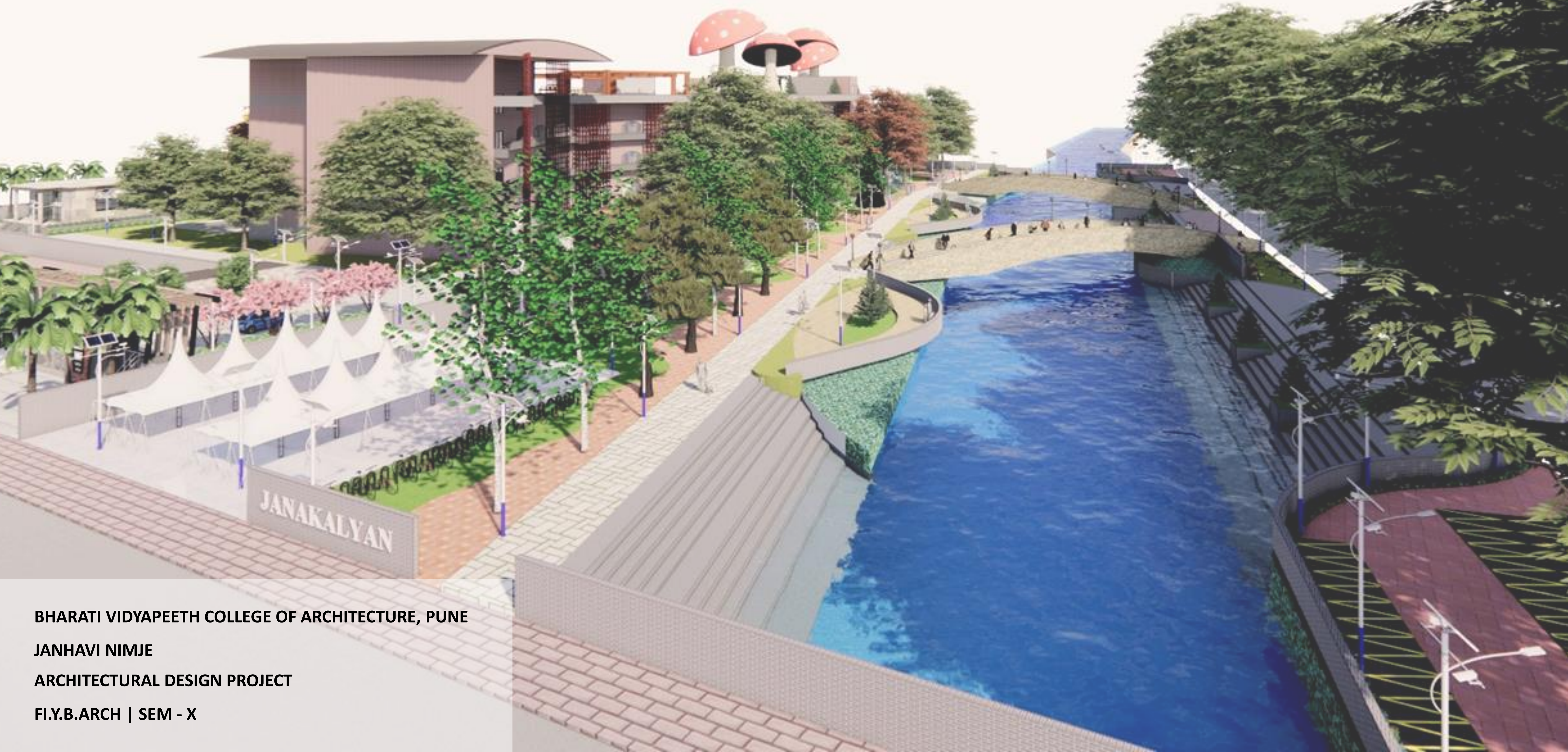


JANAKALYAN:

REVITALISATION ON THE BANKS OF NAG RIVER, NAGPUR,

BRIDGING THE GAP WITH NATURE



BHARATI VIDYAPEETH COLLEGE OF ARCHITECTURE, PUNE

JANHAVI NIMJE

ARCHITECTURAL DESIGN PROJECT

FI.Y.B.ARCH | SEM - X

INTRODUCTION: NAGPUR

HIGHLIGHTS OF NAGPUR CITY

CITY OF HISTORICAL IMPORTANCE

Nagpur Was Ruled By King Bhoales Which Gives Historical Importance To The City, The Cantonment Area Was Ruled By British People.

CITY OF FESTIVALS

According To Indian Culture, The City Celebrates Every Festival, The Main Festival Celebrated Every Year Is Ganapati Festival.

CITY OF IDOLS

As The Main Festival Is Ganapati Festival, The City Is Known For Its Idols Where We Can Find Idols In Each And Every Part Of The City.

CITY OF HERITAGE

Even The Development Is Going On Still City Is Preserving Its Heritage Which Came From The Kings. The Architecture And Design Represent Heritage Value Of The City.

CITY OF CELEBRATION

Every Year Nagpur City Celebrates Its Uniqueness. Many Times The City Is Know For Its Celebrations Only.

GROWING I.T. INDUSTRY

The South- West : MIHAN Side Of Nagpur Is Developing Into I.T. Hub Which Creates A New Identity And More Opportunity For A City To Become An I.T. City.

TIGER CAPITAL OF INDIA

Nagpur Is Also Called, "Tiger Capital Of India " As It Connects Many Tiger Reserves In India To The World.

HISTORY

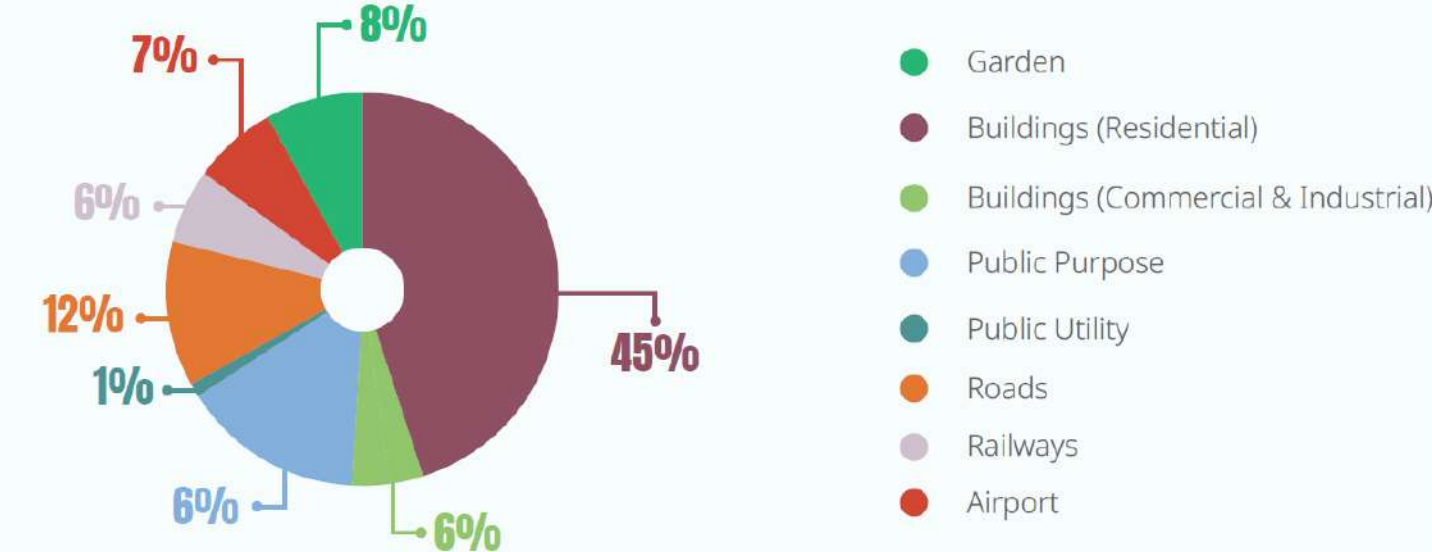
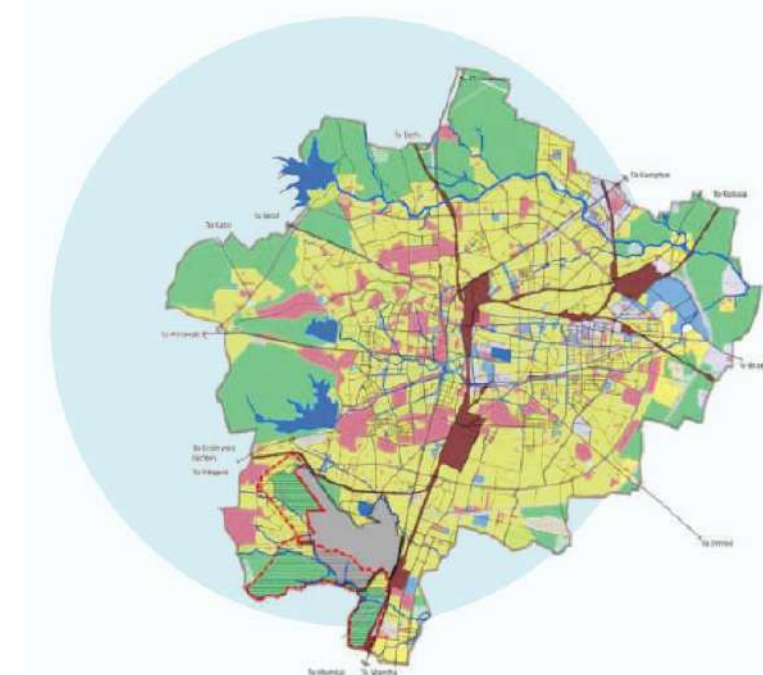
- In 1702 - Bakht Buland Shah Actually Founded The City Of Nagpur By Joining The 12 Small Villages (Barasta).
- After 1743 - A Series Of Maratha Rulers Came To Power, Starting With Raghoji Bhosale.
- Nagpur Was Burnt Substantially In 1765 And Again Partially In 1811 By Marauding Pindaris.
- In 1803 - Raghoji li Bhosale Joined The Peshwa Against The British In The Second Anglo-Maratha War.



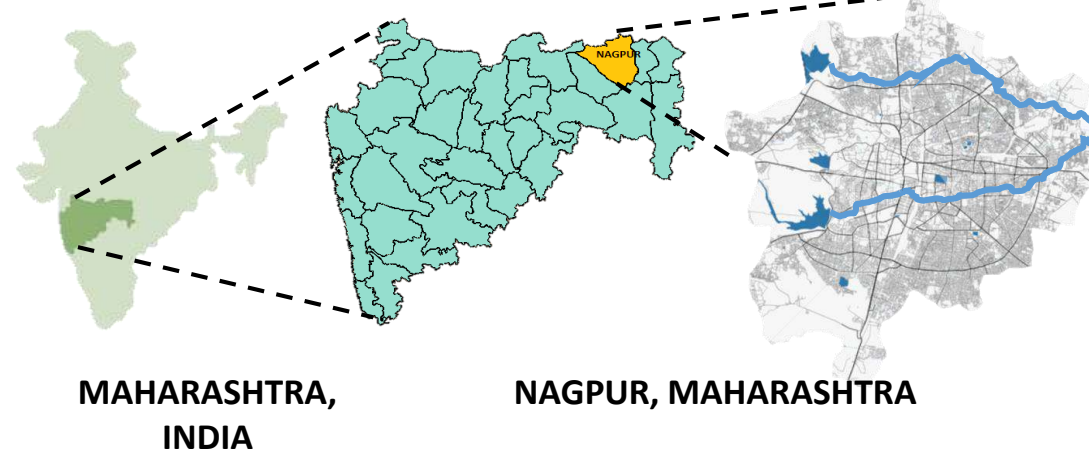
- In 1816 After Raghoji li's Death, His Son Parsaji Was Deposed And Murdered By Mudhoji li Bhosale Who Joined The Peshwa In The Third Anglo-maratha War In 1817, Suffered A Defeat
- In 1853, The British Took Control Of Nagpur
- From 1853 To 1861 - The Nagpur Province Became Part Of The Central Provinces And Berar And Came Under The British Central Government, With Nagpur As Its Capital.

- In 1950, The Central Provinces And Berar Was Reorganised As The Indian State Of Madhya Pradesh With Nagpur As Its Capital Until 1956
- 1960 It Became Part Of What Is Now Maharashtra State.

LANDUSE OF NAGPUR CITY & ITS BREAK-UP



- Nagpur is the 3rd -largest city of the Indian state of Maharashtra after Mumbai and Pune. Known as the "orange city", Nagpur is the 13th largest city in India by population.
- Nagpur is the seat of the Annual Winter Session of the Maharashtra state assembly. It is a major commercial and political center of the Vidarbha region of Maharashtra.



CITY OF TEMPLES

Nagpur City Is Consisting Of Various Temples Just Like Any Other City In India. The Importance Of Temples Becomes One Of The Identity For City.

CITY OF CULTURE

Till This Date, Nagpur Is Known For Its Cultural Background And Citizen Of Nagpur At Trying Hard To Maintain It Throughout The Time Period.

UPCOMING TOWNSHIPS AND URBAN SPRAWL

The Spread Of Nagpur Has Increased In Last Decade Which Includes Now Nearby Small Villages And Which Is Under Development Of Townships.

CITY OF EDUCATION

Nagpur Is Known For Various Educational Facilities And Opportunities, It Is Well Known For VNIT, AIIMS, IIMS & Various Other National Institutes.

CITY OF SPORTS

Nagpur Is Well Known For Its Sports Facility. Also The City Promotes Each And Every Type Of Sport Activity.

CITY OF ORANGE

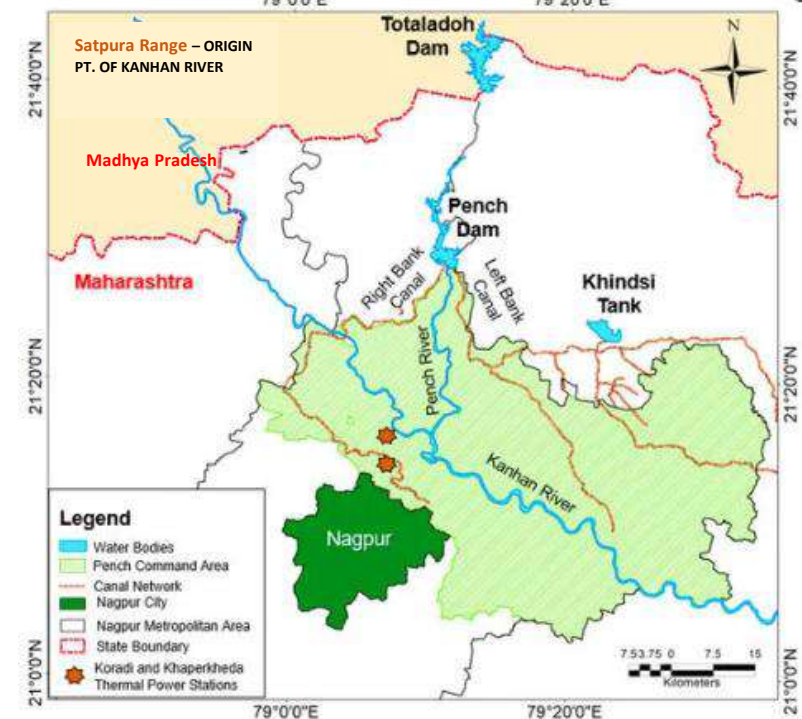
Nagpur, Often Referred To As The Orange City, Due To Its Fame For Producing Juicy, Tangy Oranges.

ETIMOLOGY

Nagpur Is Named After The Great River Nag Which Flows Through The City. The Old Nagpur City (Today Called 'Mahal') Is Situated On North Banks Of The River Nag. The Suffix Pur Means "City" .

ABOUT NAG RIVER

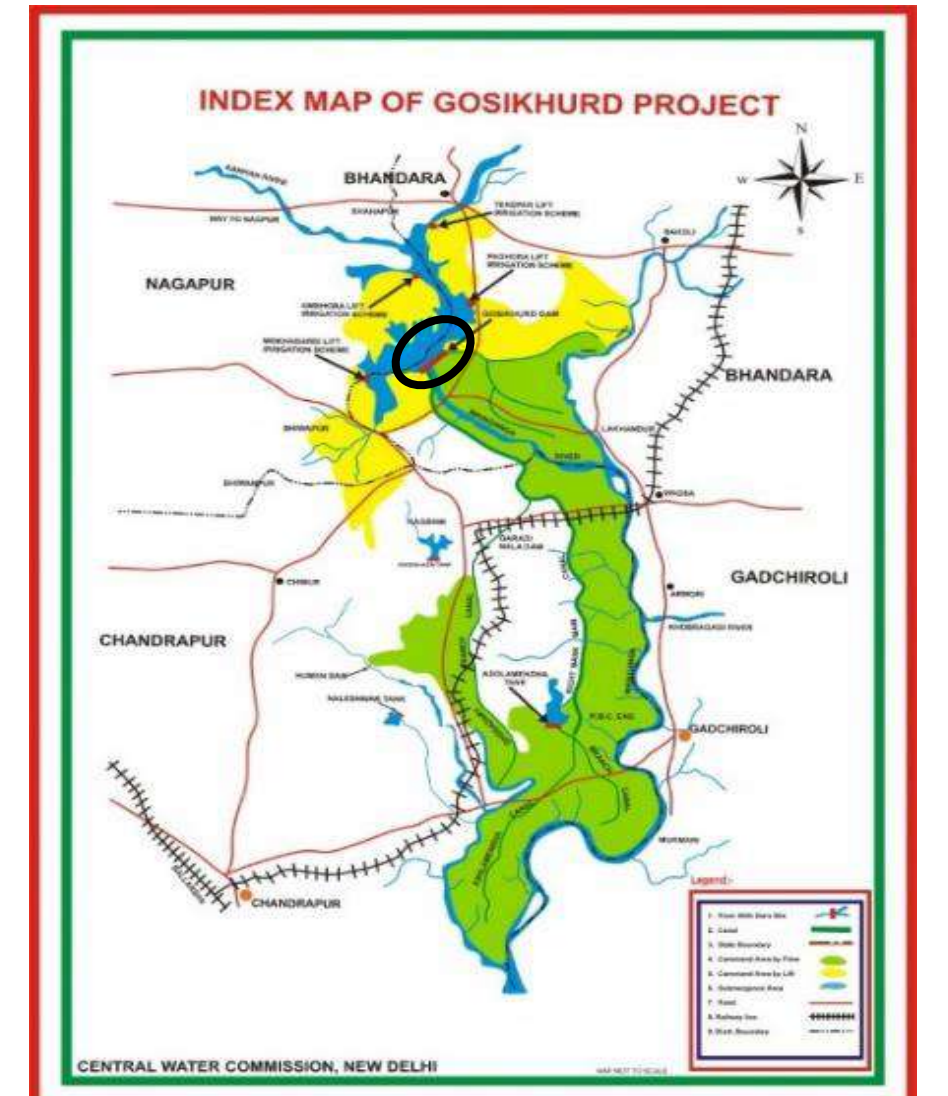
- The Nag river is a river flowing through the city of Nagpur in Maharashtra, India. The length of the river in the city limits is 17 kms. Its width ranges from 12 to 40 m and depth varies from 2 to 4.5 m.
- Nag river originates from Ambazari lake's overflow weir at the west of the orange city and flows from the west to the east following natural slope of the landform to eventually join Kanhan river.
- Total length of nag river up to the confluence with Kanhan river at Agargaon is about 68 km. Forming a part of the Kanhan-Pench river system.



CURRENT CONDITION OF NAG RIVER

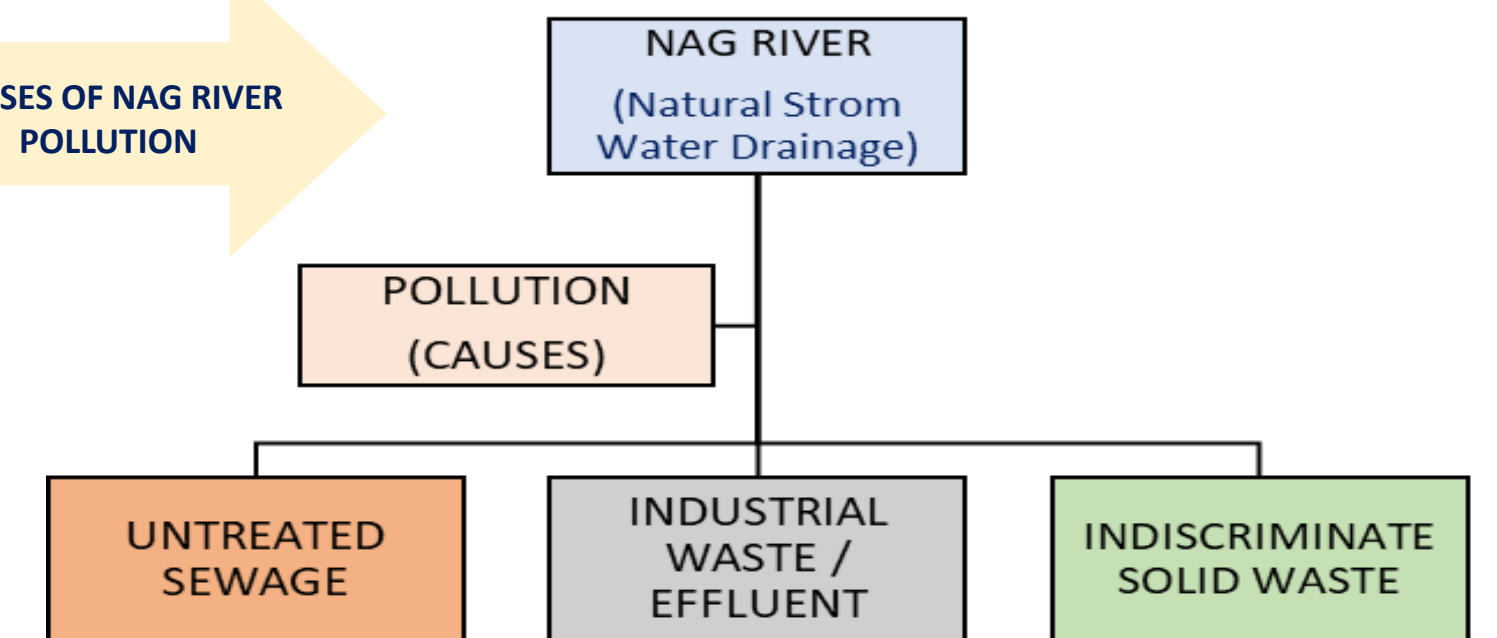
IMPACT OF NAG RIVER POLLUTION

According to nag river basin action plan prepared by Maharashtra pollution control board (MPCB), nag river is the main culprit for unsatisfactory water quality in Gosikhurd dam (Bhandari district), built on Wainganga river (MPCB, 2011)



GOSIKHURD DAM

CAUSES OF NAG RIVER POLLUTION



NAG RIVER POLLUTION ABATEMENT - FUNDINGS

CENTRAL GOVERNMENT - ₹ 1115.22 CR

MAHARASHTRA STATE GOVERNMENT - ₹ 507.36 CR

NAGPUR MUNICIPAL CORPORATION - ₹ 304.41 CR

The Japan-based Japan International Cooperation Agency (JICA) will lend funds to both central and state governments to pay their shares.

Initially, the project cost was ₹ 1, 476.96 crore as per common schedule of rates in 2014. Due to delay in the process, the cost escalated to ₹ 2,117.56 crore in 2020.

<https://timesofindia.indiatimes.com/>

efaidnbnmnnibpcajpcglcfindmkaj/https://itpi.org.in/uploads/journalfiles/oct1_11.pdf

1. JANAKALYAN – REVITALISATION ON THE BANKS OF NAG RIVER, NAGPUR - BRIDGING THE GAP WITH NATURE

PREAMBLE - BACKGROUND RESEARCH AND LITERATURE REVIEW

INTRODUCTION TO THE TOPIC

WHAT IS AMENITY CENTRE?

An amenity centre is a facility or space within a residential or commercial development that is designed to provide various conveniences and recreational opportunities for the residents or patrons.

WHAT IS REVITALISATION?

Revitalization refers to the process of restoring vitality, energy, or vigour to an area, organization, system, community, or environment that has experienced decline or stagnation. This typically involves initiatives and strategies aimed at enhancing and renewing the economic, social, cultural, or physical aspects of the target area or entity.

WHAT IS RIVERFRONT DEVELOPMENT?

It is a space where civic interaction occurs. Along the river, intent, parallel connections along the river's edge serve many different users and connect neighbourhoods and development sites to the water, providing public access, opening up views, and re-engaging the rivers as part of the public realm.



NEED & RELEVANCE OF THE PROJECT

The Nag river is a vital waterbody that runs through the city. With **Rapid Urbanization** and **Industrialization**, nag river has faced **Severe Pollution** and degradation over the years. There is a pressing need to rejuvenate and conserve the riverbanks while also creating recreational and educational opportunities for the city's residents. The design and construction of an amenity center on the banks of nag river can address these challenges and present a sustainable solution that benefits the community and the environment.

As the city **experiences a surge in population** and infrastructure expansion, there arises an **imperative need to cater to the evolving needs and aspirations of its residents**. One such critical requirement is the provision of an amenity centre – a multifaceted facility designed to enhance the quality of life and promote community well-being.

ENVIRONMENTAL CONSERVATION: The degradation of the nag river and its banks calls for immediate conservation efforts. An amenity center can serve as a focal point for environmental education and awareness, promoting sustainable practices and conservation measures.

QUALITY OF PUBLIC OPEN SPACES: Every well-planned locality of Nagpur has 2-3 public open spaces (garden, children's play area, jogging track) provided by Nagpur improvement trust which are moderately maintained, but the old areas of Nagpur for e.g. Mahal, Itwari, Tandapeth etc., Doesn't have much public open spaces due to congestion and are poorly maintained.

COMMUNITY SPACE / RECREATION: The city lacks adequate public open spaces for recreation and leisure activities. An amenity center would provide a much-needed space for the community to come together, engage in outdoor activities, and enjoy the natural beauty of the river.

CULTURAL PRESERVATION: The historical and cultural significance of the nag river can be highlighted and celebrated through the amenity center, providing a platform for showcasing local art, traditions, and heritage.

RELEVANCE OF THE DESIGN PROJECT:

PROMOTING SUSTAINABILITY: The design and construction of the amenity center can be an opportunity to incorporate sustainable and eco-friendly features, setting an example for environmentally conscious development.

ECONOMIC DEVELOPMENT: The amenity center has the potential to attract tourists and visitors, contributing to the local economy through increased tourism, the creation of job opportunities, and supporting local businesses.

EDUCATIONAL OPPORTUNITIES: By integrating educational and interpretive elements, the amenity center can serve as an outdoor classroom, providing learning opportunities about river ecosystems, biodiversity, and environmental stewardship.

AIM & OBJECTIVE OF THE PROJECT

- The Aim Is To Conceptualize And Develop A Sustainable Amenity Centre On The Banks Of Nag River In Nagpur.
- By Leveraging Sustainable Approaches And Innovative Design Strategies, The Aim Is To Create A Multifunctional Amenity Center That Not Only Enhances The Recreational And Cultural Experiences Of Residents And Visitors But Also Champions The Conservation And Sustainable Development Of The Nag River Area.

PROMOTES COMMUNITY ENGAGEMENT

Develop Spaces That Encourage Social Interaction And Community Gatherings Incorporating Recreational Areas, Seating, And Event Spaces For Diverse Community Activities.

ENVIRONMENTAL CONSERVATION

The Cleaning Of The Nag River Can Enhance The Overall Environmental Quality Of The City, Making It More Sustainable And Resilient To Environmental Challenges.

INTEGRATE CULTURAL AND HISTORICAL SIGNIFICANCE

Incorporate Elements That Celebrate The Cultural Heritage And History Of Nagpur. Showcase Local Art, Traditions, Or Historical References In The Design.

MAN WATER RELATIONSHIP

Design Areas Along The Riverbanks That Provide Tranquil And Reflective Spaces, Promoting Mental Well-being And Connection With Nature.

NEWS RELATED TO DEVELOPMENT OF NAG RIVER

<https://epaper.lokmat.com/lokmattimes/> (Dec 08, 2023)

RIVER TO NULLAH TO RIVER

- Nag river and its tributaries Pili and Pora are nullahs as NMC and NIT release untreated sewage
- Rivers polluting city environment as well as Kanhan, Wainganga rivers & Gosikhurd dam
- NMC prepared Nag River Pollution Abatement Project
- HC directed NMC to stop pollution and rejuvenate rivers in 2010
- Proposal is to lay sewage lines, build STPs and other infra
- State cabinet approved project and revised cost few months ago
- Union cabinet considered project on Wednesday

to end pollution
 Revised cost is ₹1,927cr, and likely to increase as works will take 8 years
 Centre will bear ₹1,115.22cr, state ₹507.36cr and NMC ₹304.41cr
 JICA will give long-term loan to Centre, state, which will repay loan
 State cabinet approved project and revised cost few months ago
 Union cabinet considered project on Wednesday

IN A NUTSHELL

- HC directed NMC to rejuvenate river in 2010
- NMC prepared Nag River Pollution Abatement Project
- Sewage lines, STPs and other infrastructure will be created
- Latest cost is ₹2,117.56 crore and deadline of eight years for project's execution
- NMC will make presentation before EFC on Wednesday
- Project will be cleared by Union cabinet if EFC gives nod
- JICA will start disbursement of loan for starting works
- French development agency is preparing another project – Nag Riverfront Development Project – which has remained on paper for last many years

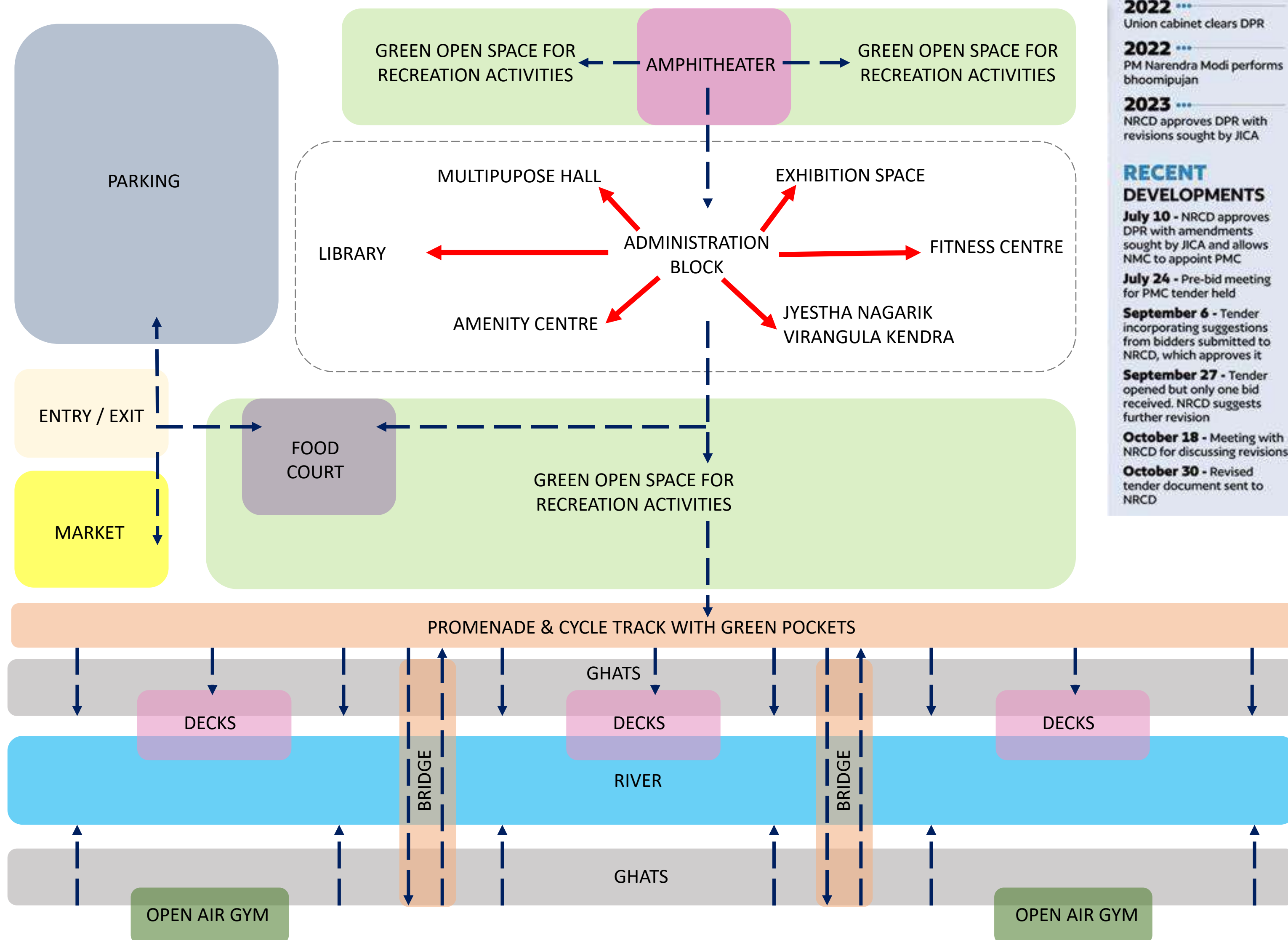
FOCUS AREA OF THE PROJECT

- REJUVENATION OF NAG RIVER BY CREATING RIVERFRONT
- INTERACTIVE - AMENITY SPACES
- INCREASE TOURISM

METHODOLOGY



LITERATURE STUDY



TIMELINE

- 2008** - NMC starts preparing DPR of Nag River Pollution Abatement Project
- 2010** - State govt asks NMC to prepare a revised DPR 2012 - NMC submits revised DPR to state
- 2012** - State approves it and forwards it to MoEFCC
- 2012** - MoEFCC ropes in IIT-Roorkee, which starts preparing the third DPR
- 2016** - IIT submits the third DPR to the ministry
- 2018** - Union minister Nitin Gadkari asks NMC to prepare fresh DPR
- 2020** - State cabinet clears fourth DPR
- 2021** - NRCDC approves fourth DPR and sends it to JICA
- 2022** - JICA seeks major revisions in DPR
- 2022** - Union cabinet clears DPR
- 2022** - PM Narendra Modi performs bhoomipujan
- 2023** - NRCDC approves DPR with revisions sought by JICA
- RECENT DEVELOPMENTS**
- July 10** - NRCDC approves DPR with amendments sought by JICA and allows NMC to appoint PMC
- July 24** - Pre-bid meeting for PMC tender held
- September 6** - Tender incorporating suggestions from bidders submitted to NRCDC, which approves it
- September 27** - Tender opened but only one bid received. NRCDC suggests further revision
- October 18** - Meeting with NRCDC for discussing revisions
- October 30** - Revised tender document sent to NRCDC

2. JANAKALYAN – REVITALISATION ON THE BANKS OF NAG RIVER, NAGPUR - BRIDGING THE GAP WITH NATURE

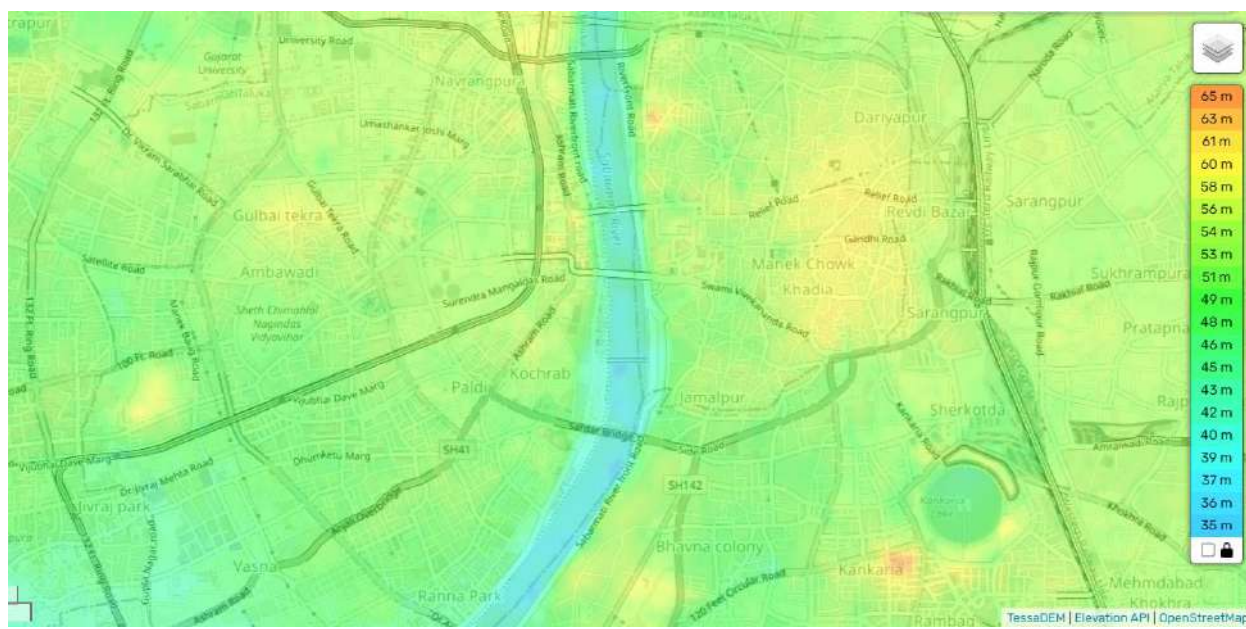
SABARMATI RIVERFRONT DEVELOPMENT, AHMEDABAD - GUJARAT



- ❖ ARCHITECT : DR. BIMAL PATEL
- ❖ SITE AREA : 506 ACRES
- ❖ PROPOSED IN : 1960
- ❖ CONSTRUCTION STARTED : 2005
- ❖ OPEN FOR PUBLIC : 2012



LOCATION & TOPOGRAPHY

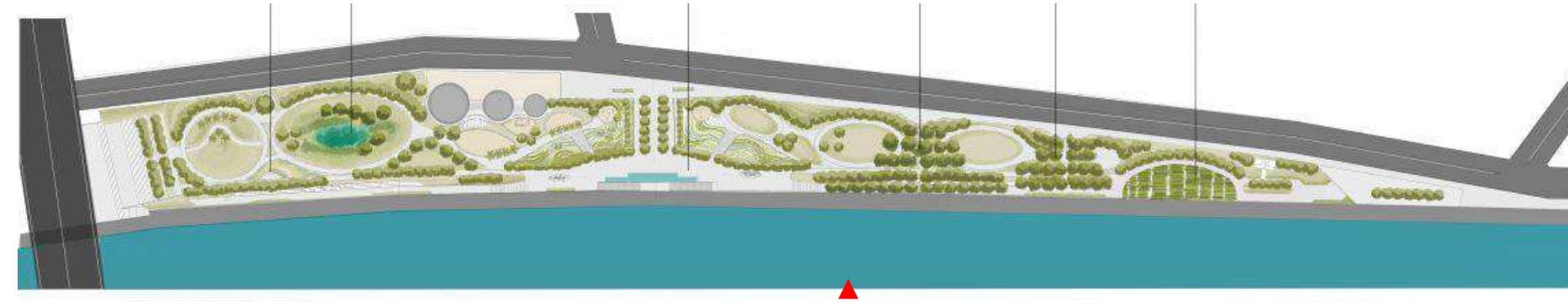


- ❖ AVERAGE ELEVATION: 51 M
- ❖ MINIMUM ELEVATION: 35 M
- ❖ MAXIMUM ELEVATION: 60 M

THE SITE'S TOPOGRAPHY IS CHARACTERIZED BY RELATIVELY FLAT TERRAIN.

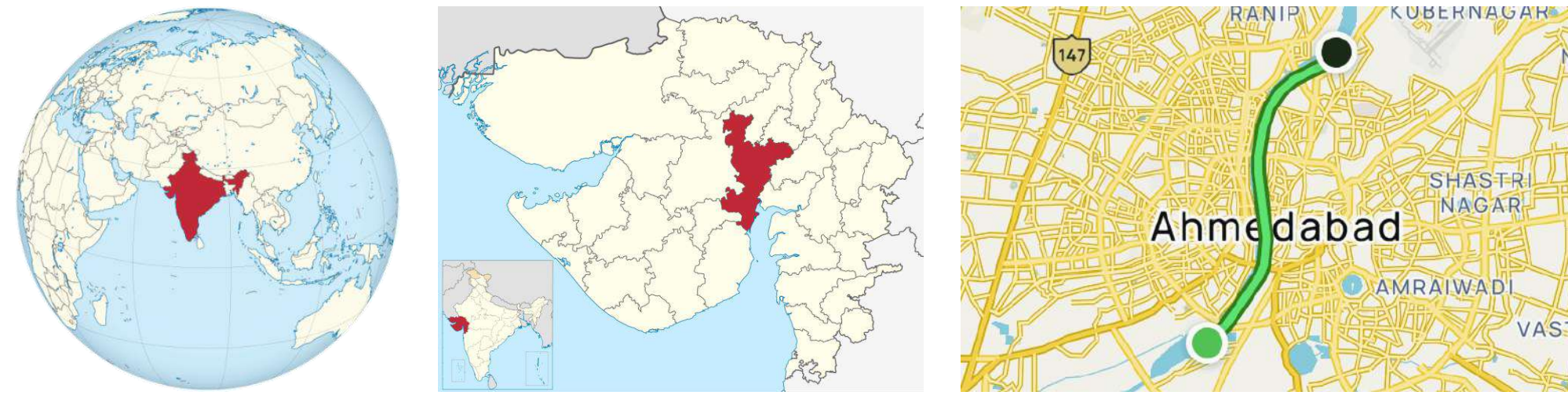


RIVERFRONT PARK



RIVERFRONT PARK

LOCATION – AHMEDABAD, GUJARAT



CLIMATE – TEMPERATE

	January	February	March	April	May	June	July	August	September	October	November	December
Avg. Temperature °C (°F)	20.4 (68.7)	22.8 (73.1)	27.2 (81.1)	31.2 (88.2)	33 (91.4)	31.9 (89.4)	28.5 (83.4)	27.5 (81.4)	28 (82.3)	27.9 (82.3)	25 (77.1)	21.5 (70.6)
Min. Temperature °C (°F)	13.9 (57)	15.7 (60.3)	19.6 (67.2)	23.5 (74.3)	26.4 (79.5)	27.6 (81.7)	26 (78.7)	25 (77.1)	24.5 (76.1)	22.1 (71.7)	18.9 (66)	15.2 (59.4)
Max. Temperature °C (°F)	27.6 (81.6)	31.2 (88.2)	34.8 (94.7)	38.8 (101.9)	40.2 (104.3)	37.1 (98.7)	31.7 (89.1)	30.4 (86.6)	31.9 (89.4)	34.2 (93.6)	32 (89.5)	28.7 (83.5)
Precipitation / Rainfall mm (in)	1 (0)	1 (0)	1 (0)	1 (0)	7 (0.2)	307 (12.1)	242 (9.5)	105 (4.1)	17 (0.7)	3 (0)	1 (0)	1 (0)
Humidity (%)	43%	39%	31%	31%	42%	58%	76%	80%	74%	52%	44%	46%
Rainy days (d)	0	0	0	0	5	14	15	7	2	1	0	0
avg. Sun hours (hours)	9.7	10.2	10.8	11.4	11.3	9.5	7.1	6.2	8.0	10.1	9.9	9.6

- THE REGION OF AHMEDABAD IS CHARACTERIZED BY A **TEMPERATE CLIMATE**, AND THE SUMMER SEASON PRESENTS SOME CHALLENGES IN TERMS OF PRECISE CATEGORIZATION. THE MOST FAVORED PERIOD FOR A VISIT IS DURING THE MONTHS OF FEBRUARY, MARCH, OCTOBER, NOVEMBER.
- THE MONTH OF **MAY** BOASTS THE HIGHEST AVERAGE TEMPERATURE, WITH A RECORDED MAXIMUM OF **33.0 °C**. THE MONTH OF **JANUARY** IS CHARACTERIZED BY THE **LOWEST TEMPERATURES**, WHICH HAVE AN AVERAGE READING OF **20.4 °C**.
- THE MONTH WITH THE LEAST AMOUNT OF PRECIPITATION IS **JANUARY** EXHIBITING A MERE **1 MM | 0.0 INCH** RAINFALL. THE MONTH OF **JULY** EXPERIENCES THE HIGHEST AMOUNT OF PRECIPITATION, WITH AN AVERAGE VALUE OF **307 MM | 12.1 INCH**.

ACCESSIBILITY



AHMEDABAD JUNCTION RAILWAY STATION – 4 KM AWAY



AHMEDABAD AIRPORT – 6 KM AWAY



NEAREST BUS STOP – 0.6 KM AWAY



PERSONAL VEHICLE / CABS

OBJECTIVE OF THE PROJECT

THE PROJECT AIMS TO PROVIDE AHMEDABAD WITH A MEANINGFUL WATERFRONT ENVIRONMENT ALONG THE BANKS OF THE SABARMATI RIVER AND TO REDEFINE AN IDENTITY OF AHMEDABAD AROUND THE RIVER. THE PROJECT HAS RECONNECTED THE CITY WITH THE RIVER AND HAS POSITIVELY TRANSFORMED THE NEGLECTED ASPECTS OF THE RIVERFRONT.



ENVIRONMENTAL IMPROVEMENT



SOCIAL UPLIFTMENT

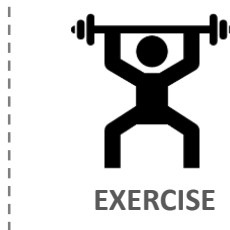


SUSTAINABLE DEVELOPMENT

- REDUCTION IN EROSION AND FLOOD TO SAFEGUARD THE CITY SEWAGE DIVERSION TO CLEAN THE RIVER WATER RETENTION AND RECHARGE.
- ACTIVITIES CREATED OF PARKS AND PUBLIC SPACES PROVISION OF SOCIO-CULTURAL AMENITIES FOR THE CITY.
- GENERATION OF RESOURCES, REVITALISATION OF NEIGHBOURHOODS. AIMS TO BRING NEW LIFE TO THE CENTRE OF THE CITY.

