मोई	<i>Lannia coromandalica</i>
७०)	नाणा	<i>Largestroemia microcarpa</i>
७१)	कवठ	<i>Limonia acidissima</i>
७२)	मोह	<i>Madhuka longifolia</i>
७३)	आंबा	<i>Mangifera indica</i>
७४)	खिरणी	<i>Manilkara hexandra</i>
७५)	बकान नीम	<i>Melia azedarach</i>
७६)	महानीम/लिंबारा	<i>Melia dubia</i>
७७)	चेरी	<i>Muntingia calabura</i>
७८)	अंजनी	<i>Memecylon umbellatum</i>
७९)	नागकेशर	<i>Mesua ferrea</i>
८०)	पिवळा चाफा	<i>Michelia champaka</i>
८१)	बकूळ	<i>Mimusops elengi</i>
८२)	कळम	<i>Mitragyna parviflora</i>

८३)	बारतोडी	<i>Morinda pubescens</i>
८४)	कुंती / कामिनी	<i>Murraya paniculata</i>
८५)	कदंब	<i>Neolamarckia cadamba/Anthocephalms</i>
८६)	पारिजातक	<i>Nyctanthes arbor-tristis</i>
८७)	पारजांभूळ	<i>Olea dioica</i>
८८)	टेदू	<i>Oroxylam indicum</i>
८९)	तिवस/काळा पळस	<i>Ougeinia oogeinensis</i>
९०)	कनकचंपा	<i>Ochna obtusata</i>
९१)	चेंडूफळी	<i>Parkia biglandulosa</i>
९२)	आवळा	<i>Phyllanthus emblica/ Emblica officinalis</i>
९३)	करंज	<i>Pongamia pinnata</i>
९४)	शमी	<i>Prosopis cineraria</i>
९५)	बीजा/बिबळा	<i>Pterocarpus marsupium</i>
९६)	मुचकुंद	<i>Pterospermum acerifolium</i>
९७)	पॉप्युलर	<i>Populus spp</i>
९८)	रक्तचंदन/तांबडाचंदन	<i>Pterocarpus santalinus</i>
९९)	वाळूज	<i>Salix tetrasperma</i>
१००)	चंदन	<i>Santalum album</i>
१०१)	रिठा	<i>Sapindus laurifolius</i>
१०२)	सिताअशोक	<i>Saraca indica</i>
१०३)	कुसुंब	<i>Schleichera oleosa</i>
१०४)	मोरवा	<i>Schrebera swietenoides</i>
१०५)	बिब्या	<i>Semecarpus anacardium</i>
१०६)	वानवृक्ष	<i>Solanum erianthum</i>
१०७)	अंबाडा	<i>Spondias pinnata/Mingifera wild</i>
१०८)	जंगली बदाम	<i>Sterculia foetida</i>
१०९)	कहांडळ	<i>Sterculia urens</i>
११०)	पाडळ	<i>Stereospermum chelenoides</i>
१११)	जांभूळ	<i>Syzygium cumini</i>

११२)	चिंच	<i>Tamarindus indica</i>
११३)	साग	<i>Tectona grandis</i>
११४)	अर्जून	<i>Terminalia arjuna</i>
११५)	बेहडा	<i>Terminalia bellirica</i>
११६)	आईन	<i>Terminalia elliptica</i>
११७)	किंजळ	<i>Terminalia paniculata</i>
११८)	हिरडा	<i>Terminalia chebula</i>
११९)	सावडा	<i>Terminalia alata</i>
१२०)	रानभेंडी	<i>Thespesia populnea</i>
१२१)	काळा कूडा	<i>Wrightia tinctoria</i>
१२२)	बोर	<i>Zizyphus mauritiana</i>

LANDSCAPE MASTERPLAN | TERRACE FARMING

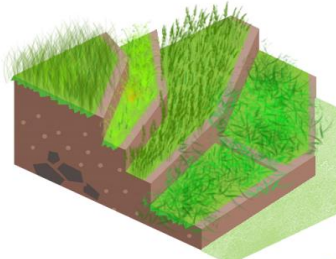
"5300 SQM DEDICATED TERRACE FARMING"