PUBLIC CONCERN:

THE PEOPLE OF AHMEDABAD, BY NATURE ARE OUT GOING PEOPLE. THEY WANT TO BE IN CLOSE VICINITY OF NATURE AND A PROMENADE, BIODIVERSITY PARK AS WELL AS A PLACE TO EXERCISE & SPEND THEIR LEISURE TIME, PROVIDED THE RESPITE WITHIN THE CITY LIMITS AND PEOPLE AROUND THE URBAN CENTRE.



EXERCISE



SPORTS



YOGA



WALKING / JOGGING



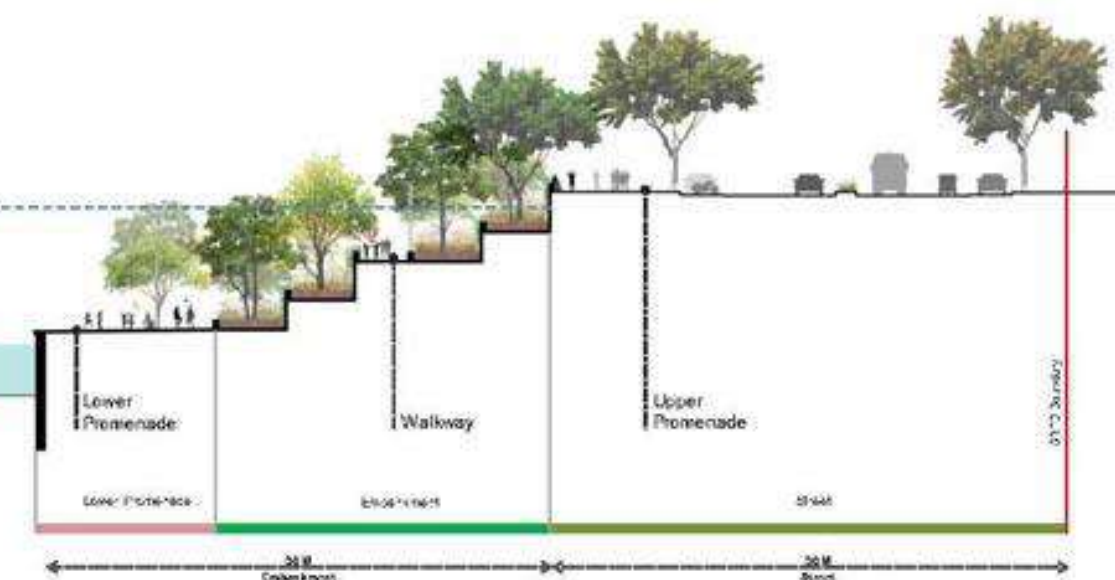
SPEND THEIR LEISURE TIME



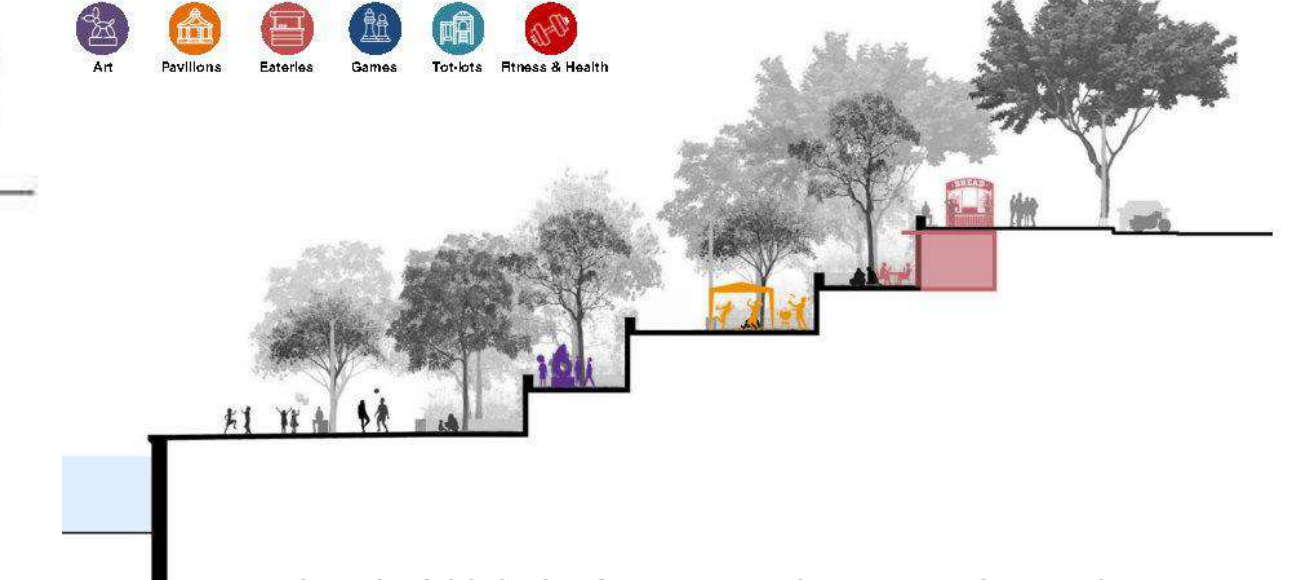
TOPIARY EXHIBITION



A PARADISE FOR BIRDS



TYPICAL CROSS SECTION – SHOWING PROMENADES



TYPICAL CROSS SECTION WITH ACTIVITY MODULES



1. RIVERFRONT MARKET



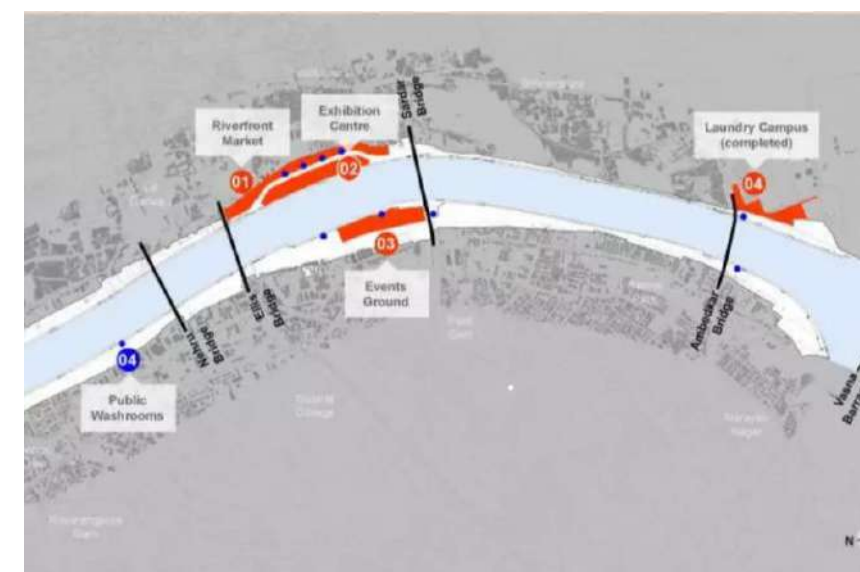
2. EXHIBITION CENTRE



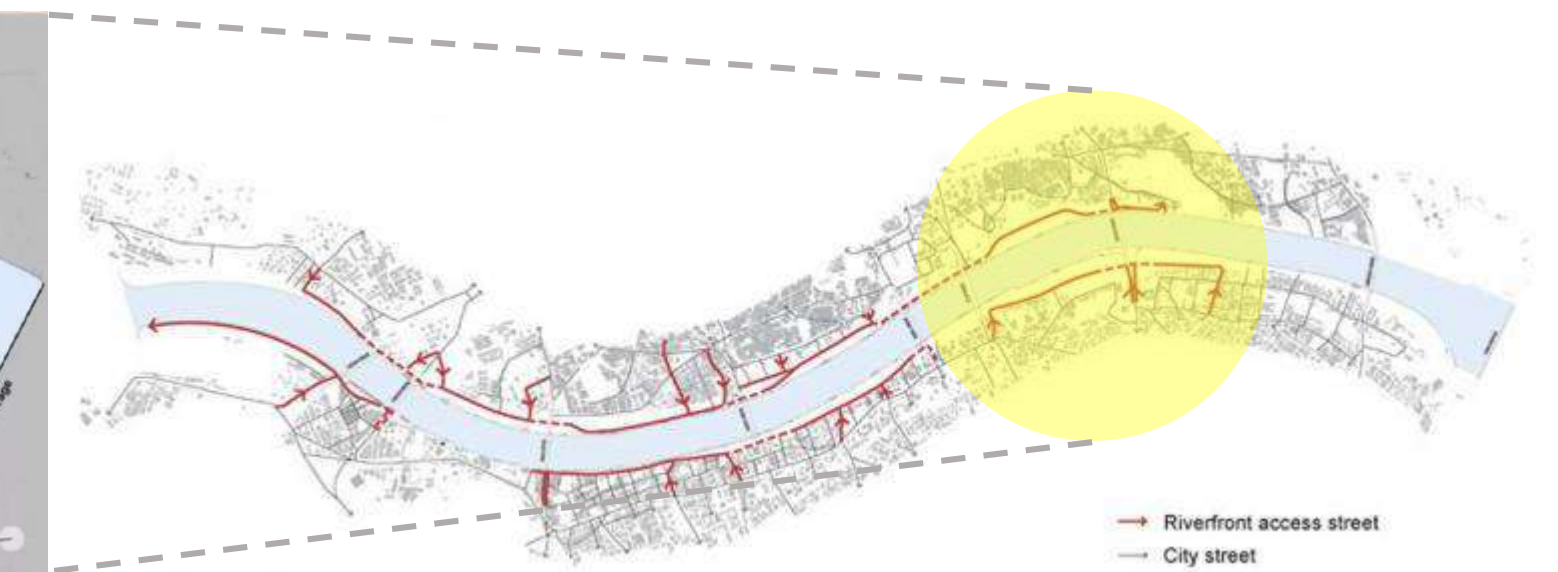
3. EVENT GROUND



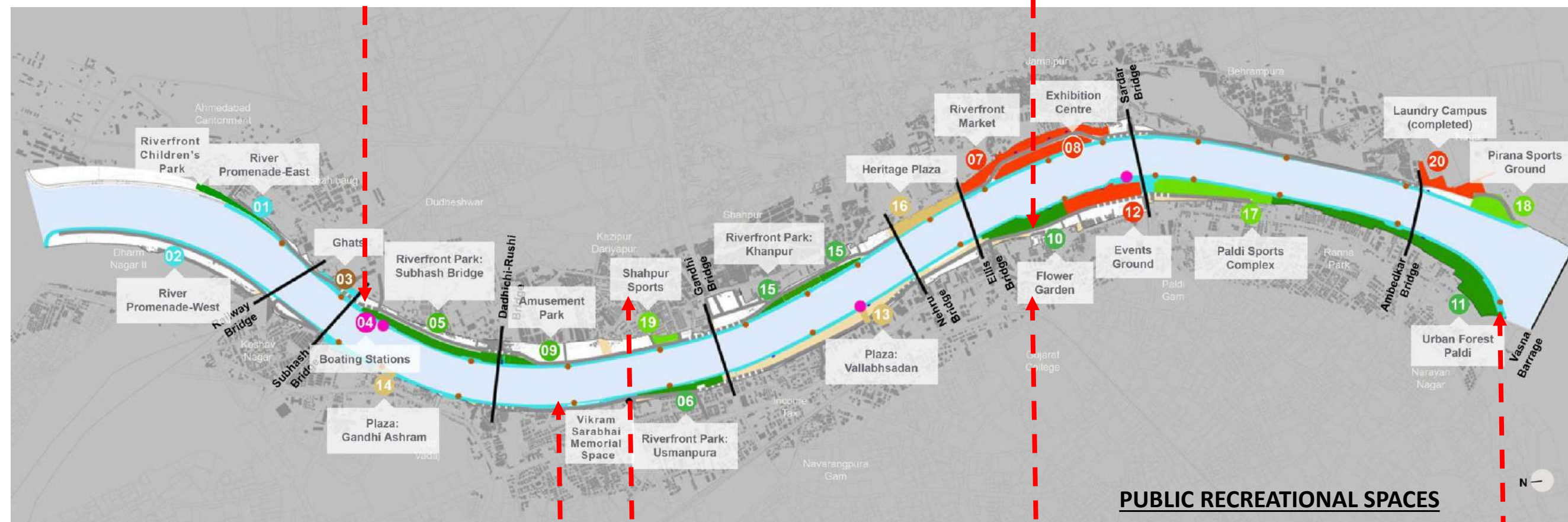
4. LAUNDRY CAMPUS



AMENITY SPACES



STREET NETWORK



PUBLIC RECREATIONAL SPACES



VIKRAM SARABHAI MEMORIAL PLACE



SPORTS CENTER



FLOWER PARK



URBAN FOREST

INFERENCE

- **PUBLIC EDGE** : THE RIVERFRONT PROJECT CREATES A PUBLIC EDGE ALONG THE RIVER ON THE EASTERN AND WESTERN BANKS.
- **IMPROVED ACCESS** : TO BETTER ACCESS THE RIVERFRONT AND FACILITIES BUILT ALONG STREETS TO WELCOME THE PUBLIC AND VISITOR ALSO THE NEW STREETS ARE DESIGNED WITH WIDE FOOTPATHS AND DESIGNATED CYCLE TRACKS TO IMPROVE AND ENCOURAGE PEDESTRIAN ACCESS TO THE RIVER.
- **SOCIAL UPLIFTMENT** : MANY NEW PARKS, GARDENS AND SPORTS FACILITIES ARE BEING BUILT ON THE RECLAIMED LAND TO ENHANCE LIVABILITY IN THE AREA THAT THEY ARE LOCATED IN AND STRENGTHEN THE CITY'S GREEN NETWORK.
- **SELF FINANCING** : HE PROJECT AIMS TO BE SELF-FINANCING – TO ACHIEVE ITS GOALS WITHOUT RELYING ON ANY FUNDING FROM THE GOVERNMENT.
- **AMENITY SECTIONS** : CONTINUOUS PROMENADE AT WATER EDGE, GHATS PUNCTUATE LOWER LEVEL PROMENADES AT PLANNED INTERVAL TO PROVIDE ACCESS TO THE WATER, BOATING STATION AT LOWER LEVEL ENSURES WATER RECREATION.
- MORE PART OF THE RIVERFRONT CONTRIBUTES TO BUILT SPACES WHEN COMPARED TO UNBUILT AND GREEN OPEN SPACES CONTRIBUTING IN ENVIRONMENTAL DEGRADATION.



BOATING STATION

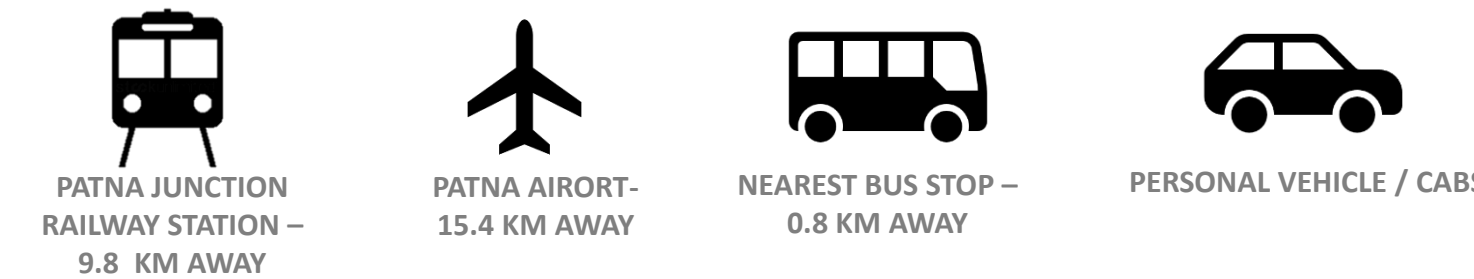
PATNA RIVERFRONT REVITALISATION, PATNA - BIHAR



A LARGE PART OF CITY HAS TURNED ITS BACK TO- WARDS THE GANGES RESULTING MISUSE OF RIVER EDGE FOR DUMPING AND WASTE ACUMMULATION. THE TRADITIONAL GHATS ALONG THE RIVER ARE ALSO DILAPIDATED AND SO ARE A LARGE PART OF GOVT LAND. THE SCHEME PLANS TO INTEGRATE THESE UNUSED LAND BY CONNECTING ALL THE 27 GHATS ALONG THE 7KM STRETCH AND PROVIDE A NETWORK OF URBAN PARKS AND WALKWAYS TO IMPROVE ACCESS TO THE GHATS.

- ❖ ARCHITECT : NISHANT LALL
- ❖ CLIENT : The World Bank/ NMCG / National Mission of Clean Ganga / Ministry of Water Resources / BUIDCO/ Bihar Urban
- ❖ DURATION : 2015 - 2019
- ❖ AREA : 7 KMS

ACCESSIBILITY



THE 6.6 KM STRETCH FROM COLLECTORATE GHAT TO NAUJAR GHAT IN LENGTH AND IN DEPTH BETWEEN THE RIVER EDGE AND THE ASHOK RAJ PATH. THE PRECINCTS IN THE DEPTH ARE OF VARIOUS KIND OF USES RANGING FROM PUBLIC MIXED USE, INSTITUTIONAL, COMMUNITY AND RESIDENTIAL

LOCATION – PATNA, BIHAR

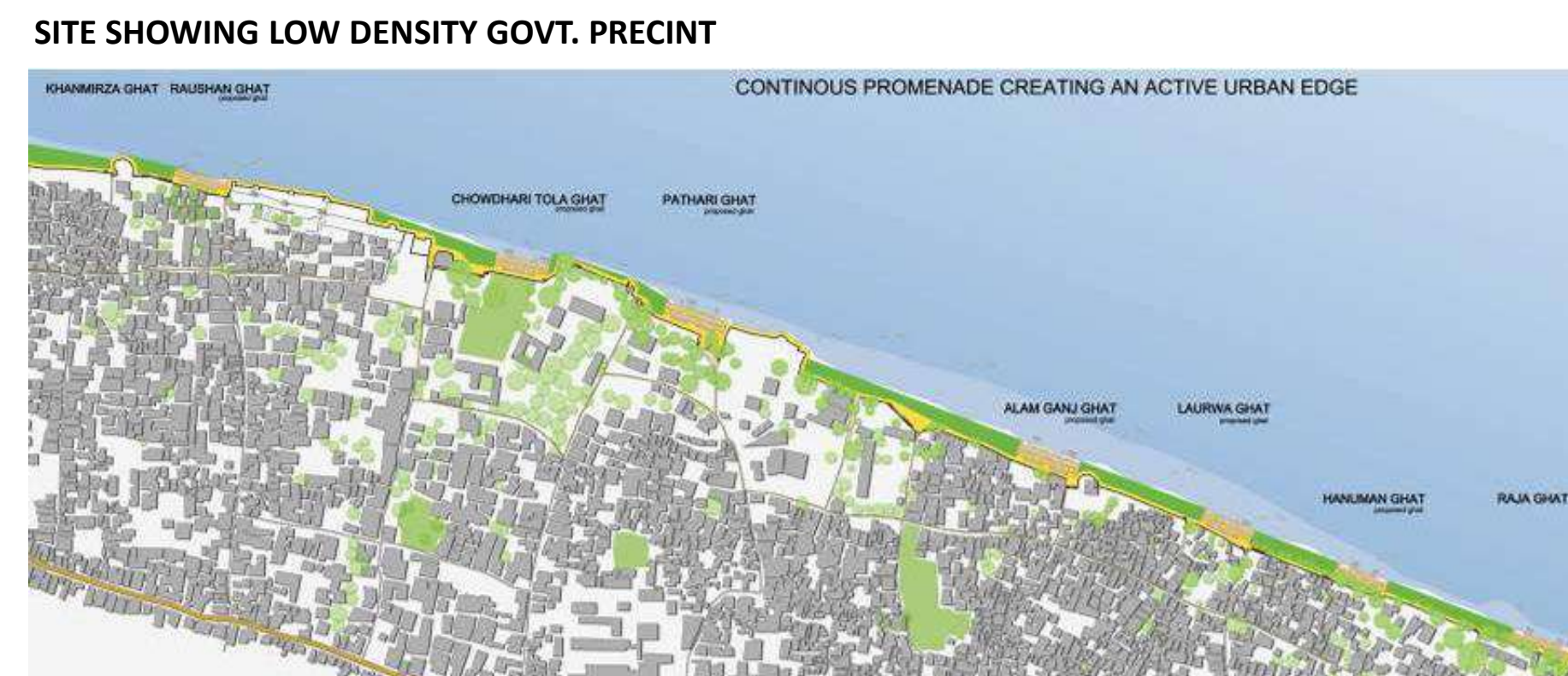
CLIMATE – TEMPERATE

	January	February	March	April	May	June	July	August	September	October	November	December
Avg. Temperature °C (°F)	16.2 °C (61.2) °F	19.9 °C (67.8) °F	25.6 °C (78.1) °F	31.9 °C (89.4) °F	31.2 °C (88.2) °F	28.8 °C (83.9) °F	26.6 °C (80.1) °F	25.8 °C (78.4) °F	22.2 °C (72.0) °F	17.9 °C (64.2) °F	12.2 °C (54.0) °F	8.8 °C (47.8) °F
Min. Temperature °C (°F)	10.6 °C (51.1) °F	13.6 °C (56.5) °F	18.4 °C (65.1) °F	23.4 °C (74.1) °F	25.9 °C (78.6) °F	26.3 °C (79.3) °F	26.1 °C (79.0) °F	25.2 °C (77.4) °F	21.7 °C (71.1) °F	16.5 °C (61.7) °F	12.2 °C (54.0) °F	8.8 °C (47.8) °F
Max. Temperature °C (°F)	22.1 °C (71.8) °F	26.2 °C (79.1) °F	32.5 °C (90.5) °F	37.6 °C (99.7) °F	37.7 °C (99.9) °F	36.7 °C (98.1) °F	32 °C (89.6) °F	31.8 °C (89.2) °F	31.1 °C (88.0) °F	30.1 °C (86.2) °F	27.7 °C (81.9) °F	23.8 °C (44.8) °F
Precipitation / Rainfall mm (in)	17 (0)	17 (0)	10 (0)	12 (0)	32 (1)	175 (6)	323 (12)	281 (11)	197 (8)	52 (2)	6 (0)	8 (0)
Humidity (%)	69%	60%	43%	36%	50%	65%	81%	83%	77%	65%	67%	67%
Rainy days (d)	2	2	2	2	4	12	19	19	15	5	1	1
avg. Sun hours (hours)	8.6	9.7	10.7	11.2	11.0	10.0	8.2	7.9	8.0	8.8	9.3	8.5

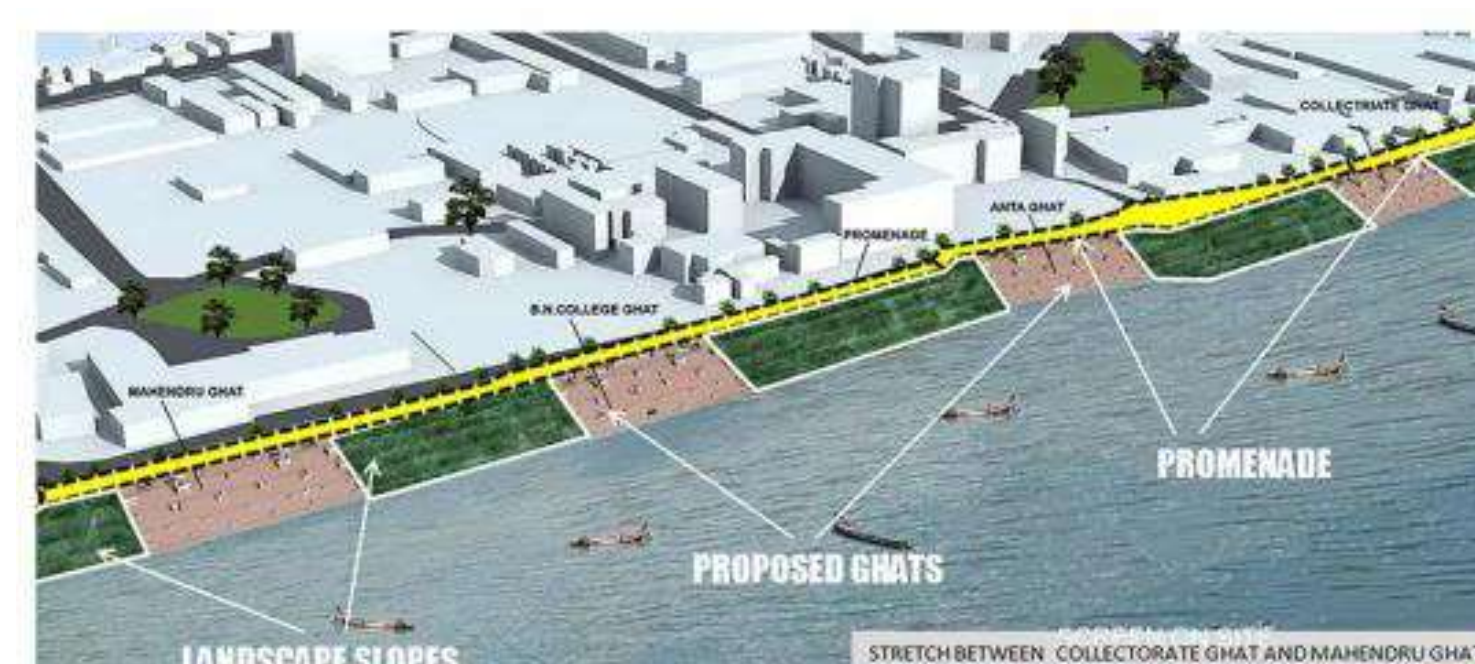
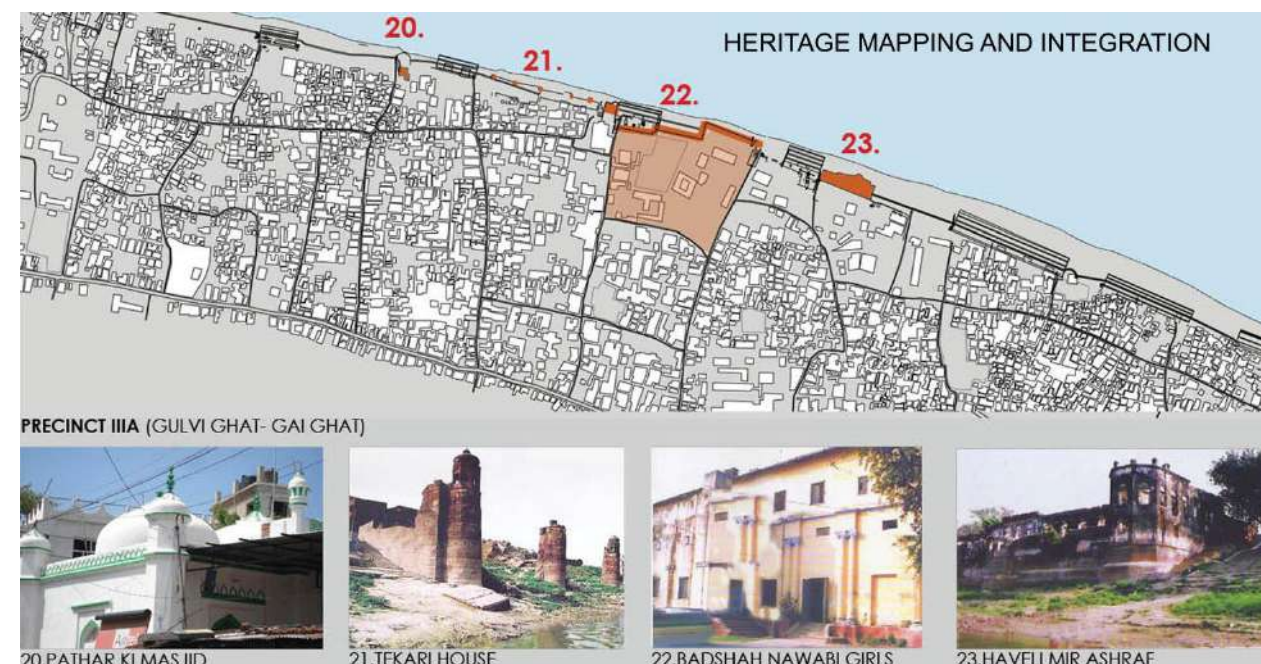
- ❖ THE TEMPERATURE HERE AVERAGES 25.5 °C | 78.0 °F. THE ANNUAL PRECIPITATION IN THIS LOCATION IS APPROXIMATELY 1130 MM | 44.5 INCH.
- ❖ THE WARMEST MONTH OF THE YEAR IS MAY, WITH AN AVERAGE TEMPERATURE OF 31.9 °C | 89.4 °F. THE MONTH OF JANUARY IS CHARACTERIZED BY THE LOWEST TEMPERATURES, WHICH HAVE AN AVERAGE READING OF 16.2 °C | 61.2 °F.

ISSUES:

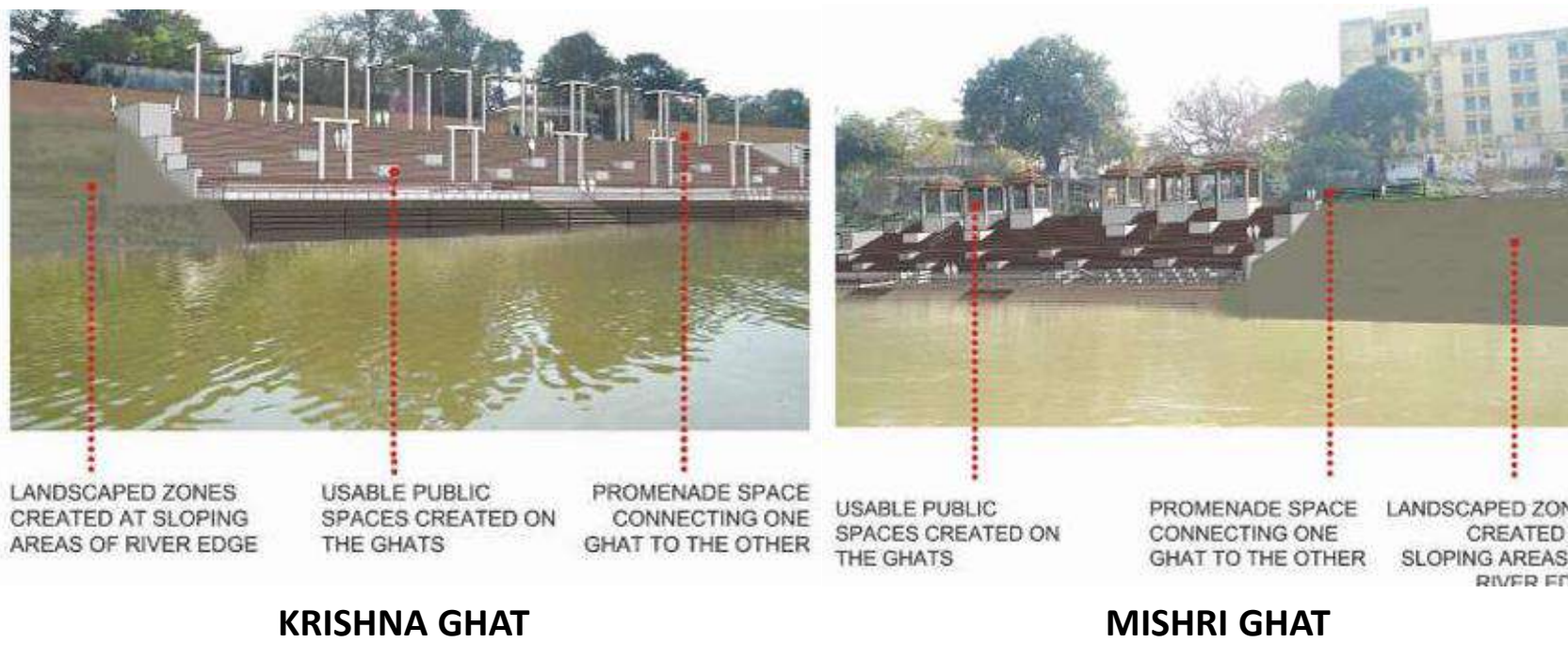
THE URBAN FABRIC ALONG EDGE MOSTLY DATING BACK TO AROUND THE INDEPENDENCE PERIOD RUNS CONTINUOUSLY ALONG AND UPTO THE RIVER EDGE THEREBY LEAVING VERY LITTLE SPACE FOR ANY FORM OF INTERVENTION AT THE RIVER'S EDGE.



THE PROMENADE AND THE GHATS WOULD FORM THE TRANSFORMATION ZONES BETWEEN THE RIVER AND EDGE.

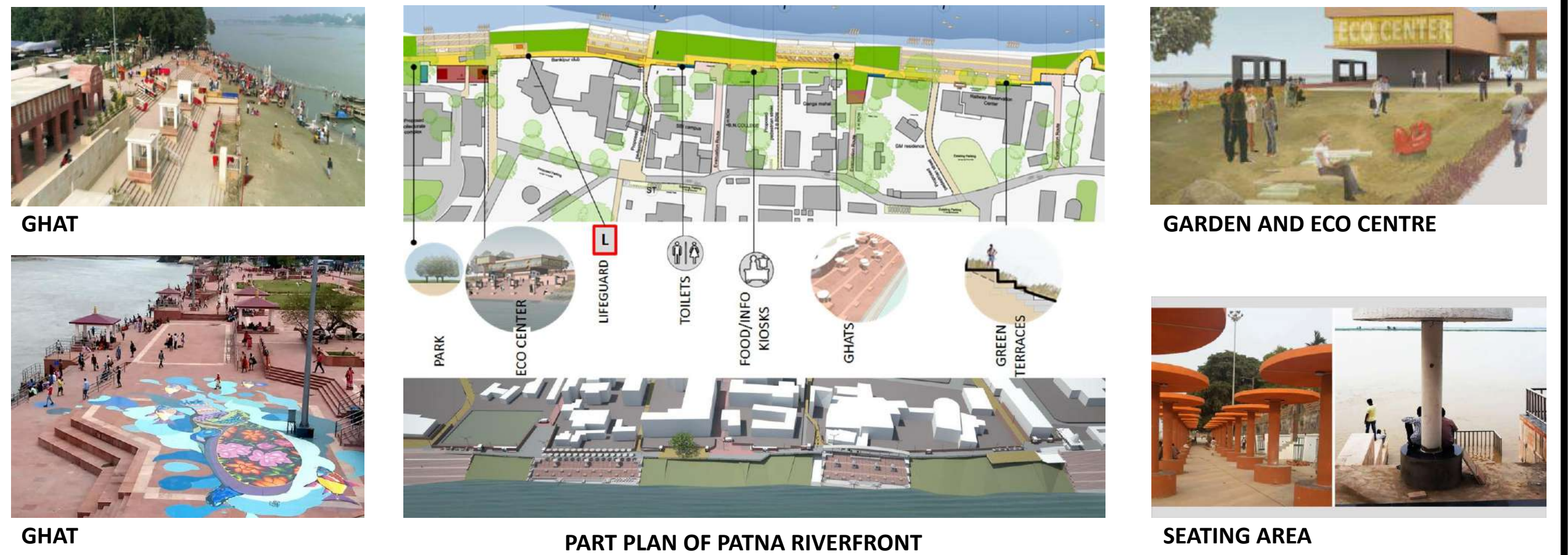


OBJECTIVE OF THE PROJECT



- THE DESIGN COMPONENTS WOULD MAXIMIZE AND OPTIMIZE THE SPACE USAGE AVAILABLE ON THE RIVER EDGE. THE PROMENADE HAS BEEN DESIGNED TO RETROFIT THE EXISTING BOUNDARY CONDITIONS WITH GHATS AND CONNECTING LANDSCAPE CREATING ACCESS TO RIVER WHEREVER POSSIBLE.
- DUE TO ITS EXTENT (6.6 KM OF URBAN EDGE), THE RIVERFRONT PROJECT AIMS TO STIR UP A RENEWED CIVIC IDENTITY AND ULTIMATELY HOPES TO NURTURE A CIVICMIND TOWARDS THE GANGA RIVER.
- THE BUILT CHARACTER OF PATNA'S RIVER EDGE IS AN EXPRESSION OF SURROUNDING LAND USE, WHICH VARIES BETWEEN INSTITUTIONAL, RESIDENTIAL, AND IN OTHER CASES MIXED USE. EACH OF THEM HAS COME INTO EXISTENCE OVER TIME AND IS QUITE DISTINCT IN ITS MORPHOLOGY.

BRINGING GAP WITH NATURE



INFERENCE

- INTEGRATE GREEN INFRASTRUCTURE, SUCH AS WETLANDS, PARKS, AND GREENWAYS, TO PROMOTE BIODIVERSITY AND MITIGATE FLOOD RISKS.
- FOSTER A MIX OF RESIDENTIAL, COMMERCIAL, CULTURAL, AND RECREATIONAL ACTIVITIES ALONG THE RIVERFRONT TO CREATE A DYNAMIC AND INCLUSIVE URBAN ENVIRONMENT.
- PRESERVE AND CELEBRATE THE HISTORICAL HERITAGE OF THE RIVERFRONT THROUGH ADAPTIVE REUSE OF HERITAGE BUILDINGS, PUBLIC ART INSTALLATIONS, AND INTERPRETIVE SIGNAGE.
- ACTIVATE THE RIVERFRONT WITH A DIVERSE MIX OF AMENITIES SUCH AS PROMENADES, WATERFRONT CAFES, MARKETS, PERFORMANCE SPACES, AND RECREATIONAL FACILITIES PROMOTES COMMUNITY ENGAGEMENT.

4. BOOK CASE STUDY JANAKALYAN – REVITALISATION ON THE BANKS OF NAG RIVER, NAGPUR - BRIDGING THE GAP WITH NATURE

WATERFRONT DEVELOPMENT AT FUTALA / TELANKHEDI LAKE, NAGPUR - MAHARASHTRA



- ❖ ARCHITECTURE FIRM : DEEPROOTS DESIGN
- ❖ CLIENT : NAGPUR IMPROVEMENT TRUST
- ❖ AREA : 4 ACRES
- ❖ BUDGET : 1 CRORE
- ❖ DURATION : 3 YEARS
- ❖ PROJECT BRIEF : TO IMPROVE WATERFRONT OF FUTALA LAKE

HISTORY OF FUTALA / TELANKHEDI LAKE

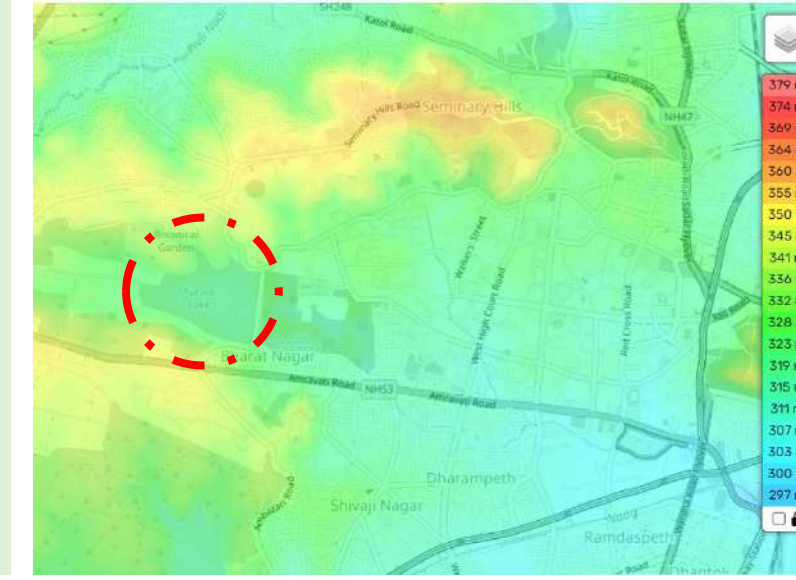


BUILT BY 2ND RAGHUJI RAJE BHOSALE IN 1783.

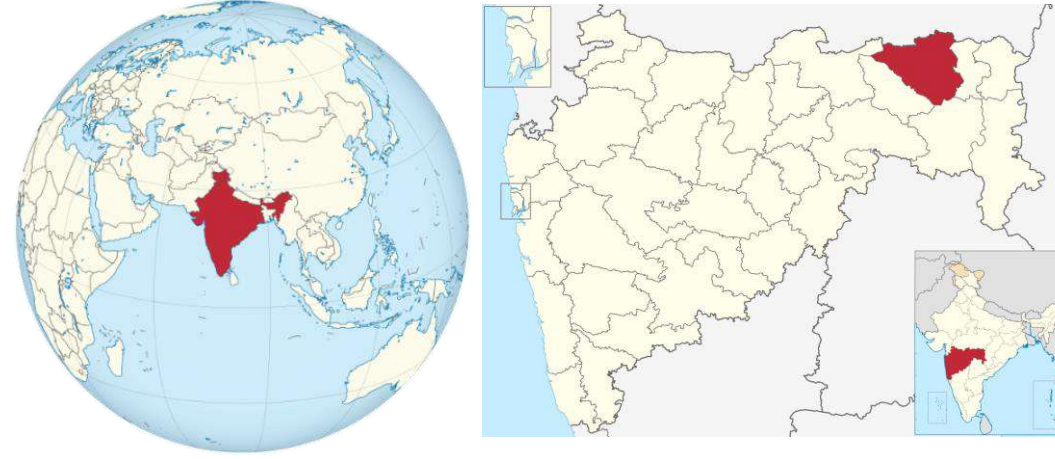
ORIGINALLY THE EMBANKMENTS WERE CONSTRUCTED IN THE LAST CENTURY BY RAJE BHOSALE IN AN ATTEMPT TO CONSERVE THE WATER BODY.

WAS CREATED TO SERVE AS ADDITIONAL SOURCES OF WATER TO SEGMENT WATER SUPPLY

TOPOGRAPHY

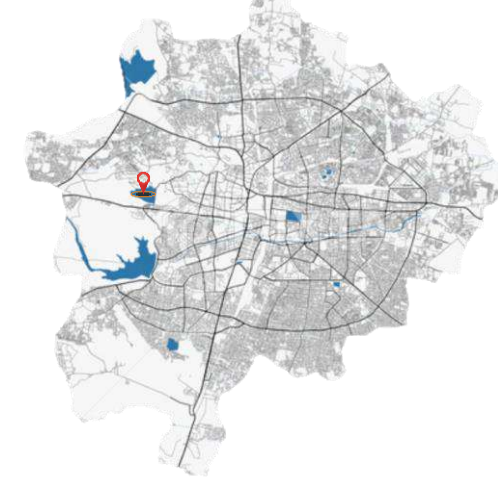


LOCATION



FUTALA LAKE IS SITUATED IN THE WESTERN AREA OF THE NAGPUR ABOUT 6 KM FROM THE CITY CENTRE.

THE TOPOGRAPHY OF FUTALA LAKE IN NAGPUR IS CHARACTERIZED BY A GENTLE, UNDULATING TERRAIN SURROUNDED BY VERDANT LANDSCAPES. THE LAKE IS NESTLED AMIDST PICTURESQUE HILLS AND VALLEYS, CREATING A SCENIC AND SERENE SETTING



ISSUES & CONCERNS

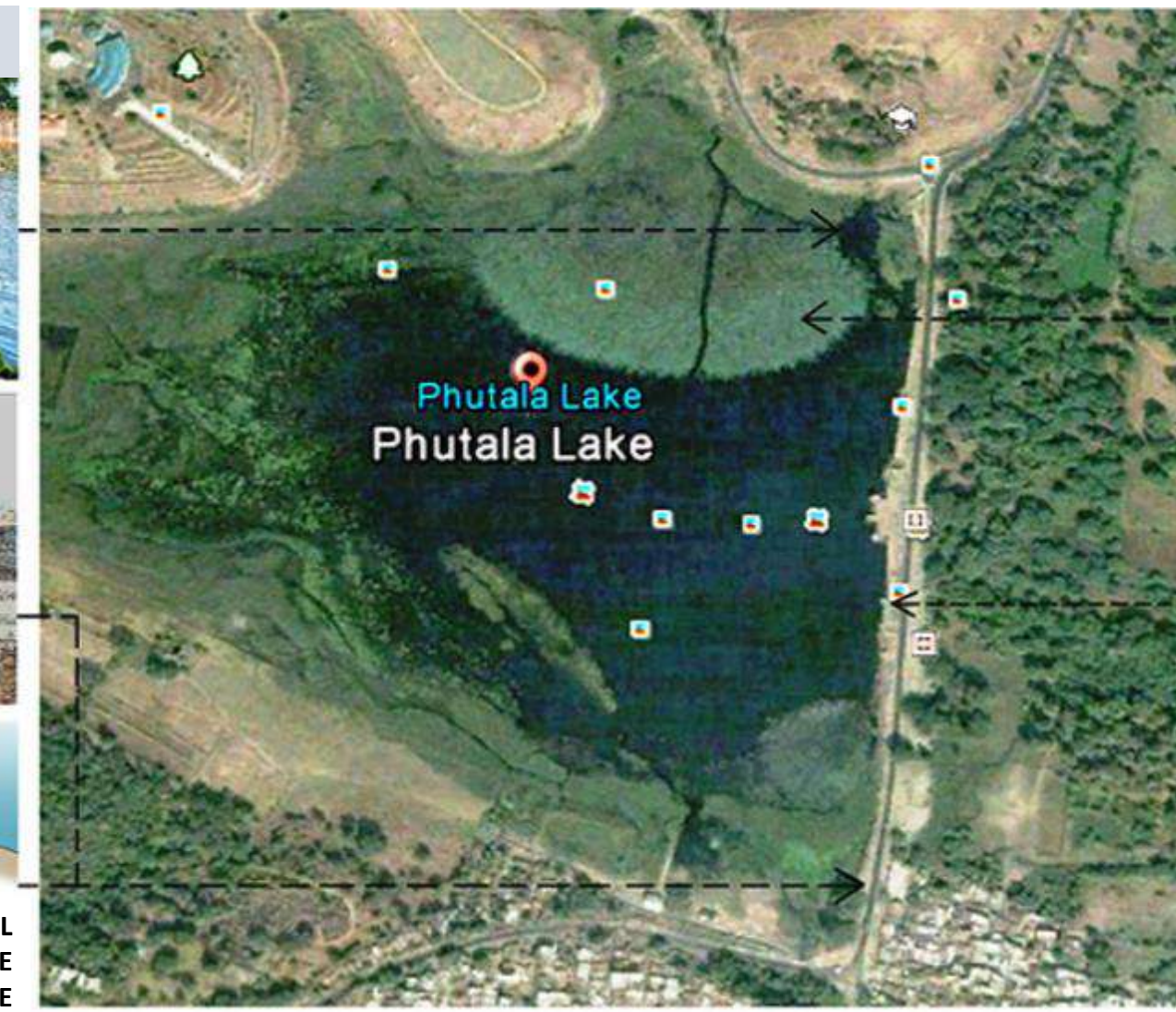


EXCESSIVE GARBAGE DUMPING & GROWTH OF WATER HYACINTHS - HAMPERED AQUATIC ECOSYSTEM AND POLLUTED WATER



SECTION SHOWING OLD DILAPATED WALL

BANKS WERE ERODED & THE LAKE WALL WAS DILAPATED - DUE TO THE PRESSURE EXERTED FROM HEAVY VEHICLE TRAVELLING ON THE ROAD.

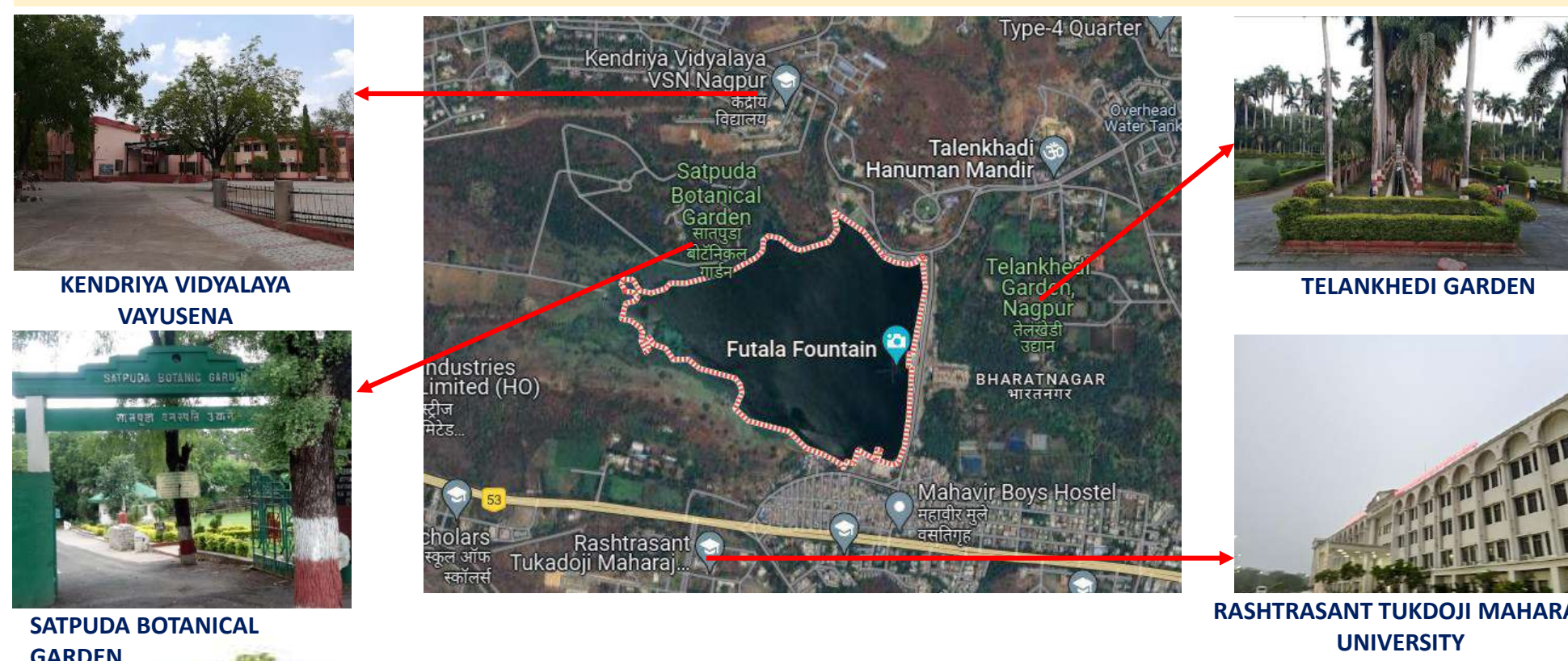


SITTING WAS A MAJOR PROBLEM DUE TO IDOL IMMERSION WHICH REDUCED WATER HOLDING CAPACITY OF THE LAKE.

ACCESSIBILITY

- NAGPUR JUNCTION RAILWAY STATION - 6.1 KM AWAY
- BHARAT NAGAR BUS STOP - 1.1 KM AWAY
- DR. B.R. AMBEDKAR INTERNATIONAL AIRPORT - 7.2 KM AWAY
- PERSONAL VEHICLE / CABS

SITE AND SURROUNDINGS



KENDRIYA VIDYALAYA VAYUSENA, SATPUDA BOTANICAL GARDEN, TELANKHEDI GARDEN, RASHTRASANT TUKDOJI MAHARAJ UNIVERSITY

DESIGN CONCEPT

- SUSTAINABILITY**
- CONSERVATION**
- URBAN DESIGN**

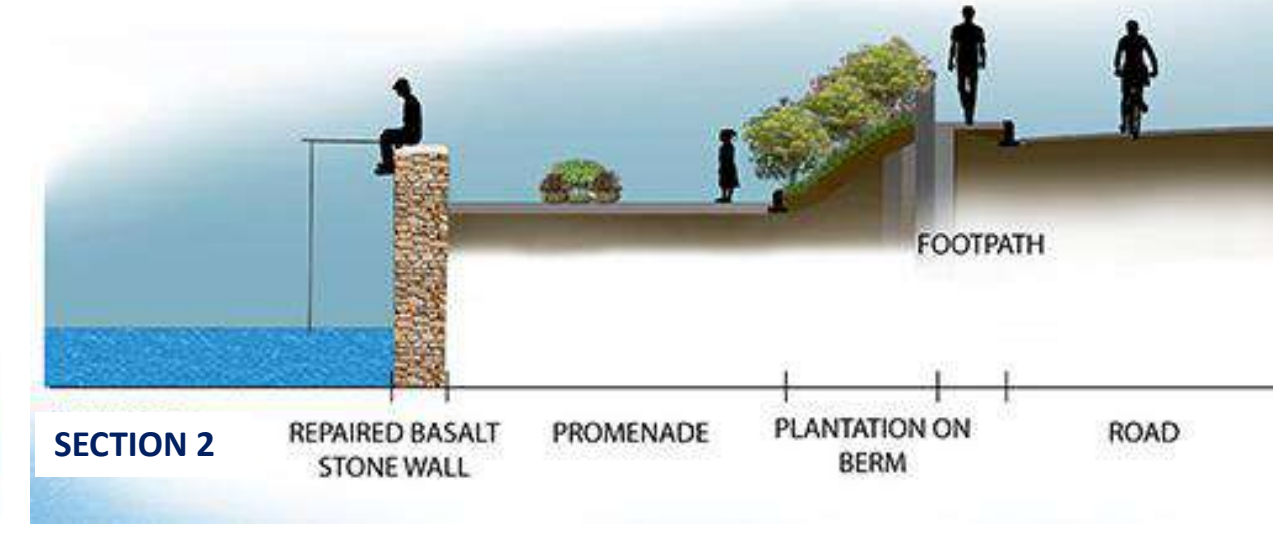
XERISCAPE PLANTING BEING A PUBLIC SPACE - USE OF VANDAL PROOF MATERIALS
 CONSERVING THE OLD HERITAGE STRUCTURES LIKE WATER SUPPLY SYSTEM, THE RETAINING WALL & RECONSTRUCTING THEM WITH SIMILAR MATERIALS AND TECHNIQUES
 GIVING PROPER SPACE FOR EXISTING ACTIVITIES LIKE FISHING, IDOL IMMERSION, BOATING ETC, ALSO PROPOSED AMENITY SPACE LIKE FOOD PLAZA ETC.

NEEDS FOR WATERFRONT DEVELOPMENT

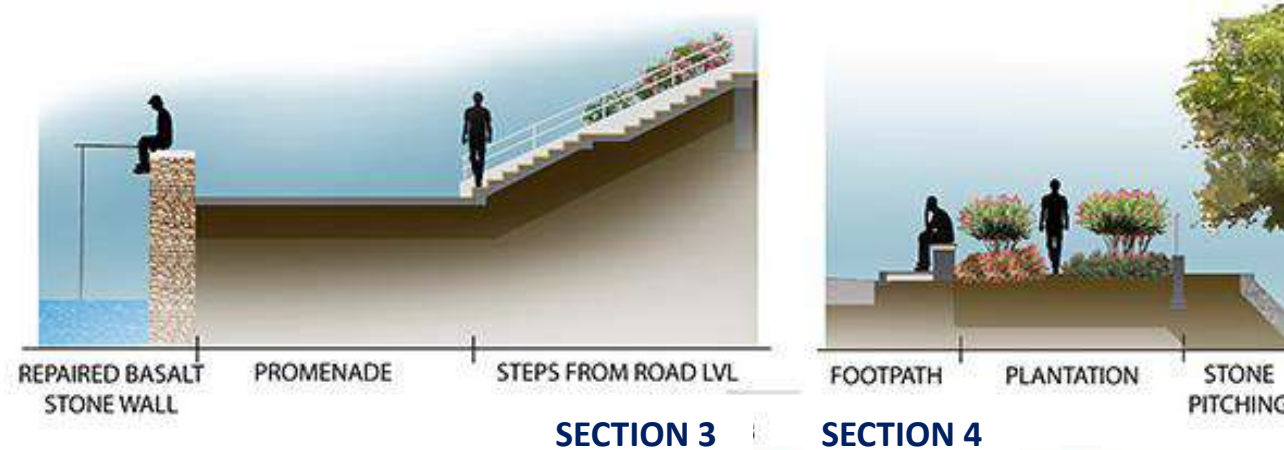
- RAPID URBANIZATION AND FAST GROWING POPULATION OF THE CITY HAS RESULTED IN THE DEGRADATION OF LAKES AND ITS ENVIRONMENT.
- ALSO DUE TO INCREASING DEMAND OF FRESHWATER IN THE DEVELOPING CIVILIZATION, THERE IS NEED OF RESTORATION AND MANAGEMENT OF LAKES.



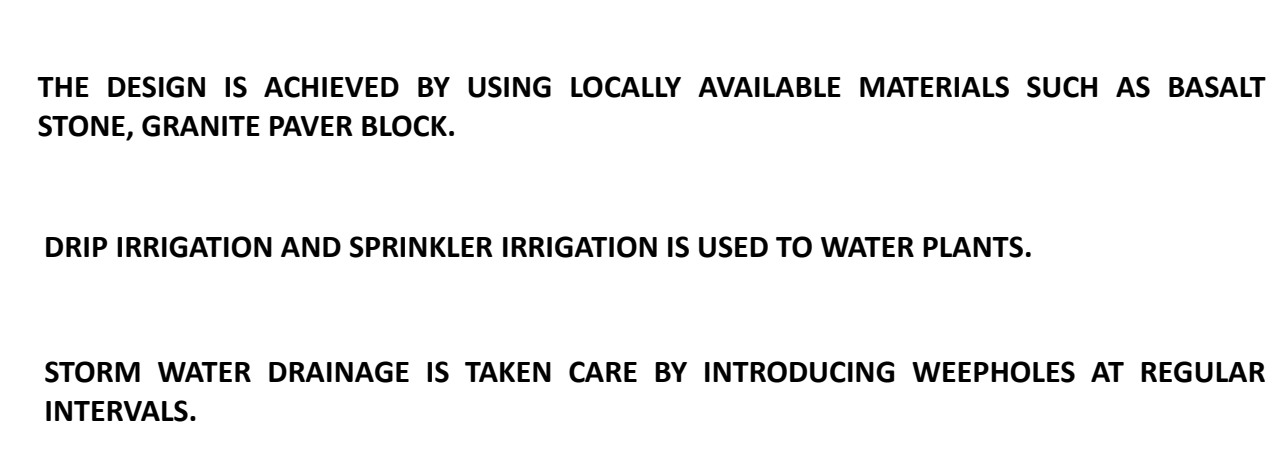
SECTION 1: ROAD, STONE PITCHING, PROMENADE, REPAIRED BASALT STONE WALL



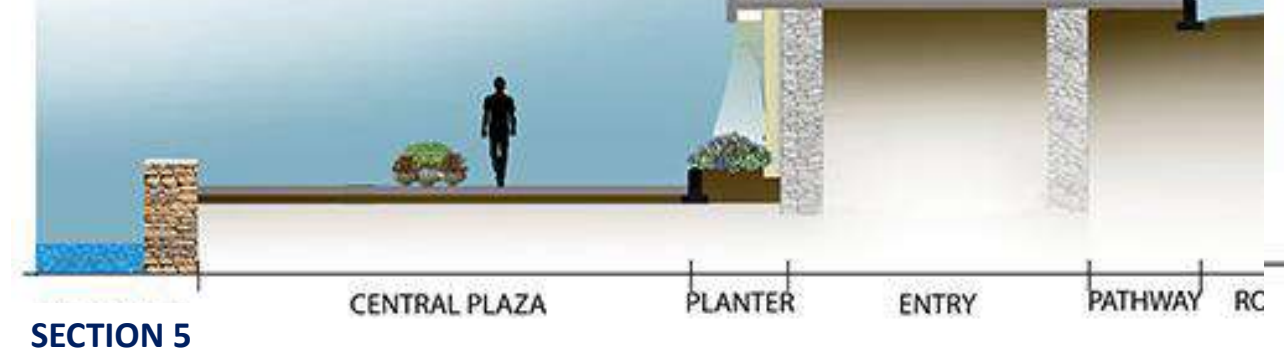
SECTION 2: REPAIRED BASALT STONE WALL, PROMENADE, PLANTATION ON BERM, ROAD



SECTION 3: REPAIRED BASALT STONE WALL, PROMENADE, STEPS FROM ROAD LVL, FOOTPATH, PLANTATION, STONE PITCHING



SECTION 4: REPAIRED BASALT STONE WALL, PROMENADE, ENTRY, PATHWAY, RAMP FROM ROAD, KHANDAKI FLOORING STEPS FOR GHAT, KUND

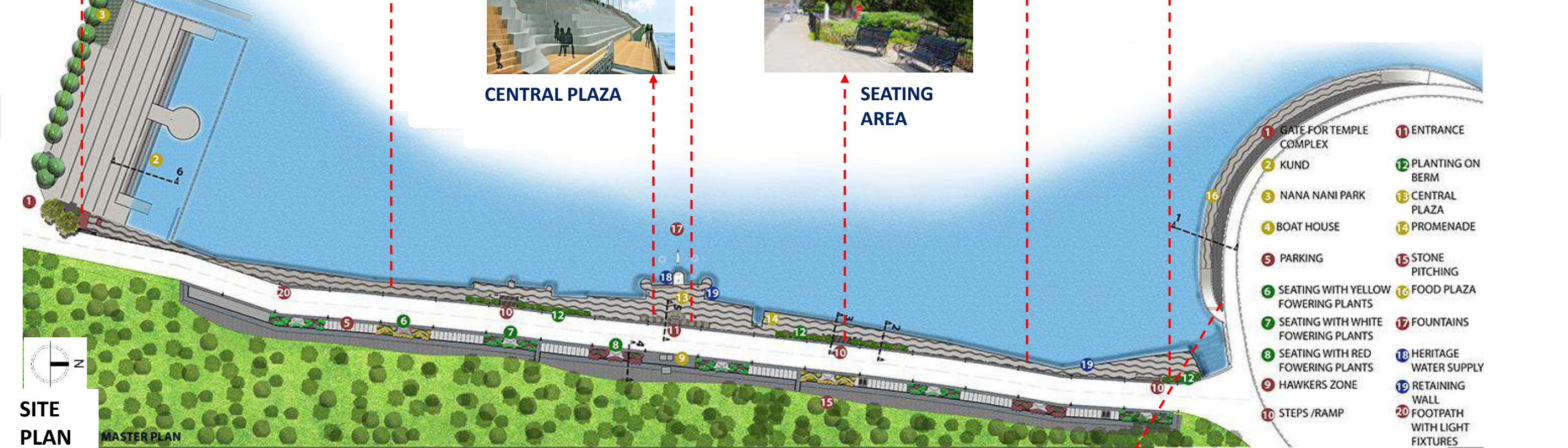


SECTION 5: REPAIRED BASALT STONE WALL, PROMENADE, ENTRY, PATHWAY, RAMP FROM ROAD, KHANDAKI FLOORING STEPS FOR GHAT, KUND



SECTION 6: REPAIRED BASALT STONE WALL, PROMENADE, ENTRY, PATHWAY, RAMP FROM ROAD, KHANDAKI FLOORING STEPS FOR GHAT, KUND

THE CONCEPT OF BARRIER FREE URBAN RECREATIONAL SPACE WAS INTRODUCED TO THE CITY BY PROVIDING RAMPS TO ACCESS ALL LOCATION. STREET FURNITURE LIKE SIGNAGES, BENCHES, LIGHTS FIXTURES AND DUSTBINS AT REGULAR INTERVALS.



SITE PLAN: TEMPLE ENTRY, PARKING, CENTRAL PLAZA, SEATING AREA, GREEN SPACE

- ACTIVITIES :**
- MORNING - JOGGING, WALKING, RUNNING, EXERCISE etc.
 - AFTERNOON - FISHING
 - EVENING - FOUNTAIN SHOW, EATERIES, MOBILE VENDORS, ADVERTISING VEHICLES, BOATING
- PROMOTES COMMUNITY ENGAGEMENT**
- MAJOR ACTIVITIES HAPPENING HERE ARE RECREATIONAL - FLASH MOB, STREET PLAYS, MUSICAL CONCERT

- VISION :**
- RESTORATION OF CATCHMENT AREA
 - ECOLOGICAL & HERIATGE CONSERVATION - UPGRADING THE LAKE AS POTENTIAL ENVIRONMENTAL RESOURCE
 - TO CREATE URBAN RECREATIONAL SPACE
 - REVIVAL AND RESTORATION OF HISTORICAL HERITAGE SITE

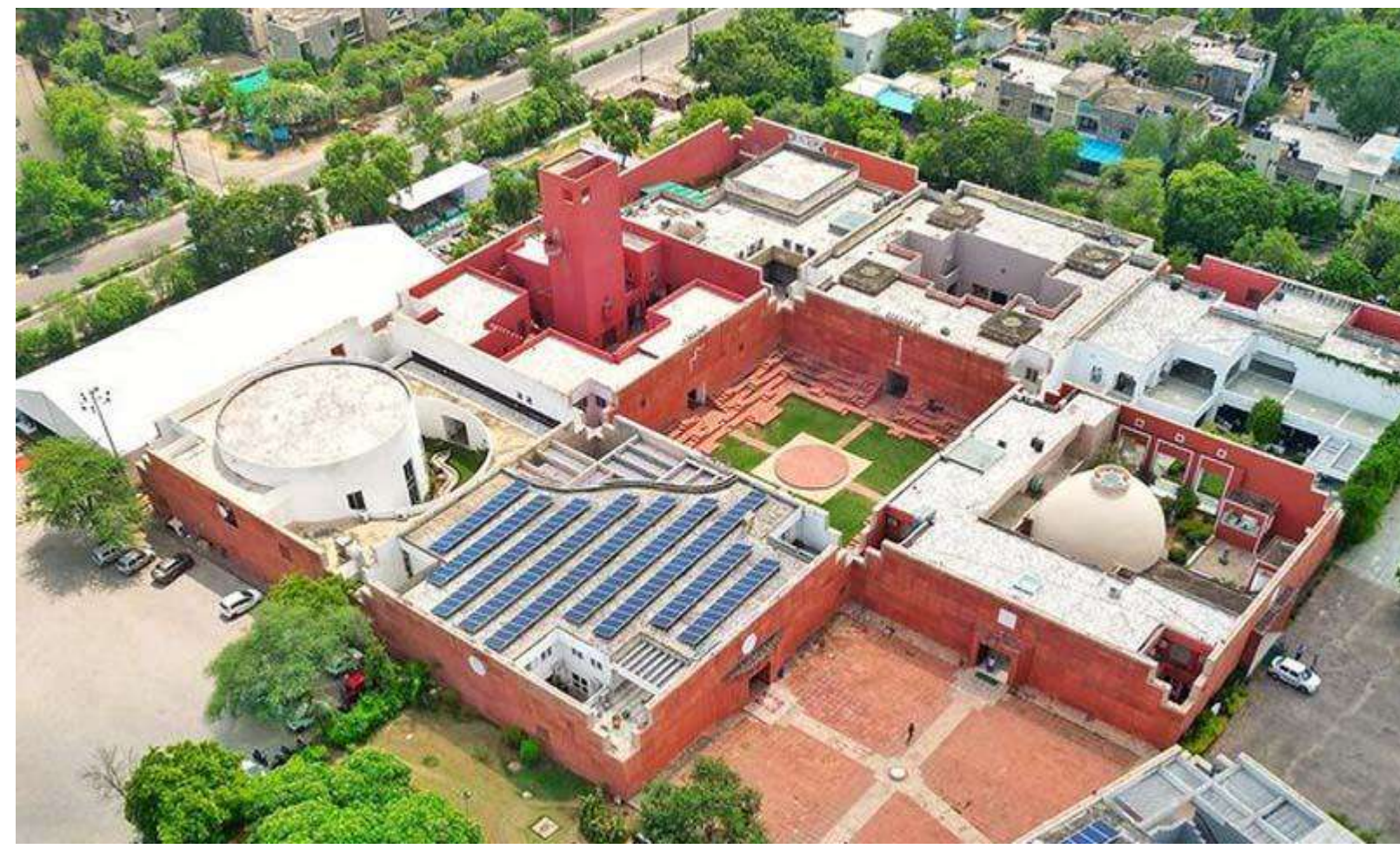


INFERENCE

THE LAKE'S DESIGN TAKES ADVANTAGE OF ITS NATURAL SURROUNDINGS, PROVIDING A SERENE AND PICTURESQUE SETTING FOR VISITORS.
 THE LAKE IS DESIGNED WITH A CENTRAL ISLAND GARDEN, FOUNTAINS, AND PROMENADES ALONG THE SHORELINE. THE DESIGN ELEMENTS BLEND IN SEAMLESSLY WITH THE NATURAL LANDSCAPE, OFFERING A HARMONIOUS BLEND OF ARCHITECTURE AND NATURE.
 PROMOTES COMMUNITY ENGAGEMENT THROUGH RECREATIONAL FACILITIES: THE DESIGN INCLUDES FACILITIES FOR BOATING, PADDLE BOATING, AND OTHER WATER-BASED ACTIVITIES, AS WELL AS LEISURE AREAS FOR PICNICS AND RELAXATION.
 ENVIRONMENTAL SUSTAINABILITY: THE DESIGN INFERENCE OF FUTALA LAKE ALSO INCLUDES ELEMENTS OF ENVIRONMENTAL SUSTAINABILITY, SUCH AS WATER CONSERVATION MEASURES, ECO-FRIENDLY LANDSCAPING PRACTICES, AND EFFORTS TO PRESERVE THE NATURAL ECOSYSTEM OF THE AREA.

5. LIVE CASE STUDY JANAKALYAN - REVITALISATION ON THE BANKS OF NAG RIVER, NAGPUR - BRIDGING THE GAP WITH NATURE

JAWAHAR KALA KENDRA, JAIPUR, RAJASTHAN



- ❖ ARCHITECTS: CHARLES CORREA ASSOCIATES
- ❖ LOCATION: JAIPUR, RAJASTHAN, INDIA
- ❖ CLIENT: GOVERNMENT OF RAJASTHAN
- ❖ BUILT-UP AREA: 9.5 ACRES
- ❖ CONSTRUCTION: 5 YEARS (1986 – 1991)
- ❖ TYPOLOGY: CULTURAL ARCHITECTURE / MUSEUM
- ❖ PROJECT YEAR: 1991



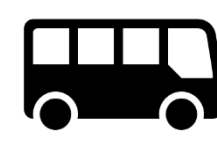
ACCESSIBILITY



JAIPUR JUNCTION RAILWAY STATION – 7.7 KM AWAY



JAIPUR AIRPORT – 6.1 KM AWAY

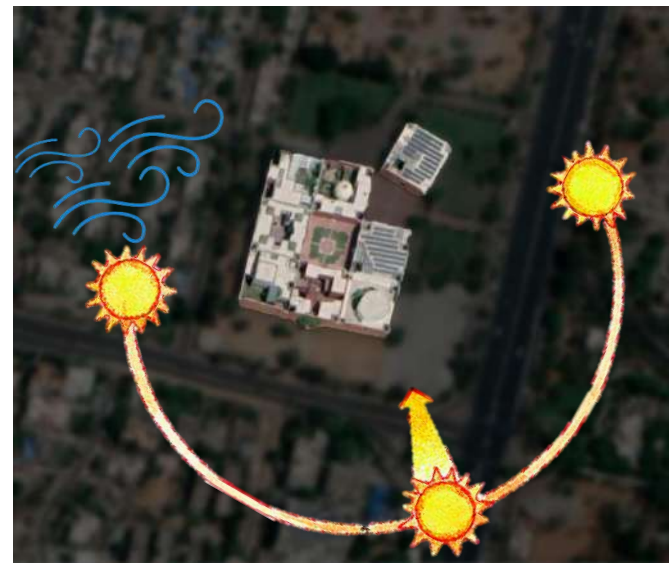
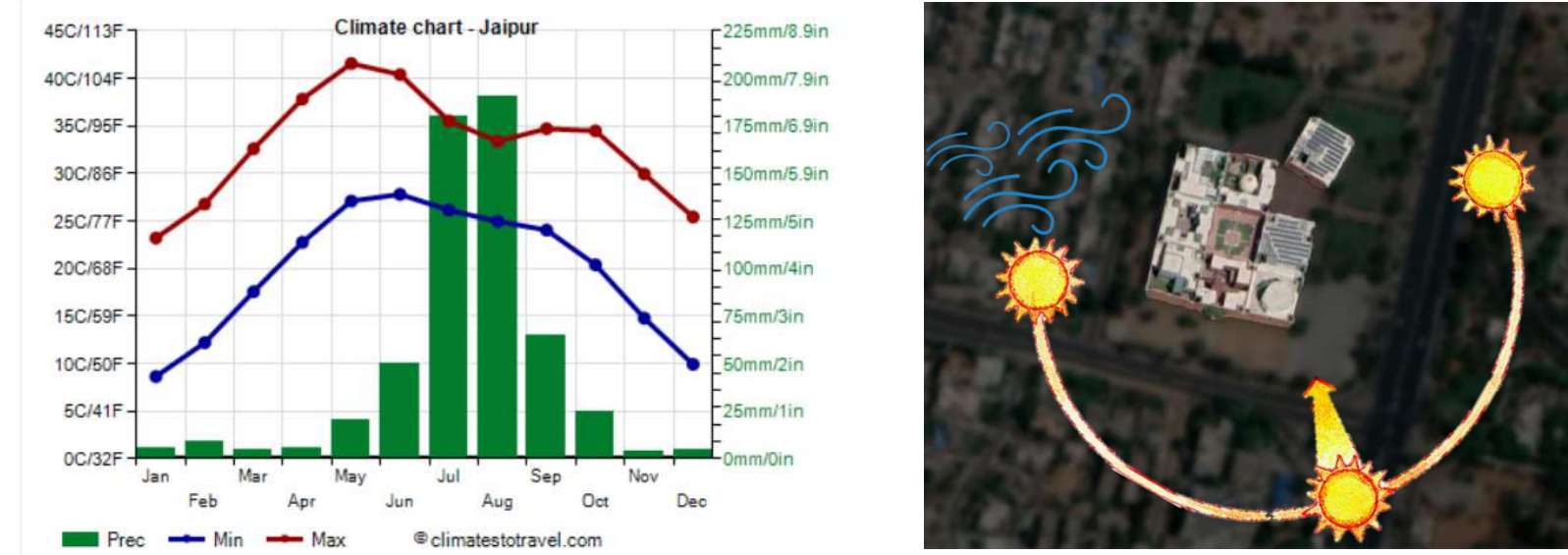


NEAREST BUS STOP – 0.4 KM AWAY



PERSONAL VEHICLE / CABS

CLIMATE – HOT AND HUMID



SUMMER:-
MAX TEMPERATURE – 45°C
MIN TEMPERATURE – 25 °C

WINTER:-
MAX TEMPERATURE – 23°C
MIN TEMPERATURE – 10°C

LOCATION – JAIPUR, RAJASTHA



- JAWAHAR KALA KENDRA WAS BUILT TO RESEMBLE A RED FORT, WITH NO WINDOWS ON ITS FACADE. THE DESIGN WAS PREPARED BY THE ARCHITECT CHARLES CORREA.
- ARCHITECTURE OF JAWAHAR KALA KENDRA FOLLOWS THE INDIAN CLASSICAL PRINCIPLE VASTU PURUSH MANDALA. IN THIS STYLE, THE PLAN OF THE BUILDING IS CONCEIVED AS A MODEL OF THE COSMOS.
- THE CENTRE WAS LAUNCHED BY THE GOVT. TO PROVIDE SPACE TO THE CULTURAL & SPIRITUAL VALUES OF INDIA & DISPLAY THE RICH CRAFT HERITAGE.

SITE AND SURROUNDINGS



CLIMATE RESPONSIVE BUILDING

- MATERIAL :- RED STONE & WHITE MARBLE
- SMALL PUNCTURE ON WALL FOR VENTILATION
- LIFT SHAFTS HAVE STEP PROFILE WITH MARBLE CAPPING
- LIFT SHAFTS AT CORNER OF EACH UNIT
- CENTRAL COURTYARD BRING IN LIGHT AND AIR

BUILT & OPEN SPACES

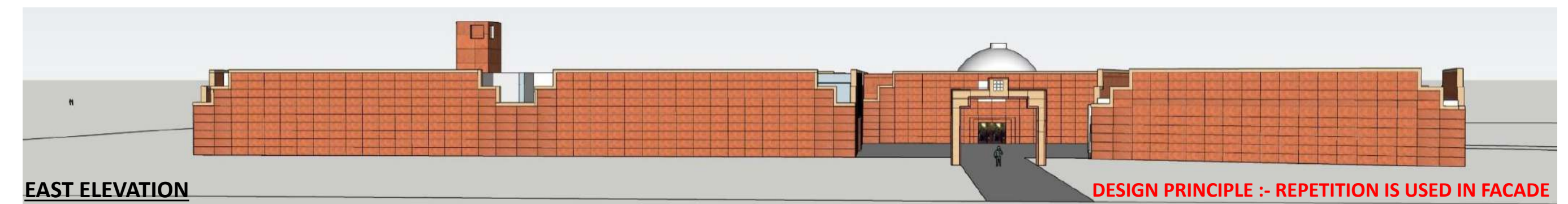


FRAGMENTED SPACES OF BUILT, UNBUILT AND THE IN-BETWEEN ARE CONFIGURED TO CREATE NUMEROUS JOURNEYS WITHIN THE BUILDING. THE BUILDING ALLOWS THE USERS TO EXPERIENCE A NON-LINEAR, ALMOST ARBITRARY MOVEMENT THROUGHOUT THE DISCOVERY OF THE PREMISES ; MUCH LIKE HOW ONE TRAVERSES WITHIN THE OLD CITY OF JAIPUR.

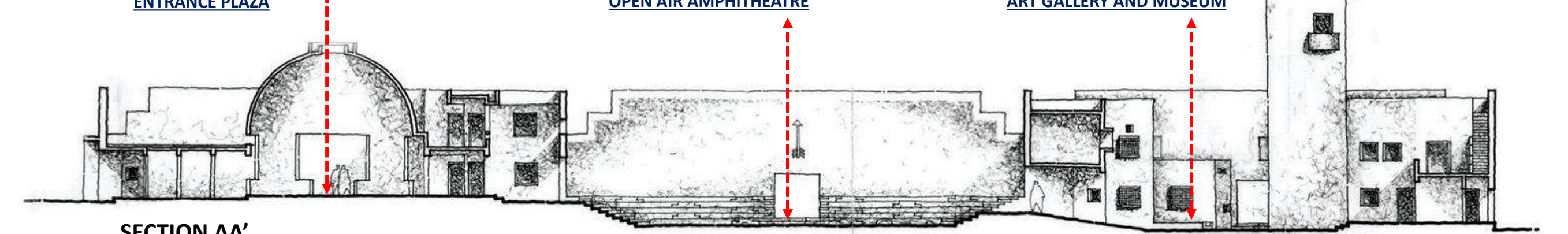
HERE, THE ARCHITECT ENSURES A SENSORIAL EXPERIENCE OF THE USER AS THE EYES MOVE ALONG SHARP LINES OF THE SHADOWS WHILE THE BUILT VOLUMES CONJURE UP THE SOUND, CREATING SOFT ECHOES THAT FADE THROUGH THE SPACES.

MADHYAVARTI OPEN AIR THEATRE

- IT IS PLANNED SUCH THAT THE REST OF THE 8 SQUARE WERE WELL CONNECTED TO THE CENTRAL OPEN THEATRE.
- STEPPED PLATFORM FOR SEATING PURPOSE
- THE SAME WAS SURROUNDED BY THE 8M HIGH WALLS AND THE DESIGN OF STEPS WAS INCORPORATED IN THE CORNER OF THE TWO WALLS AS THE TOP PERIPHERY OF THE WALL WAS LINED WITH MARBLE.
- MOTIFS OF EACH PLANET WAS INDICATED ON 3 RESPECTIVE WALLS.
- MOST OF THE OCCASIONS & FUNCTIONS (MUSIC & DANCE) ARE CONDUCTED IN THIS CENTRAL SPACE.

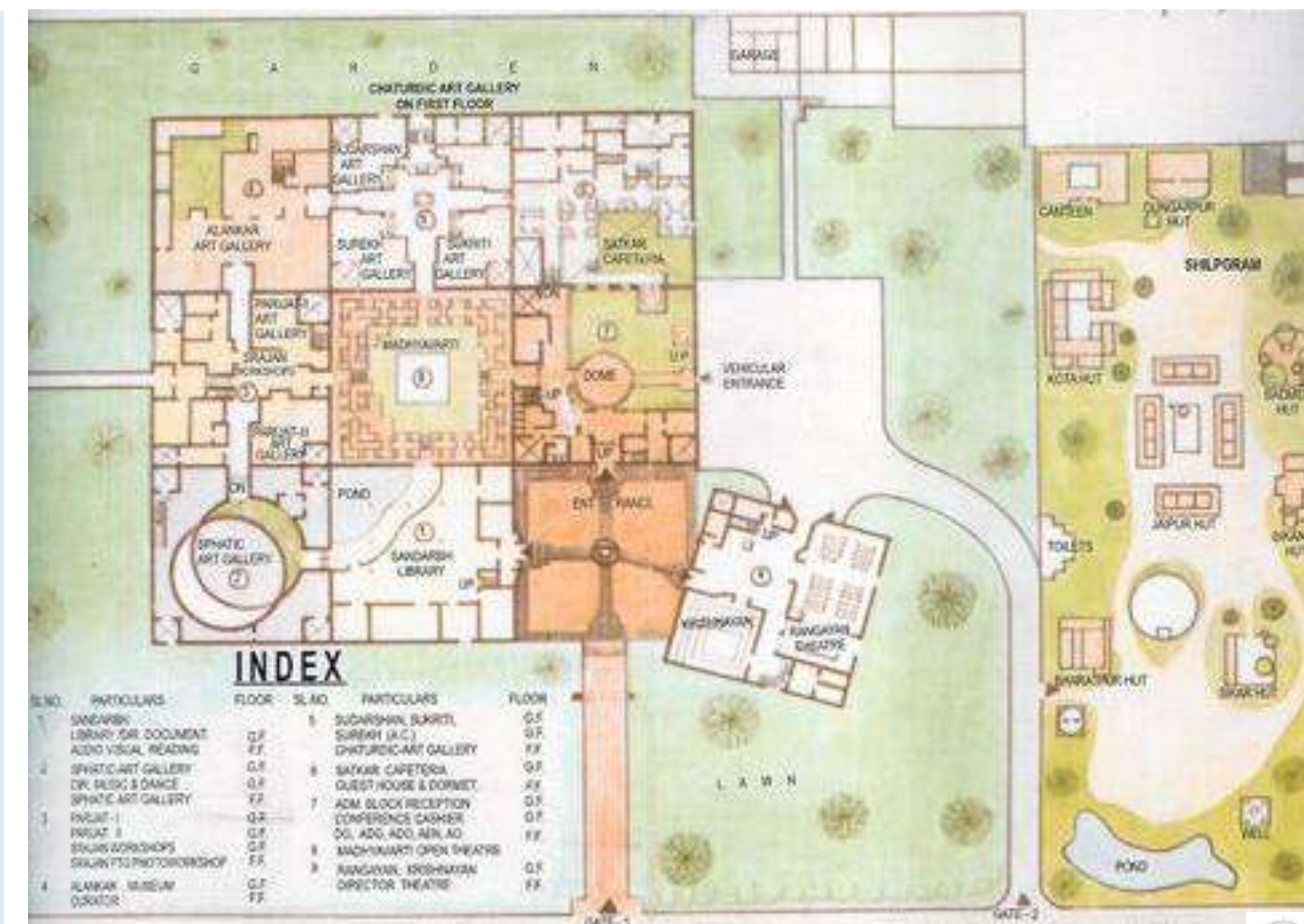


- THE EXTERNAL WALLS ARE CLAD WITH RED SANDSTONE TOPPED BY A COPING OF BEIGE DHOLPUR SANDSTONE.
- ON THESE SURFACES, THE PRESENCE OF EACH PLANET IS EXPRESSED BY ITS TRADITIONAL SYMBOL INLAID IN WHITE MARBLE WITH POLISH BLACK GRANITE AND MICA SLATE



- DIFFERENT PLINTH LEVELS ARE CAN ALSO BE NOTICED, MAJOR LEVEL CHANGE CAN BE SEEN IN THE OPEN THEATRE .
- DIFFERENT SIZES AND SHAPES OF COMPONENTS HAVE BEEN USED IN THE STRUCTURE MAKING IT MORE COMPLEX, ELEGANT AND AESTHETIC.
- DURING THE SUNRISE AND DAWN HOURS, HIGH RAISED WALLS PROVIDE SHADING TO THE OPEN THEATRE AND THE ADJACENT PATHWAYS.

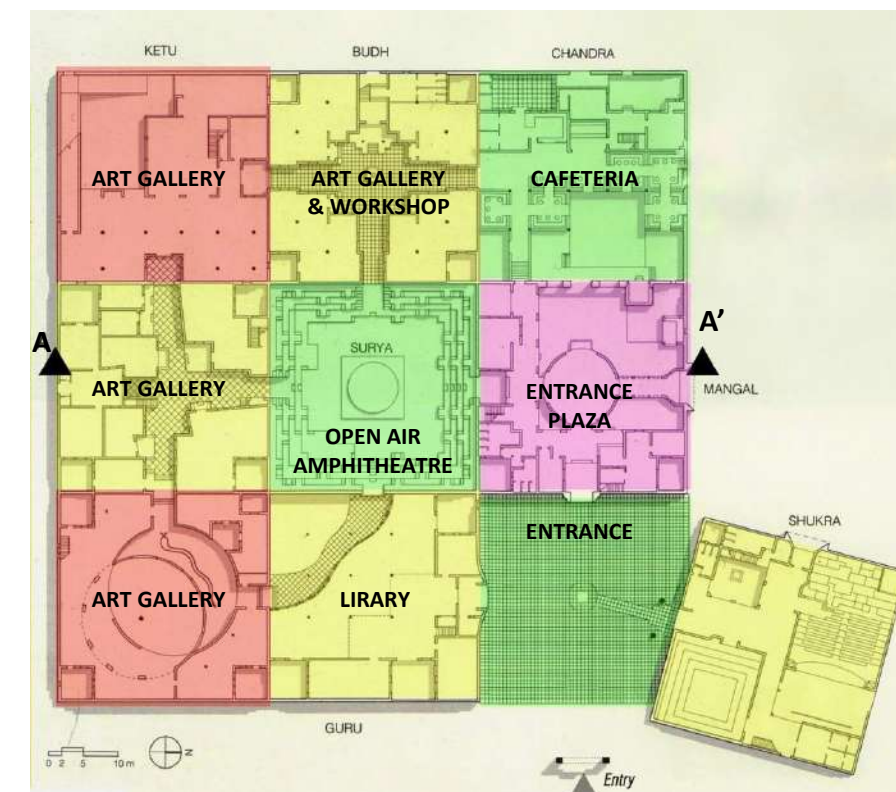
SITE LEVEL PLANNING



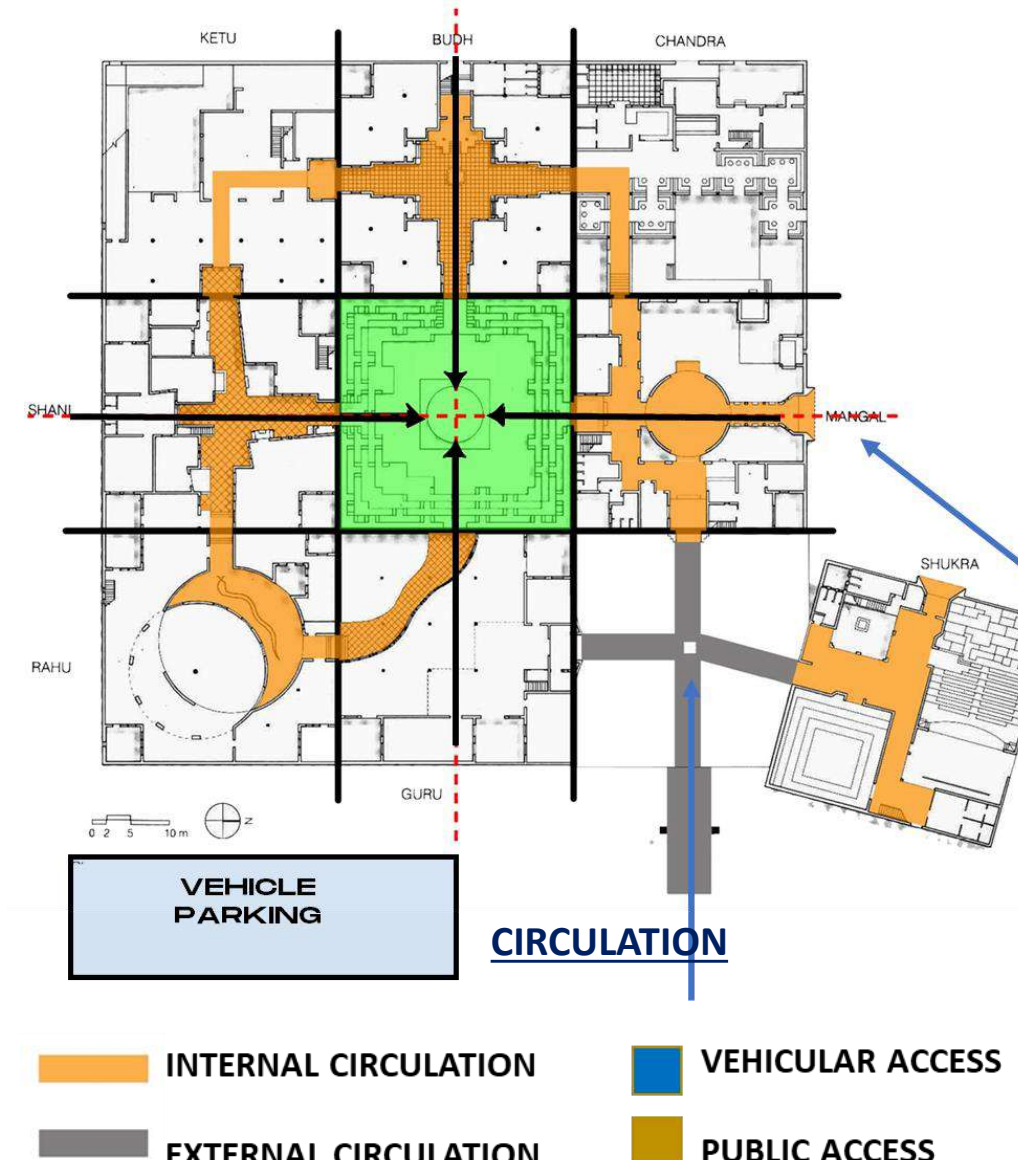
CONCEPT & PLANNING STRATEGY:

- THE ARCHITECTURAL PLAN OF THE CENTER IS AN INSPIRATION OF THE ORIGINAL CITY PLAN OF JAIPUR WHICH WAS CONCEIVED BY MAHARAJA JAI SINGH.
- THE CONCEPT OF NINE SQUARES OR THE 'NAVAGRAHA MANDALA' FORMS AS THE FUNDAMENTAL PRINCIPLE IN THE PLANNING AND ALLOCATION OF SPACES, FUNCTION, AND CHARACTER OF THE KALA KENDRA.

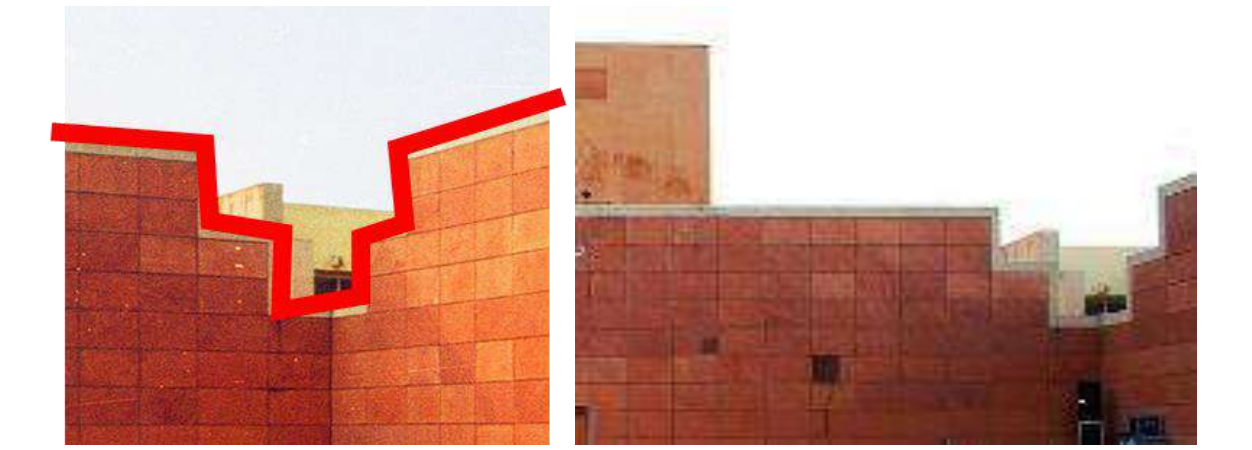
ZONING & CIRCULATION



- ZONING
- SPACES OF LEARNING
 - ADMINISTRATION
 - MUSEUM / GALLERY SPACES
 - RECREATIONAL SPACES



- THE SIGNIFICANT FEATURE WHICH HAS BEEN ADOPTED IN THIS - WAS THE SPECTACULAR PLAY WITH THE LIGHT AND THE SHADOW.