SEGREGATION AT SOURCE



COMPOSTING AT SITE



TERRACE FARMING ON SITE



USING THE GREENS IN CAMPUS KITCHEN



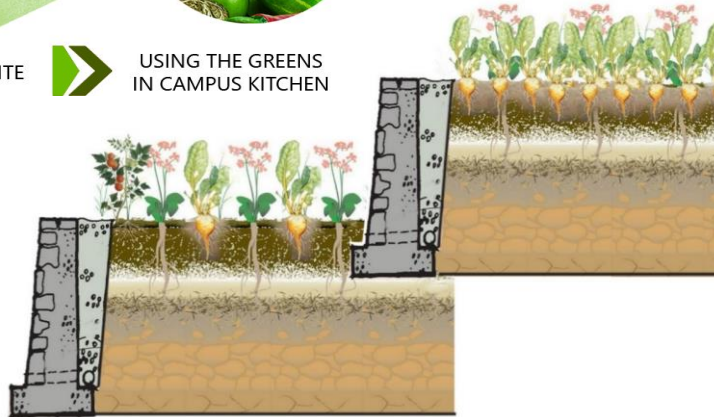
150-200MM SOIL



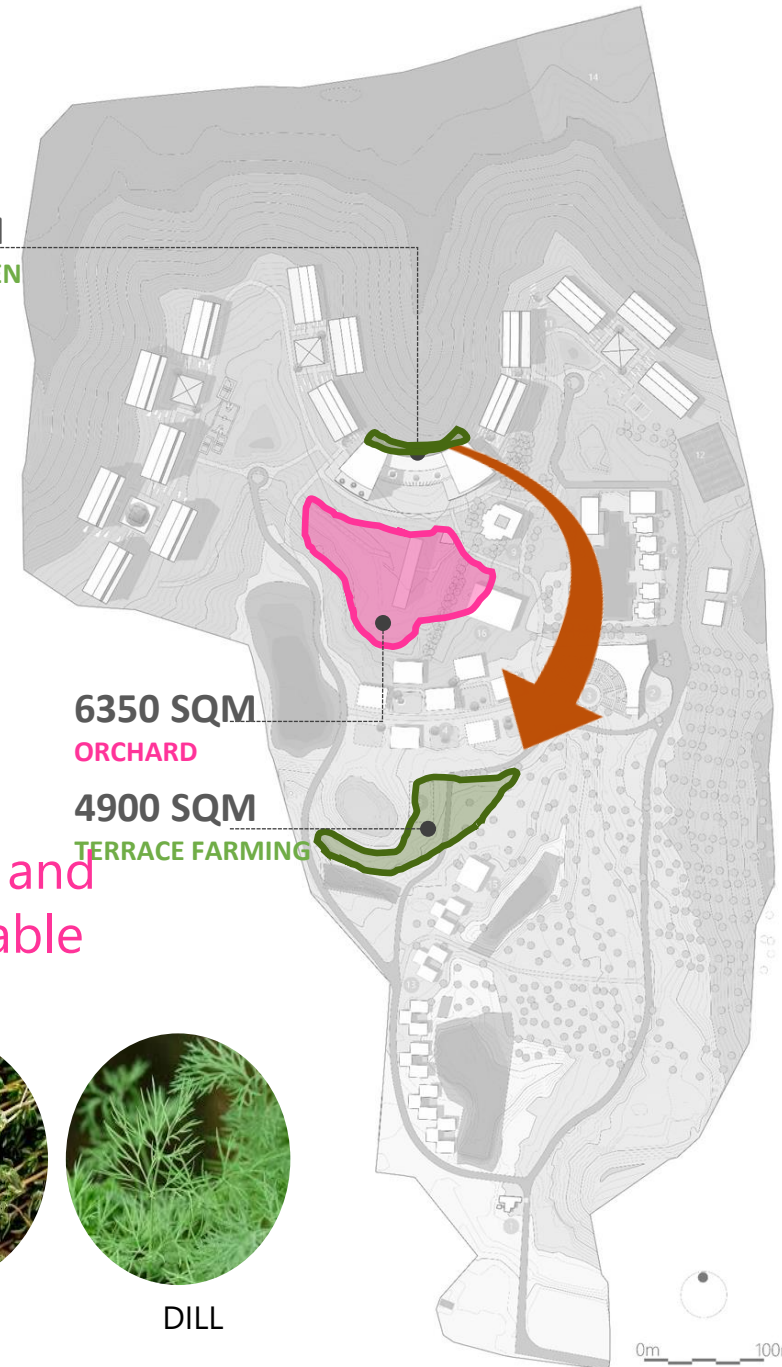
250-300MM DEAD PLANTS, LEAVES AND GRASS CLIPPINGS



300-350 MM KITCHEN WASTE



400 SQM
HERB GARDEN



6350 SQM
ORCHARD

4900 SQM
TERRACE FARMING

Creating a circular economy and making the site self sustainable

KITCHEN HERBS



MINT



CORIANDER



THYME



DILL



Reference for terrace farming

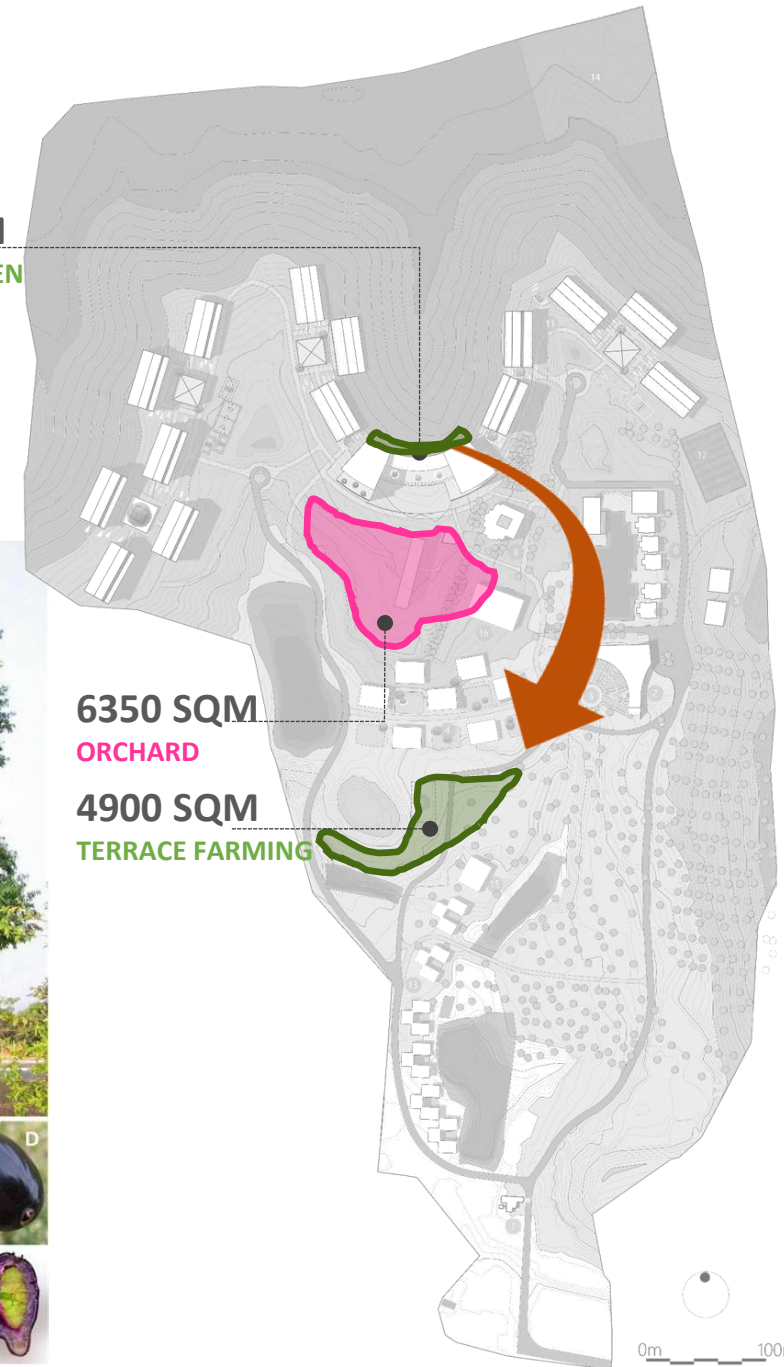
LANDSCAPE MASTERPLAN | ORCHARD

FRUITS TREES IN ORCHARD

- *Mangnifera indica*- Alphonso Mangoes
- *Musa × paradisiaca*- Plaintains
- *Emblica officinalis* -Indian gooseberry
- *Ficus carica*-Purandar fig
- *Ziziphus mauritiana*-Ber
- *Syzygium cumini* L.- Jamun
- *Carica papaya*-Papaya