- LIGHT SHAFTS AT CORNER OF EACH UNIT IS PROVIDED
- LIGHT SHAFTS HAVE STEP PROFILES WITH MARBLE CAPPING
- SMALL PUNCTURES ON WALLS FOR VENTILATION (SMALLER OPENINGS)

INFERENCE

- THE CRITICAL SUSTAINABLE ASPECT OF TRADITIONAL ARCHITECTURE OF JAIPUR HAS BEEN TRACKED WELL, AS THE ARE OPEN SPACES IN THE CENTRAL PART OF THE BUILDING.
- PLAY OF LIGHT , SHADOW AND COLOR , EVOKE EMOTIONS IN THE USER MAKING HIM MOVE AROUND.
- THE PUNCTURES ON THE EXTERNAL FAÇADE PROVIDES GOOD VENTILATION KEEPING THE FACT IN MIND THAT, THERE ARE NO OPENINGS ON THE FAÇADE.
- CLIMATE RESPONSIVE ARCHITECTURE TO CREATE A COMFORTABLE INTERIOR WHILE REDUCING THE BUILDING'S RELIANCE ON ARTIFICIAL ENERGY.

SHIVSRUSHTI - HISTORICAL MUSEUM, PUNE - MAHARASHTRA

SUMMARY:



Indian Culture | Maratha History & Architecture | Heritage Theme Park

THE STORY OF SHIVSRUSHTI STARTED IN THE YEAR 1998 WITH AN ARTIST'S IMPRESSION CAPTURING THE ESSENCE OF THE MARATHA CONFEDERACY WHICH GRADUALLY DEVELOPED INTO AN EPIC HISTORICAL THEME PARK BASED ON EXTENSIVE RESEARCH AND DOCUMENTATION OF THE VARIOUS HISTORICAL SITES RELATED TO THE MARATHA HISTORY.

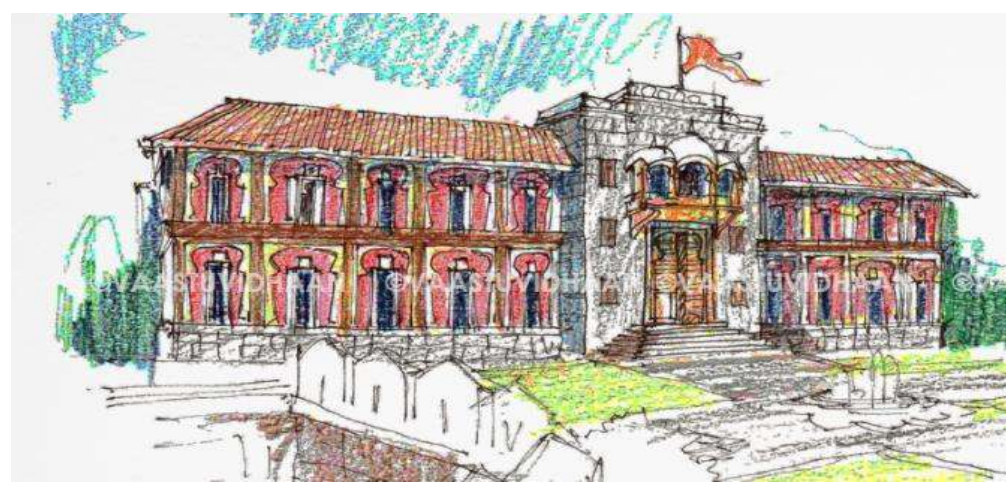
- ❖ OWNER : MAHARAJA SHIVCHATRAPATI PRATISHTHAN
- ❖ ARCHITECTURE FIRM : CRYSTAL ARCH
- ❖ PLOT AREA : 81200 SQM
- ❖ BUILT UP AREA : 40473.95 SQM
- ❖ NO. OF FLOORS : G + 2



DESIGN CONCPET & INSPIRATION :

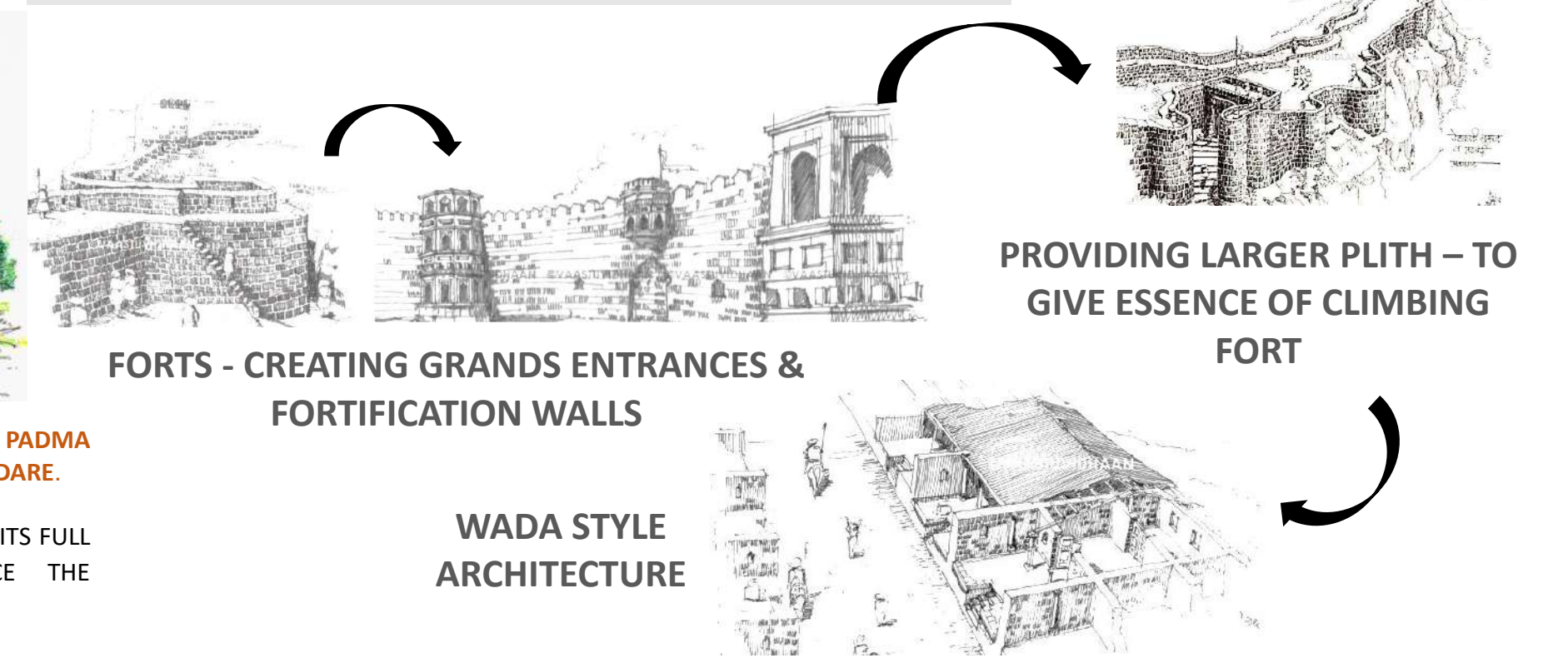
THE THEME PARK IS DESIGNED LIKE A COLLAGE OF THE 16TH AND 17TH CENTURY MARATHA CULTURE MAINLY REVOLVING AROUND THE LIFETIMES OF **CHHATRAPATI SHIVAJI MAHARAJ** AND THE CONCEPT OF **HINDAVI SWARAJYA**.

WHAT IS SHIVSRUDHTI ?



- ❖ SHIVSRUSHTI IS A DREAM THAT TOOK SHAPE UNDER AUSPICES OF **PADMA VIBHUSHAN MAHARASHTRA BHUSHAN SHIVSHAHIR BABASAHEB PURANDARE**.
- ❖ THE MAIN THEME OF THE PROJECT IS TO RECREATE THE BYGONE ERA IN ITS FULL GRANDEUR COMMONLY KNOWN AS THE **SHIV-KAAL**. HENCE THE NAME **SHIVSRUSHTI**.

CONCEPTUALIZING SHIVSRUSHTI :



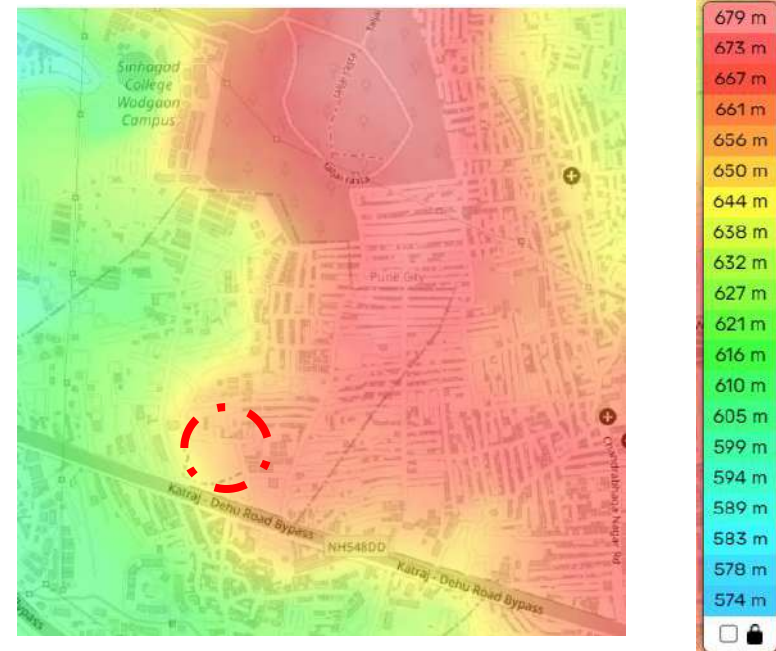
FORTS - CREATING GRANDS ENTRANCES & FORTIFICATION WALLS

WADA STYLE ARCHITECTURE

PROVIDING LARGER PLITH – TO GIVE ESSENCE OF CLIMBING FORT

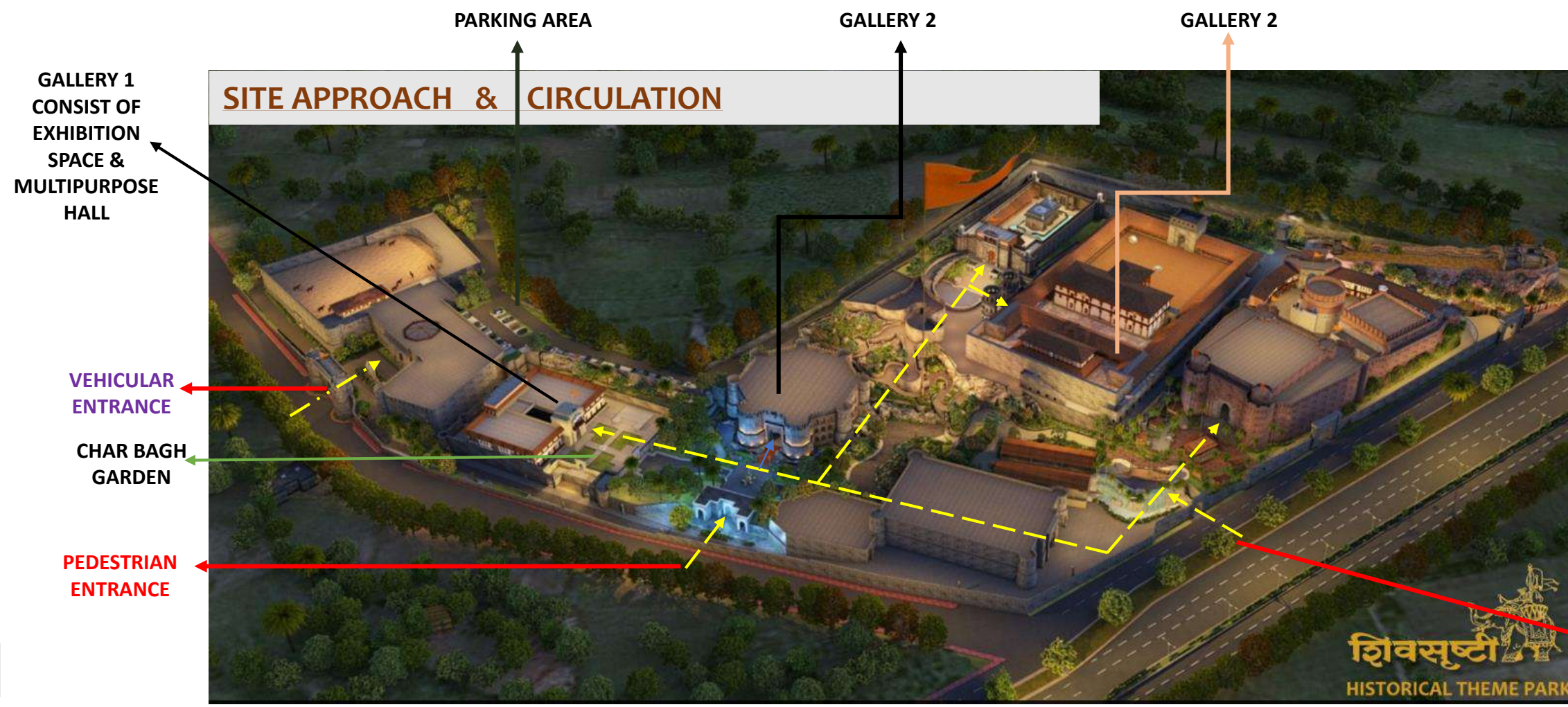
LOCATION : KATRAJ BYPASS ROAD, PUNE

TOPOGRAPHY



THE SITE IS HILLY TERRAIN WHICH IS SLOPING TOWARDS THE MAIN ROAD. THE PLANNING IS DONE KEEPING IN MIND THE PEDESTRIANS CIRCULATION AND SITE CONTOURS.

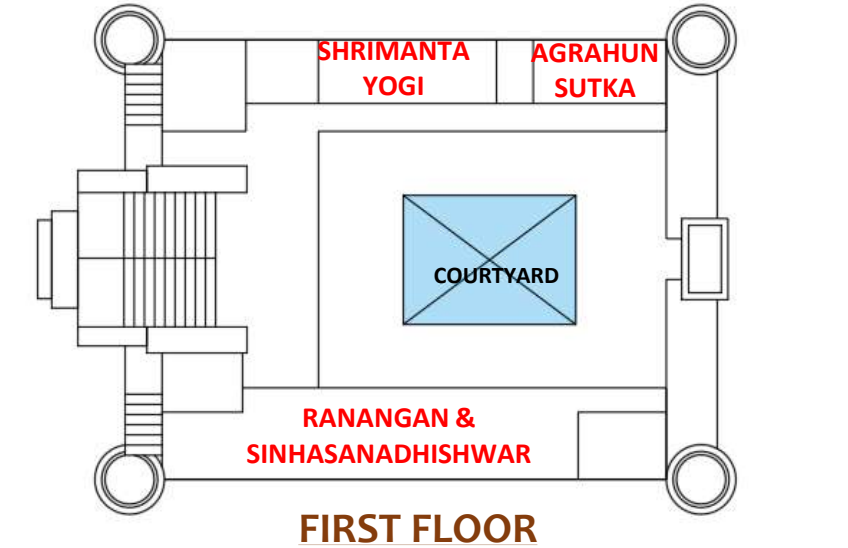
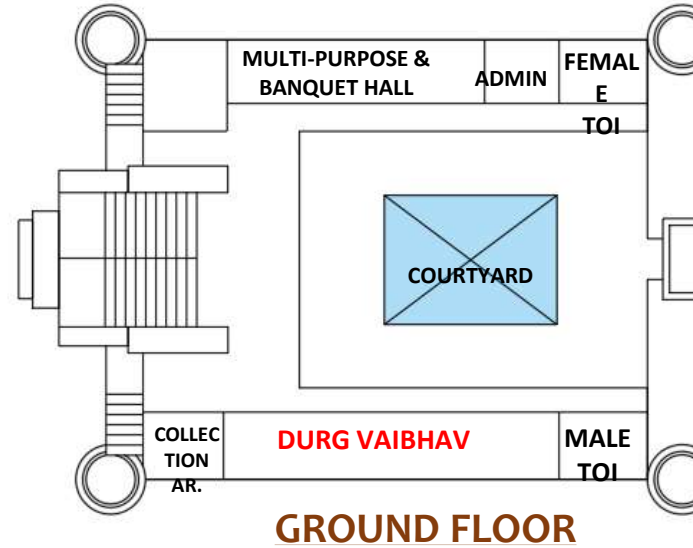
SITE APPROACH & CIRCULATION



GALLERY 1 CONSIST OF EXHIBITION SPACE & MULTIPURPOSE HALL

VEHICULAR ENTRANCE
CHAR BAGH GARDEN
PEDESTRIAN ENTRANCE

PEDESTRIAN ENTRANCE
VEHICULAR ENTRANCE
PEDESTRIAN ENTRANCE



GROUND FLOOR
FIRST FLOOR

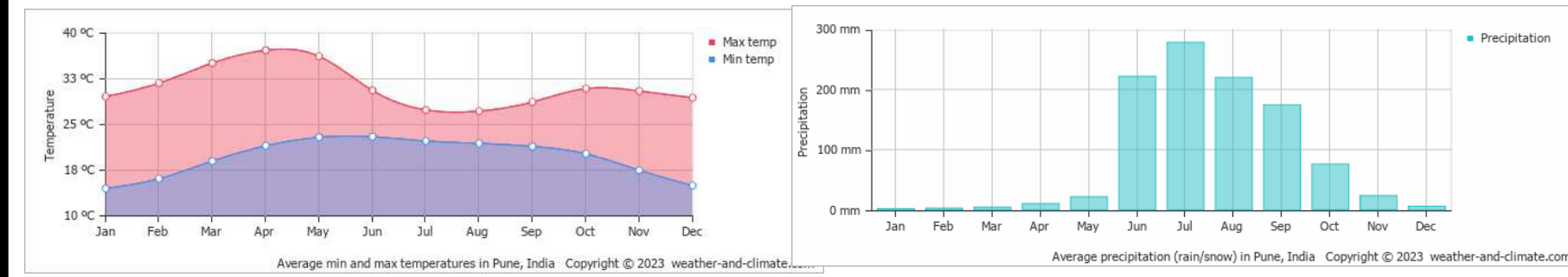


ACCESSIBILITY



CLIMATE

PUNE HAS A HOT SEMI-ARID CLIMATE BORDERING WITH TROPICAL WET AND DRY WITH AVERAGE TEMPERATURES RANGING BETWEEN 19 TO 33 °C. PUNE EXPERIENCES THREE SEASONS: SUMMER, MONSOON, AND WINTER.



AVERAGE HIGH & LOW TEMPERATURE
HIGH TEMPERATURE – 37°C
LOW TEMPERATURE – 27°C

AVERAGE MONTHLY RAINFALL – JUNE TO OCTOBER
MOST RAINFALL – JULY
AVG RAINFALL – 13.3 INCHES

THIS THEME IS SHOWCASED THROUGH THE HISTORICAL LANDSCAPE DEPICTING THAT ERA AND BUILT FORMS SUCH AS FORTS, SHRINES, BAZARPETH, VILLAGE SCENES, AND STREET FURNITURE ELEMENTS LIKE DEEPMAL, STEP WELLS, CHAVDIS, ETC.



PICTURE FROM OUTSIDE
MARATHA STYLE ARCHITECTURE - HIGH PLITH LEVEL & FORTIFICATION WALLS – TO CREATE WELCOMING ENVIRONMENT
COURTYARD

SECTIONAL ELEVATION

AIM :

- OLD BUILDING ELEMENTS AND FEATURES WERE USED TO PRESERVE CULTURAL HERITAGE OF THE CITY
- LINEAR CIRCULATION IS MAKING THE PLACE MORE USER FRIENDLY.
- MINIMUM COLORS HAS BEEN USED INTERNALLY TO HIGHLIGHT ART-WORKS.
- NO PARKING HAS BEEN PROVIDED.

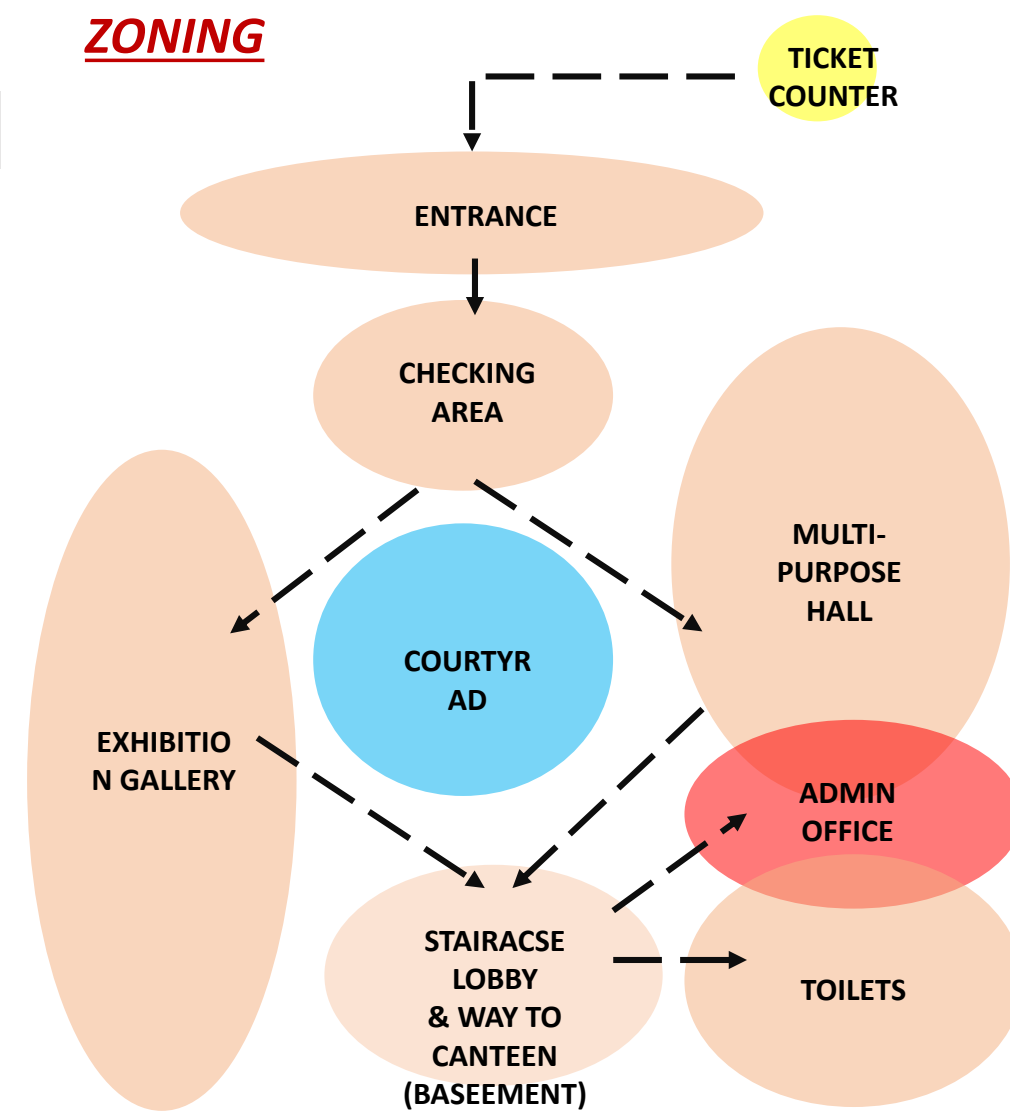
VISION :

TRANSCENDS BEYOND THE MATERIALISM OF AN ARCHITECTURAL HERITAGE PROJECT

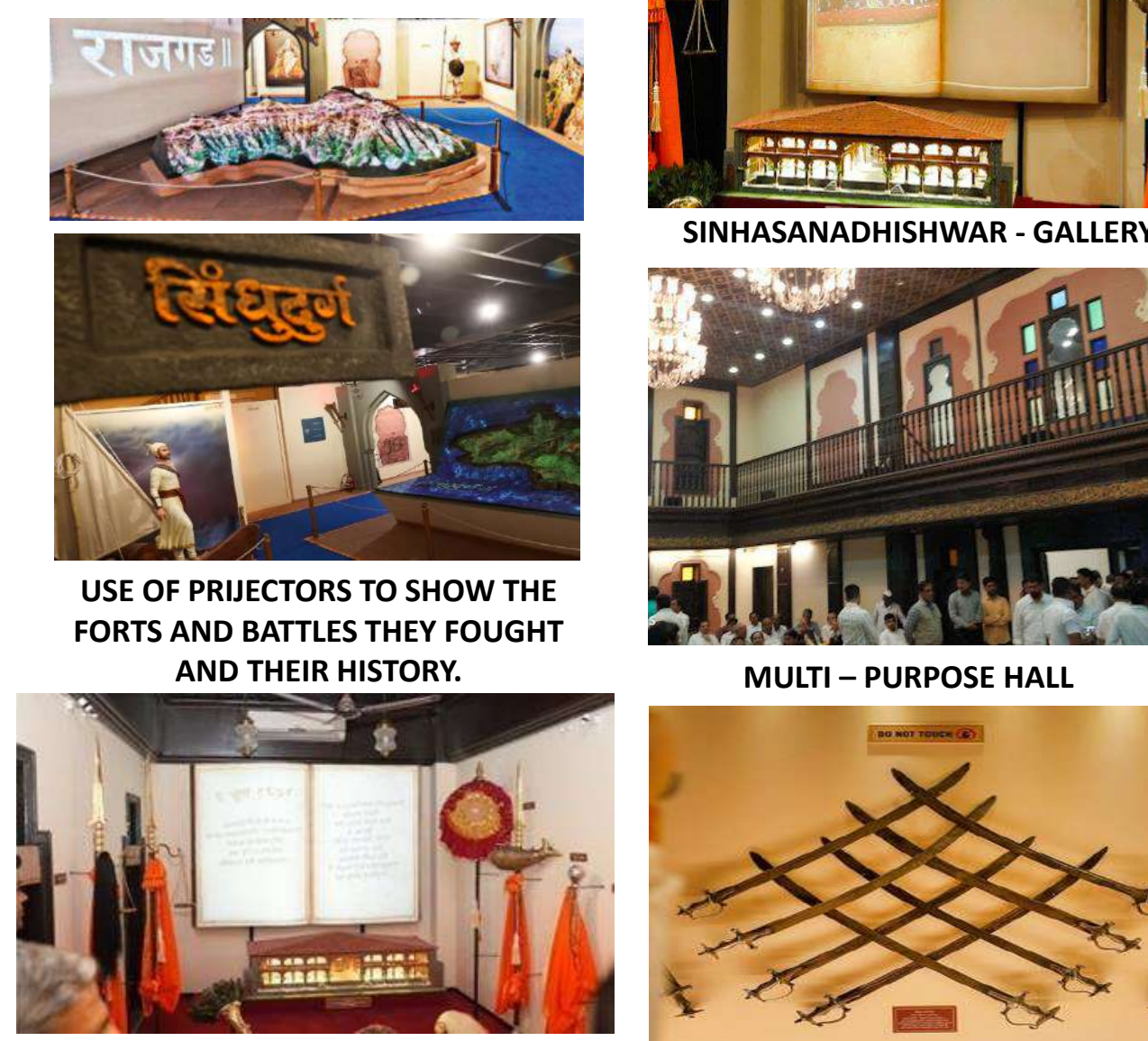
PROPAGATED THROUGH VARIOUS CULTURAL ACTIVITIES NAMELY WORKSHOPS AND HERITAGE WALKS TO IMBIBE THE HISTORICAL LEGACY OF THE LAND

TO EXPLORE CREATIVITY & HISTORY TO CONNECT SPECTATORS TO THEIR CULTURAL ROOTS .

SITE AND SURROUNDINGS



EXHIBITION GALLERY



USE OF PRIJECTORS TO SHOW THE FORTS AND BATTLES THEY FOUGHT AND THEIR HISTORY.

PRESERVE OUR RELIGIOUS, CULTURAL AND HISTORICAL VALUE.

THEY ARE A GOOD SOURCE OF KNOWLEDGE & ENTERTAINMENT AS WELL.

THIS PLACE IS POSITIONED AS CREATIVITY & AMENITY CENTRE - MUSEUM WITH OTHER FACILITIES FOR DISCOVERY, LERANING, RECREATIONAL & CELEBRATION SPACE.

NEED :

EXHIBITION GALLERIES : VASTU SANGRAHALAYA :- NAMED AS – SHRIMANTA YOGI, AGRAHUN SUTKA, SINHASANADHISHWAR, RANANGAN, DURGAVAIBHAV

MULTI-PURPOSE HALL – DURBAR HALL

LIBRARY - VACHANALAYA

CANTEEN – UPHAAR GRIHA

ADMIN OFFICE – DAFTAR / KACHERI

CONFERENCE ROOM - KHALABAT KHANA

SPACES :

7.
LIVE CASE
STUDY

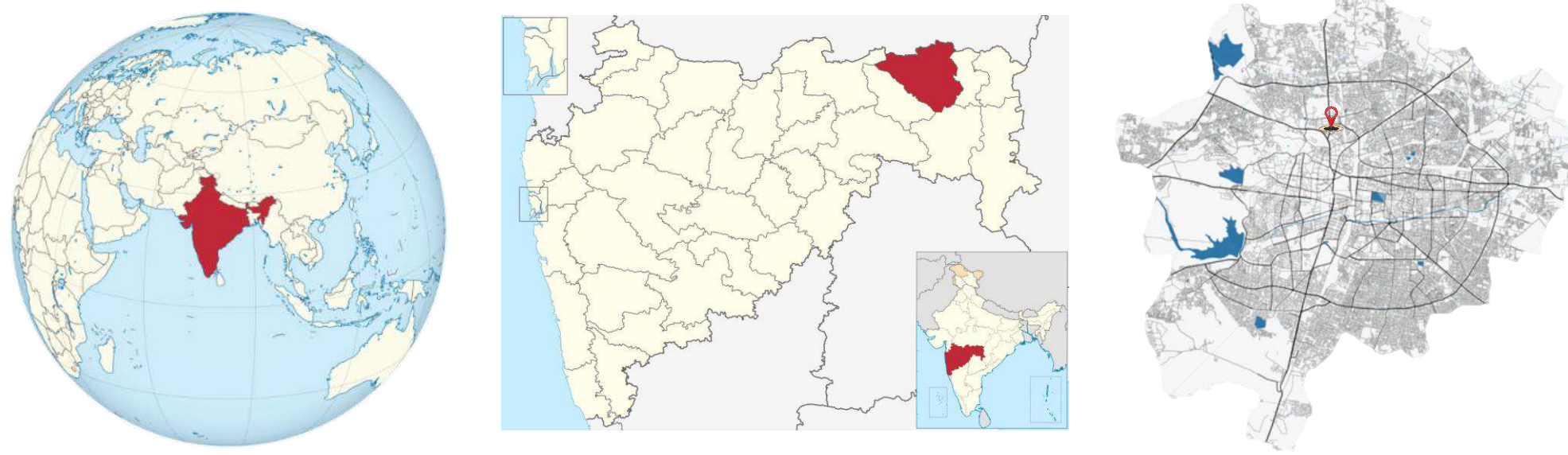
JANAKALYAN – REVITALISATION ON THE BANKS OF NAG RIVER, NAGPUR - BRIDGING THE GAP WITH NATURE

SACHEE ART GALLERY, NAGPUR - MAHARASHTRA

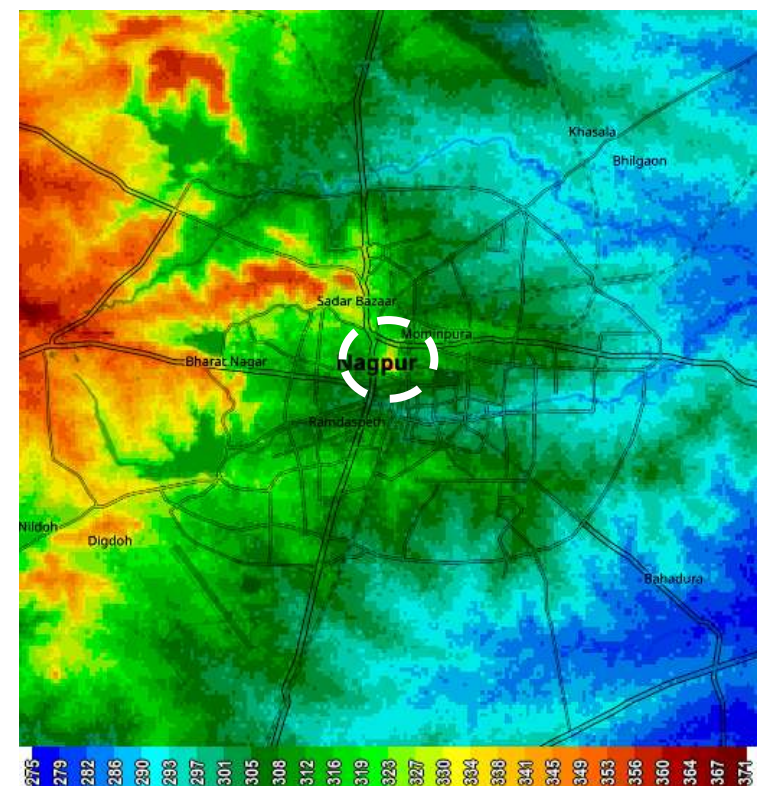


- ❖ OWNER : PARMESH PANDHI
- ❖ BUILT UP AREA : 200 SQM
- ❖ TYPE : EXHIBITION BUILDING (ADAPTIVE REUSE)
- ❖ THE TWO FLOORED HERITAGE BUILDING HOUSES ARTWORKS OF VARIOUS RENOWNED ARTISTS.

LOCATION & TOPOGRAPHY



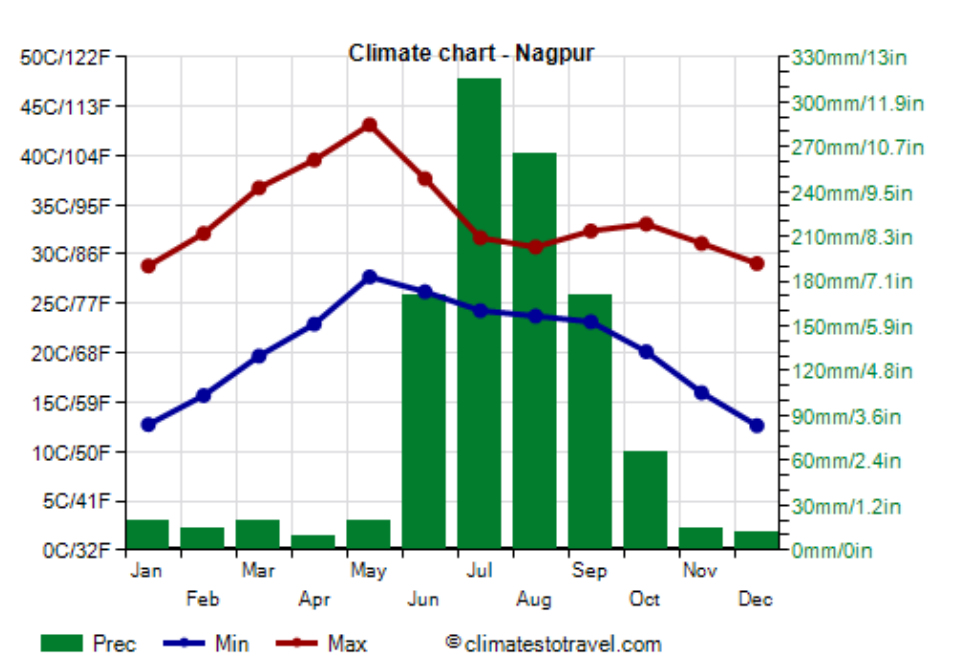
MAHDI BAGH,, RESIDENCY RD, SADAR, NAGPUR, MAHARASHTRA 440001, INDIA.



THE CITY LIES ON THE DECCAN PLATEAU OF THE INDIAN SUBCONTINENT
 AVERAGE ELEVATION: 307 M
 MINIMUM ELEVATION: 273 M
 MAXIMUM ELEVATION: 369 M
 THE SITE'S TOPOGRAPHY IS CHARACTERIZED BY RELATIVELY FLAT TERRAIN.

CLIMATE - COMPOSITE CLIMATE

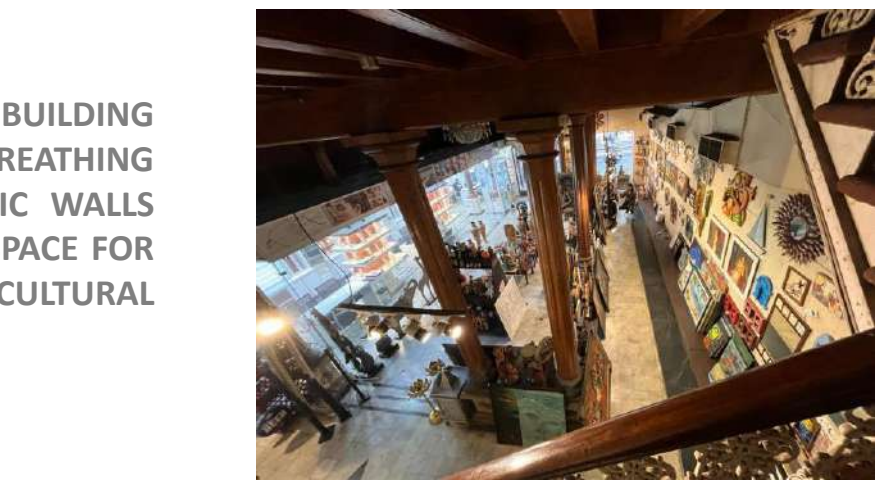
	January	February	March	April	May	June	July	August	September	October	November	December
Avg. Temperature °C (°F)	21.1 °C (69.9) °F	24.3 °C (75.8) °F	28.5 °C (83.3) °F	33.1 °C (91.6) °F	35.6 °C (96.1) °F	31.3 °C (88.3) °F	26.7 °C (80.1) °F	26.1 °C (78.9) °F	26.7 °C (80) °F	26.1 °C (78.9) °F	23.7 °C (74.7) °F	21.2 °C (70.1) °F
Min. Temperature °C (°F)	14.5 °C (58.1) °F	17.5 °C (63.5) °F	21.2 °C (70.2) °F	25.7 °C (78.2) °F	29.5 °C (85) °F	27.3 °C (81.2) °F	24.5 °C (76) °F	23.9 °C (75) °F	23.6 °C (74.5) °F	21 °C (69.8) °F	17.5 °C (63.6) °F	14.7 °C (58.4) °F
Max. Temperature °C (°F)	27.7 °C (81.9) °F	31.1 °C (88) °F	35.5 °C (95.8) °F	40 °C (103.9) °F	41.7 °C (107) °F	35.8 °C (96.4) °F	29.6 °C (85.4) °F	29 °C (84.1) °F	30.4 °C (86.7) °F	31.3 °C (88.3) °F	29.7 °C (85.5) °F	27.7 °C (81.9) °F
Precipitation / Rainfall mm (in)	14 (0)	12 (0)	17 (0)	8 (0)	13 (0)	169 (6)	355 (13)	309 (12)	168 (6)	46 (1)	11 (0)	6 (0)
Humidity(%)	47%	41%	31%	24%	25%	52%	79%	83%	78%	62%	53%	49%
Rainy days (d)	1	2	2	2	2	10	17	17	12	4	2	1
avg Sun hours (hours)	9.5	10.1	10.7	11.3	11.8	10.7	8.2	7.6	8.7	9.7	9.6	9.5



- ### WEATHER AVERAGES NAGPUR
- THE CITY HAS DRY WEATHER FOR MOST OF THE YEAR.
 - DURING THE MONSOON OF JUNE TO SEPTEMBER, NAGPUR HAS 1205 MM OF RAIN. ON JULY 14, 1994, THE CITY HAD RECORDED A RECORD RAINFALL OF 304 MM ON THE SAME DAY.
 - THEY ARE EQUALLY WARM DURING THE SUMMER OF MARCH TO JUNE. MAY IS THE HIGHEST TEMPERATURE IN MAY.
 - NOVEMBER TO JANUARY IS THE PERIOD OF WINTER IN WINTER THE TEMPERATURES BELOW 10 DEGREES.
 - ON MAY 29, 2012, THE CITY RECORDED 48.6 DEGREES CELSIUS AND THE LOWEST TEMPERATURE WAS 3.9 DEGREE CELSIUS IN 1937.

CONCEPT

TO TRANSFORM THE OLD BUILDING INTO AN ART GALLERY, BREATHING NEW LIFE INTO ITS HISTORIC WALLS AND CREATING A DYNAMIC SPACE FOR CREATIVITY AND CULTURAL EXPRESSION.



VIEW FROM STAIRCASE

ACCESSIBILITY

NAGPUR JUNCTION RAILWAY STATION - 1.23 KM AWAY

DR. B.R. AMBEDKAR INTERNATIONAL AIRPORT- 10.2 KM AWAY

ANJUMAN SCHOOL BUS STOP - 0.2 KM AWAY

PERSONAL VEHICLE / CABS

NEAREST METRO STATION : KASTURCHAND PARK - 0.51KM AWAY

SITE & SURROUNDINGS

SADAR JAMA MASJID

PWD OFFICE

JEEVANODAY SPECIAL SCHOOL

ST. FRANCIS SCHOOL

NEARBY PRECINT AREA

THIS ART GALLERY IS SITUATED IN THE MARKET, POSH BUSINESS AND COMMERCIAL LOCALITY.

IT IS A PRIME LOCATION AND HAS TREMENDOUS BUSINESS, WHICH INCLUDES STARRED HOTELS, RESTAURANTS AND SHOPPING ARCADES.

MOST OF THE PRECINCT AREA IS CHARACTERIZED BY A HIGH DEGREE OF CONGESTION AND NARROW ROADS, POSING SIGNIFICANT CHALLENGES FOR BOTH PEDESTRIANS AND VEHICULAR TRAFFIC.

SPECTACLE SHOP

- THE SACHEE ART GALLERY IS HOUSED IN A SPACIOUS, ELEGANT AND HERITAGE BUILDING THAT PROVIDES A PERFECT SETTING FOR SHOWCASING CONTEMPORARY ART, ALSO PRESERVING CITY'S CULTURAL HERITAGE.
- THE GALLERY HAS 2 EXHIBITION HALLS, EACH WITH ITS UNIQUE THEME AND STYLE, SHOWCASING THE WORKS OF ESTABLISHED AND EMERGING ARTISTS.

SECTIONS AA

- THE GALLERY HAS 2 EXHIBITION HALLS, EACH WITH ITS UNIQUE THEME AND STYLE, SHOWCASING THE WORKS OF ESTABLISHED AND EMERGING ARTISTS.
- THE GALLERY'S COLLECTION INCLUDES VARIOUS ART FORMS, INCLUDING PAINTINGS, SCULPTURES, INSTALLATIONS, AND PHOTOGRAPHS.

PROMOTES COMMUNITY ENGAGEMENT

- ONE OF THE MAIN FEATURES OF THE SACHEE ART GALLERY IS ITS COMMITMENT TO PROMOTING YOUNG AND EMERGING ARTISTS.
- THE GALLERY ORGANIZES SEVERAL ART EXHIBITIONS THROUGHOUT THE YEAR, PROVIDING A PLATFORM FOR THESE ARTISTS TO SHOWCASE THEIR WORK AND GAIN EXPOSURE TO A WIDER AUDIENCE.
- THE GALLERY'S EVENTS PROVIDE ART ENTHUSIASTS AND COLLECTORS A PLATFORM TO INTERACT WITH ARTISTS AND LEARN MORE ABOUT THEIR WORKS.

INFERENCE

- OLD BUILDING ELEMENTS AND FEATURES WERE USED TO PRESERVE CULTURAL HERITAGE OF THE CITY
- LINEAR CIRCULATION IS MAKING THE PLACE MORE USER FRIENDLY.
- MINIMUM COLORS HAS BEEN USED INTERNALLY TO HIGHLIGHT ART-WORKS.
- NO PARKING HAS BEEN PROVIDED.

8. LIVE CASE STUDY JANAKALYAN - REVITALISATION ON THE BANKS OF NAG RIVER, NAGPUR - BRIDGING THE GAP WITH NATURE

BHARATI VIDYAPEETH COLLEGE OF ARCHITECTURE, PUNE JANHAVI NIMJE F.I.Y.ARCH | SEM - X ARCHITECTURAL DESIGN PROJECT SHEET NO. 8 DATE - 25.01.24

COMPARITIVE ANALYSIS

CASE STUDIES -	WATERFRONT DEVELOPMENT			EXHIBITION SPACES		
	SABARAMATI RIVERFRONT DEVELOPMENT	PATNA RIVERFRONT REVITALISATION	WATERFRONT DEVELOPMENT AT FUTALA	JAWAHAR KALA KENDRA	SHIV-SRUSHTI HISTORICAL MUSEUM	SACHEE ART GALLERY
ARCHITECT	DR. BIMAL PATEL	NISHNAT LAL	DEEPROOTS DESIGN	CHARLES CORREA	CRYSTAL ARCH	PARMESH PANDHI
LOCATION	AHMEDABAD, GUJARAT	PATNA, BIHAR	NAGPUR, MAHARASHTRA	JAIPUR, RAJASTHAN	PUNE, MAHARASHTRA	NAGPUR, MAHARASHTRA
SITE AREA	SITE AREA = 506 ACRES	SITE AREA = 7 KMS	SITE AREA = 4 ACRES	SITE AREA = 9.5 ACRES	SITE AREA = 81200 SQM	SITE AREA = 200 SQM
CLIMATE	TEMPERATE	TEMPERATE	COMPOSITE	HOT & HUMID	WARM & HUMID	COMPOSITE
ORIENTATION AXIS	NORTH – SOUTH	EAST – WEST	NORTH – SOUTH	NORTH – EAST	EAST – WEST	EAST – WEST
BUILDING ENTRANCE	EAST & WEST	SOUTH OF THE GHAT	EAST	EAST	SOUTH-WEST & WEST	EAST
PLANNING	The Sabarmati Riverfront's planning drew inspiration from global riverfront developments, aiming to transform the riverbanks into vibrant public spaces.	To create a permanent edge, Promenade connecting various isolated Ghats and to provide variety of access to the river	The planning inspiration for Futala Waterfront in Nagpur drew from modern urban design principles, aiming for sustainable development and community engagement.	Planning inspiration is taken from the city plan and developed with the help of 9 planets.	The theme park is designed like a collage of the 16th and 17th century Maratha culture mainly revolving around the lifetimes of Chhatrapati Shivaji Maharaj and the concept of Hindavi Swarajya.	The planning inspiration is taken from re-adaptive use of building in a creative way.
CONCEPT	The concept is to reconnect the city with the river with the help of Environmental Improvement, Social Up-liftment & Sustainable Development	The concept is to rejuvenate Ghats along the river and to integrate flood mitigation, urban revitalization, public spaces, and cultural heritage preservation along the riverbanks.	Conserving the old heritage structures like water supply system, the retaining wall & reconstructing.	The concept of nine squares or the 'Navagraha Mandala' forms as the fundamental principle in the planning and allocation of spaces, function, and character of the Kala Kendra.	The main theme of the project is to recreate the bygone era in its full grandeur commonly known as the Shiv-Kaal. Hence the name Shivrushthi.	To transform the old building into an art gallery, breathing new life into its historic walls and creating a dynamic space for creativity and cultural expression.
CLIMATE COMPATIBILITY / SUSTAINABILITY	Sabarmati Riverfront incorporates green spaces, water bodies, and shade structures to mitigate urban heat island effect, enhance biodiversity, and promote passive cooling strategies.	Patna Riverfront utilize green infrastructure, water management systems, and vegetation to mitigate flooding, improve air quality, and enhance urban resilience.	Futala Waterfront in Nagpur integrate sustainable landscaping, storm water management, and shade provision to mitigate heat, enhance biodiversity, and promote public comfort.	The heat and harshness of the climate are not felt due to the 8m high compound wall and courtyards.	Shivrushthi Museum incorporates passive design like courtyards, evaporative cooling, and indigenous landscaping to minimize environmental impact, conserve resources, and enhance visitor comfort.	The building feature thick walls, courtyards for ventilation, and sloping roofs to provide thermal comfort, natural cooling, and protection from harsh climates.
LIGHTING & VENTILATION	The street lights used are solar lights.	The street lights used are solar lights.	The street lights used are solar lights.	Artificial lights such as spotlights, track lighting, and ambient lighting, used strategically to accentuate specific objects, highlight textures, and create focal points within gallery spaces. Also light and ventilation through light shafts and small openings.	Artificial lights such as spotlights, track lighting, and ambient lighting, used strategically to accentuate specific objects, highlight textures, and create focal points within gallery spaces. Mechanical ventilation	Artificial lights such as spotlights, track lighting, and ambient lighting, used strategically to accentuate specific objects, highlight textures, and create focal points within gallery spaces. Mechanical ventilation
LIFT	-	-	-	NO	NO	NO
RAMP	YES	YES	YES	NO	NO	NO
COURTYARD	-	-	-	YES	YES	YES
STRUCTURAL SYSTEM	The stepped ghats are provided with the alternate areas of landscape and vegetated buffers to mitigate flood. The lower promenade is to serve pedestrian activities and to provide access to water, the upper level promenade host the variety of public features at city level.	The promenade has been designed to retrofit the existing boundary conditions with Ghats and creating sloped landscape as vegetated buffer to mitigate flood.	Lake walls are conserved using same construction technique with which it is built before. The design is achieved by using locally available materials such as Basalt Stone, Granite Paver Block. Storm water drainage is taken care by introducing weepholes at regular intervals.	The spanning between the beams was designed so that the local materials like Wooden Bamboo Sticks could be used to complete the Entrance Space Frame.	The structural system of the building reflects the traditional building techniques, cultural values, and environmental considerations of the region in which it is built. The walls are constructed of stone.	The walls were constructed of stone (load-bearing walls). The planning based on a Square Grid Pattern with wooden slab and wooden structural members like wooden columns to support the structure.
STAKEHOLDERS	<ul style="list-style-type: none"> Government of Gujarat Local administration Businessman Visitors & tourists Local Community Funding agencies and Donors Academic and Educational Institutions 	<ul style="list-style-type: none"> Government of Bihar Local administration Businessman Visitors & tourists Local Community Funding agencies and Donors Academic and Educational Institutions 	<ul style="list-style-type: none"> Government of Maharashtra Local administration Businessman Visitors & tourists Local Community Funding agencies and Donors Academic and Educational Institutions 	<ul style="list-style-type: none"> Government of Rajasthan Department of Art and Culture, Government of Rajasthan Artists and Cultural Practitioners Jawahar Kala Kendra Management Committee Local administration Local Community Funding agencies and Donors Academic and Educational Institutions 	<ul style="list-style-type: none"> Government of Maharashtra Department of Art and Culture, Government of Maharashtra Artists and Cultural Practitioners Shivrushthi Management Committee Local administration Visitors & tourists Local Community Funding agencies and Donors Academic and Educational Institutions 	<ul style="list-style-type: none"> Department of Art and Culture, Government of Maharashtra Artists and Cultural Practitioners Sachee Art Gallery Management Committee Visitors & tourists Local Community Funding agencies and Donors Academic and Educational Institutions
INFERENCE VIEWS AND OBSERVATION AS CRITIC	<p>Public edge : the riverfront project creates a public edge along the river on the eastern and western banks.</p> <p>Improved access : to better access the riverfront and facilities built along streets to welcome the public and visitor also the new streets are designed with wide footpaths and designated cycle tracks to improve and encourage pedestrian access to the river.</p> <p>Social up-liftment : many new parks, gardens and sports facilities are being built on the reclaimed land to enhance livability in the area that they are located in and strengthen the city's green network.</p> <p>Self financing : he project aims to be self-financing – to achieve its goals without relying on any funding from the government.</p> <p>Amenity sections : continuous promenade at water edge, Ghats punctuate lower level promenades at planned interval to provide access to the water, boating station at lower level ensures water recreation.</p> <p>More part of the riverfront contributes to built spaces when compared to unbuilt and green open spaces contributing in environmental degradation.</p>	<p>Integrate green infrastructure, such as wetlands, parks, and greenways, to promote biodiversity and mitigate flood risks.</p> <p>Foster a mix of residential, commercial, cultural, and recreational activities along the riverfront to create a dynamic and inclusive urban environment.</p> <p>Preserve and celebrate the historical heritage of the riverfront through adaptive reuse of heritage buildings, public art installations, and interpretive signage.</p> <p>Activate the riverfront with a diverse mix of amenities such as promenades, waterfront cafes, markets, performance spaces, and recreational facilities promotes community engagement.</p>	<p>The lake's design takes advantage of its natural surroundings, providing a serene and picturesque setting for visitors.</p> <p>The lake is designed with a central island garden, fountains, and promenades along the shoreline. The design elements blend in seamlessly with the natural landscape, offering a harmonious blend of architecture and nature.</p> <p>Promotes community engagement through recreational facilities: the design includes facilities for boating, paddle boating, and other water-based activities, as well as leisure areas for picnics and relaxation.</p> <p>Environmental sustainability: the design inference of Futala lake also includes elements of environmental sustainability, such as water conservation measures, eco-friendly landscaping practices, and efforts to preserve the natural ecosystem of the area.</p>	<p>The critical sustainable aspect of traditional architecture of Jaipur has been tracked well, as the are open spaces in the central part of the building.</p> <p>Play of light , shadow and color , evoke emotions in the user making him move around.</p> <p>The punctures on the external façade provides good ventilation keeping the fact in mind that, there are no openings on the façade.</p> <p>Climate responsive architecture to create a comfortable interior while reducing the building's reliance on artificial energy.</p>	<p>Transcends beyond the materialism of an architectural heritage project</p> <p>Propagated through various cultural activities namely workshops and heritage walks to imbibe the historical legacy of the land</p> <p>Explore creativity & history to connect spectators to their cultural roots .</p> <p>This place id positioned as creativity & amenity center - museum with other facilities for discovery, learning, recreational & celebration space.</p>	<p>Old building elements and features were used to preserve cultural heritage of the city</p> <p>Linear circulation is making the place more user friendly.</p> <p>Minimum colors has been used internally to highlight art-works.</p> <p>No parking has been provided.</p>

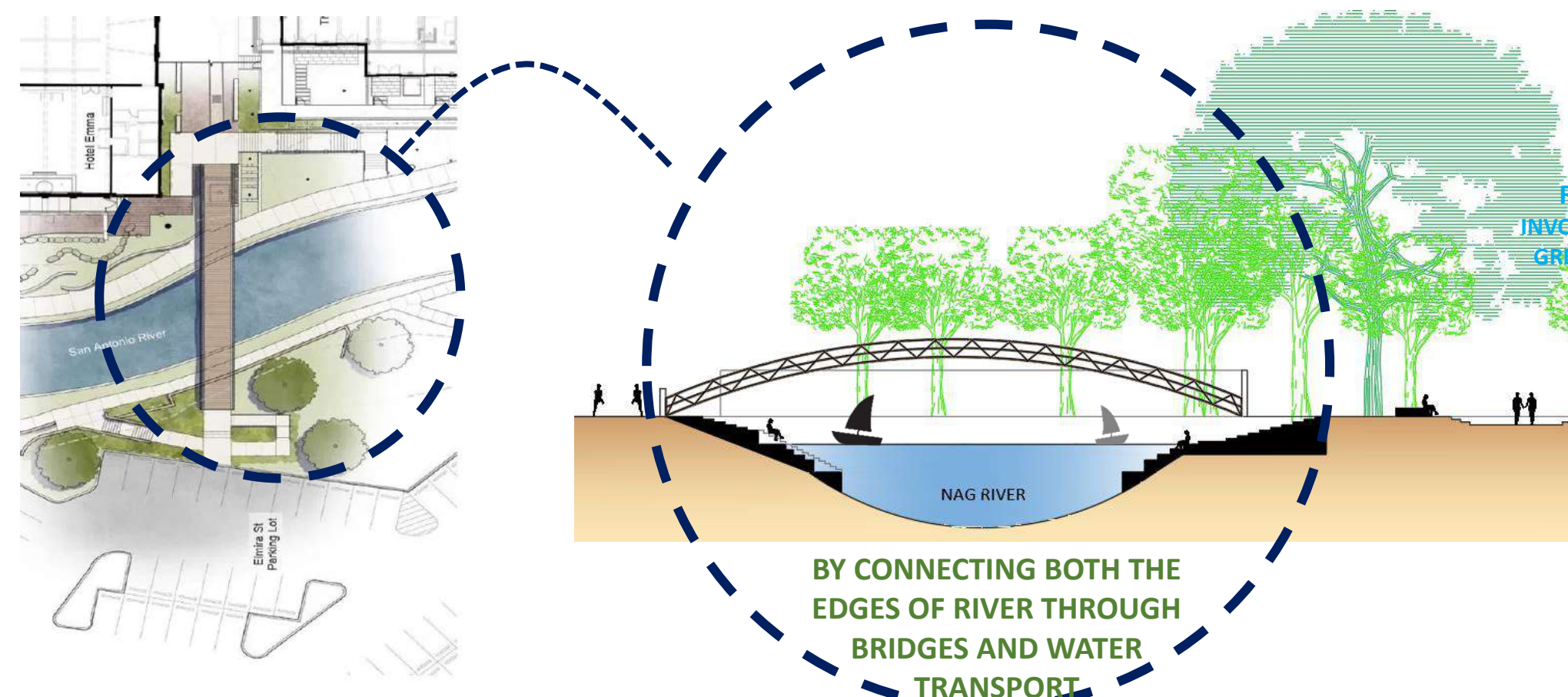
9. JANAKALYAN – REVITALISATION ON THE BANKS OF NAG RIVER, NAGPUR - BRIDGING THE GAP WITH NATURE

DESIGN CONCEPT, GOALS, STRATEGIES, APPROACH, PRINCIPLES & DISASTER PREPAREDNESS

DESIGN CONCEPT:

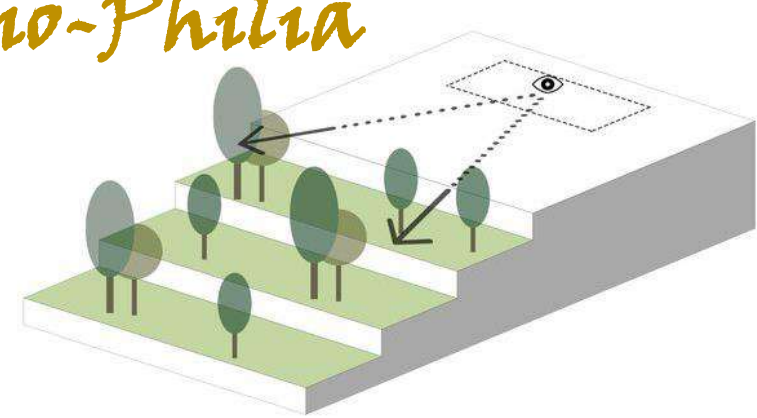
Natural Harmony

AIMING TO BLEND THE NATURAL BEAUTY OF THE RIVER ECOSYSTEM WITH HUMAN-MADE AMENITIES, PROMOTING ECOLOGICAL BALANCE, RECREATION, AND COMMUNITY ENGAGEMENT.

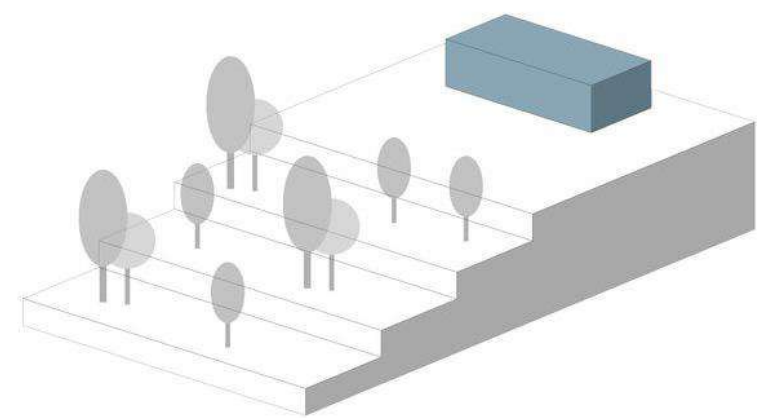


BY CONNECTING BOTH THE EDGES OF RIVER THROUGH BRIDGES AND WATER TRANSPORT.

Bio-Philia



1. CREATING GHATS WITH VEGETATED BUFFER AND WETLANDS



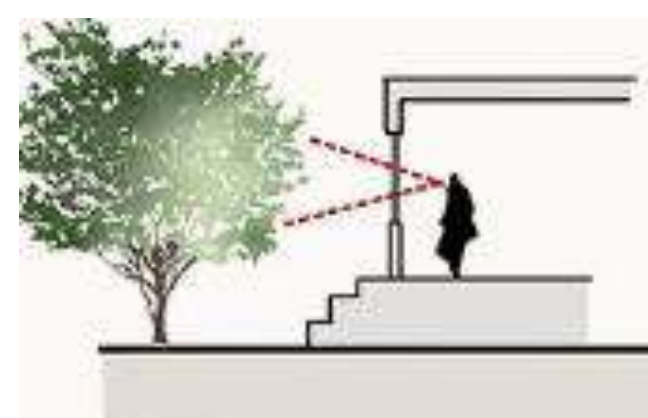
2. MASS PLACEMENT WITH RESPECT TO GHATS



3. DEVELOPING ORGANIC FORM



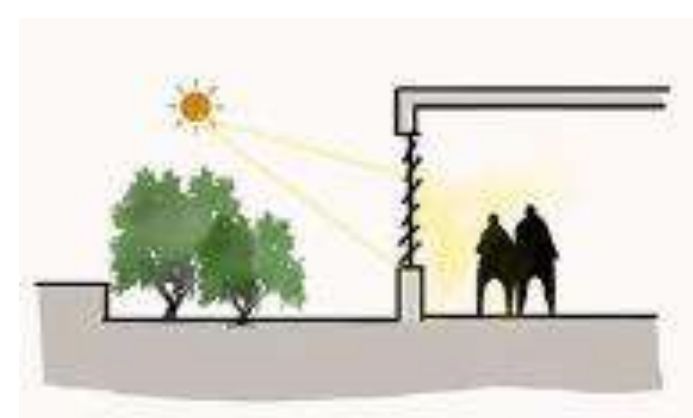
4. NON-RHYTHMIC SENSORY STIMULI



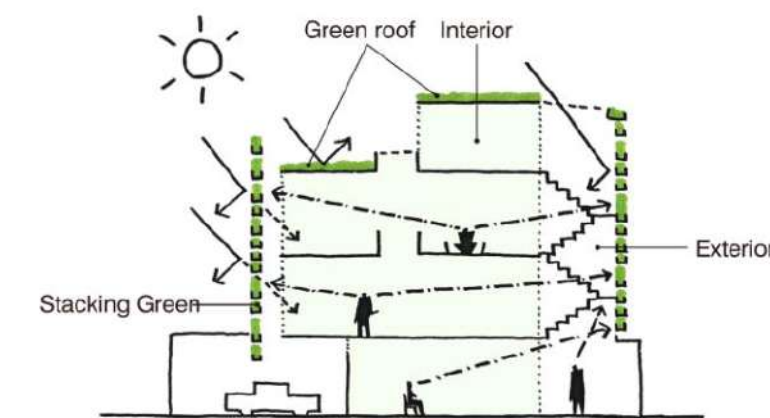
5. VISUAL & NON-VISUAL CONNECTION WITH NATURE



6. PRESENCE OF WATER



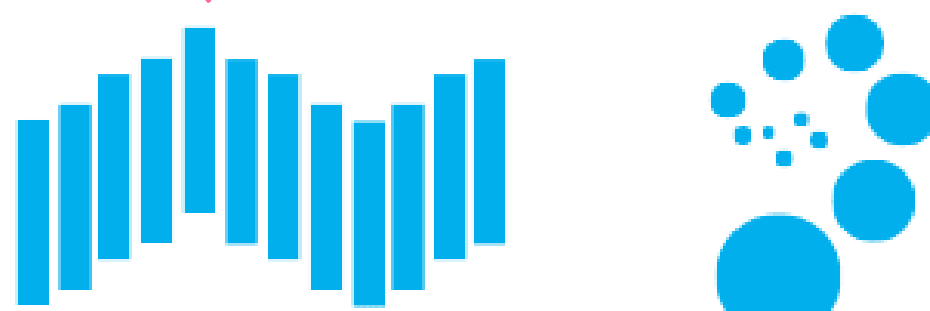
7. DYNAMIC & DIFFUSED LIGHT



8. GREEN ROOF

DESIGN PRINCIPLES:

Rhythm & Movement



RHYTHM MOVEMENT
PRINCIPLE OF DESIGN

RHYTHM & MOVEMENT IN DESIGN FOR RIVERFRONT DEVELOPMENT INVOLVES CREATING A HARMONIOUS FLOW OF ELEMENTS SUCH AS WALKWAYS, GREEN SPACES, AND RECREATIONAL AREAS TO ENHANCE VISUAL APPEAL AND USER EXPERIENCE.

PRINCIPLE OF UNIVERSAL DESIGN



EQUITABLE USE
THE DESIGN IS USEFUL AND MARKETABLE TO PEOPLE WITH DIVERSE ABILITIES.

FLEXIBILITY IN USE
THE DESIGN ACCOMMODATES A WIDE RANGE OF INDIVIDUAL PREFERENCES AND ABILITIES.



SIMPLE & INTUITIVE USE
USE OF THE DESIGN IS EASY TO UNDERSTAND, REGARDLESS OF THE USER'S EXPERIENCE, KNOWLEDGE, LANGUAGE SKILLS, OR CURRENT CONCENTRATION LEVEL.



LOW PHYSICAL EFFORT
THE DESIGN CAN BE USED EFFICIENTLY, COMFORTABLY, AND WITH A MINIMUM OF FATIGUE.

DISASTER PREPAREDNESS



FIRE EMERGENCY

- IMPLEMENT A CLEAR AND EASILY ACCESSIBLE FIRE EVACUATION PLAN.
- ENSURE MULTIPLE EXITS ARE AVAILABLE AND CLEARLY MARKED.
- INSTALL FIRE ALARMS, SPRINKLERS, FIRE EXTINGUISHERS AT STRATEGIC LOCATIONS AND SMOKE DETECTORS.
- INTEGRATE FIRE-RESISTANT MATERIALS IN THE CONSTRUCTION.
- DESIGNATE SAFE ASSEMBLY POINTS OUTSIDE THE BUILDING.
- TRAIN STAFF ON FIRE SAFETY PROTOCOLS AND EMERGENCY RESPONSE.



FLOOD

- ELEVATE CRITICAL BUILDING SYSTEMS ABOVE POTENTIAL FLOOD LEVELS.
- IMPLEMENT FLOOD BARRIERS AROUND THE PERIMETER OF THE BUILDING.
- INSTALL FLOOD-RESISTANT MATERIALS AND FINISHES IN VULNERABLE AREAS.
- ENSURE PROPER DRAINAGE SYSTEMS TO REDIRECT WATER AWAY FROM THE BUILDING.
- DESIGNATE EMERGENCY EVACUATION ROUTES TO HIGHER GROUND.
- INSTALL FLOOD DETECTION AND WARNING SYSTEMS.
- UTILIZE WATER-RESISTANT OR WATERPROOF DOORS AND WINDOWS.
- INCORPORATE EMERGENCY POWER SOURCES IN CASE OF FLOODING-RELATED OUTAGES.



EARTHQUAKE

- EMPLOY BASE ISOLATION OR DAMPENING SYSTEMS TO MINIMIZE EARTHQUAKE IMPACT.
- STRENGTHEN STRUCTURAL COMPONENTS THROUGH REINFORCEMENT TECHNIQUES.
- DESIGN EMERGENCY EXITS AND PATHWAYS FOR SAFE EVACUATION.
- INCORPORATE EMERGENCY LIGHTING AND SIGNAGE FOR VISIBILITY DURING POWER OUTAGES.
- EDUCATE OCCUPANTS ON EARTHQUAKE SAFETY PROCEDURES AND EVACUATION ROUTES.

DESIGN GOALS:

ENVIRONMENT CONSERVATION

TO ENHANCE THE RIVERSIDE CORRIDOR ECOSYSTEM BY IMPLEMENTING GREEN LANDSCAPE SOLUTION.

TO ATTRACT FAUNA

ESTABLISHING MAN WATER CONNECT

ENHANCING CONNECTIVITY - DESIGNED PATHWAYS, BRIDGES, AND VIEWING POINTS THAT PROVIDE DIRECT AND IMMERSIVE EXPERIENCES WITH THE NAG RIVER, FOSTERING A DEEPER CONNECTION BETWEEN VISITORS AND THE WATER.

CULTURAL CONSERVATION

THE HISTORICAL AND CULTURAL SIGNIFICANCE OF THE NAG RIVER CAN BE HIGHLIGHTED AND CELEBRATED THROUGH THE AMENITY CENTRE, PROVIDING A PLATFORM FOR SHOWCASING LOCAL ART, TRADITIONS, AND HERITAGE.

INCORPORATE ELEMENTS THAT CELEBRATE THE CULTURAL HERITAGE AND HISTORY OF NAGPUR. SHOWCASE LOCAL ART, TRADITIONS, OR HISTORICAL REFERENCES IN THE DESIGN.

HISTORICAL CONSERVATION

COMMERCIAL-TOURISM

CAN BE ONE OF THE MAIN ATTRACTION AND BOOST THE TOURISM SECTOR IN NAGPUR AND NAG RIVER THROUGH NATURAL RECREATIONAL ACTIVITIES

RECREATIONAL-VIBRANT COMMUNITY INTERACTION

TO BOOST USER EXPERIENCE BY INTRODUCING ECOLOGICAL AND OTHER RECREATIONAL ACTIVITIES.

DEVELOP SPACES THAT ENCOURAGE SOCIAL INTERACTION AND COMMUNITY GATHERINGS INCORPORATING RECREATIONAL AREAS, SEATING, AND EVENT SPACES FOR DIVERSE COMMUNITY ACTIVITIES.

EDUCATIONAL

AND APPRECIATION RIVERFRONTS OFFER EDUCATION THROUGH ENVIRONMENTAL ACTIVITIES, WILDLIFE OBSERVATION, AND RECREATIONAL OPPORTUNITIES, FOSTERING AWARENESS N.

DESIGN STRATEGIES:

UNIVERSAL DESIGN : DESIGN FOR ALL

- DESIGNED TO BE USABLE BY ALL INTENDED USER
- GREATER INDEPENDENCE, SAFETY AND USABILITY BY EVERYONE
- INCLUSIVE AND PLURALISTIC MODEL
- FLEXIBILITY, ADAPTABILITY, ADJUSTABILITY AND MODULARITY

ECOLOGICAL CORRIDOR

IN ADDITION TO CONSERVING NATURE, ECOLOGICAL CORRIDORS CAN BENEFIT PEOPLE. IN OTHER PLACES, ECOLOGICAL CORRIDORS MAY ALSO PROVIDE RECREATIONAL BENEFITS OR MAY BUFFER RIVERS, STREAMS, AND WETLANDS.

CLIMATE RESPONSIVE BUILDING

BY INCORPORATING INNOVATIVE ENERGY SYSTEMS AND MATERIALS, CLIMATE-RESPONSIVE BUILDINGS CAN SIGNIFICANTLY REDUCE ENERGY CONSUMPTION.

REVENUE GENERATION

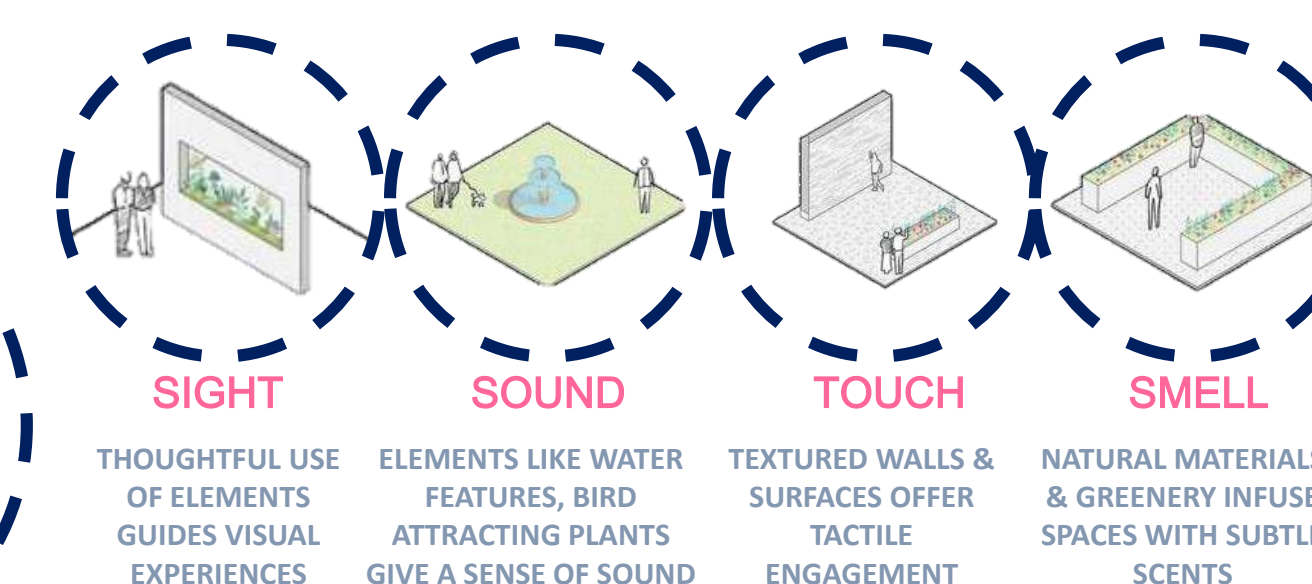
TOURISM & PUBLIC AMENITY SPACES WILL CONTRIBUTE TO THE ECONOMIC GROWTH OF THE CITY.

SUSTAINABLE DEVELOPMENT GOALS

TO ACHIEVE ENVIRONMENTAL, SOCIAL & ECONOMIC SUSTAINABILITY



DESIGN APPROACH:



SIGHT

THOUGHTFUL USE OF ELEMENTS GUIDES VISUAL EXPERIENCES

SOUND

ELEMENTS LIKE WATER FEATURES, BIRD ATTRACTING PLANTS GIVE A SENSE OF SOUND

TOUCH

TEXTURED WALLS & SURFACES OFFER TACTILE ENGAGEMENT

SMELL

NATURAL MATERIALS & GREENERY INFUSE SPACES WITH SUBTLE SCENTS



THE ECOLOGICAL CORRIDOR DESIGN APPROACH INTEGRATES NATURAL LANDSCAPES, ENSURING CONNECTIVITY BETWEEN HABITATS FOR SPECIES MOVEMENT, BIODIVERSITY CONSERVATION, AND ECOLOGICAL FUNCTIONALITY.



CLIMATE-RESPONSIVE BUILDING DESIGN INTEGRATES ARCHITECTURAL ELEMENTS AND MATERIALS TAILORED TO LOCAL CLIMATE CONDITIONS TO OPTIMIZE ENERGY EFFICIENCY AND COMFORT WHILE REDUCING ENVIRONMENTAL IMPACT. LOCALLY FOUND IN NAGPUR - BASALT, BAMBOO, TIMBER, F OTHER MATERIALS - HEMPCRETE, MUD BRICK, STRAW, FIBER REINFORCED CONCRETE

INCORPORATING PASSIVE COOLING TECHNOLOGIES



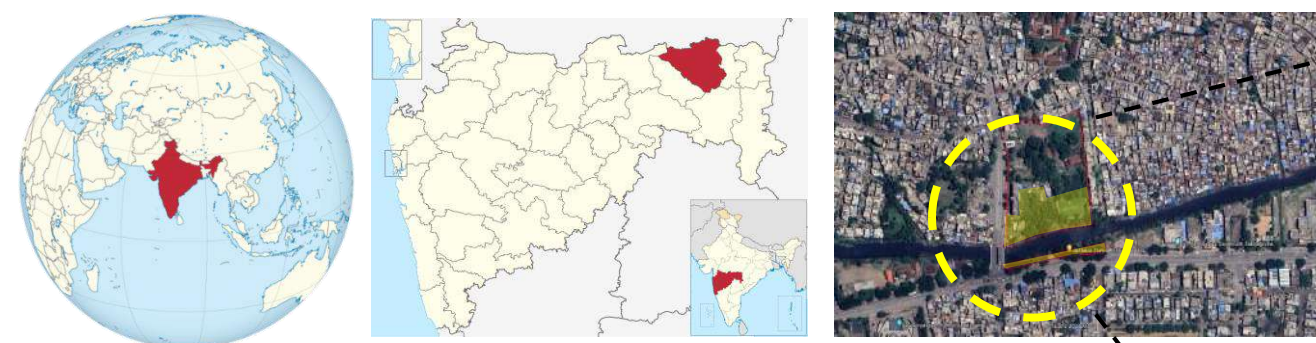
REVENUE GENERATION AS A DESIGN APPROACH INVOLVES STRATEGIZING TO INCORPORATE INCOME-GENERATING FEATURES INTO PROJECTS, SUCH AS COMMERCIAL SPACES, RENTALS, OR AMENITIES, TO SUSTAINABLY FINANCE DEVELOPMENT INITIATIVES.

CONNECTING EDGES OF RIVER THROUGH WATER TRANSPORT

10. JANAKALYAN - REVITALISATION ON THE BANKS OF NAG RIVER, NAGPUR - BRIDGING THE GAP WITH NATURE

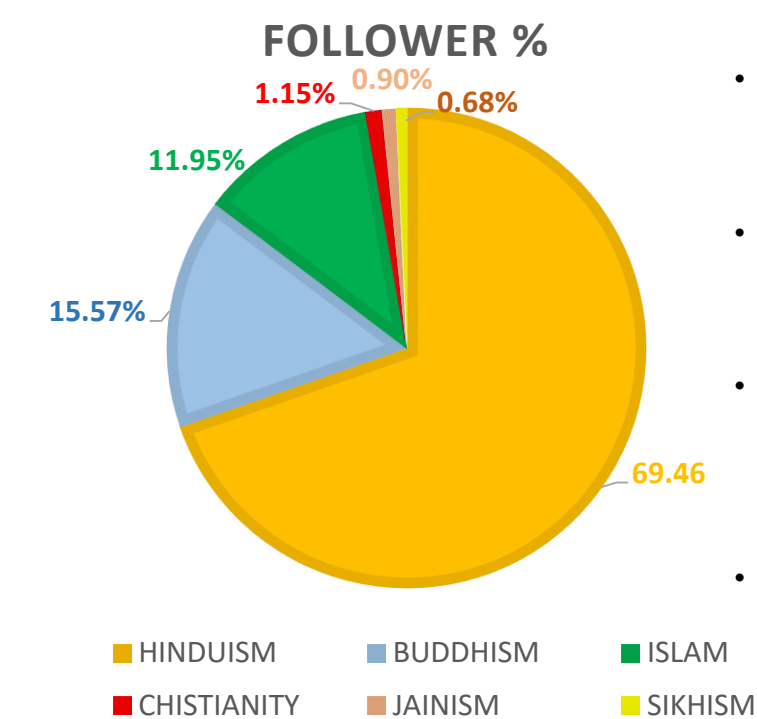
LOCATION ANALYSIS

LOCATION -- BHOLA GANESH CHOWK, NAGPUR, MH



MAJOR RELIGION FOUND IN NAGPUR

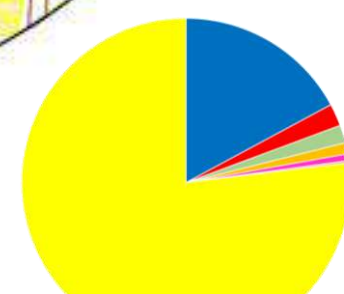
POPULATION



- TOTAL POPULATION: 2,405,665
MALE: 1,225,405
FEMALE: 1,180,270
- TOTAL CHILDREN (0-6 YRS.): 247,078
BOY: 128,290
GIRL: 118,788
- SEX RATION: 963 FEMALES PER 1,000 MALES AND CHILD SEX RATIO OF 926 GIRLS PER 1,000 BOYS
- AVERAGE LITERACY RATE: AVERAGE LITERACY RATE OF NAGPUR CITY ARE 91.92%. MEN ARE 94.44% AND WOMEN ARE 89.31% LITERATE.

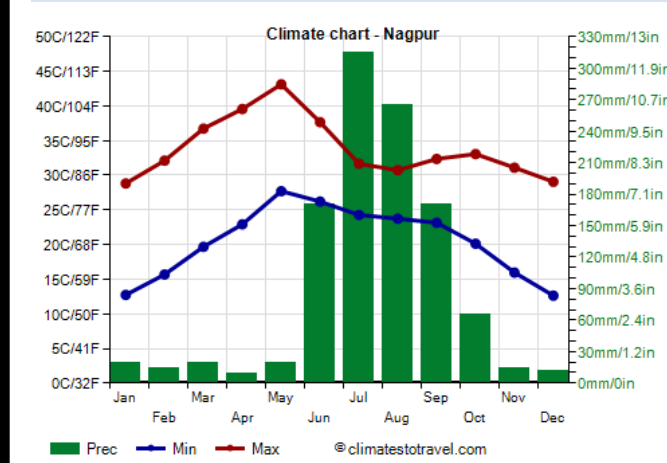


EXISTING LANDUSE AT THE SITE (500 M RADIUS)



■ BUILT □ UNBUILT

CLIMATE - COMPOSITE

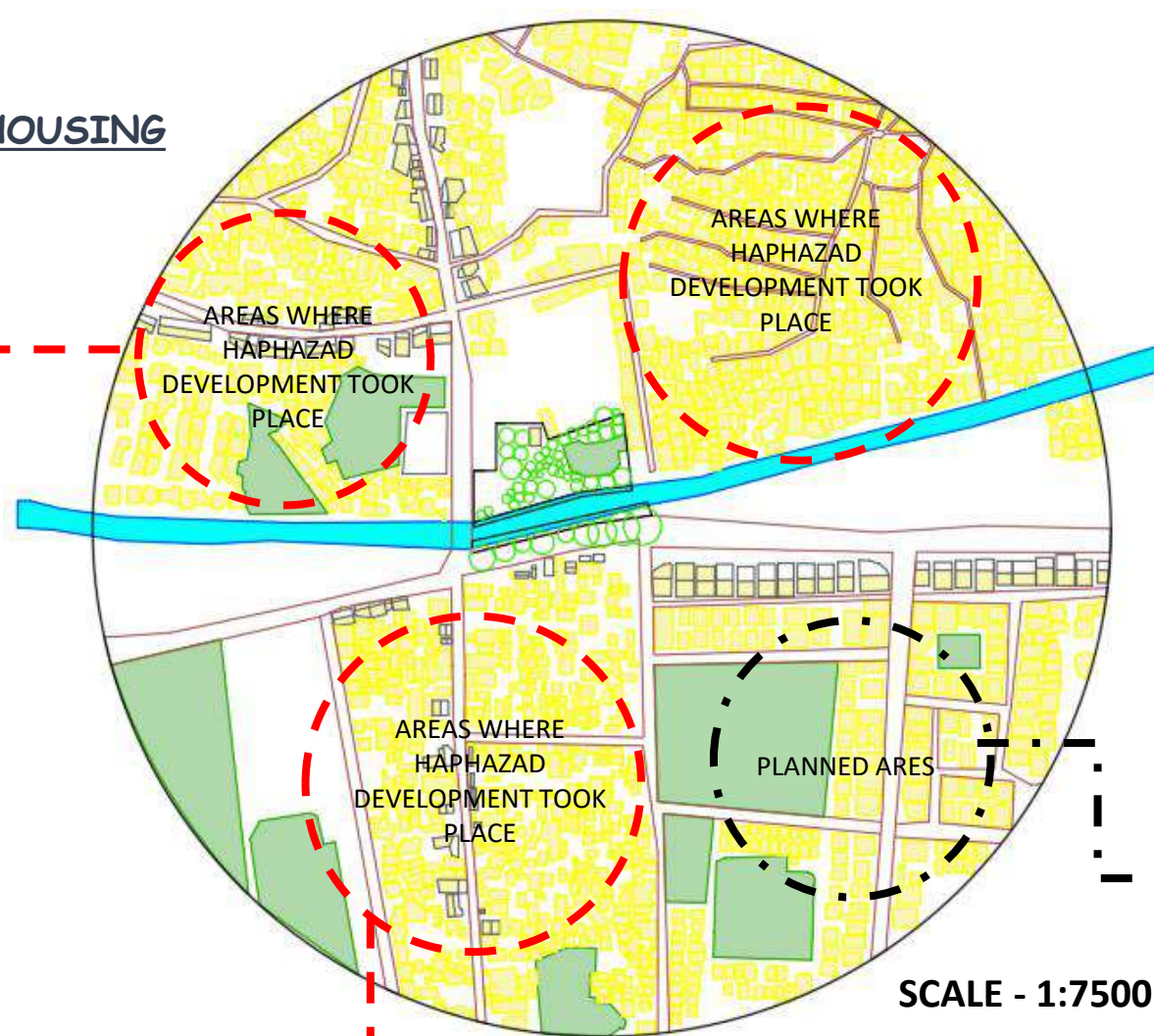


- THE CITY HAS DRY WEATHER FOR MOST OF THE YEAR.
- DURING THE MONSOON OF JUNE TO SEPTEMBER, NAGPUR HAS 1205 MM OF RAIN. ON JULY 14, 1994, THE CITY HAD RECORDED A RECORD RAINFALL OF 304 MM ON THE SAME DAY.
- THEY ARE EQUALLY WARM DURING THE SUMMER OF MARCH TO JUNE. MAY IS THE HIGHEST TEMPERATURE IN MAY.

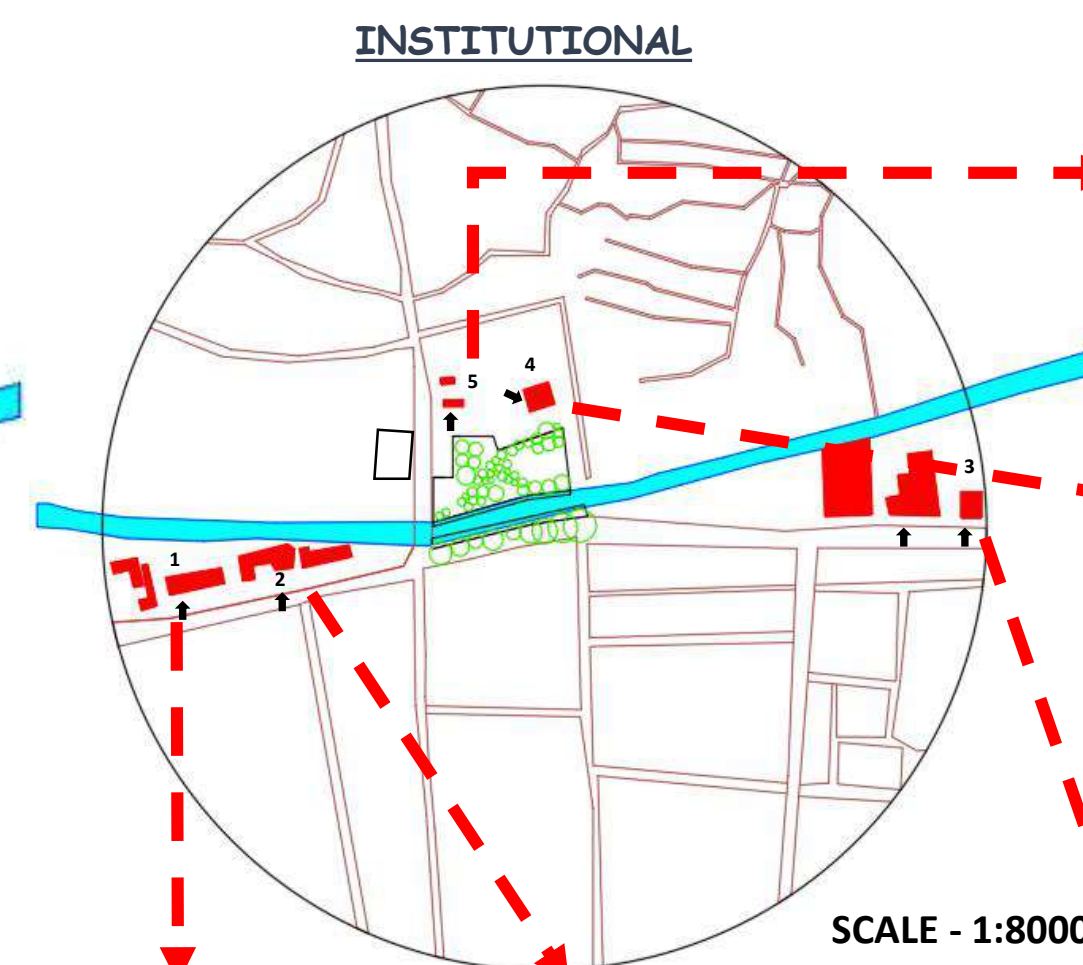
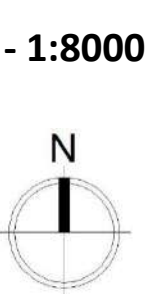
- NOVEMBER TO JANUARY IS THE PERIOD OF WINTER IN WINTER THE TEMPERATURES BELOW 10 DEGREES.
- ON MAY 29, 2012, THE CITY RECORDED 48.6 DEGREES CELSIUS AND THE LOWEST TEMPERATURE WAS 3.9 DEGREE CELSIUS IN 1937.



HOUSING



MOST OF THE PRECINCT AREA NEATBY SITE IS CHARACTERIZED BY A HIGH DEGREE OF CONGESTION AND NARROW ROADS, POSING SIGNIFICANT CHALLENGES FOR BOTH PEDESTRIANS AND VEHICULAR TRAFFIC.



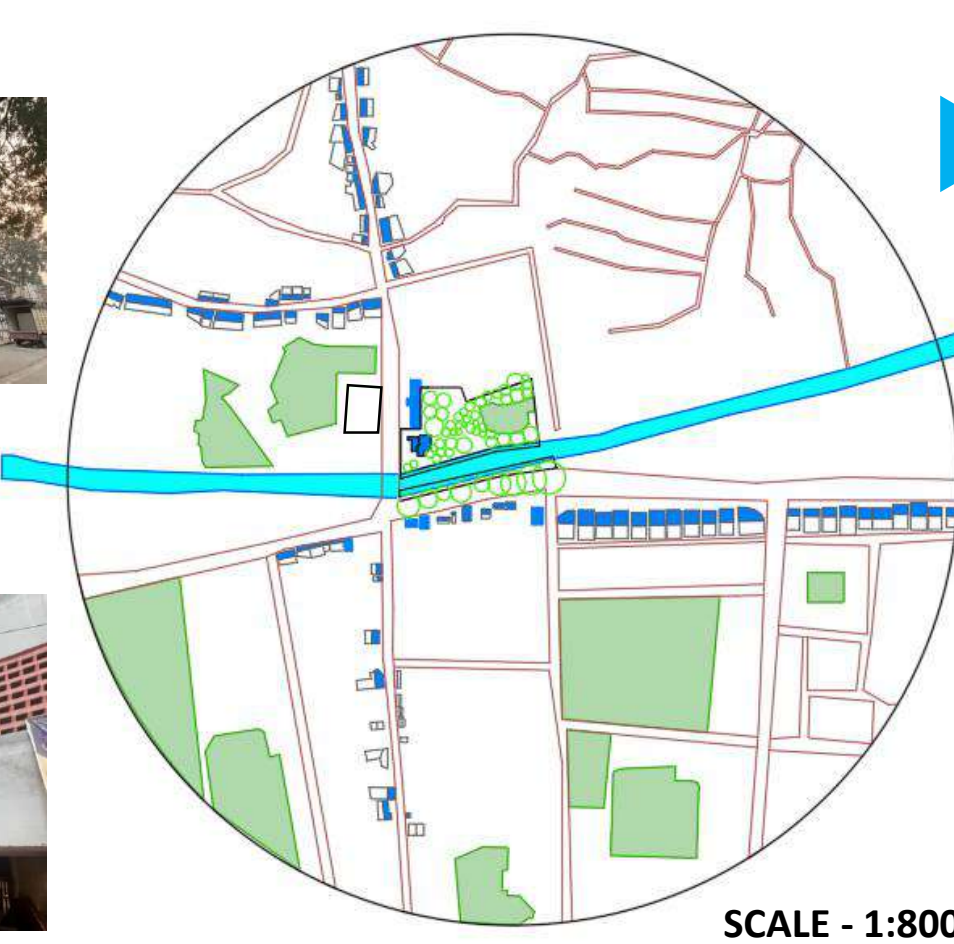
VIEW OF RIVER FROM INSTITUTIONAL & RELIGIOUS BUILDING



INSTITUTIONAL BUILDINGS IN RIVERFRONT DEVELOPMENTS HOLD SIGNIFICANT SWAY OVER THE CHOSEN SITE.