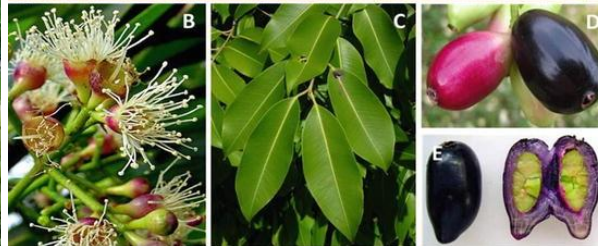


400 SQM
HERB GARDEN



6350 SQM
ORCHARD

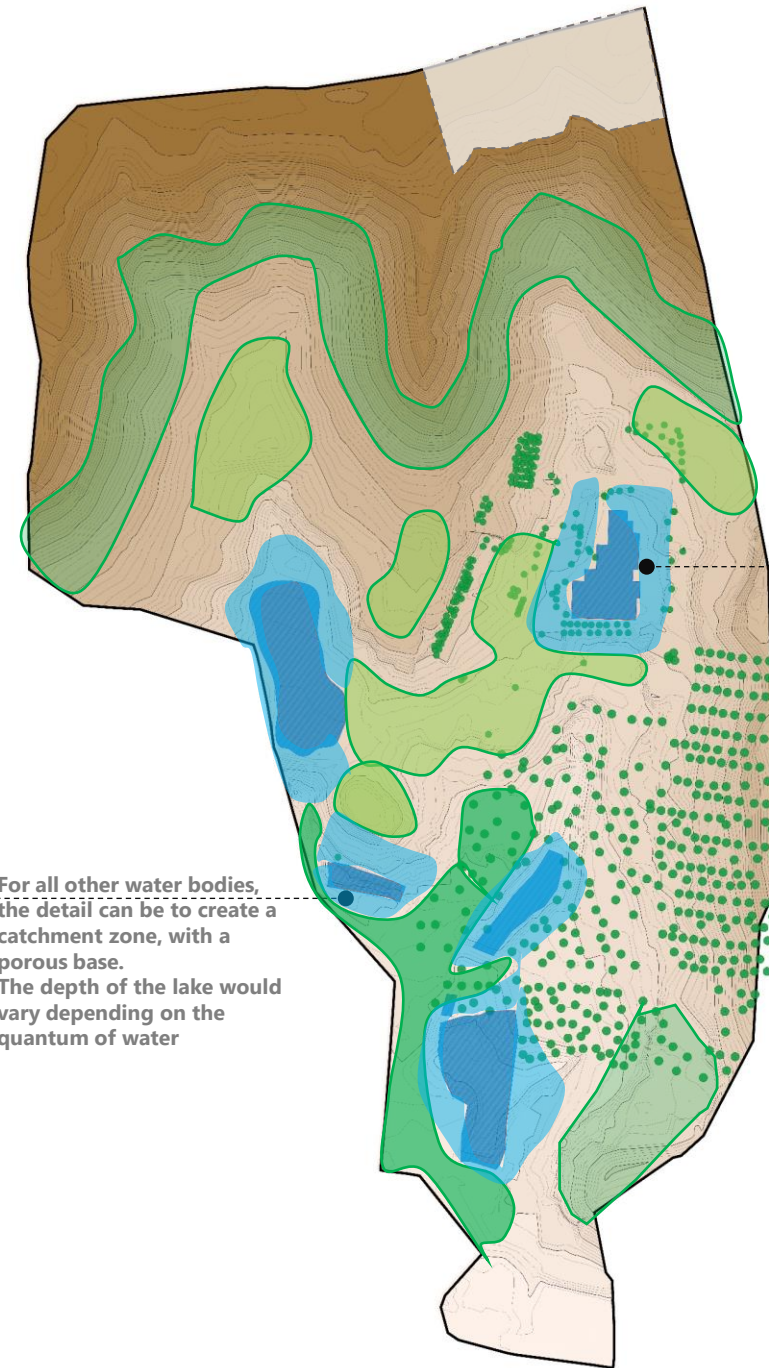
4900 SQM
TERRACE FARMING



LANDSCAPE MASTERPLAN | LAKE DESIGN



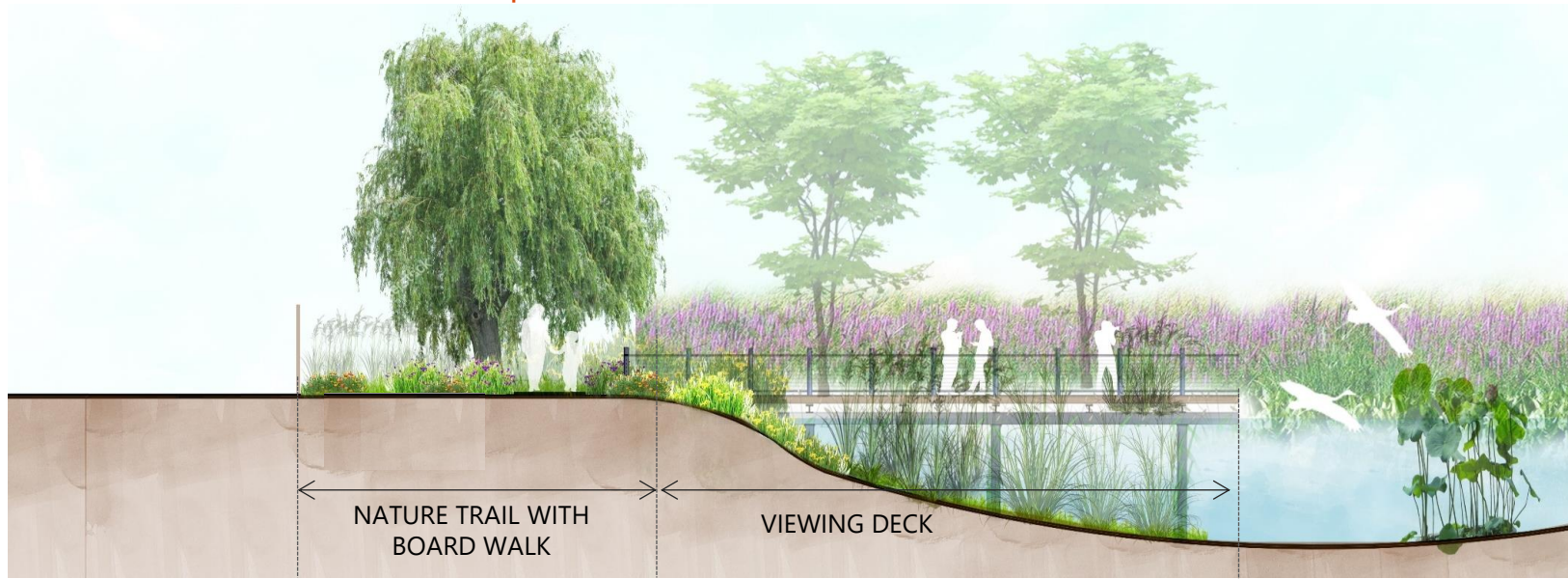
lake



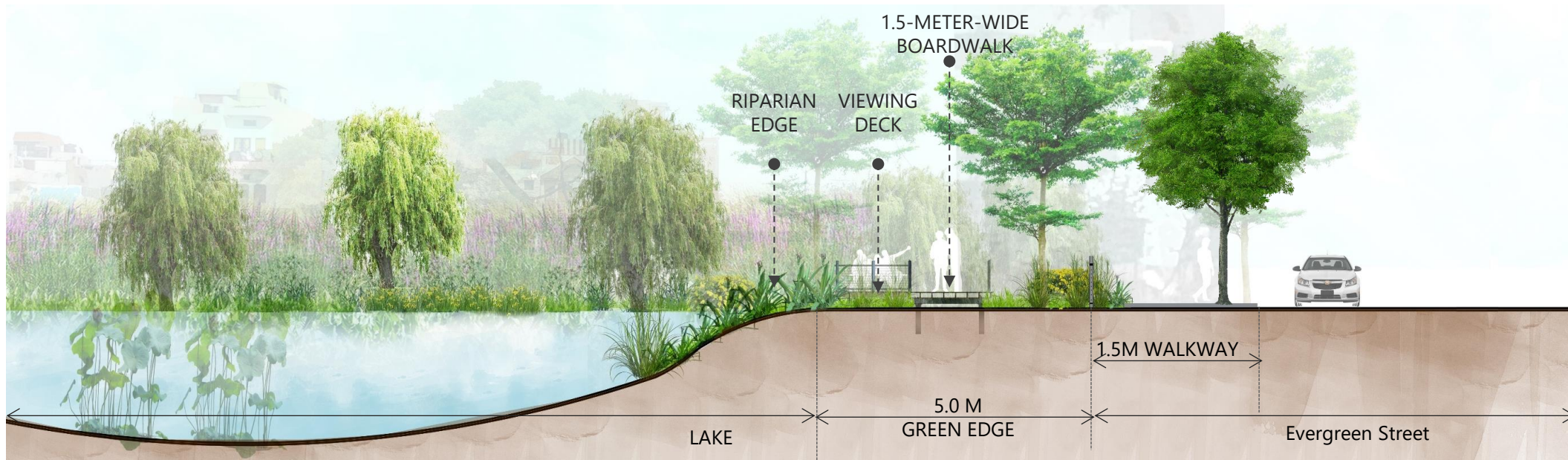
Since concreting for the base has already happened for water body-01. Therefore, that can be maintained as it is.

For all other water bodies, the detail can be to create a catchment zone, with a porous base. The depth of the lake would vary depending on the quantum of water