THEIR DESIGN, ORIENTATION, AND INTEGRATION CAN ENHANCE THE WATERFRONT'S APPEAL, ATTRACTING VISITORS AND CATALYZING ECONOMIC ACTIVITY.

THOUGHTFUL PLANNING MAY ALSO PRESERVE ECOLOGICAL BALANCE AND CULTURAL HERITAGE, ENRICHING THE RIVERFRONT EXPERIENCE. CONVERSELY, HAPHAZARD DEVELOPMENT COULD DEGRADE THE ENVIRONMENT AND DIMINISH COMMUNITY ENGAGEMENT.



MIXED USE AND COMMERCIAL

THE PRECINCT AREA NEATBY SITE IS CHARACTERIZED BY A DECENT NUMBERS OF MIXED USE BUILDINGS AS IT IS A PRIME LOCATION AND HAS TREMENDOUS BUSINESS.

MIXED-USE BUILDINGS PLAY A PIVOTAL ROLE IN RIVERFRONT DEVELOPMENT, BLENDING RESIDENTIAL, COMMERCIAL, AND RECREATIONAL SPACES TO CREATE VIBRANT WATERFRONT COMMUNITIES.

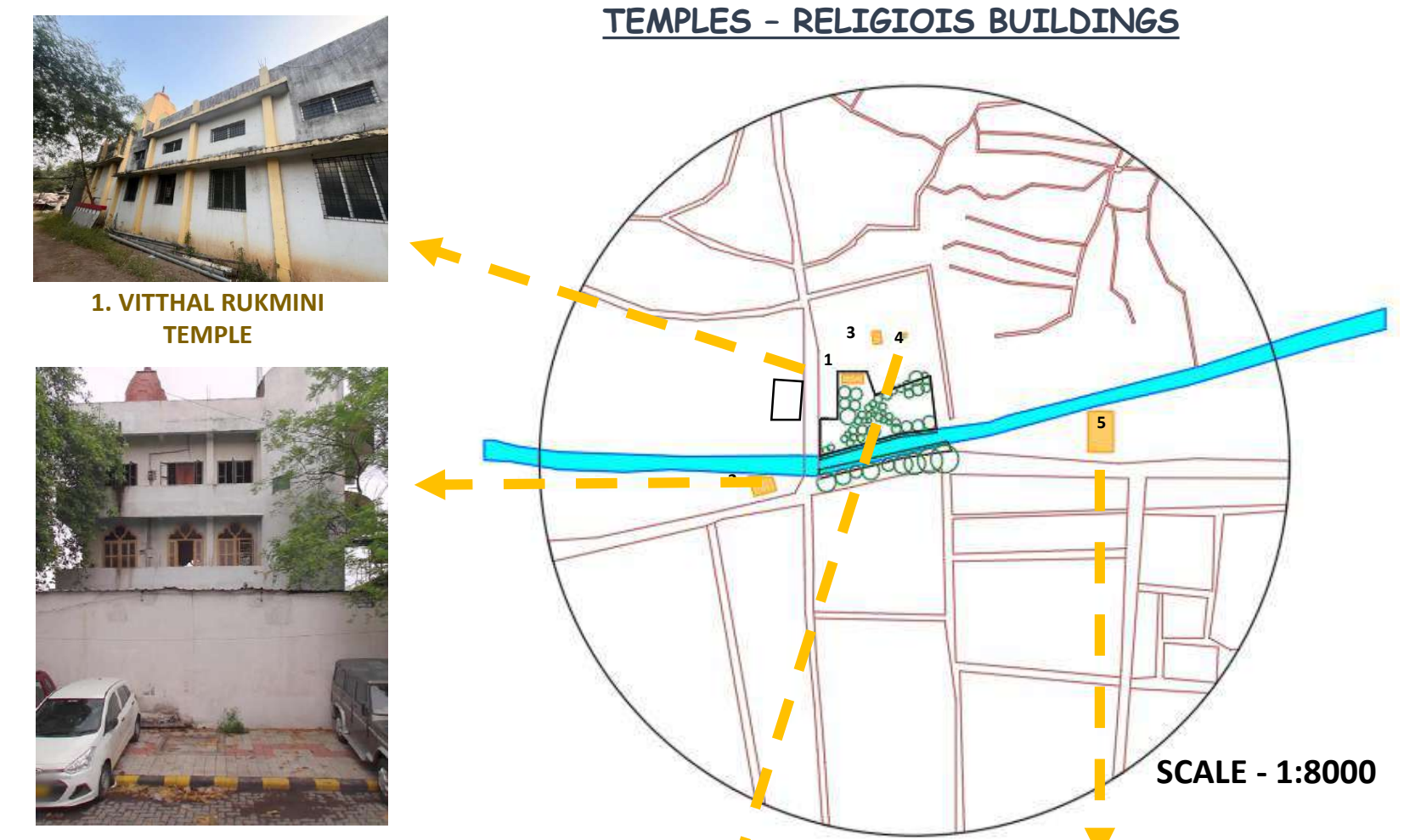
THEIR DIVERSE FUNCTIONS ATTRACT A RANGE OF ACTIVITIES, FOSTERING DYNAMIC INTERACTIONS AND ECONOMIC VITALITY.

PROPERLY INTEGRATED, THEY CAN ENHANCE THE RIVERFRONT'S APPEAL, ENRICHING THE URBAN EXPERIENCE AND PROMOTING SUSTAINABLE GROWTH.

LEGENDS :



TEMPLES - RELIGIOUS BUILDINGS

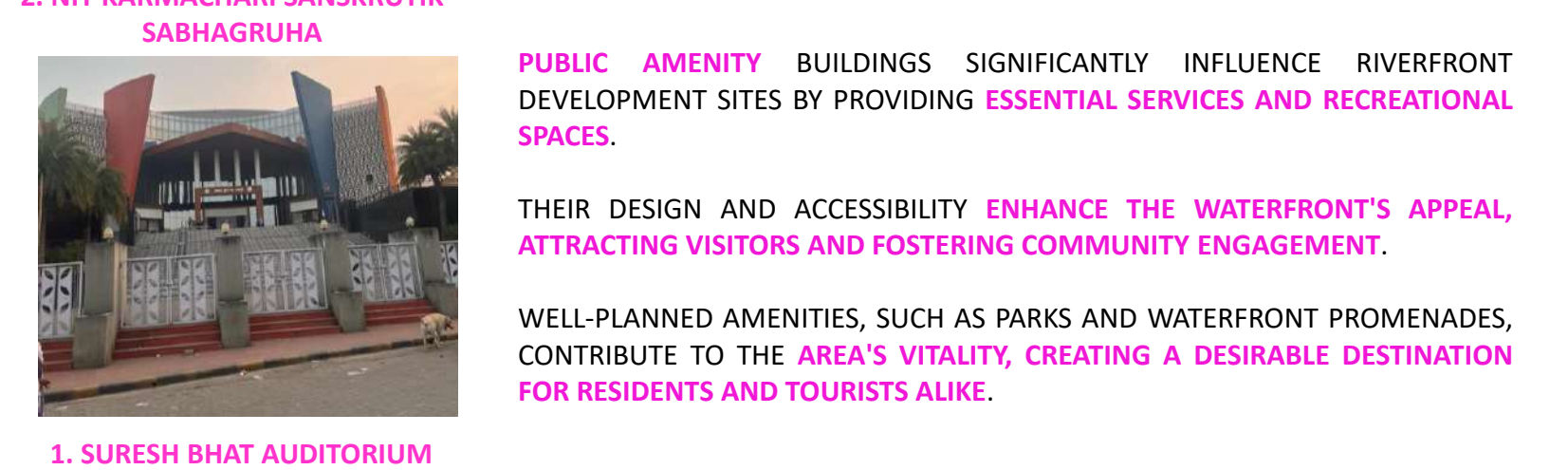
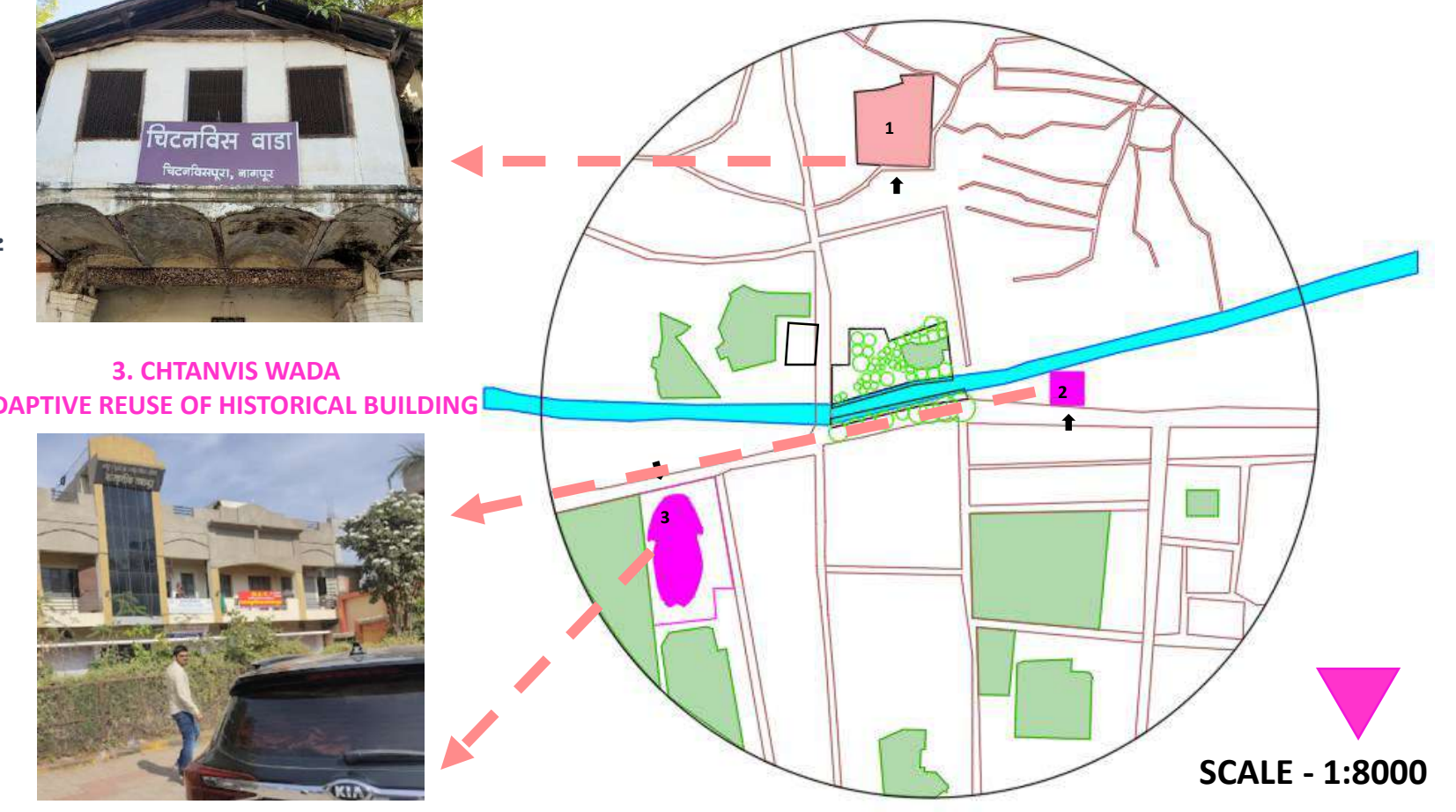


RELIGIOUS BUILDINGS IN RIVERFRONT DEVELOPMENT SITES WIELD CONSIDERABLE INFLUENCE, SHAPING THE AREA'S AMBIANCE AND CULTURAL SIGNIFICANCE.

THEIR ARCHITECTURAL DESIGN AND SPIRITUAL FUNCTION CAN IMBUE THE RIVERSIDE WITH A SENSE OF SANCTITY AND CONTEMPLATION, ENHANCING THE OVERALL APPEAL.

PROPER INTEGRATION RESPECTS BOTH NATURAL AND SPIRITUAL ELEMENTS, FOSTERING HARMONY AND COMMUNITY CONNECTION ALONG THE WATERFRONT.

PUBLIC AMENITY, HISTORICAL PLACES & OPEN SPACE



PUBLIC AMENITY BUILDINGS SIGNIFICANTLY INFLUENCE RIVERFRONT DEVELOPMENT SITES BY PROVIDING ESSENTIAL SERVICES AND RECREATIONAL SPACES.

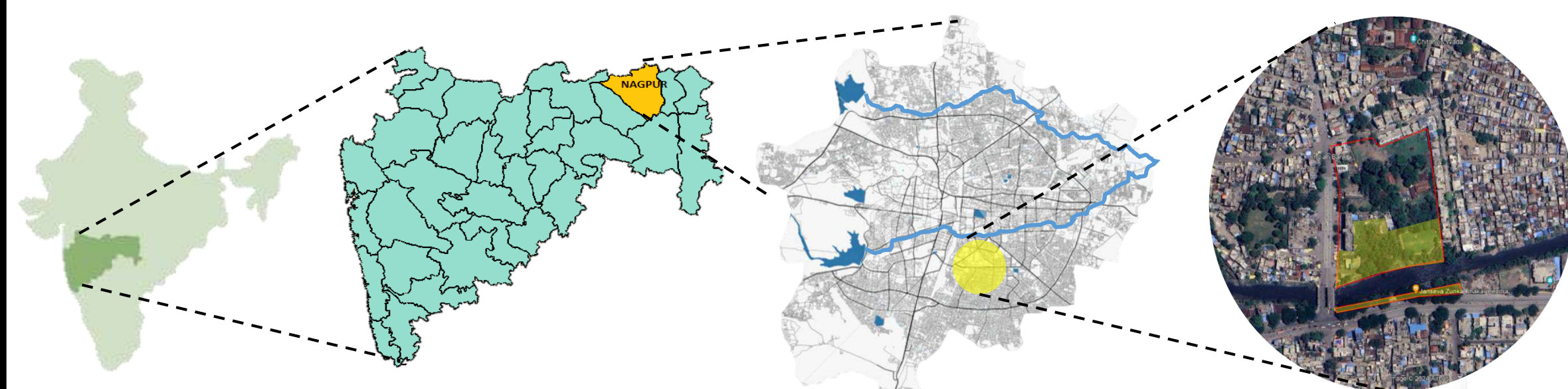
THEIR DESIGN AND ACCESSIBILITY ENHANCE THE WATERFRONT'S APPEAL, ATTRACTING VISITORS AND FOSTERING COMMUNITY ENGAGEMENT.

WELL-PLANNED AMENITIES, SUCH AS PARKS AND WATERFRONT PROMENADES, CONTRIBUTE TO THE AREA'S VITALITY, CREATING A DESIRABLE DESTINATION FOR RESIDENTS AND TOURISTS ALIKE.

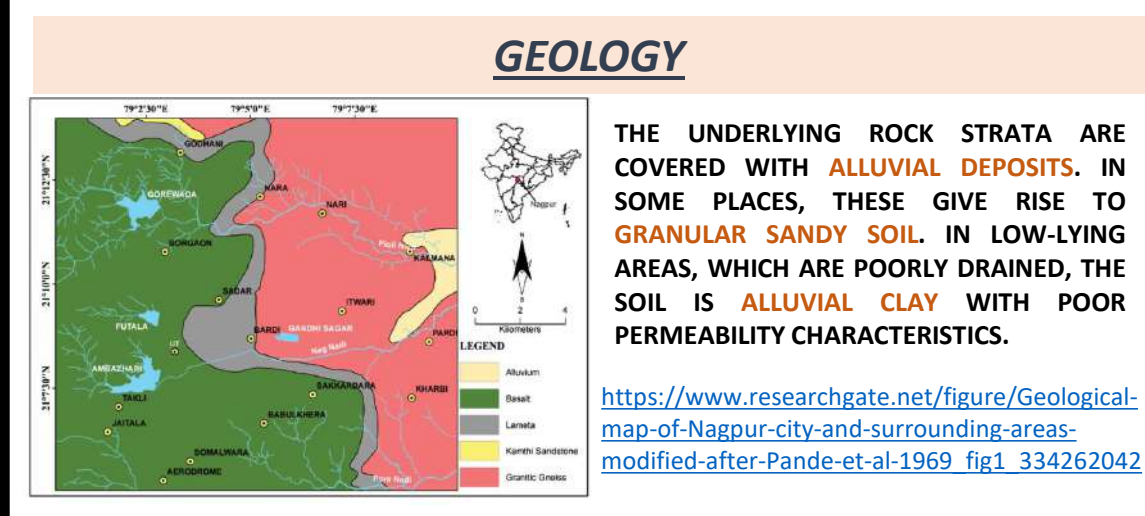
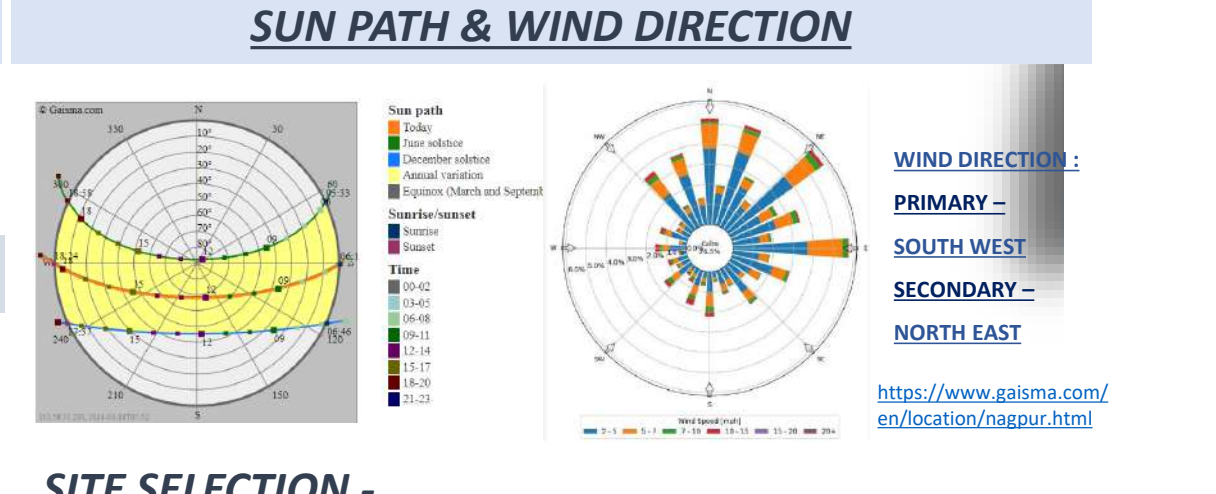
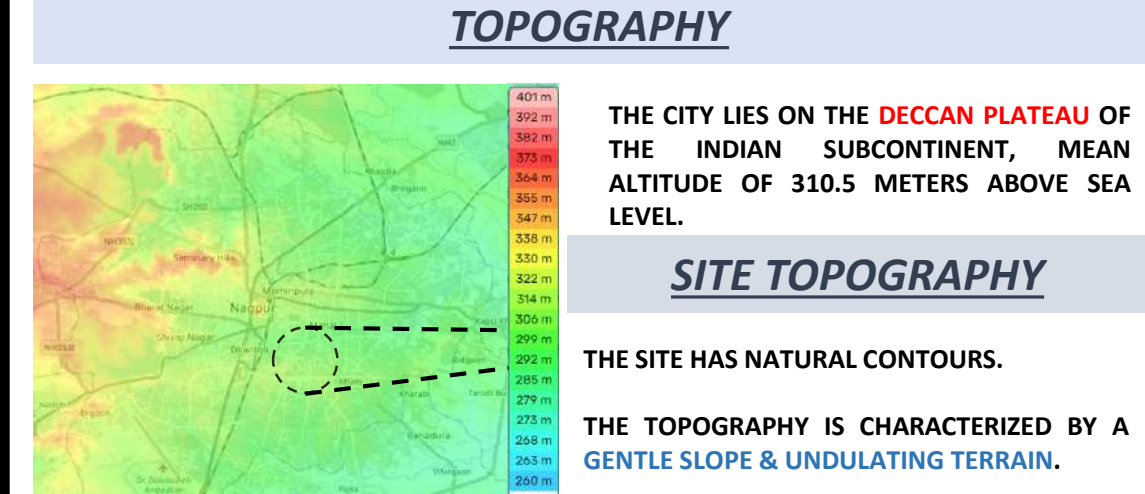
11. JANAKALYAN - REVITALISATION ON THE BANKS OF NAGPUR RIVER, NAGPUR - BRIDGING THE GAP WITH NATURE

SITE ANALYSIS

LOCATION -- BHOLA GANESH CHOWK, NAGPUR, MH



MAHARASHTRA, INDIA NAGPUR, MAHARASHTRA BHOLA GANESHCHOWK, MAHARASHTRA



SITE SELECTION -

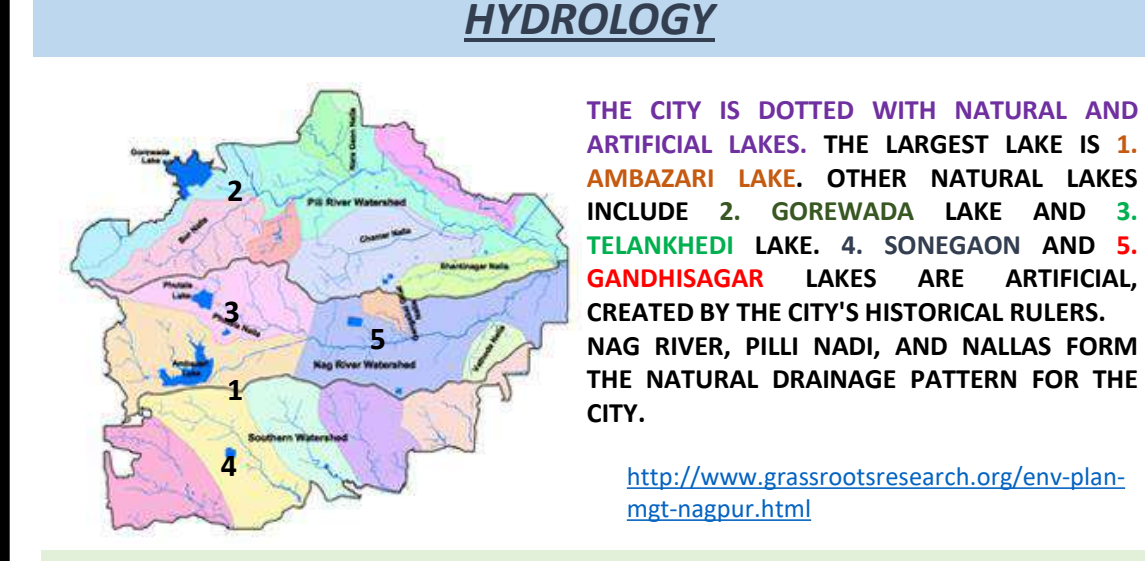
THIS PROPOSED SITE FOR RIVERFRONT DEVELOPMENT HAVE BEEN CHOSEN DUE TO ITS PRIME LOCATION AND IMMENSE POTENTIAL FOR REVITALIZATION.

THE SITE OFFERS STUNNING WATERFRONT VIEWS, CREATING A NATURAL DRAW FOR VISITORS AND RESIDENTS ALIKE.

ADDITIONALLY, ITS PROXIMITY TO KEY AMENITIES AND INFRASTRUCTURE MAKES IT HIGHLY ACCESSIBLE AND CONDUCTIVE TO ECONOMIC GROWTH.

MOREOVER, THE AREA'S HISTORICAL SIGNIFICANCE ADDS CULTURAL VALUE TO THE PROJECT, OFFERING OPPORTUNITIES FOR PRESERVATION AND CELEBRATION OF THE REGION'S HERITAGE.

BY DEVELOPING THIS RIVERFRONT, WE CAN CREATE A VIBRANT COMMUNITY HUB, STIMULATE TOURISM, AND ENHANCE THE QUALITY OF LIFE FOR ALL WHO LIVE, WORK, AND PLAY IN THE AREA.



WHY PROPOSED SITE WOULD BE A SUCCESS?

PRIME LOCATION: THE PROPOSED SITE OFFERS A PRIME LOCATION ALONG THE RIVERFRONT, PROVIDING STUNNING NATURAL VIEWS AND A SERENE ENVIRONMENT FOR RESIDENTS AND VISITORS.

ECONOMIC POTENTIAL: THE DEVELOPMENT PRESENTS SIGNIFICANT ECONOMIC OPPORTUNITIES, ATTRACTING BUSINESSES, TOURISM, AND INVESTMENT TO THE AREA, LEADING TO JOB CREATION AND INCREASED REVENUE.

RECREATIONAL AMENITIES: WITH AMPLE SPACE FOR RECREATIONAL ACTIVITIES SUCH AS BOATING, FISHING, AND WATERFRONT DINING, THE SITE BECOMES A DESIRABLE DESTINATION FOR LEISURE AND ENTERTAINMENT.

COMMUNITY ENGAGEMENT: INCORPORATING PUBLIC SPACES AND GATHERING AREAS FOSTERS COMMUNITY ENGAGEMENT AND SOCIAL INTERACTION, CREATING A SENSE OF BELONGING AND ENHANCING THE OVERALL QUALITY OF LIFE FOR RESIDENTS.

SUSTAINABLE DESIGN: EMBRACING SUSTAINABLE DESIGN PRACTICES ENSURES ENVIRONMENTAL PRESERVATION, MITIGATES CLIMATE IMPACTS, AND ENHANCES THE LONG-TERM VIABILITY AND ATTRACTIVENESS OF THE DEVELOPMENT.

ABOUT SITE

TOPOGRAPHY OF SITE: SITE HAS NATURAL CONTOURS, TOPOGRAPHICALLY THE AREA HAS GRADUAL SLOPE ON THE SOUTH SIDE OF THE SITE.

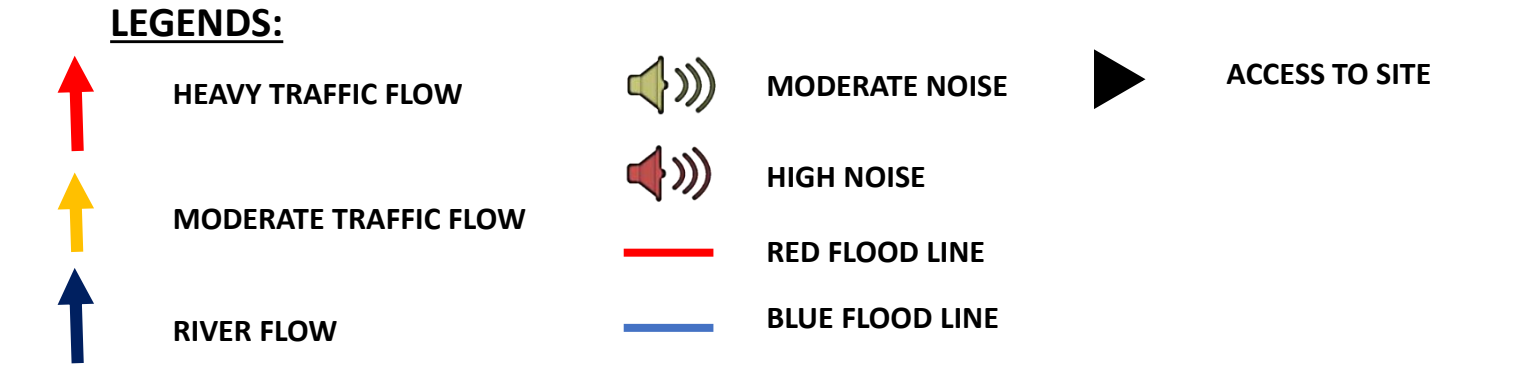
SOIL AND VEGETATION ON SITE: SLIGHTLY DEEP, WELLDRAINED, FINE, ALLUVIAL CLAY SOIL ON VERY GENTLE SLOPE LANDS WITH MEASAS AND BUTTES WITH MODERATE EROSION

FLORA & FAUNA (TYPICAL IN NAGPUR):
FLORA - NEEM, PEEPAL, MANGO, ASHOKA, GULMOHAR, BABOOL, IMLI, RINGWORM BUSH, WHITE CHIPPI (SONNERATIA ALBA - MANGROOVES)
FAUNA - KINGFISHER, CROW, PIGEON, RED RUMPED SWALLOW, BLACK STORK, BAR HEADED GOOSE, SPECTACLED COBRA, CRICKET FROG, INDIAN BULL FROG

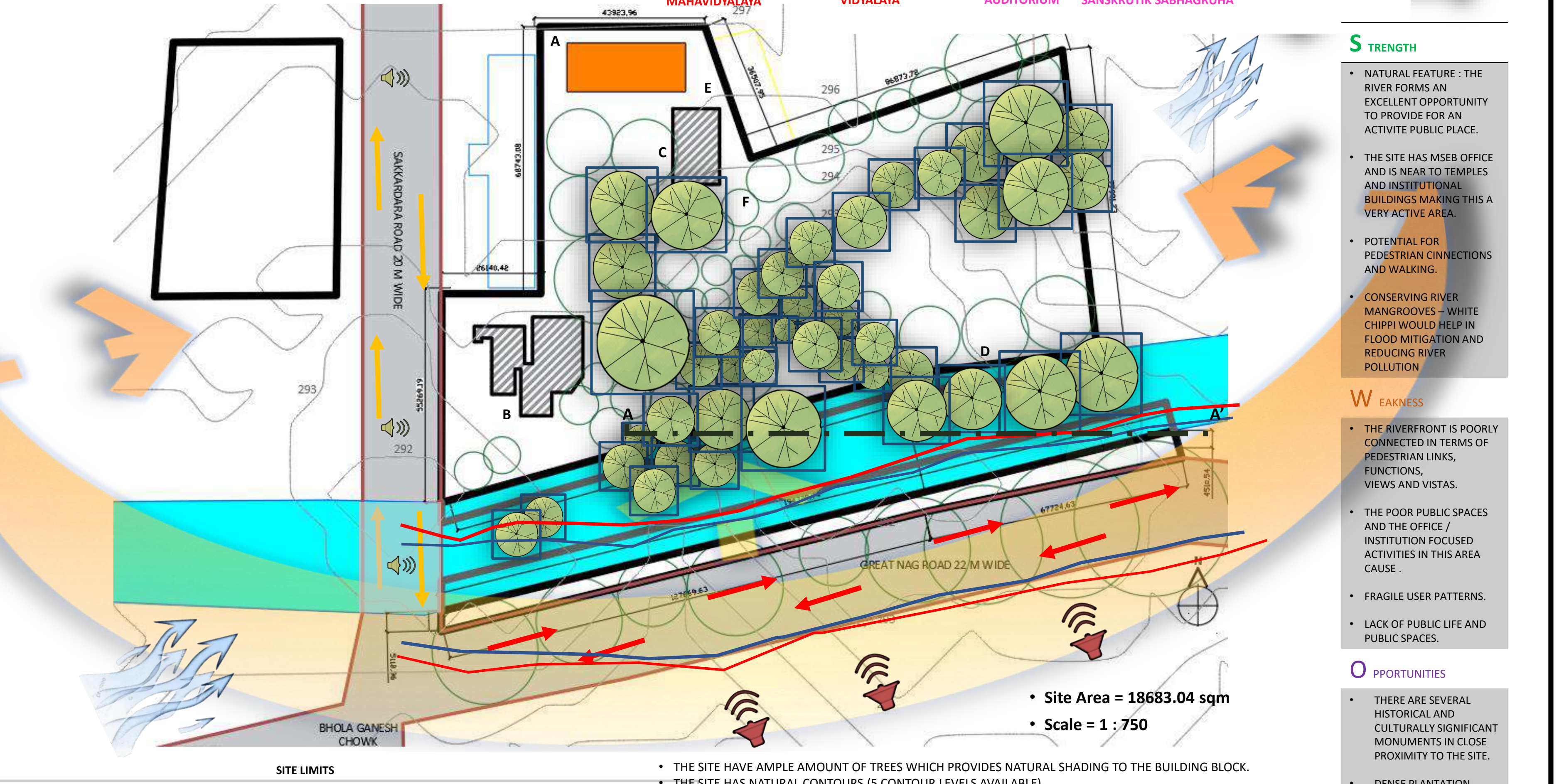
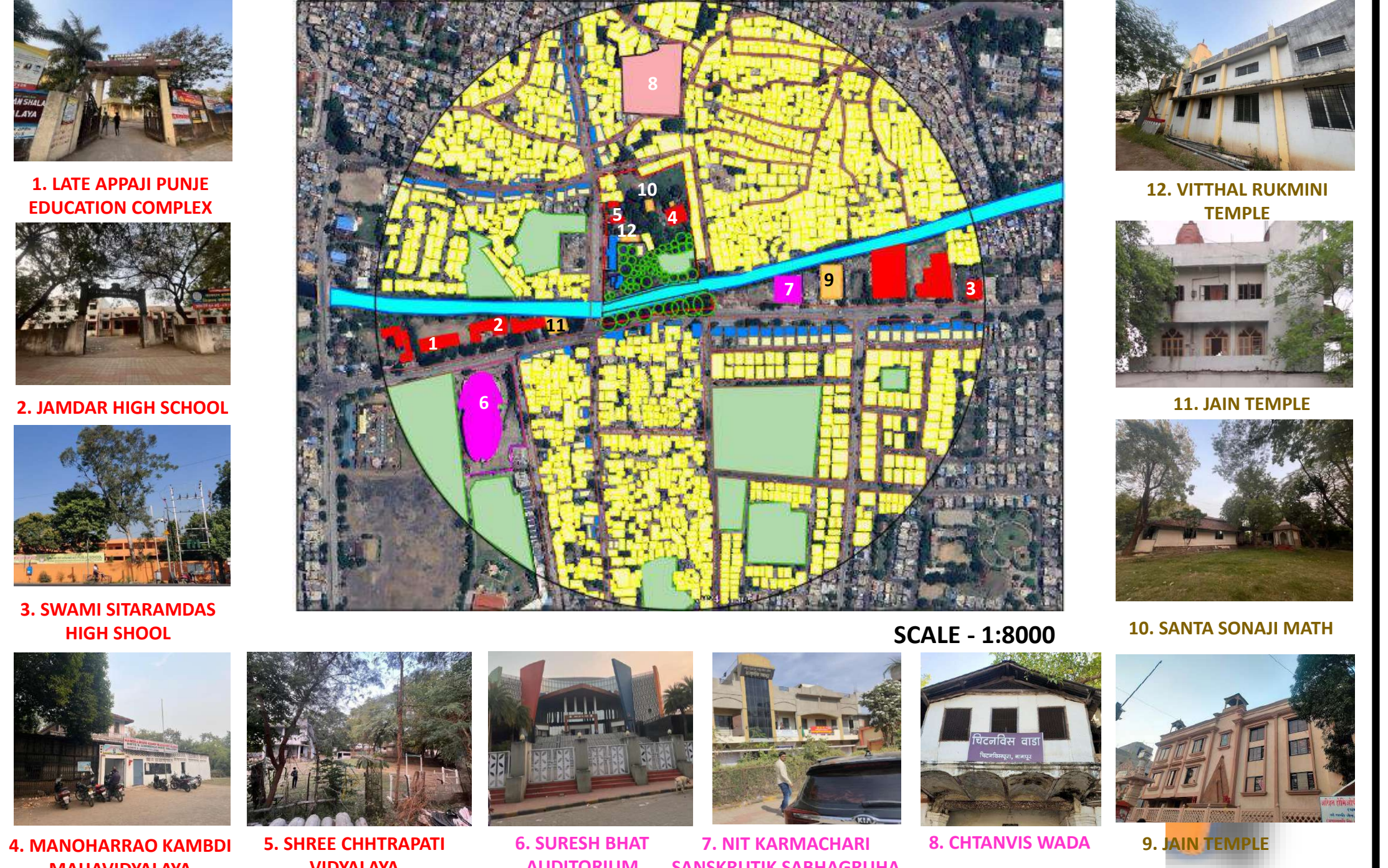
MICROCLIMATE: THE MICROCLIMATE OF THE SITE IS AFFECTED BY THE FULLY GROWN EVERGREEN TREES AS IT HELPS TO COOL THE ENVIRONMENT - BY INTERCEPTING SOLAR RADIATION & DIRECTING AIR MOVEMENT. NAG RIVER PROVIDES COOL BREEZE FROM THE SOUTHERN PART OF THE SITE.



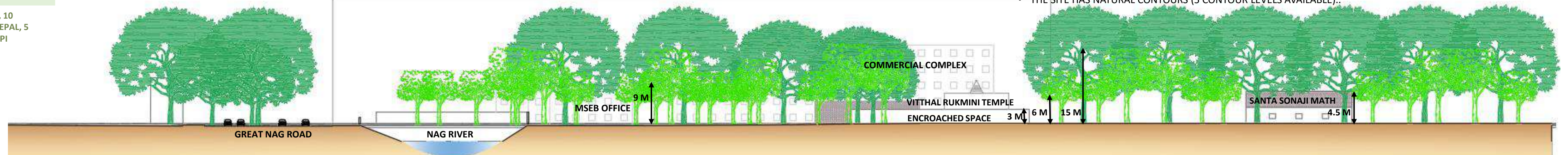
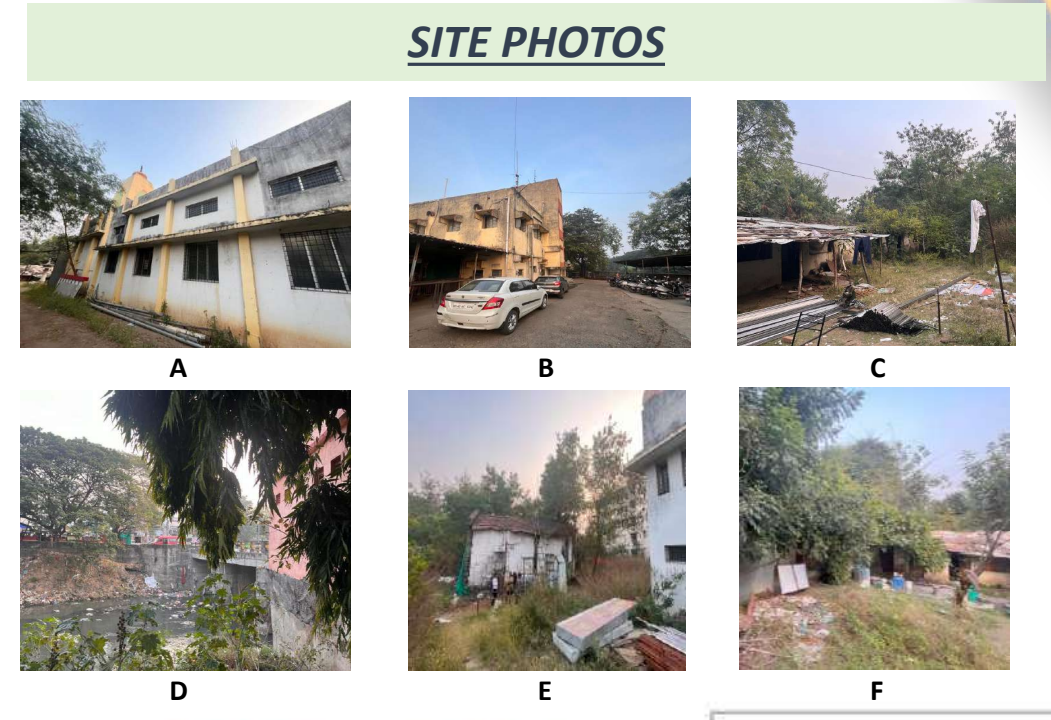
DEVELOPMENT PLAN - NAGPUR (2000)



SITE AND SURROUNDINGS

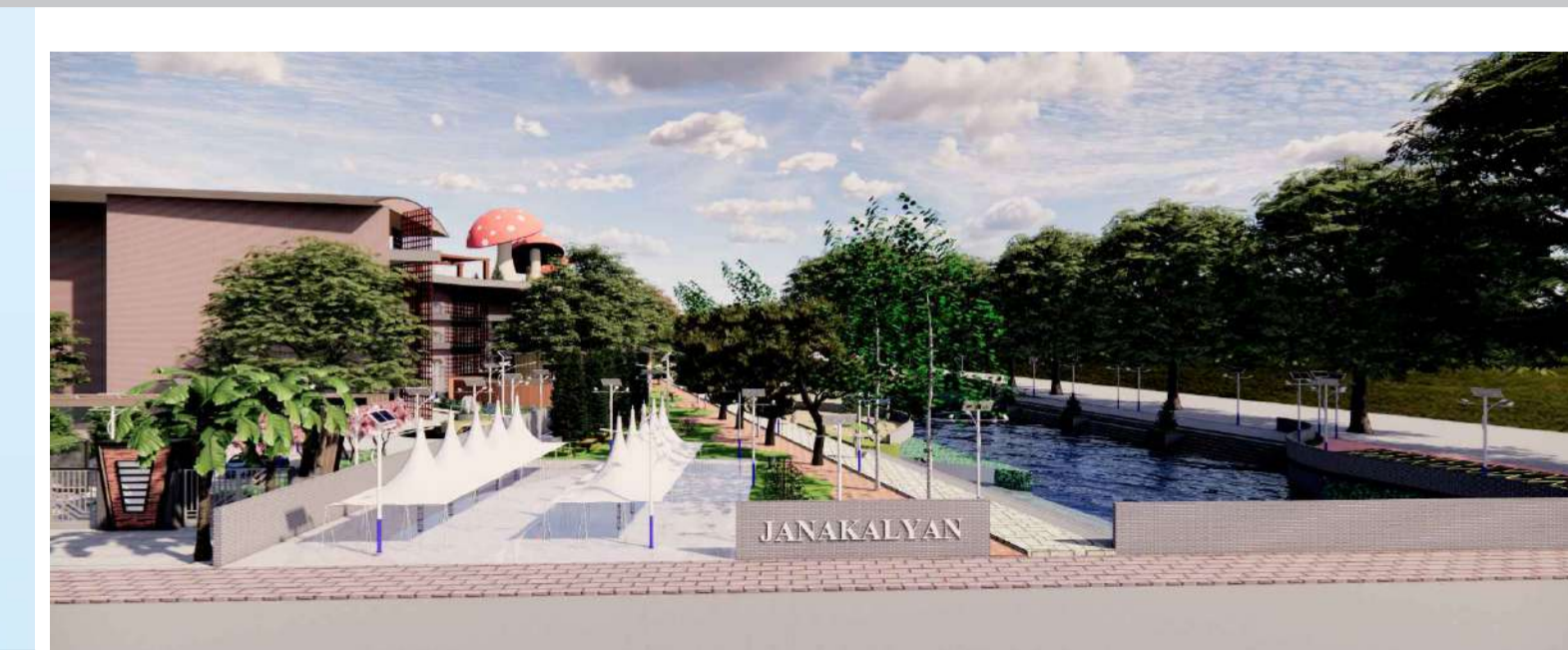
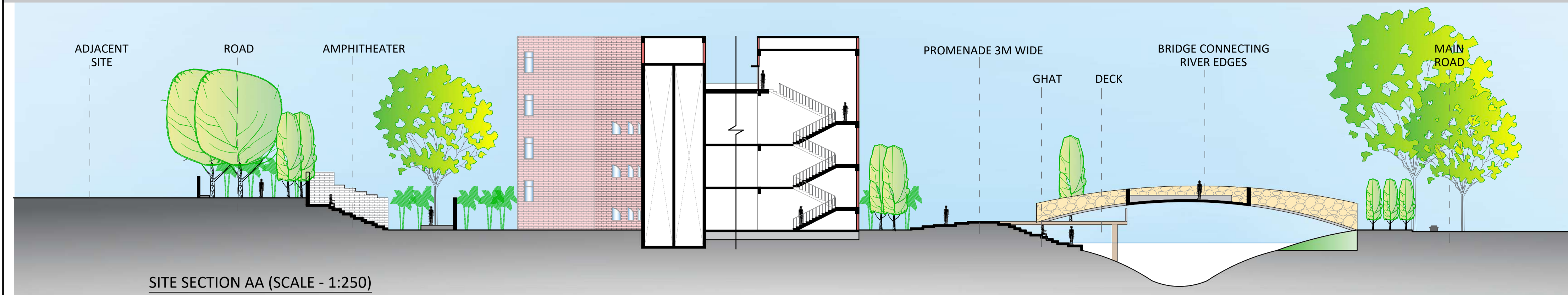


- ### STRENGTH
- NATURAL FEATURE : THE RIVER FORMS AN EXCELLENT OPPORTUNITY TO PROVIDE FOR AN ACTIVE PUBLIC PLACE.
 - THE SITE HAS MSEB OFFICE AND IS NEAR TO TEMPLES AND INSTITUTIONAL BUILDINGS MAKING THIS A VERY ACTIVE AREA.
 - POTENTIAL FOR PEDESTRIAN CONNECTIONS AND WALKING.
 - CONSERVING RIVER MANGROOVES - WHITE CHIPPI WOULD HELP IN FLOOD MITIGATION AND REDUCING RIVER POLLUTION
- ### WEAKNESS
- THE RIVERFRONT IS POORLY CONNECTED IN TERMS OF PEDESTRIAN LINKS, FUNCTIONS, VIEWS AND VISTAS.
 - THE POOR PUBLIC SPACES AND THE OFFICE / INSTITUTION FOCUSED ACTIVITIES IN THIS AREA CAUSE .
 - FRAGILE USER PATTERNS.
 - LACK OF PUBLIC LIFE AND PUBLIC SPACES.
- ### OPPORTUNITIES
- THERE ARE SEVERAL HISTORICAL AND CULTURALLY SIGNIFICANT MONUMENTS IN CLOSE PROXIMITY TO THE SITE.
 - DENSE PLANTATION.
- ### THREATS
- THE OPEN SPACE HAS LOST ITS IMPORTANT ROLE AS A PREFERRED MEETING PLACE.
 - LACK OF SAFETY.