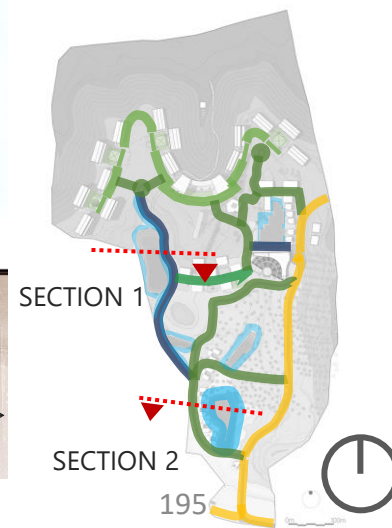
LANDSCAPE MASTERPLAN | LAKE SECTIONS



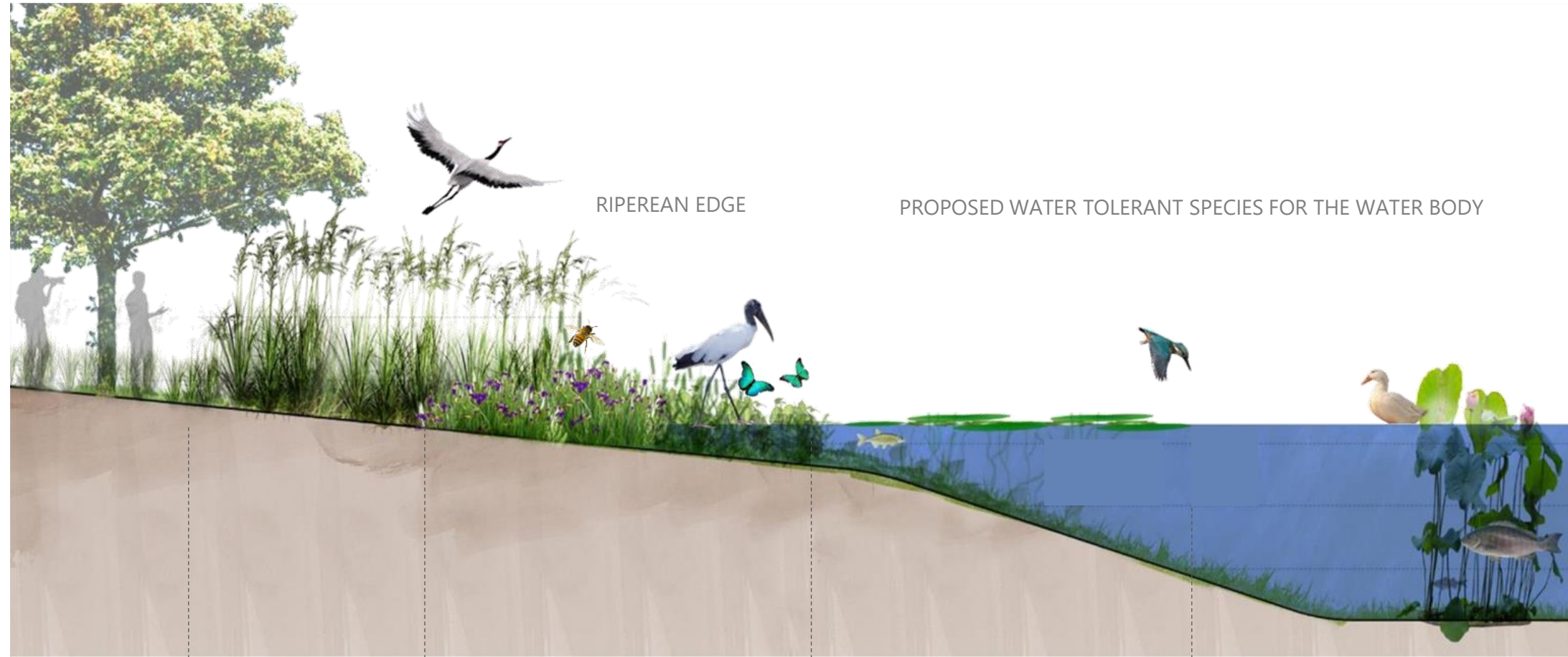
SECTION 1 NATURE TRAIL



SECTION 2 LAKE BOARDWALK



LANDSCAPE MASTERPLAN | RIPARIAN EDGE



RIPERIAN EDGE

PROPOSED WATER TOLERANT SPECIES FOR THE WATER BODY

Water tolerant
Trees

Large Grasses

Emergent plants with seasonal flowering

Submerged/ Semi-aquatic plants

Aquatic plants



Neolamarckia cadamba

Aristida adscensionis

Canna flacida

Pontederia cordata

Sagittaria latifolia

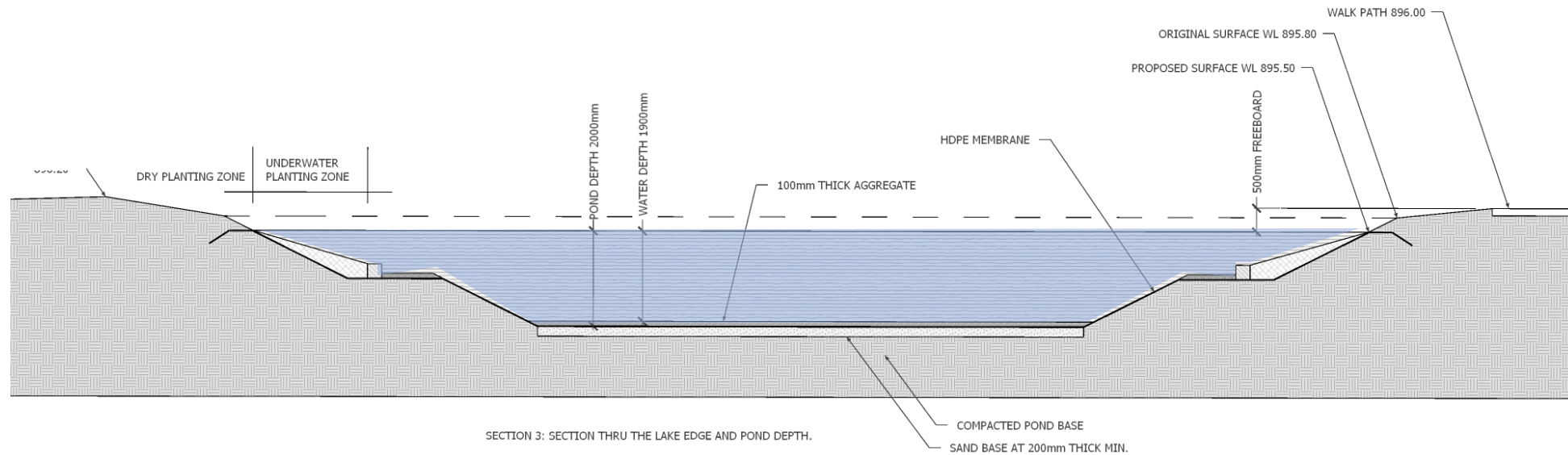
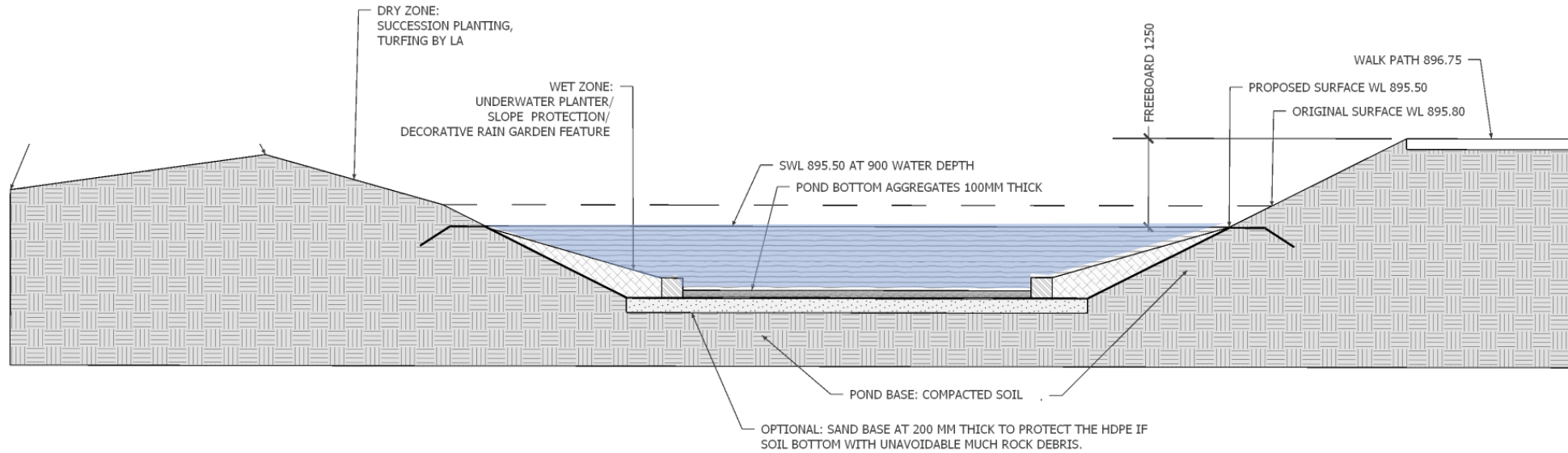
Zantedeschia_aethiopica