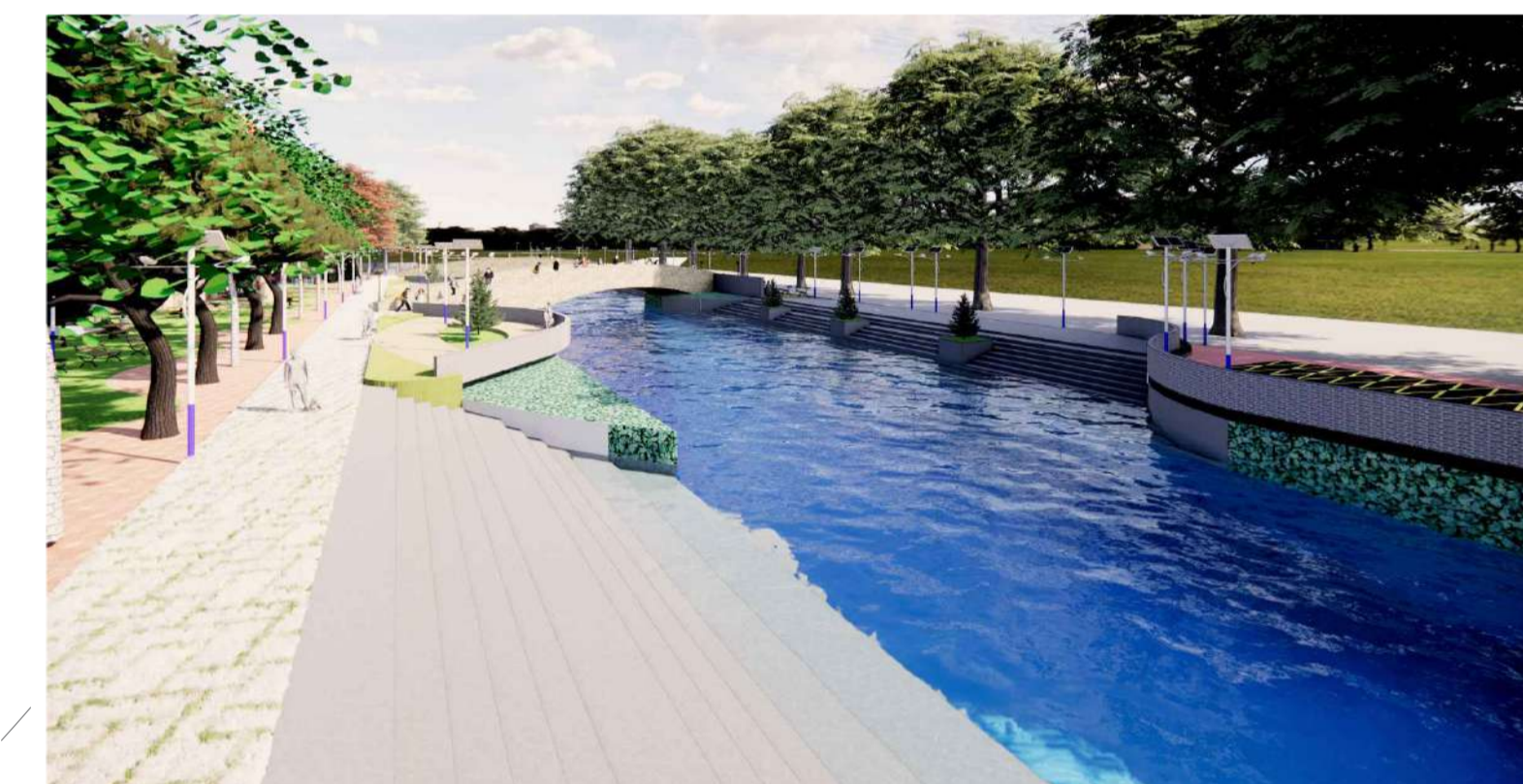
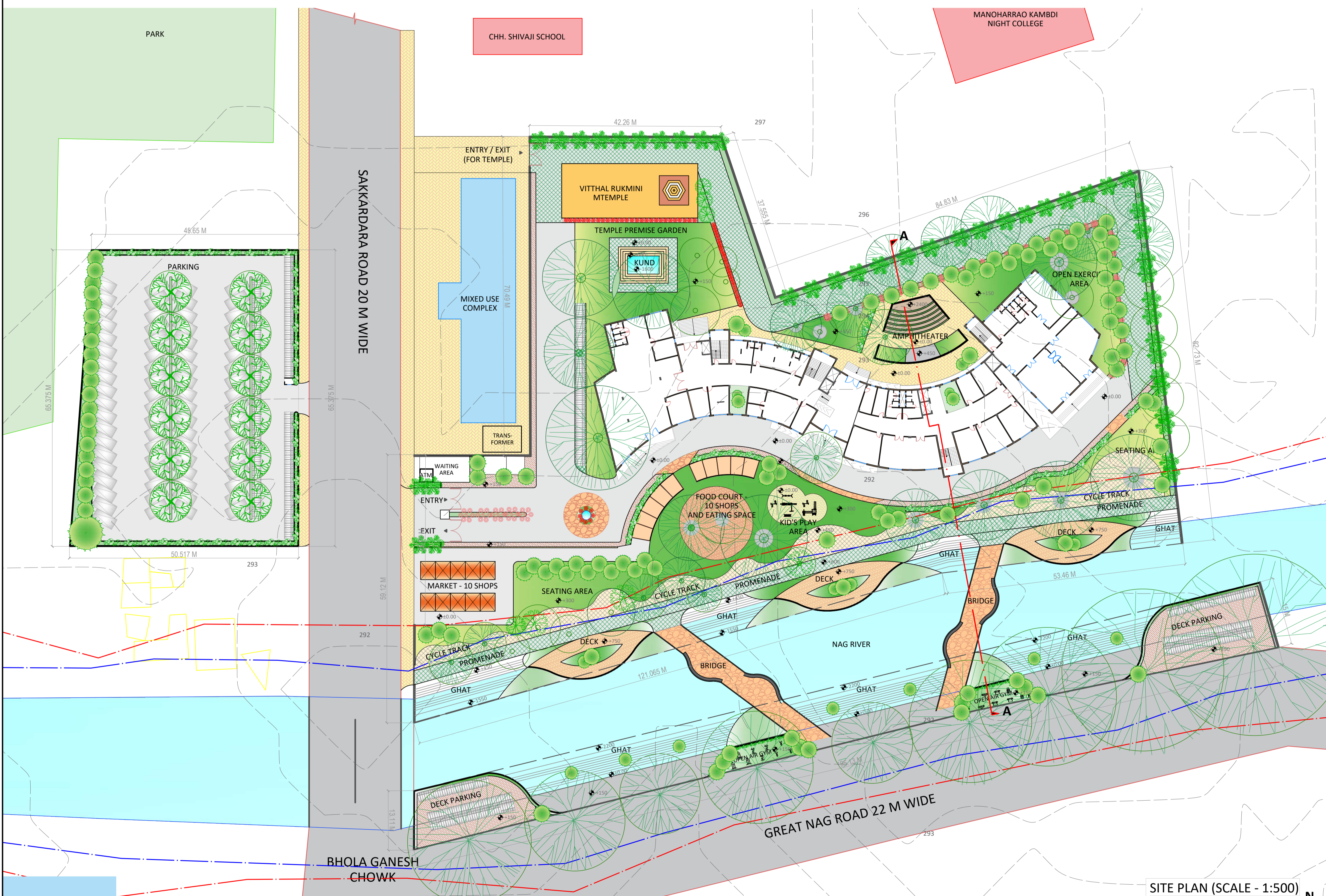


12. JANAKALYAN - REVITALISATION ON THE BANKS OF NAG RIVER, NAGPUR - BRIDGING THE GAP WITH NATURE

SITE PLAN WITH GROUND FLOOR PLAN



MAIN ENTRANCE, WAITING AREA, ATM & MARKET PLACE



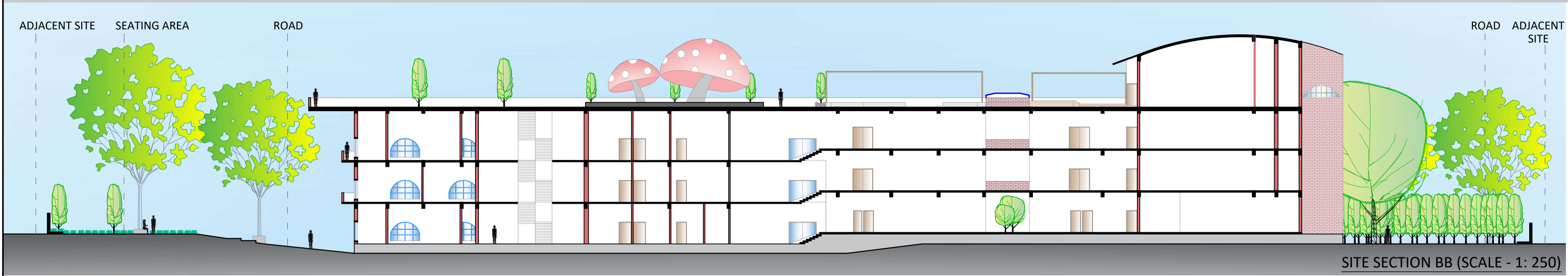
GHATS, BRIDGES CONNECTING EDGES OF RIVER, VIEWING DECK & DECK PARKING



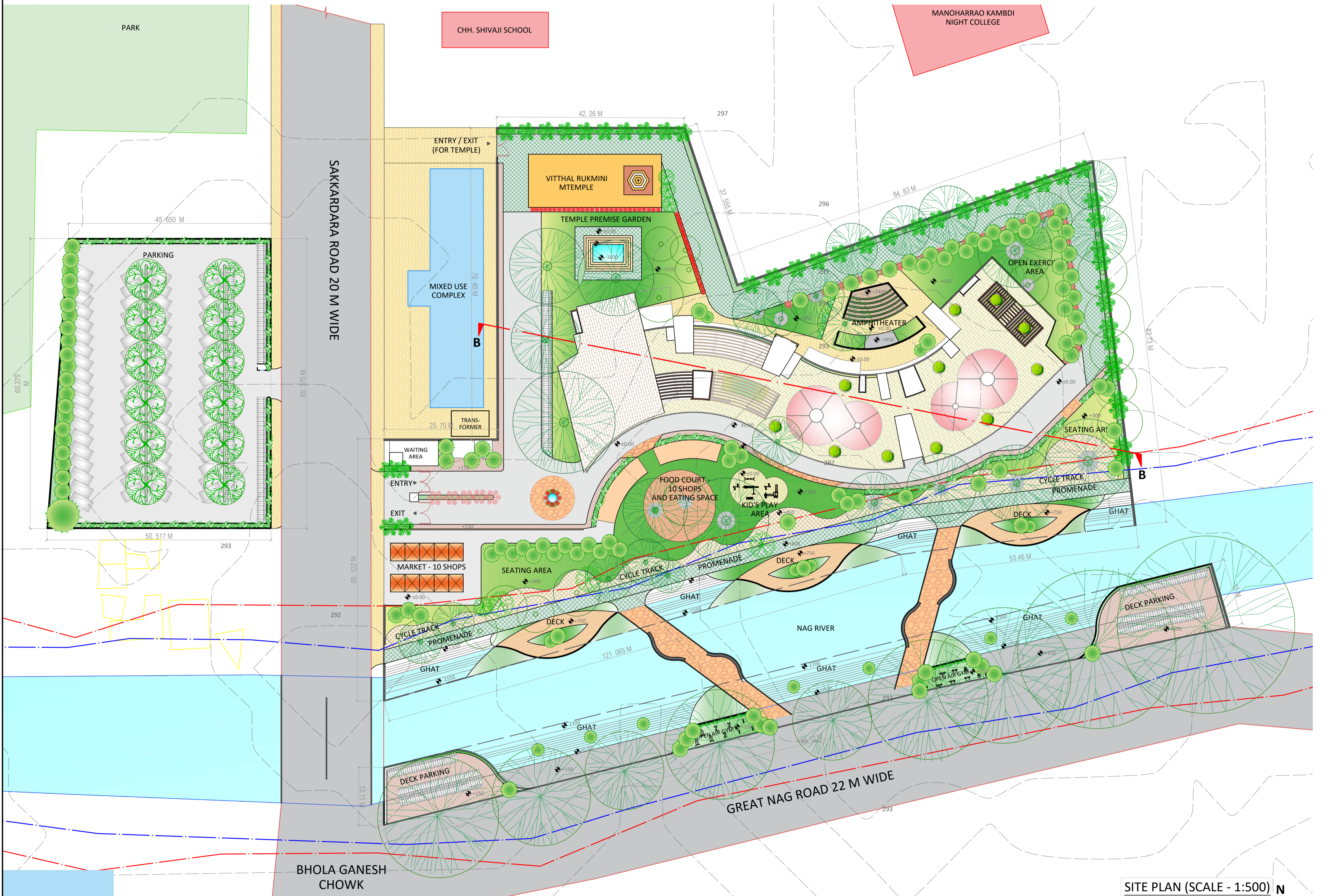
ACTIVITIES AT GHAT

14. JANAKALYAN – REVITALISATION ON THE BANKS OF NAG RIVER, NAGPUR - BRIDGING THE GAP WITH NATURE

SITE PLAN WITH ROOF PLAN



TEMPLE & LOTUS KUND



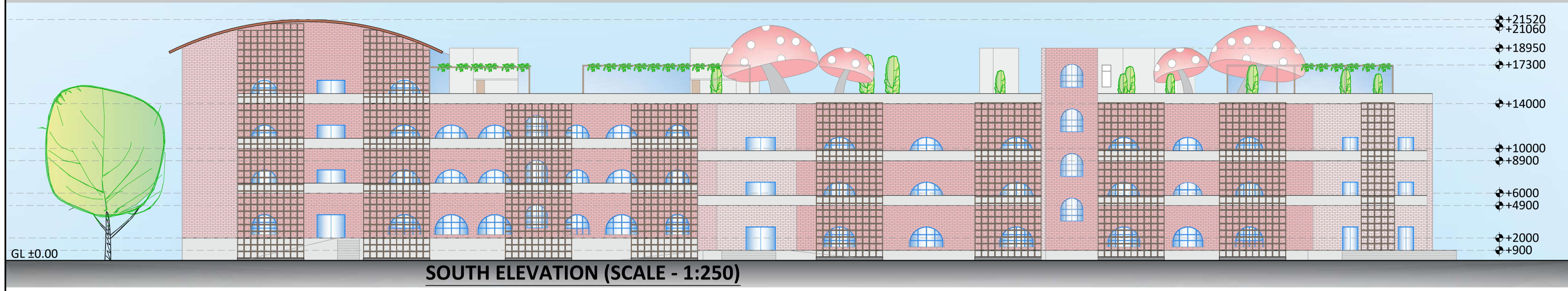
FOOD COURT - HUT STYLE



KID'S PLAY AREA

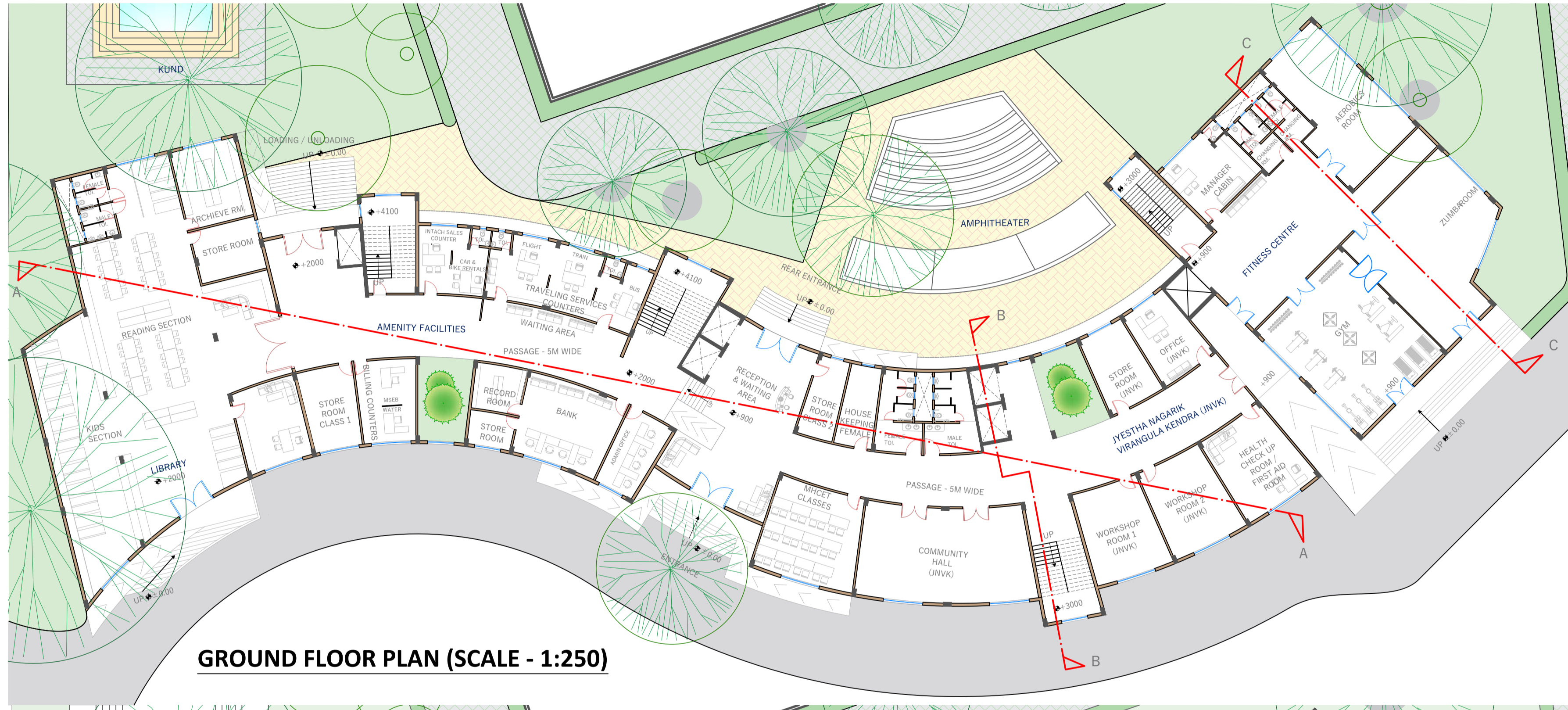
15. JANAKALYAN – REVITALISATION ON THE BANKS OF NAG RIVER, NAGPUR - BRIDGING THE GAP WITH NATURE

FLOOR PLANS, SECTIONS & ELEVATION



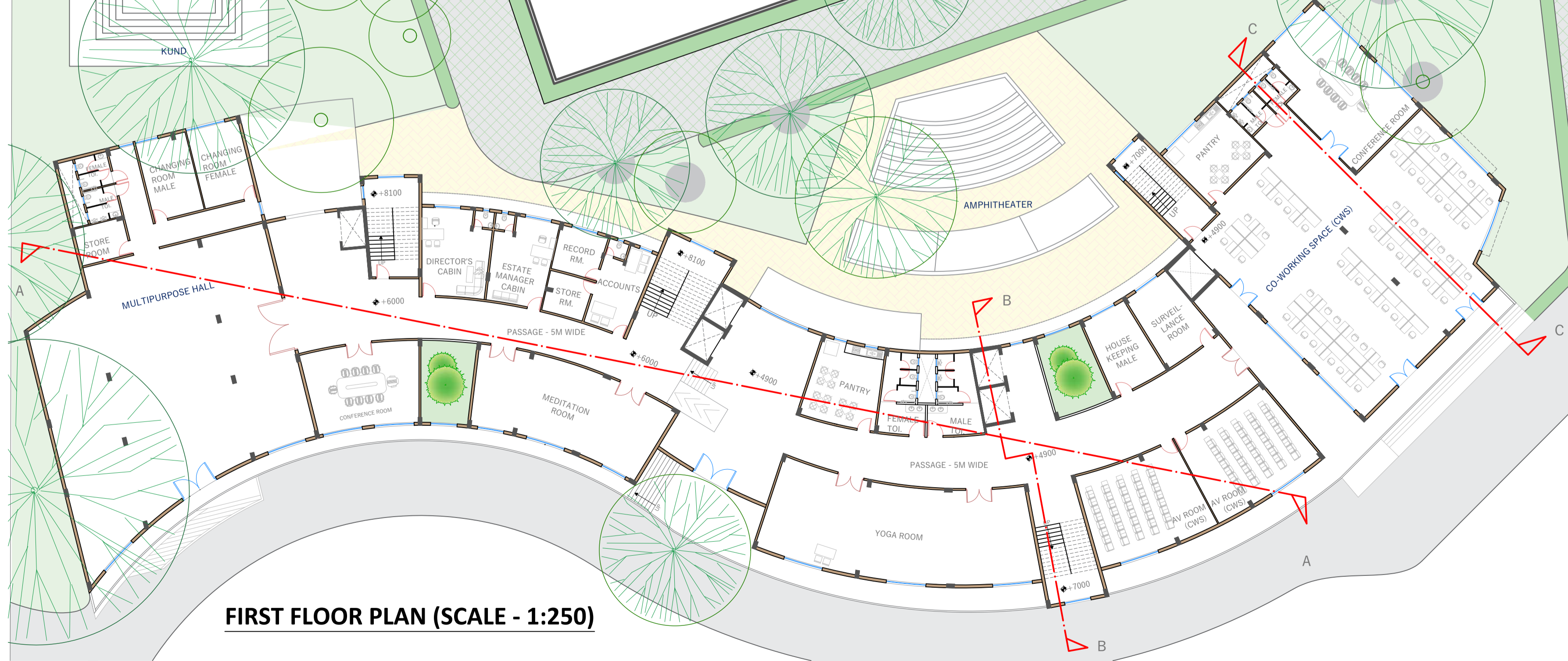
SOUTH ELEVATION (SCALE - 1:250)

LEGENDS - GROUND FLOOR		
NO.	SPACE	AREA
A LIBRARY		
	READING SECTION	19.2 X 21.0
	LIBRARIAN'S CABIN	5.0 X 6.2
	STORE ROOM	5.0 X 4.0
	ACHIEVE ROOM	5.0 X 6.0
B ADMIN		
	RECEPTION AND WAITING AREA	
	ADMIN OFFICE	3.8 X 6.0
	STORE ROOM CLASS 1	4.2 X 6.0
	STORE ROOM CLASS 2	2.8 X 6.0
	HOUSEKEEPING FEMALE	2.8 X 6.0
C AMENITY FACILITIES		
	TRAVELING SERVICE COUNTER - FLIGHT, TRAIN BUS	12.0 X 5.0
	BILLING COUNTERS - MSEB WATER	4.2 X 6.0
	HITCH SALES COUNTER & CAR BIKE RENTALS	5.2 X 5.0
	BANK	7.2 X 6.0
	RECORD ROOM & STORE ROOM	3.8 X 3.4
	MHCET CLASS	7.2 X 7.0
D JYESHTHA NAGARIK VIRANGULA KENDRA		
	OFFICE	4.4 X 6.0
	STORE ROOM	4.4 X 6.0
	COMMUNITY HALL	12.7 X 7.0
	WORKSHOP ROOM 1 & 2	5.0 X 7.0
	HEALTH CHECK UP ROOM /FIRST AID ROOM	5.0 X 7.0
E FITNESS CENTER		
	MANAGER CABIN	5.7 X 5.2
	GYM	9.2 X 11.2
	ZUMBA	10.0 X 11.2
	AEROBICS	10.0 X 8.8
	CHANGING ROOMS	2.4 X 2.0



GROUND FLOOR PLAN (SCALE - 1:250)

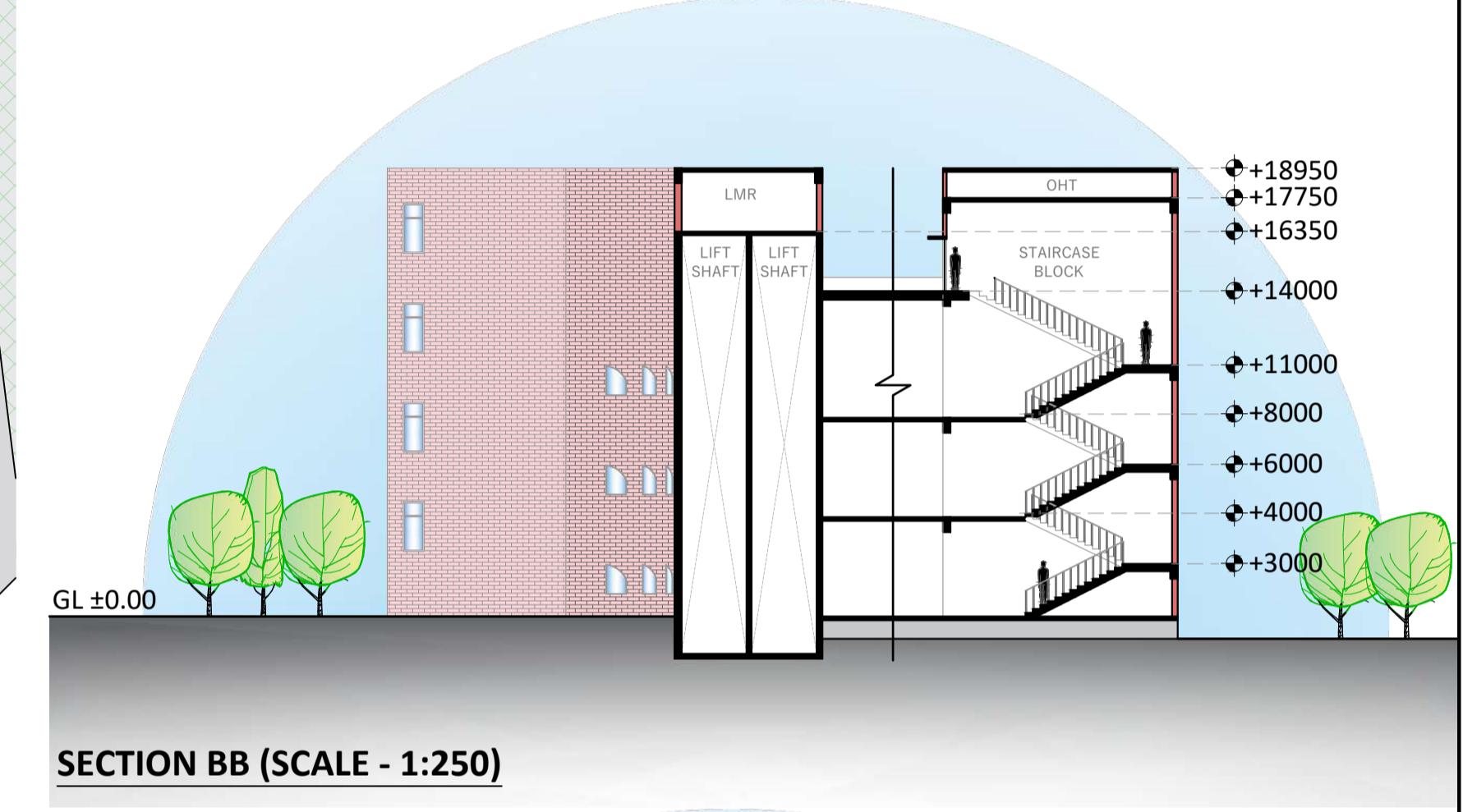
LEGENDS - FIRST FLOOR		
NO.	SPACE	AREA
F MULTIPURPOSE HALL		
	HALL	19.2 X 17.4
	CHANGING ROOMS	3.8 X 6.0
	STORE ROOM	3.8 X 2.8
G ADMIN		
	DIRECTOR'S CABIN	5.4 X 6.5
	ESTATE MANAGER CABIN	4.8 X 6.5
	CONFERENCE ROOM	9.0 X 6.0
	ACCOUNTS	3.7 X 6.5
	RECORD ROOM & STORE ROOM	3.6 X 3.3
	PANTRY & EATING AREA	4.7 X 6.0
	HOUSEKEEPING MALE	4.4 X 6.0
	SURVEILLANCE ROOM	4.4 X 6.0
H FITNESS CENTER		
	YOGA ROOM	20.0 X 7.0
	MEDITATION ROOM	16.0 X 6.0
I CO-WORKING SPACE		
	WORKING SPACE	19.6 X 19.3
	CONFERENCE ROOM	10.0 X 8.8
	AV ROOMS	8.3 X 7.0
	PANTRY & EATING AREA	4.7 X 6.0



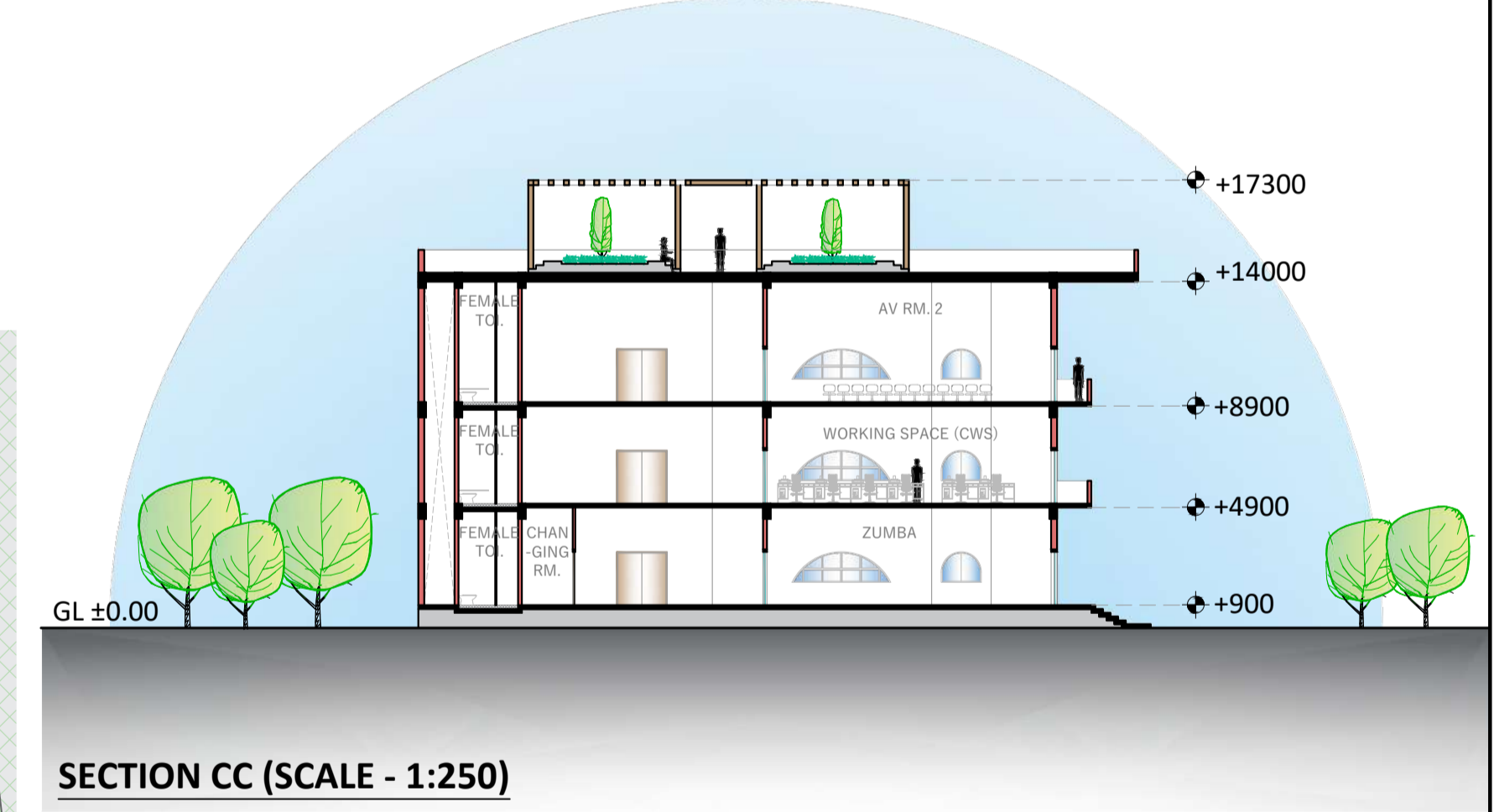
FIRST FLOOR PLAN (SCALE - 1:250)



BIRD'S EYE VIEW FROM WEST SIDE



SECTION BB (SCALE - 1:250)



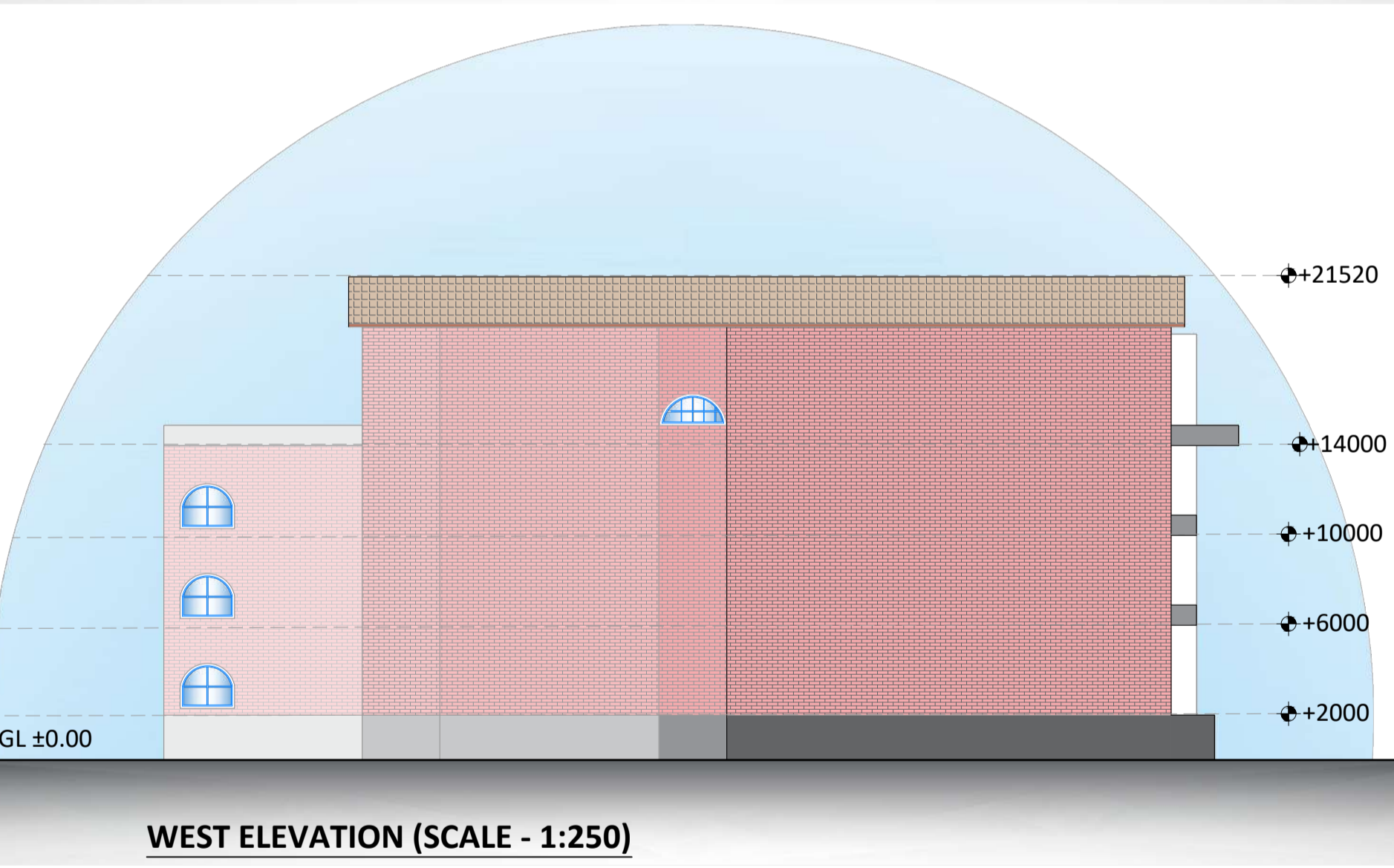
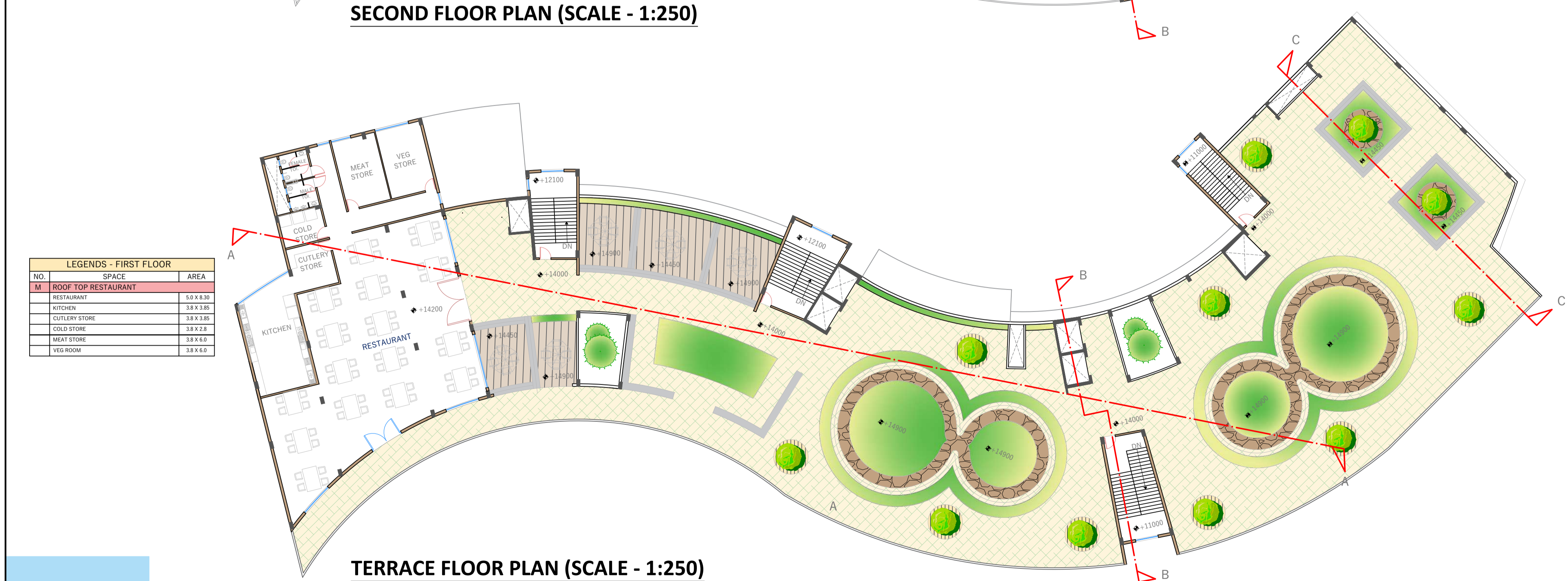
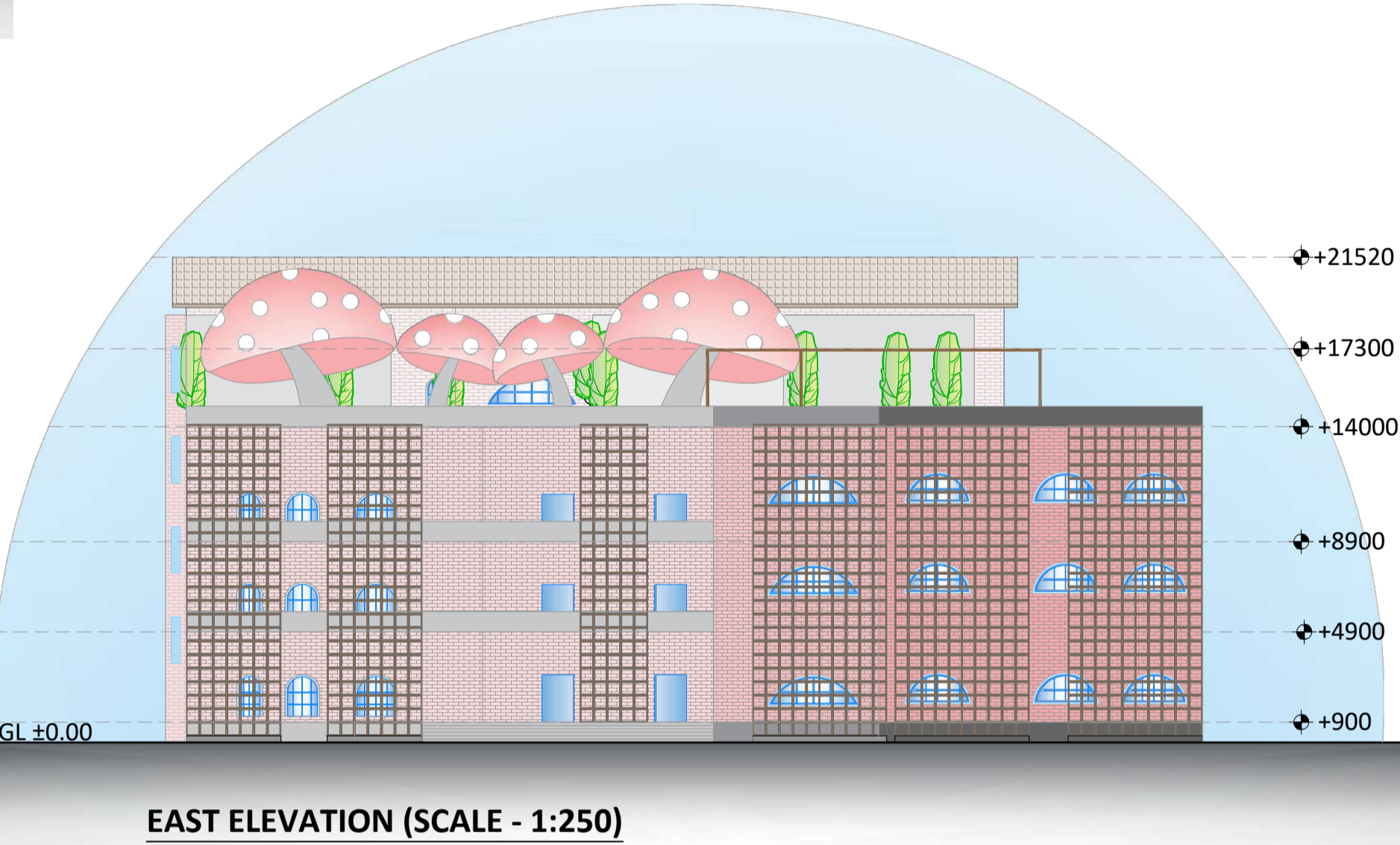
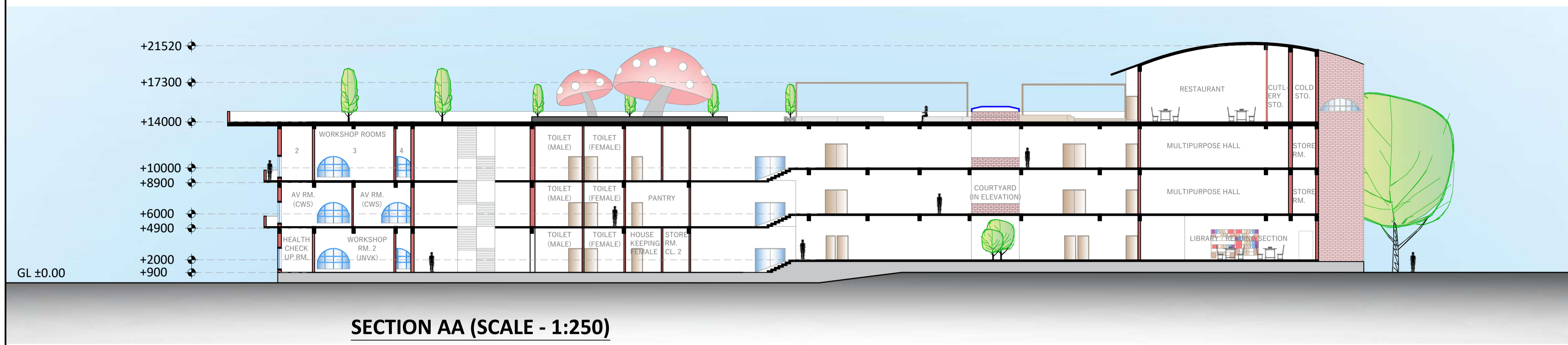
SECTION CC (SCALE - 1:250)



BIRD'S EYE VIEW FROM EAST SIDE

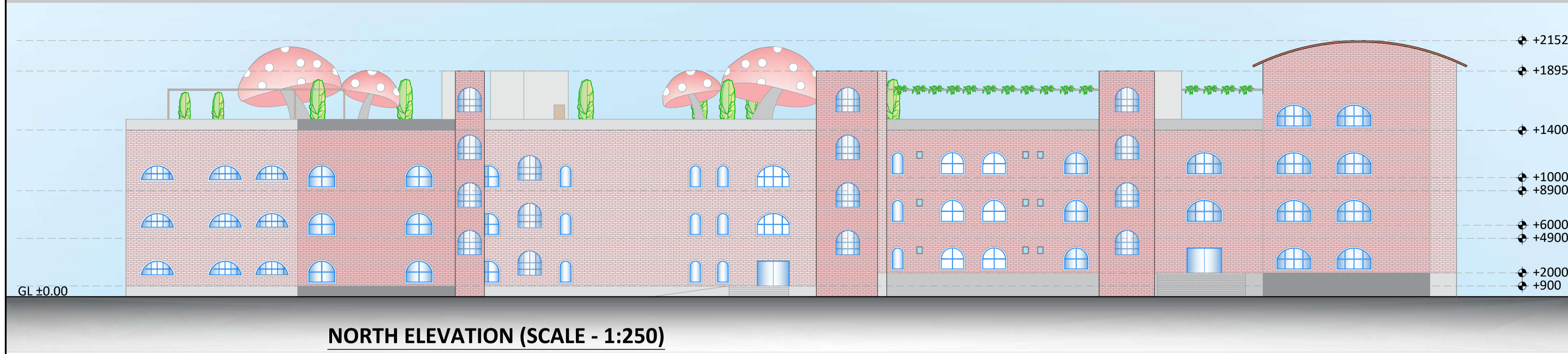
16. JANAKALYAN – REVITALISATION ON THE BANKS OF NAG RIVER, NAGPUR - BRIDGING THE GAP WITH NATURE