Nymphaea alba

Nymphaea nouchali



LANDSCAPE MASTERPLAN | LAKE DETAIL



SECTION 3: SECTION THRU THE LAKE EDGE AND POND DEPTH.

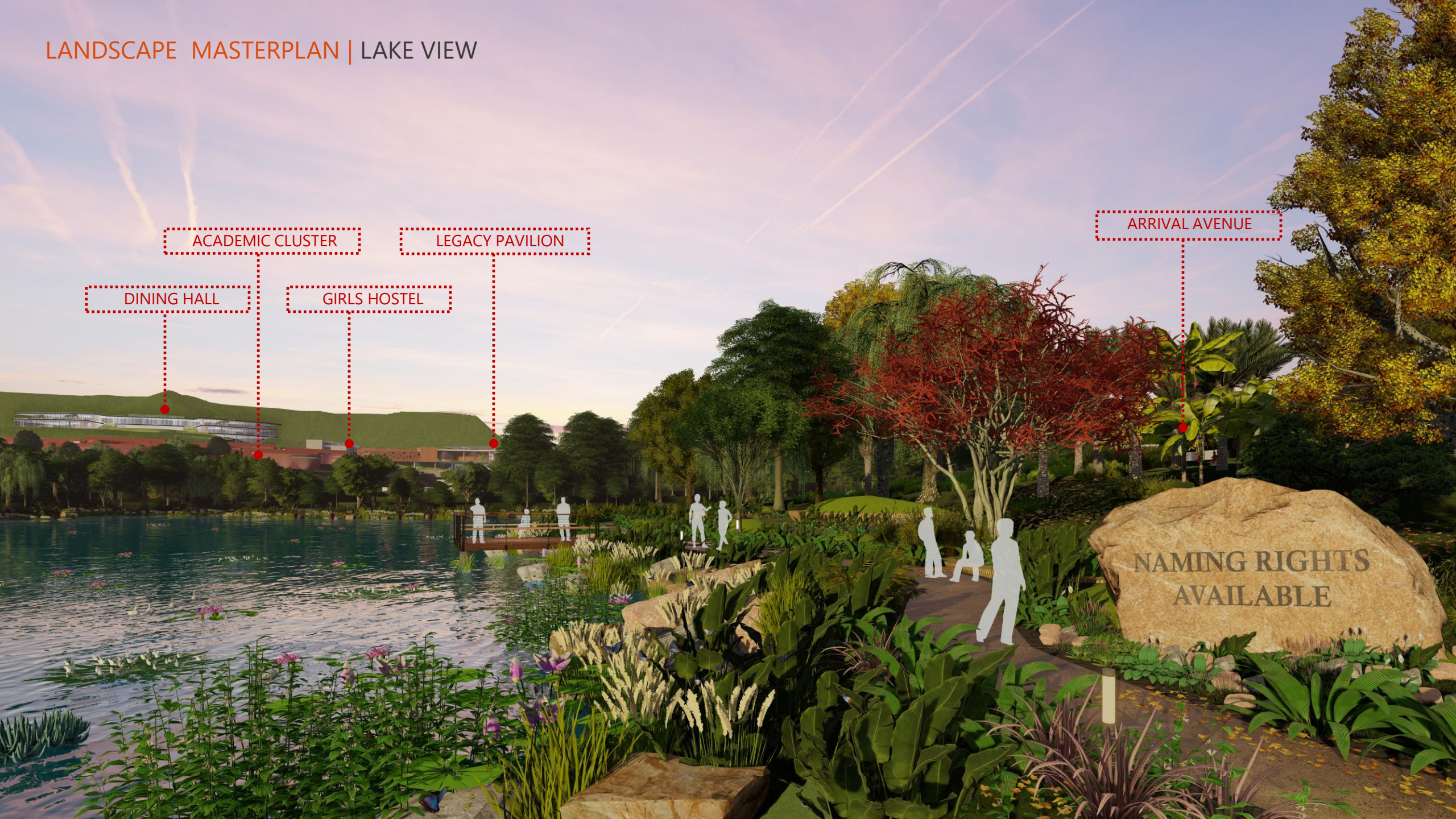
LANDSCAPE MASTERPLAN | LAKE EDGE





NAMING RIGHTS
AVAILABLE

LANDSCAPE MASTERPLAN | LAKE VIEW



ACADEMIC CLUSTER

LEGACY PAVILION

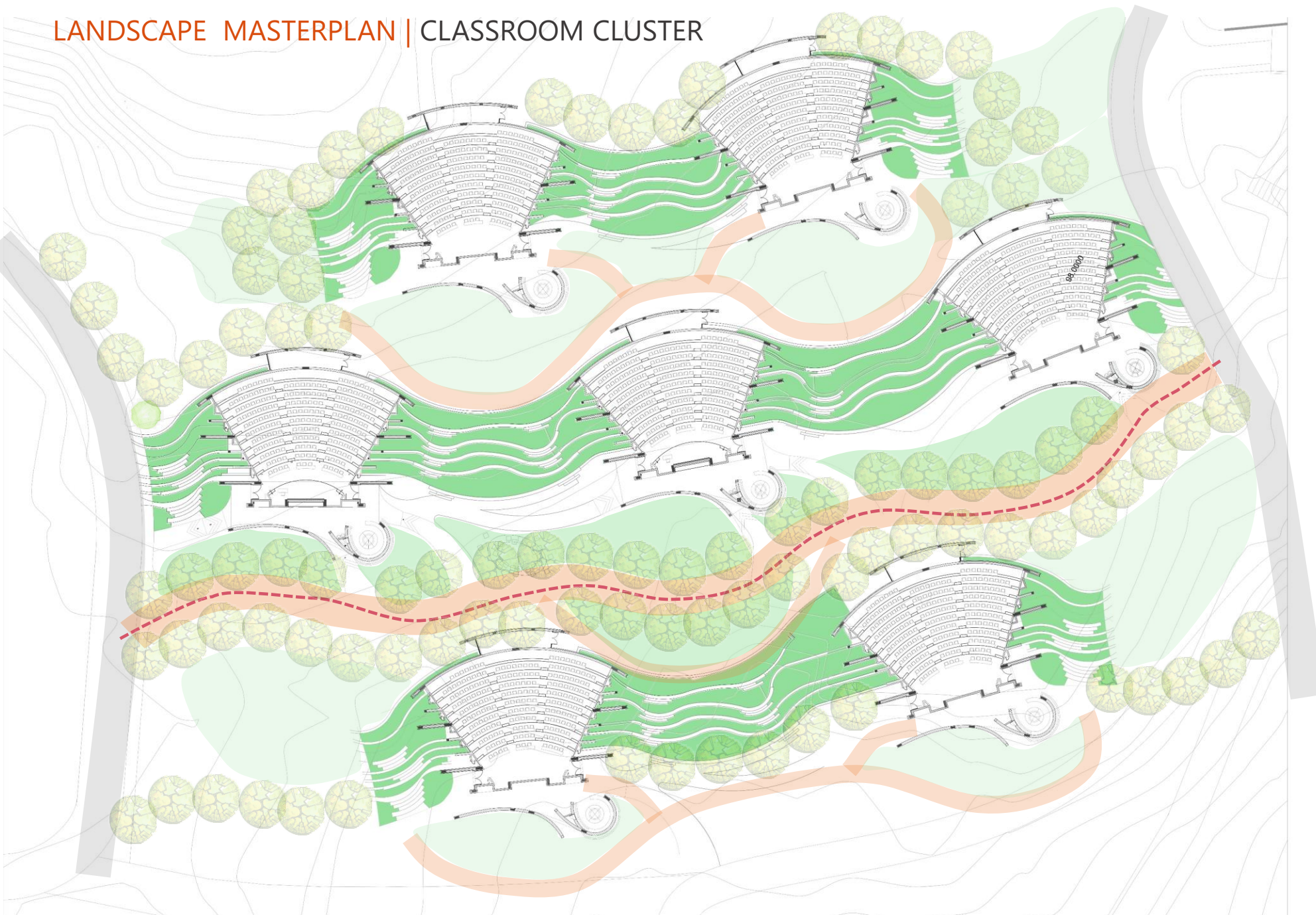
ARRIVAL AVENUE

DINING HALL

GIRLS HOSTEL

NAMING RIGHTS
AVAILABLE

LANDSCAPE MASTERPLAN | CLASSROOM CLUSTER