FLOOR PLANS, SECTION & ELEVATIONS

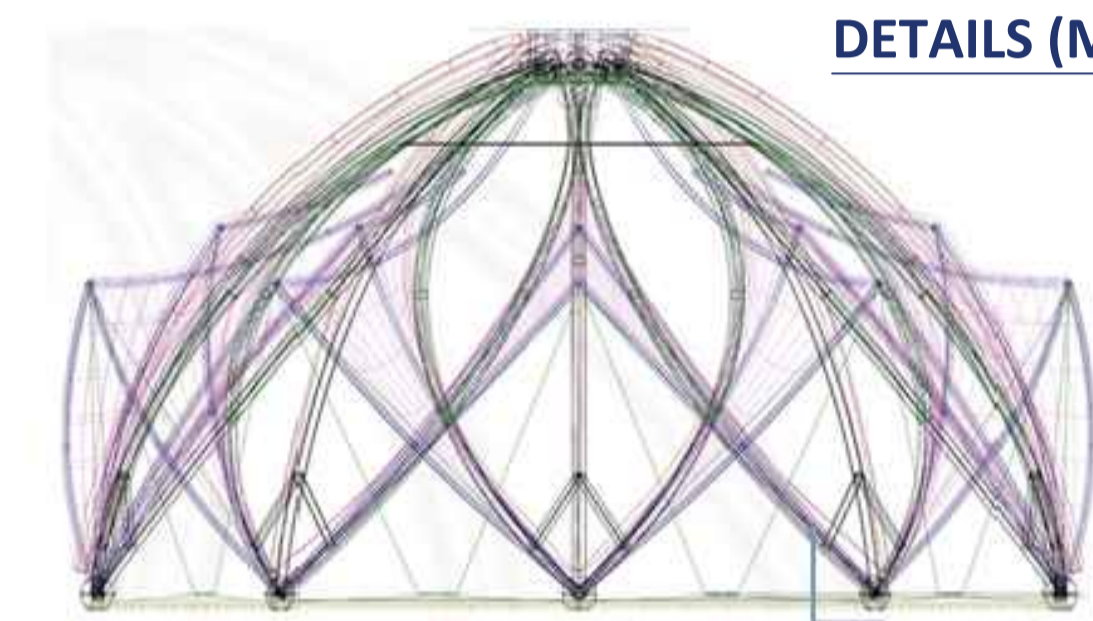


17. JANAKALYAN – REVITALISATION ON THE BANKS OF NAG RIVER, NAGPUR - BRIDGING THE GAP WITH NATURE

FLOOR PLANS, STRUCTURAL LAYOUT, ELEVATION & DETAILS



MUSHROOM - SHADING STRUCTURE



DETAILS (MATERIAL EXPLORATION)

FRP (FIBER REINFORCED POLYMER) BARS

ADVANTAGES

1. EXCEPTIONAL TENSILE STRENGTH
2. LIGHT WEIGHT & DURABLE
3. IMPACT RESISTANT
4. CAN RETAIN THEIR SHAPE
5. EASY TO INSTALL
6. LOW MAINTENANCE



3D PRINTED THERMOPLASTIC FORMWORK

ADVANTAGES

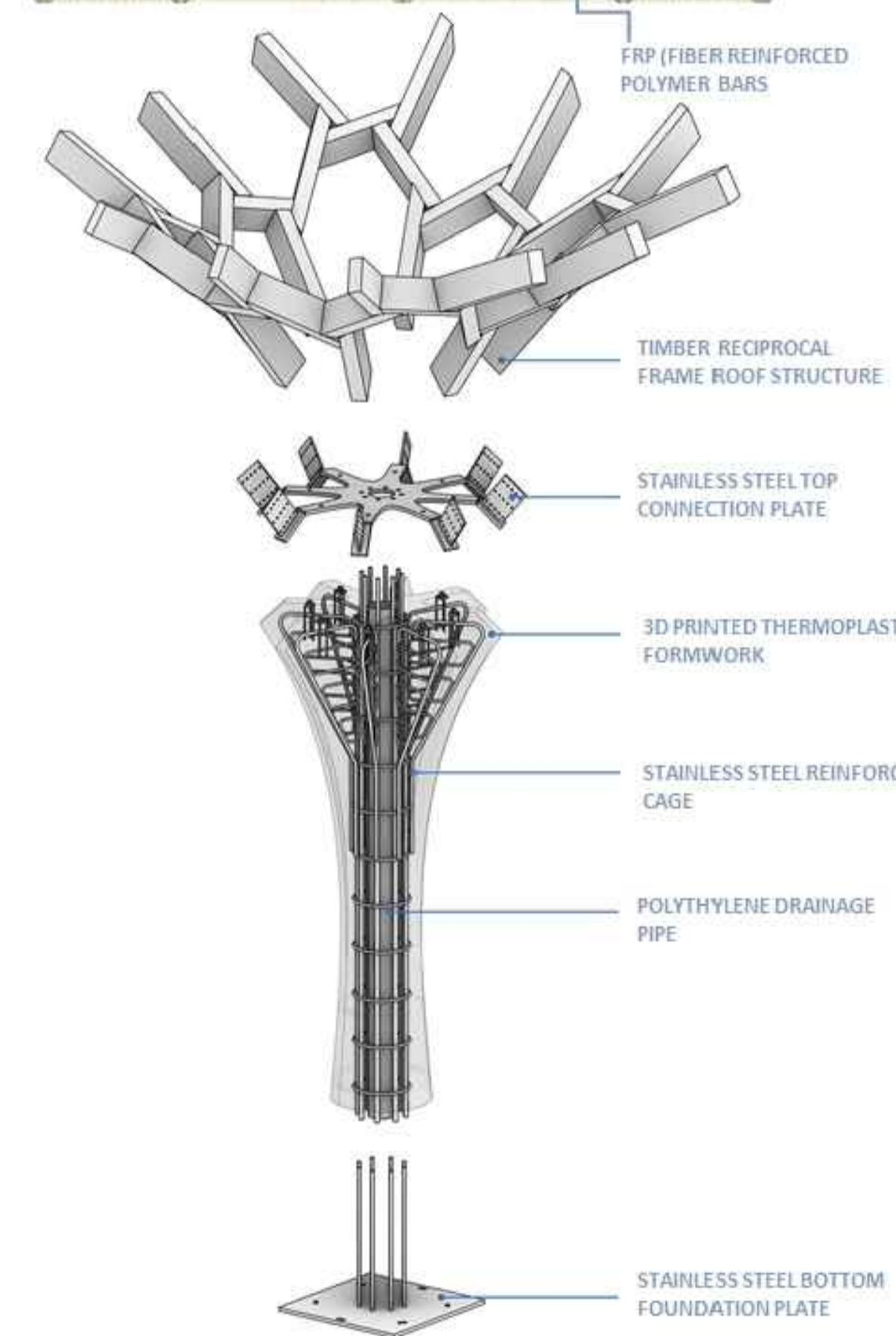
1. SPEEDY CONSTRUCTION
2. DESIGN FLEXIBILITY
3. ENHANCED STRUCTURAL STRENGTH
4. ABILITY FOR ON-SITE REPAIR AND MAINTENANCE



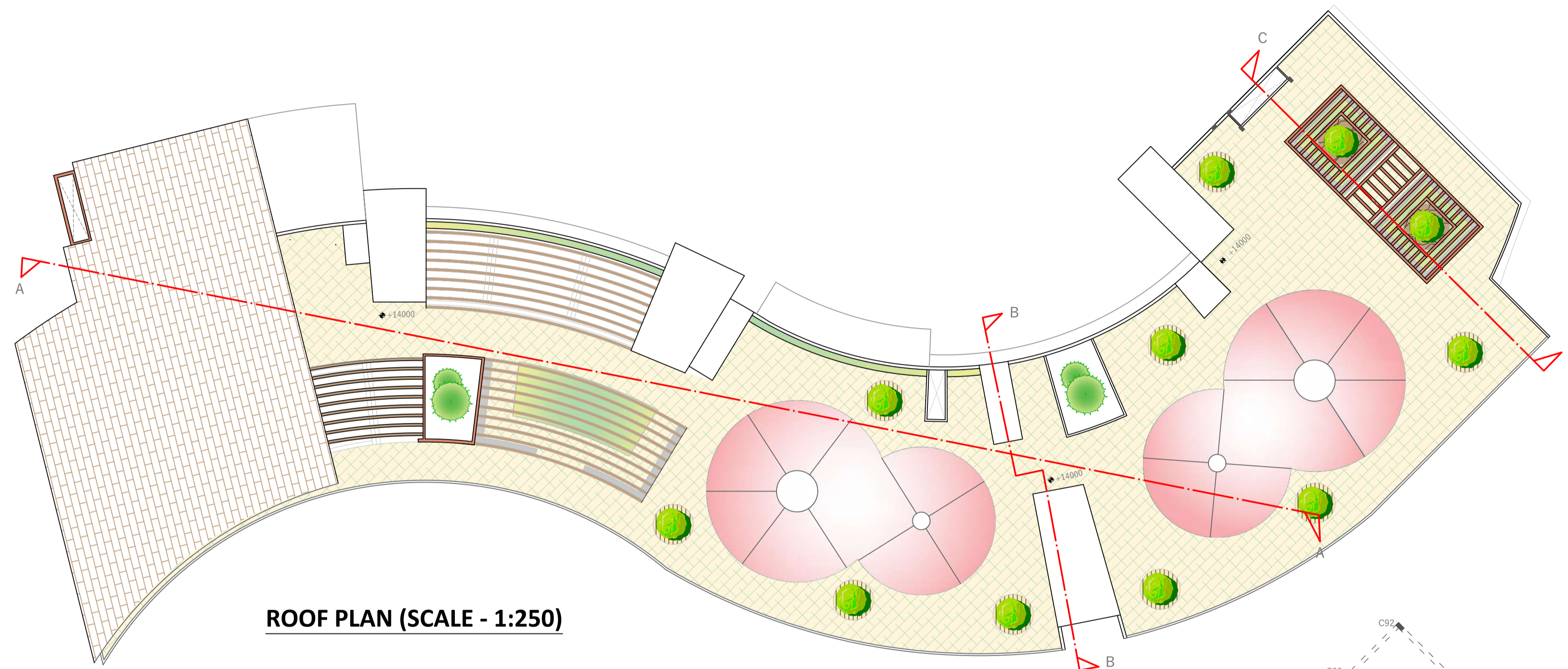
HDPE - FOR COVERING OF (HIGH DENSITY POLYETHYLENE)

ADVANTAGES

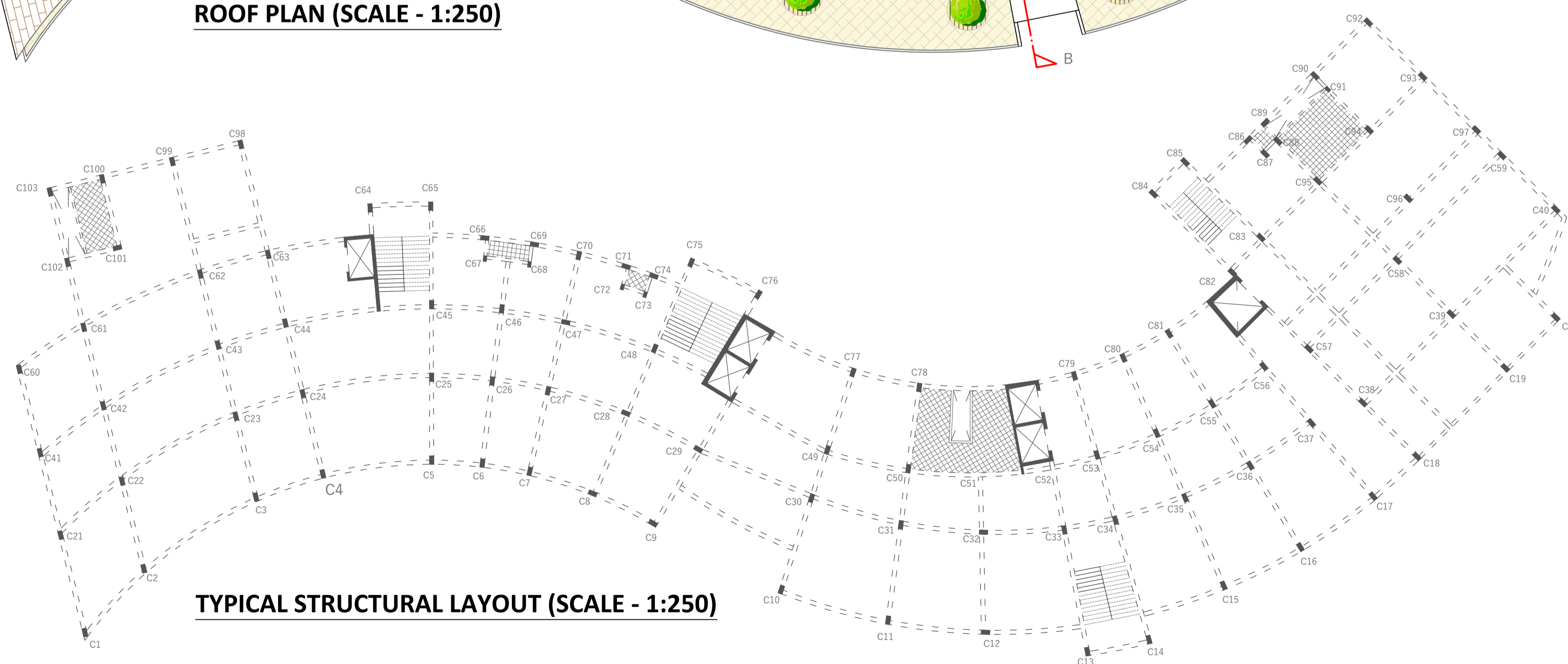
1. LOW COST
2. IMPACT RESISTANT FROM -40° C TO 90° C
3. MOISTURE RESISTANCE
4. GOOD CHEMICAL RESISTANCE
5. READILY PROCESSED BY ALL THERMOPLASTIC METHODS



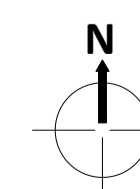
STRUCTURAL DETAIL FOR MUSHROOM SHADING



ROOF PLAN (SCALE - 1:250)



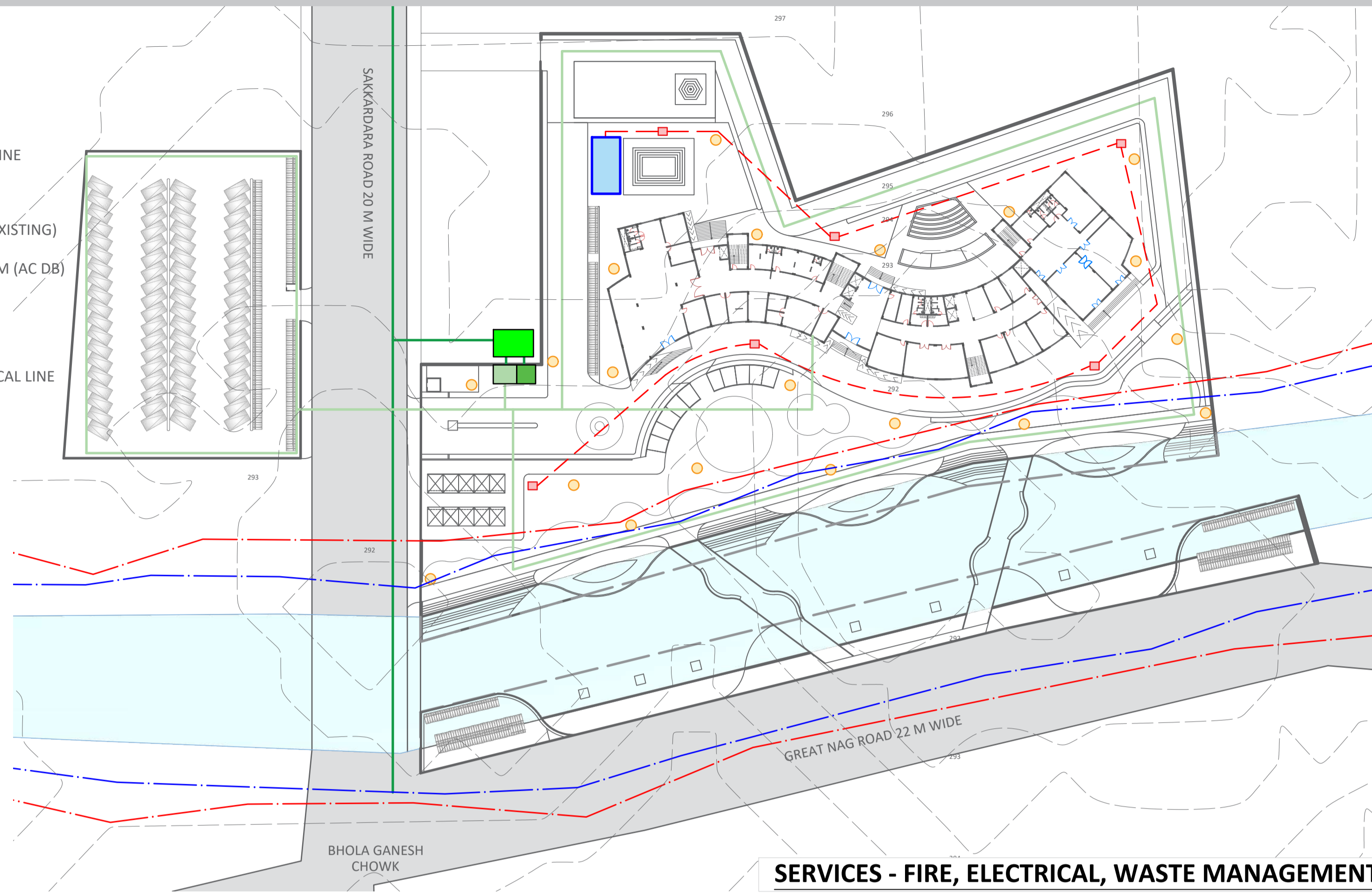
TYPICAL STRUCTURAL LAYOUT (SCALE - 1:250)



SERVICE LAYOUT & DETAILS

LEGENDS:

- FIRE EMERGENCY**
- FIRE HYDRANT
 - FIRE WATER PIPELINE
- ELECTRICAL SERVICE**
- TRANSFORMER (EXISTING)
 - GENERATOR ROOM (AC DB)
 - METER ROOM
 - ELECTRICAL MAIN
 - PRIMARY ELECTRICAL LINE
- WASTE MANAGEMENT**
- GARBAGE BIN

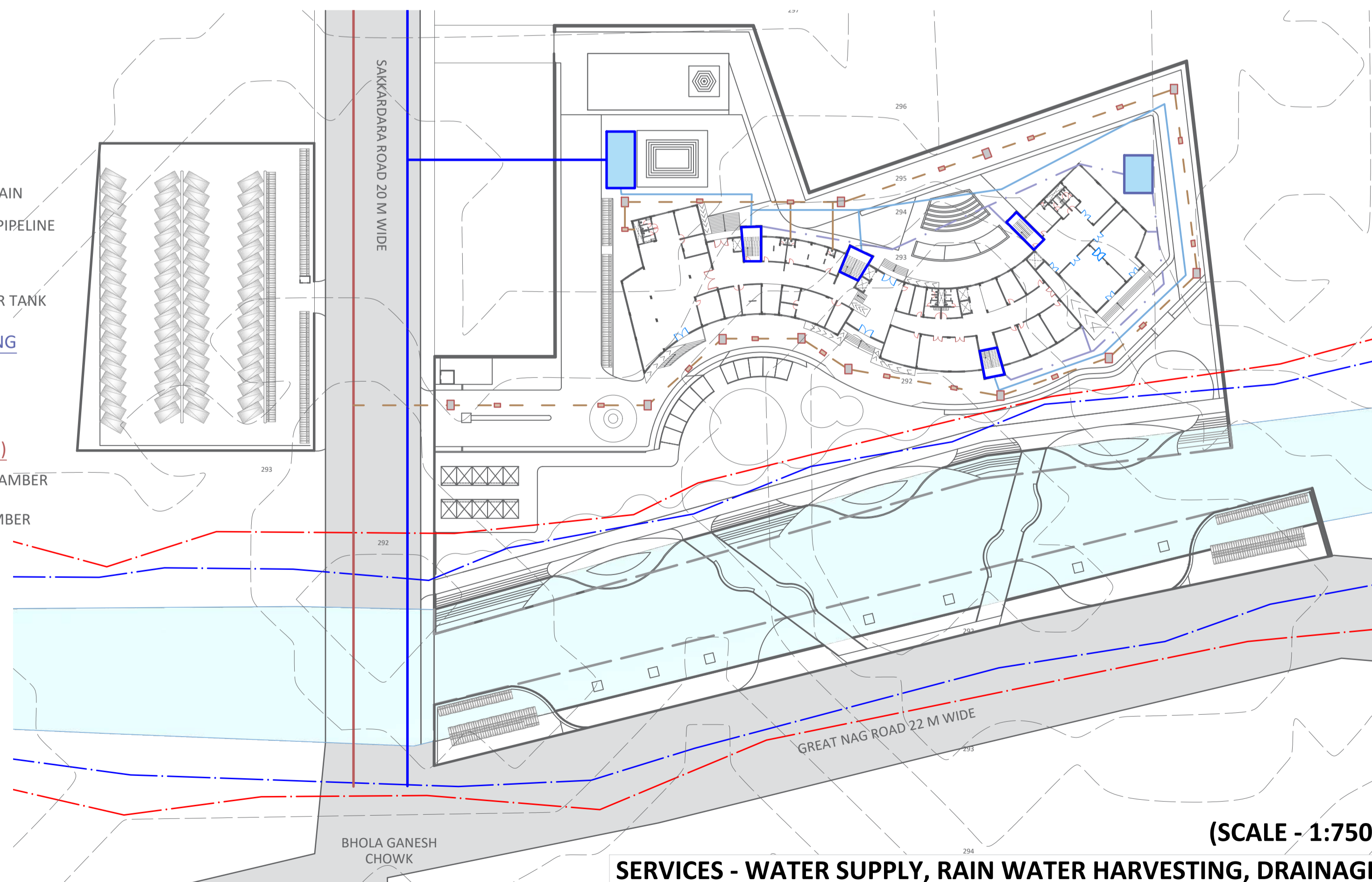


SERVICES - FIRE, ELECTRICAL, WASTE MANAGEMENT

(SCALE - 1:750)

LEGENDS:

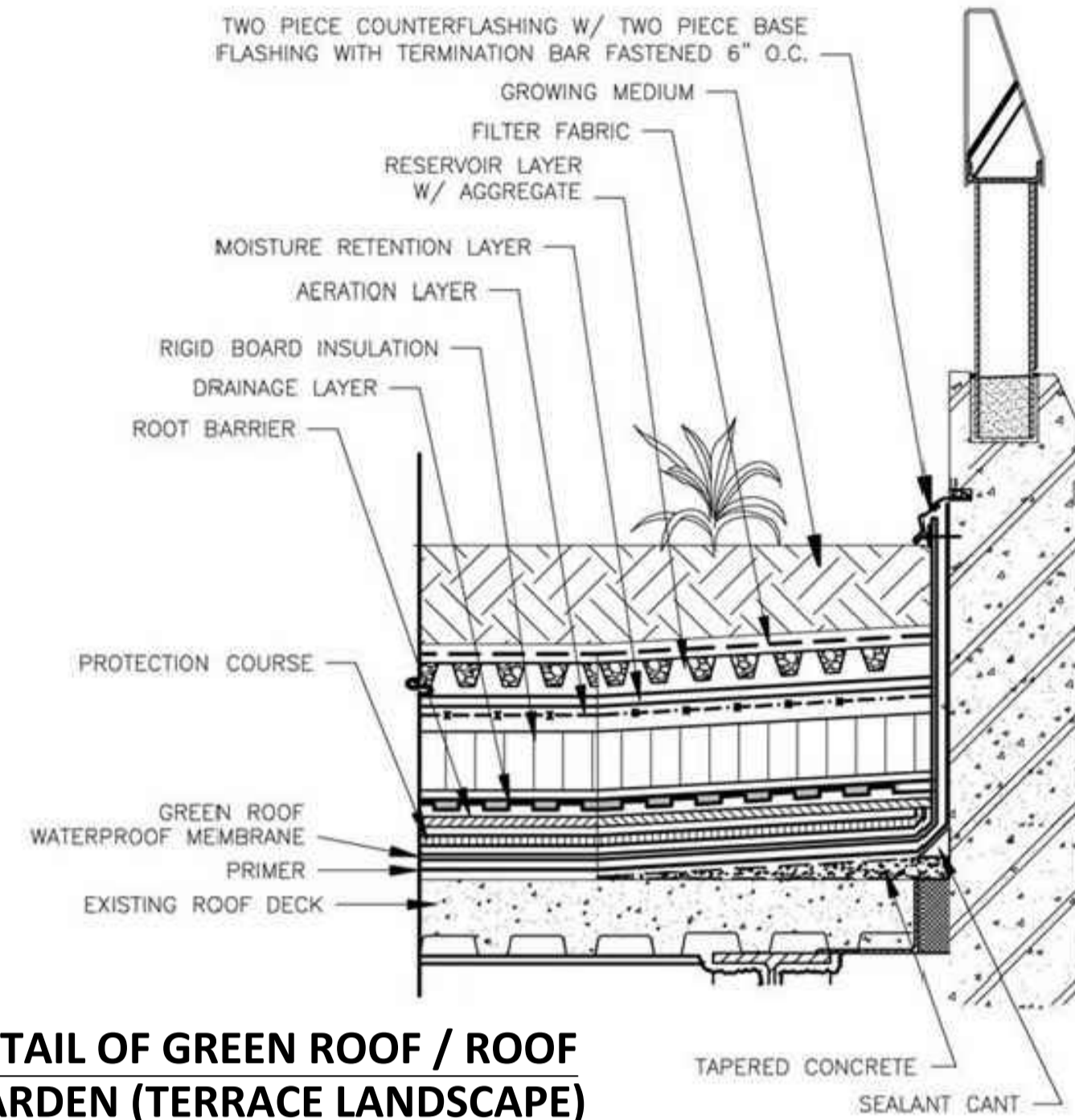
- WATER SUPPLY**
- UGWT
 - WATER SUPPLY MAIN
 - PRIMARY WATER PIPELINE
 - FIRE TANK
 - OVERHEAD WATER TANK
- RAIN WATER HARVESTING**
- RWH TANK
 - WATER PIPELINE
- DRAINAGE (SANITATION)**
- INTERCEPTING CHAMBER
 - INSPECTION CHAMBER
 - DRAINAGE MAIN
 - DRAINAGE LINE



SERVICES - WATER SUPPLY, RAIN WATER HARVESTING, DRAINAGE

(SCALE - 1:750)

DETAILS (MATERIAL EXPLORATION)



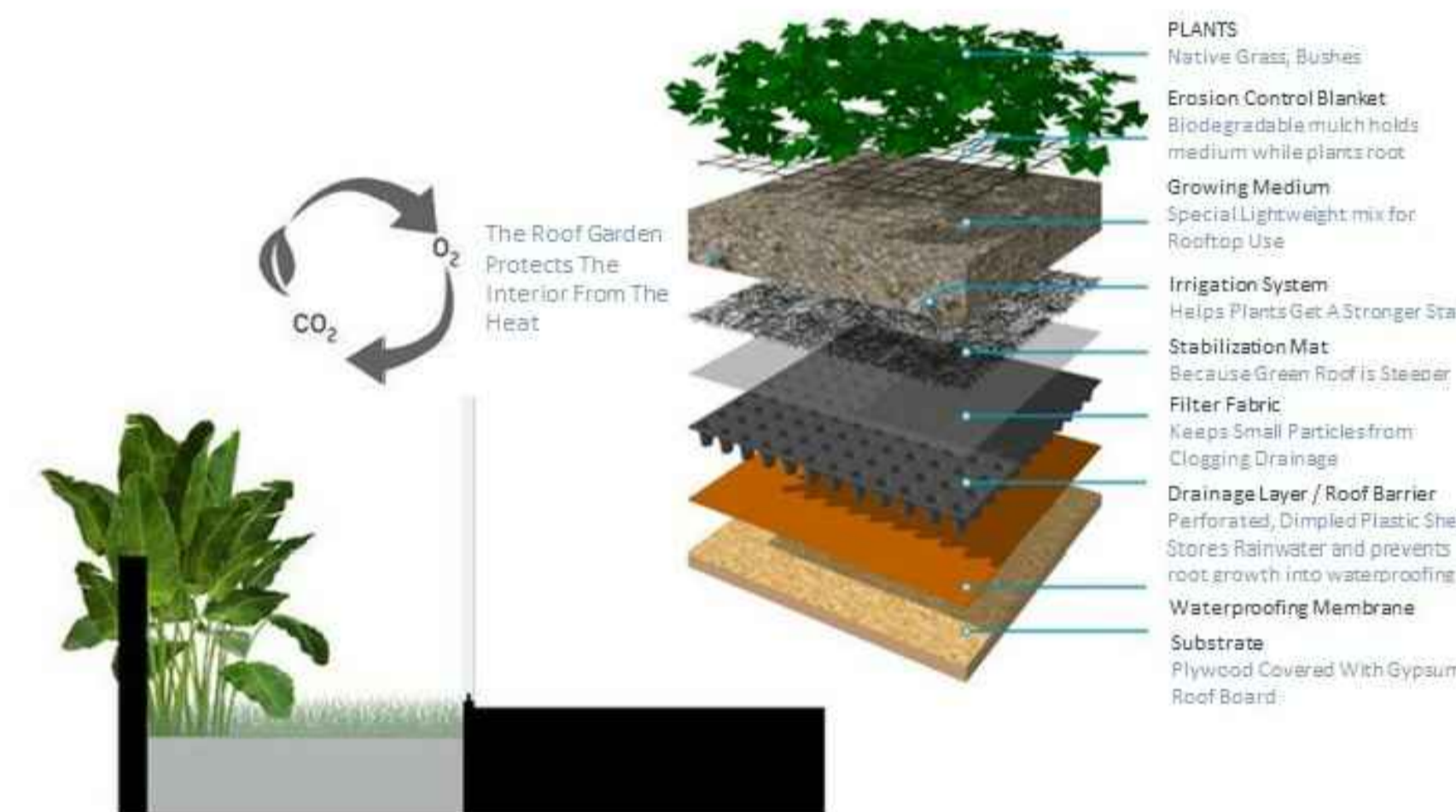
GREEN ROOF

A GREEN ROOF OR LIVING ROOF IS A ROOF OF A BUILDING THAT IS PARTIALLY OR COMPLETELY COVERED WITH VEGETATION AND A GROWING MEDIUM, PLANTED OVER A WATERPROOFING MEMBRANE.

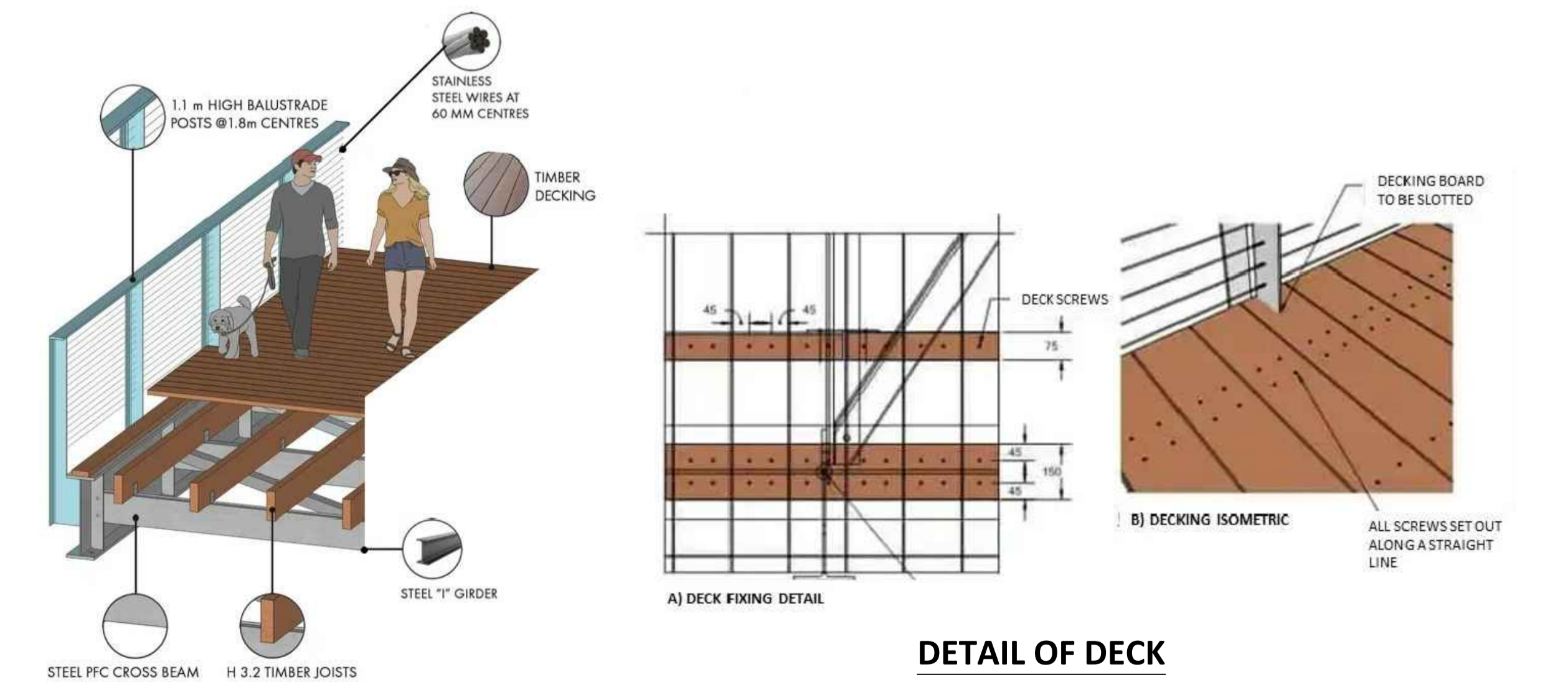
GENERALLY HAVE 5 LAYERS

1. A **ROOT BARRIER** PREVENTS ROOTS FROM PENETRATING INTO THE BUILDING.
2. A **PROTECTION MAT** HELPS TO MINIMIZE PUNCTURES.
3. THE **DRAINAGE LAYER** ALLOWS HEAVY RAIN TO RUN OFF TO A PERIMETER DRAIN YET STILL REMAINS MOISTURE FOR DRY PERIODS. A **FILTER SHEET** STOPS FINE PARTICLES FROM CLOGGING THE DRAINAGE LAYER, AND THE GROWING MEDIUM TYPICALLY ENGINEERED MATERIAL.
5. AND THE **SOIL** PROVIDES NUTRIENTS FOR PLANTS ABOVE.

DETAIL OF GREEN ROOF / ROOF GARDEN (TERRACE LANDSCAPE)



ROOF GARDEN



DETAIL OF DECK

LANDSCAPE DETAILS & VIEWS

SOFT-SCAPE

- EXISTING TREES**
MANGO, BANYAN, IMLI, PEEPAL & BABOOL
- RELOCATED TREES**
SMALL TREES – THOSE WHO HAVE LESS FOLIAGE
- PLANTED TREES & PLANTS**
 - GULMOHAR TREE (DELONIX REGIA)
AESTHETICS & FRAGRANCE
 - ASHOKA TREE (SARACA ASOCA)
 - PALM TREE (ARECACEAE)
 - NEEM TREE (AZADIRACHTA INDICA)
 - CHAMPA TREE (MAGNOLIA CHAMPACA)
AESTHETICS & FRAGRANCE
 - MARIGOLD (TAGETES)
AESTHETICS & FRAGRANCE
 - SHEVANTI (CHRYSANTHEMUM)
AESTHETICS & FRAGRANCE
 - BOXWOOD (BOXUS SEMPERVIREN)

HARD-SCAPE

- GREEN PAVERS**
 - LOW MAINTENANCE
 - RELATIVELY LOW COSTS
 - ESTABLISH A GREEN STREET SCENE
 - GREENERY ENSURES THAT SOME OF THE WATER EVAPORATES WHILE SOME OF IT IS ABSORBED
- BRICK PAVER**
 - LOW MAINTENANCE & DURABLE
 - RELATIVELY LOW COSTS
 - ECO-FRIENDLY
 - NON-SLIPPERY SURFACE
 - SUITABLE FOR AREAS WITH HIGH TRAFFIC
- PORCELIN PAVER BLOCK – FOR TERRACE**
 - LOW MAINTENANCE
 - DURABLE
 - ECO-FRIENDLY & AESTHETICAL
 - WATER RESISTANCE
 - SUITABLE FOR AREAS WITH HIGH TRAFFIC
- DECKING BOARD FOR DECK**
 - DURABLE
 - STRENGTH & SAFETY
 - ECO-FRIENDLY & AESTHETICAL
 - LONG WEARING
 - SUITABLE FOR AREAS WITH HIGH TRAFFIC



MAIN PARKING AREA



VITTHAL RUKMINI TEMPLE WITH KUND



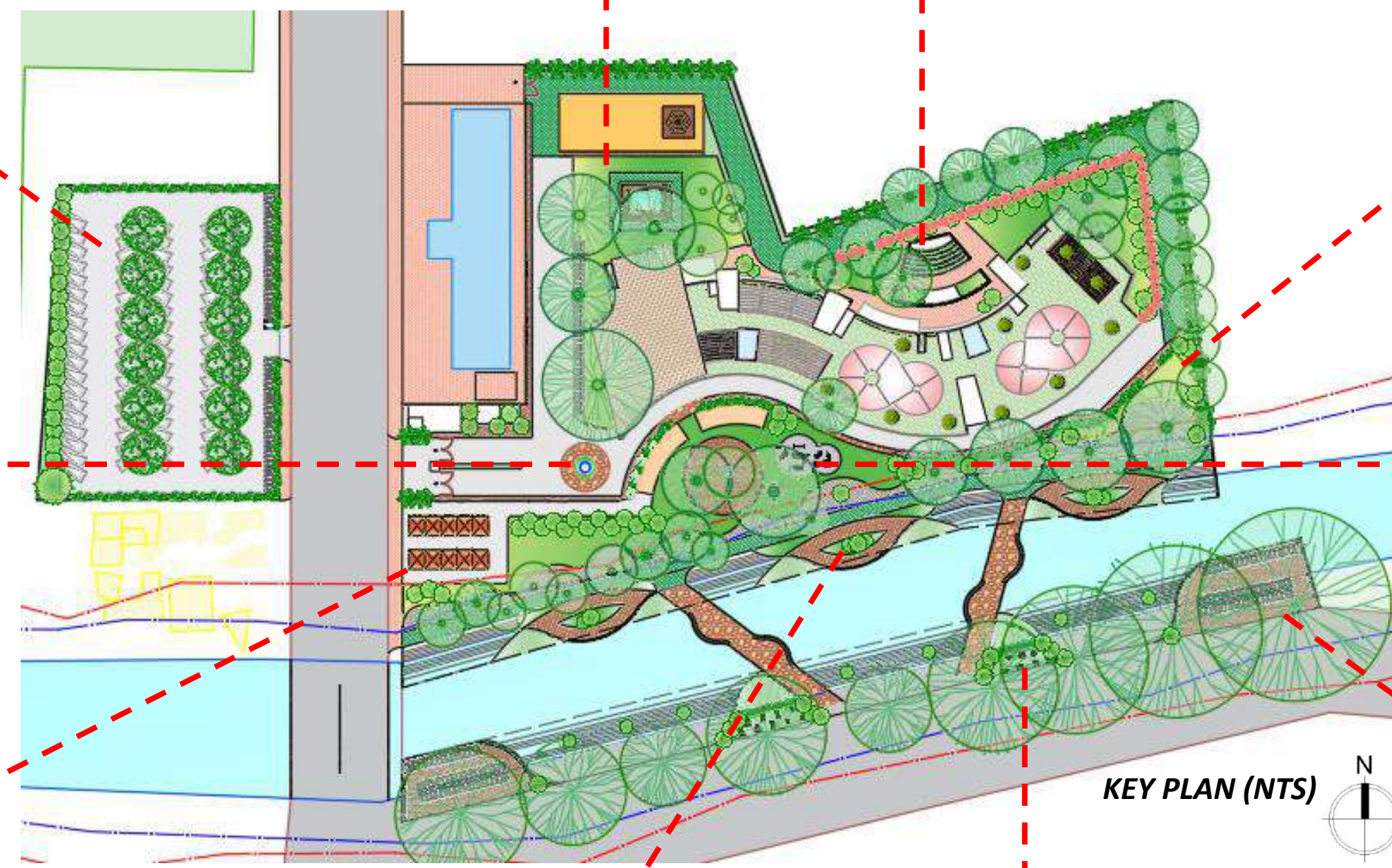
OPEN AIR AMPHITHEATRE



SEATING SPACE & CHABUTRA



MAIN ENTRANCE – INSIDE VIEW



KEY PLAN (NTS)



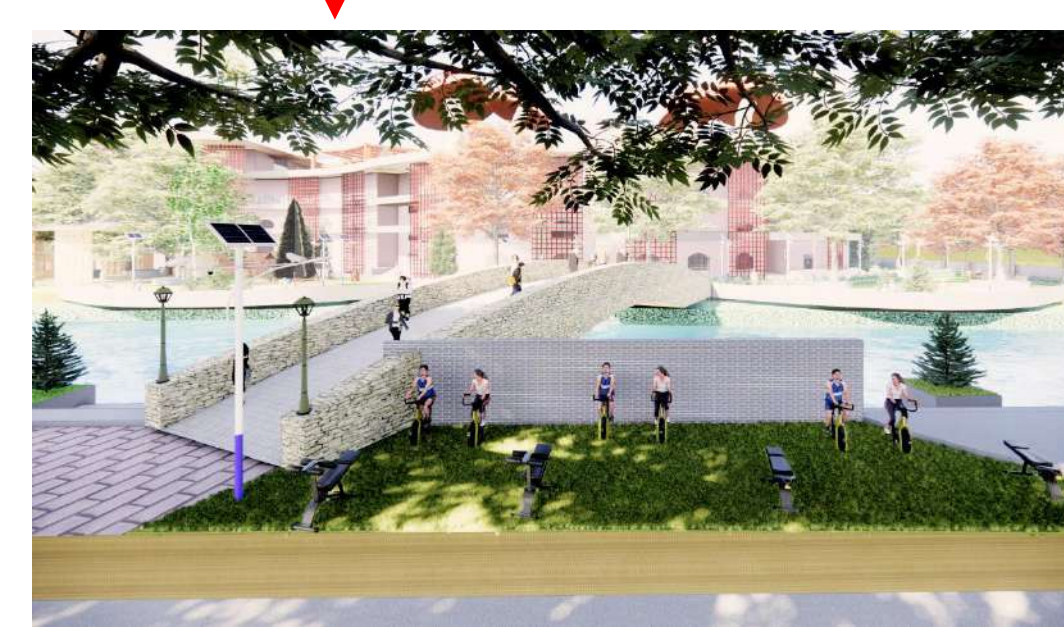
KIDS'S PLAY AREA AND FOOD COURT



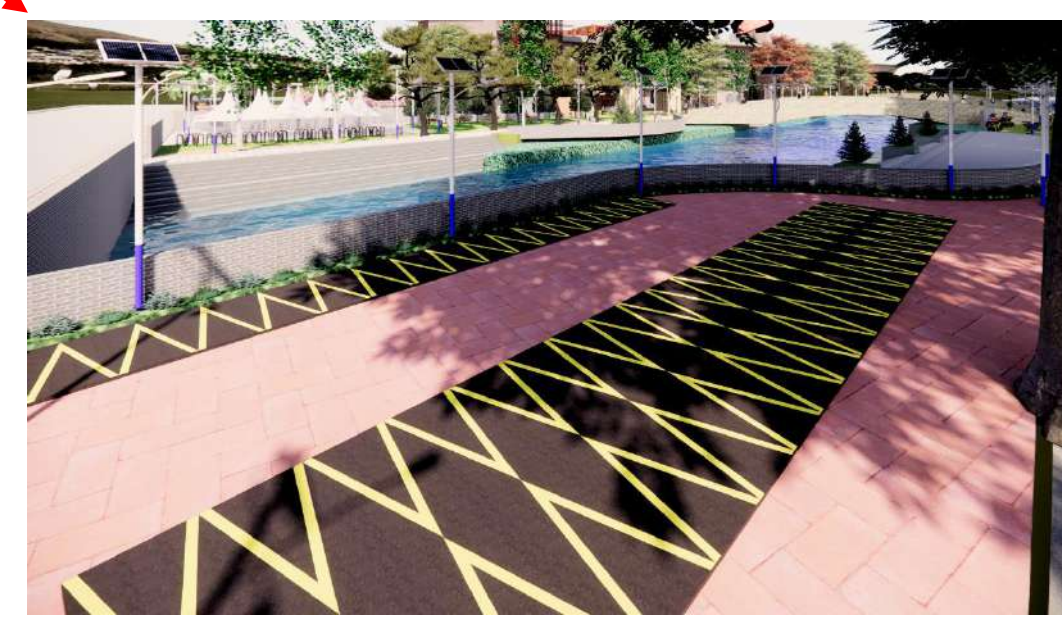
MARKET – TEMPORARY STRUCTURE



DECK, BRIDGE, AND GHAT



OPEN AIR GYM



DECK PARKING



SOUTH SIDE VIEW OF THE PROJECT



NORTH SIDE VIEW OF THE PROJECT