Respecting existing Topography



Creating Outdoor classrooms

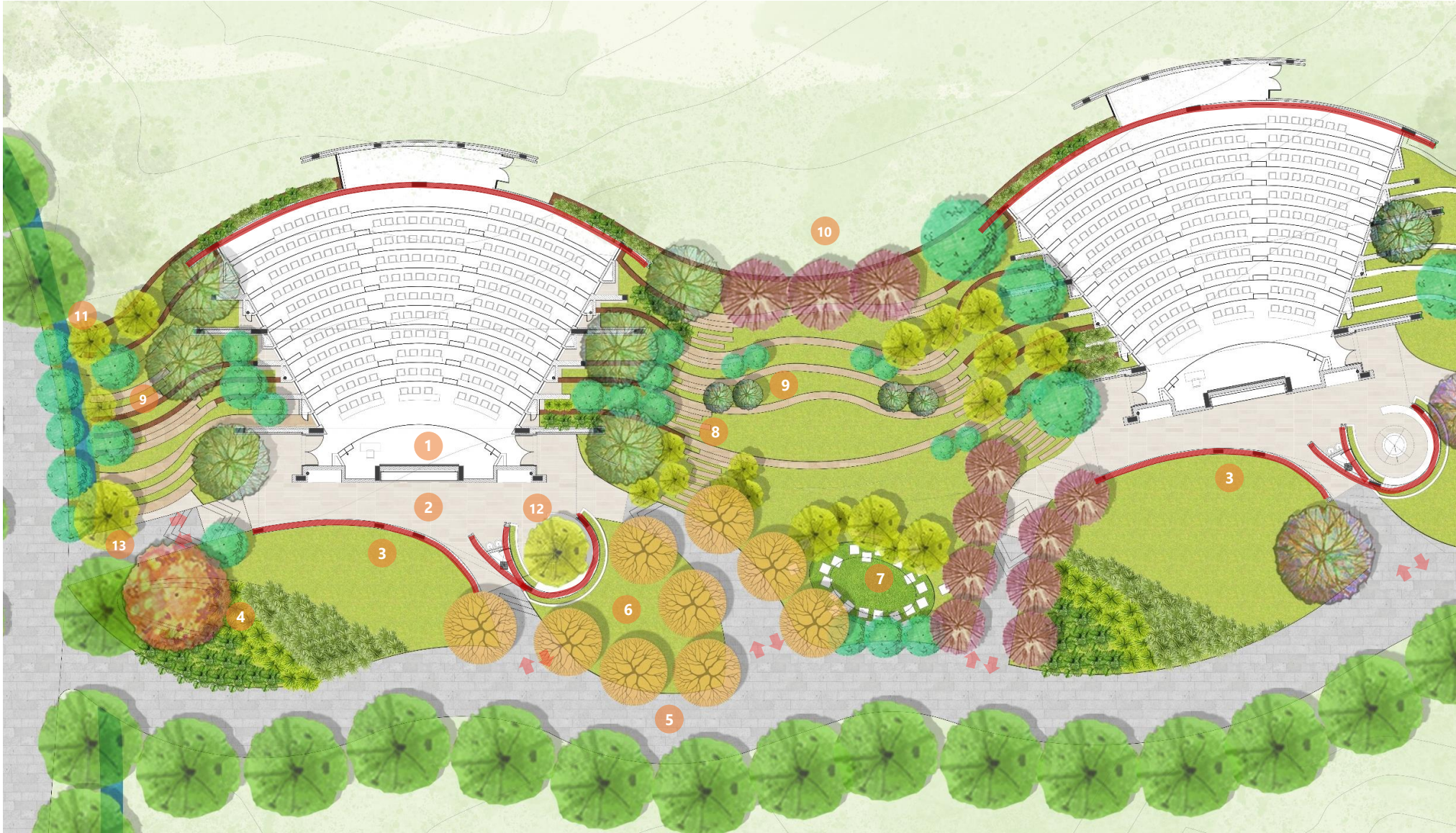


Creating seating and interactive courts



Creating evergreen avenues

LANDSCAPE MASTERPLAN | CLASSROOM



Legend

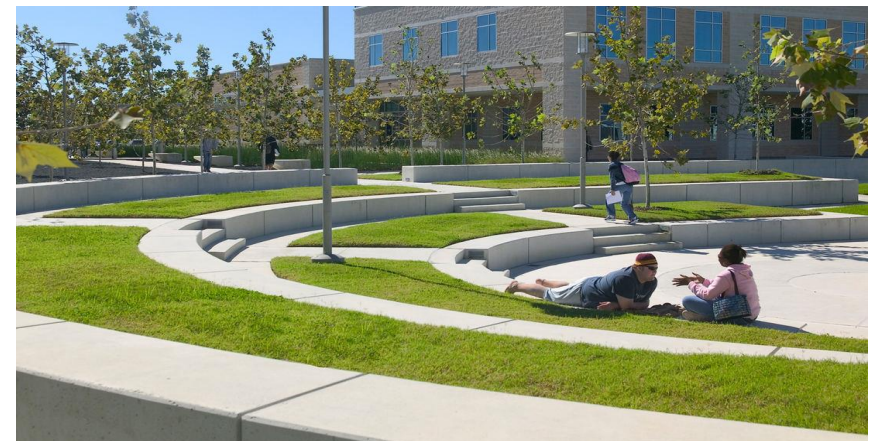
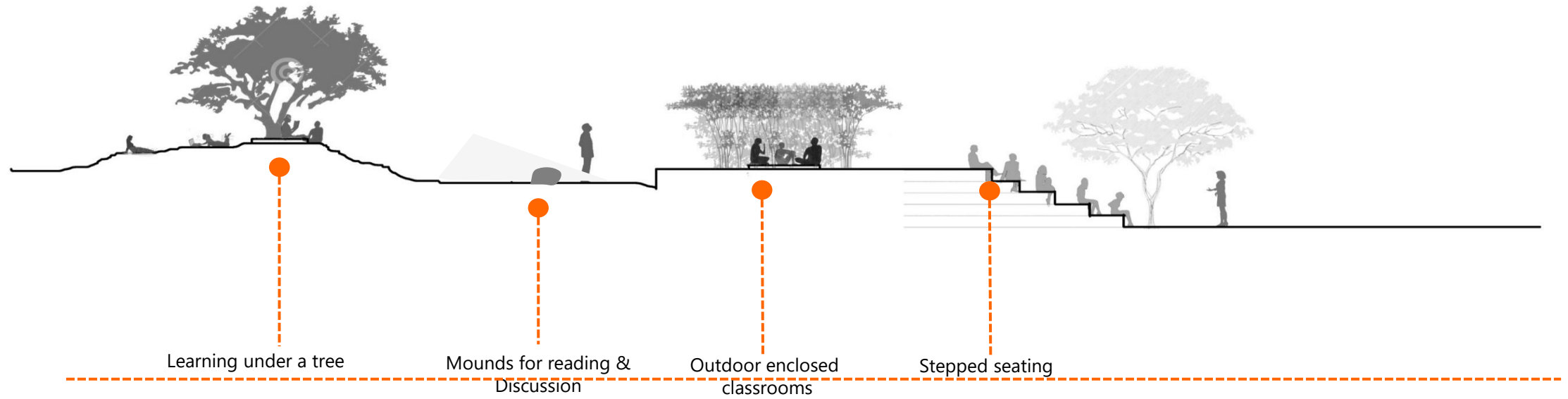
1. Classroom
2. Shaded Walkway
3. Doner Wall
4. Feature Planting
5. Knowledge Street
6. Gulmohar Court
7. Seating Bowl
8. Steps
9. Seating steps
10. Feature Tree buffer
11. Bio Swale
12. Group discussion area
13. Culvert below for Bioswale



Key Plan



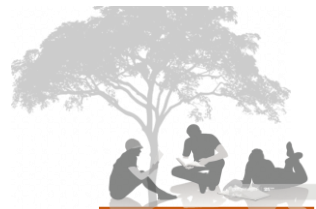
LANDSCAPE MASTERPLAN | CLASSROOMS



LANDSCAPE MASTERPLAN | CLASSROOMS STEP SEATING



Self Studying Spaces
For **an individual**



Discussion spaces
For **Larger Group** of Scholars

The level difference to be negotiated by creating steps and seating