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DESIGNER PORTFOLIO

ABOUT ME

ARCHITECT AND URBAN PLANNER

SHREETANYA SWAIN

I am a dedicated Architect and Urban Planner with a Master's degree in Urban and Regional Planning and 2 years of experience in architecture and 1 year experience in urban planning. I have a strong foundation in sustainable design, urban development, and project management, with a focus on delivering innovative, functional, and aesthetically pleasing solutions.

Passionate about enhancing urban environments, I am adept at adhering to regulations and ensuring the seamless execution of projects. I thrive in collaborative settings and am committed to contributing to the growth and improvement of communities through thoughtful, sustainable design practices.

CONTENTS

1.RIVERFRONT BUILDING

- Site Context and Layout Plans
- Detailed Floor Plans (Basement, Upper Ground, Duplex Units)
- Architectural Sections and Elevation
- Visualizations and Perspective Views

2.DUPLEX CONTENTS

- Conceptual Plans and Sections
- Landscaping and Open Space Design
- Architectural Features and Aesthetics

3.RESIDENTIAL

- Architectural Plans and Layout Optimization
- Contemporary Design Elements and Innovations

4.PARAMETRIC DESIGN

- Principles and Application in Urban Planning
- Integration of Computational Design.

5.THESIS

- Comprehensive Study Proposal
- Research Objectives and Key Findings

6.MASTER PLAN OF ODISHA

- Project Overview and Objectives
- Development of Master Plans for 12 Towns in Odisha
- Methodology and Planning Framework
- Regional Context and Town Profiles (Dhamnagar, Athagarh)
- Infrastructure Analysis and Future Projections

I.RIVERFRONT BUILDING

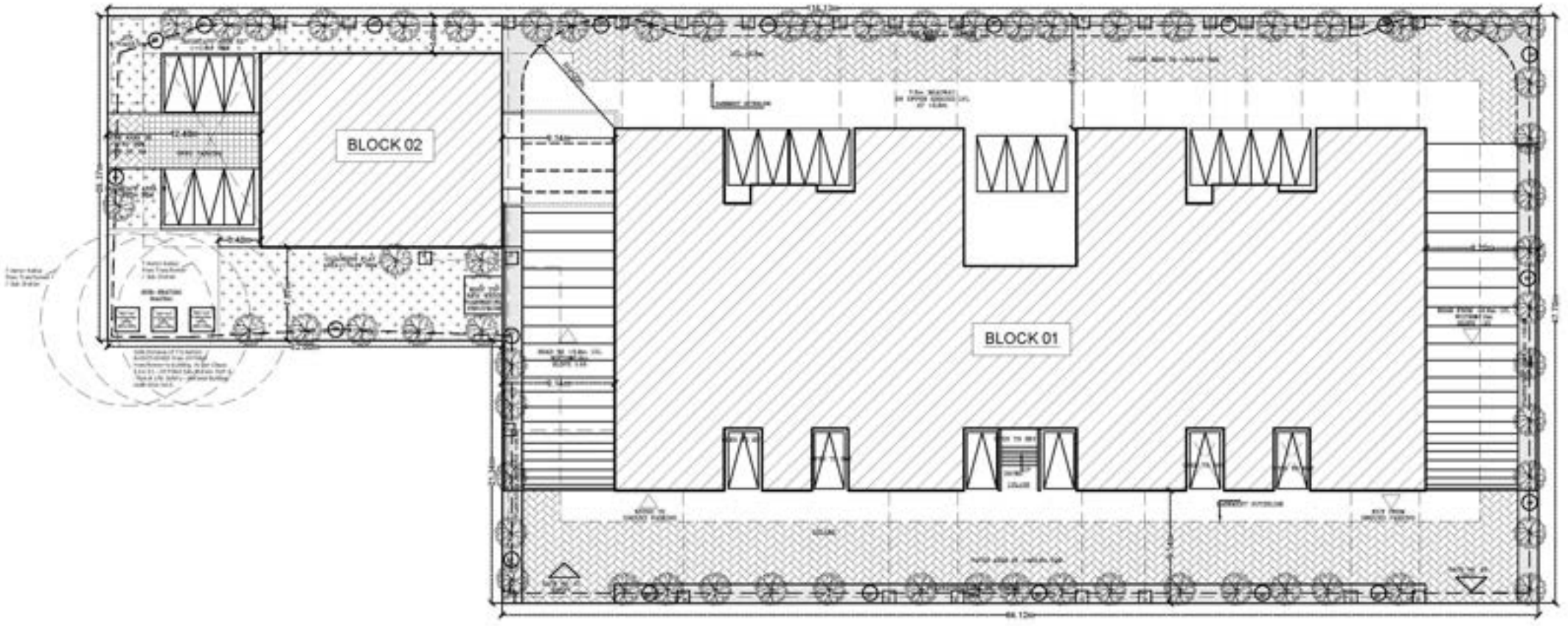
Location: Cuttack, Odisha, India

• The site is connected with 2 side road, 24 mtr. in front & 12 mtr. to the left side.

• The site is a part of the approved layout plan of Sector-11, CDA which is kept for group housing / residential use.

• The proposal envisages construction of one Block of (B2+B1+LG+UG/S+19 floors) multi storied residential apartment and another Block of (S+3 floors+ Part terrace floor) storied along with community centre/Club house.

SITE PLAN LAYOUT FOR PROPOSED BLOCK 01(B2+B1+LG+UG/S+19 FLOORS) RESIDENTIAL APARTMENT AND BLOCK 02(S+3+TERRACE FLOOR), COMMUNITY CENTRE.



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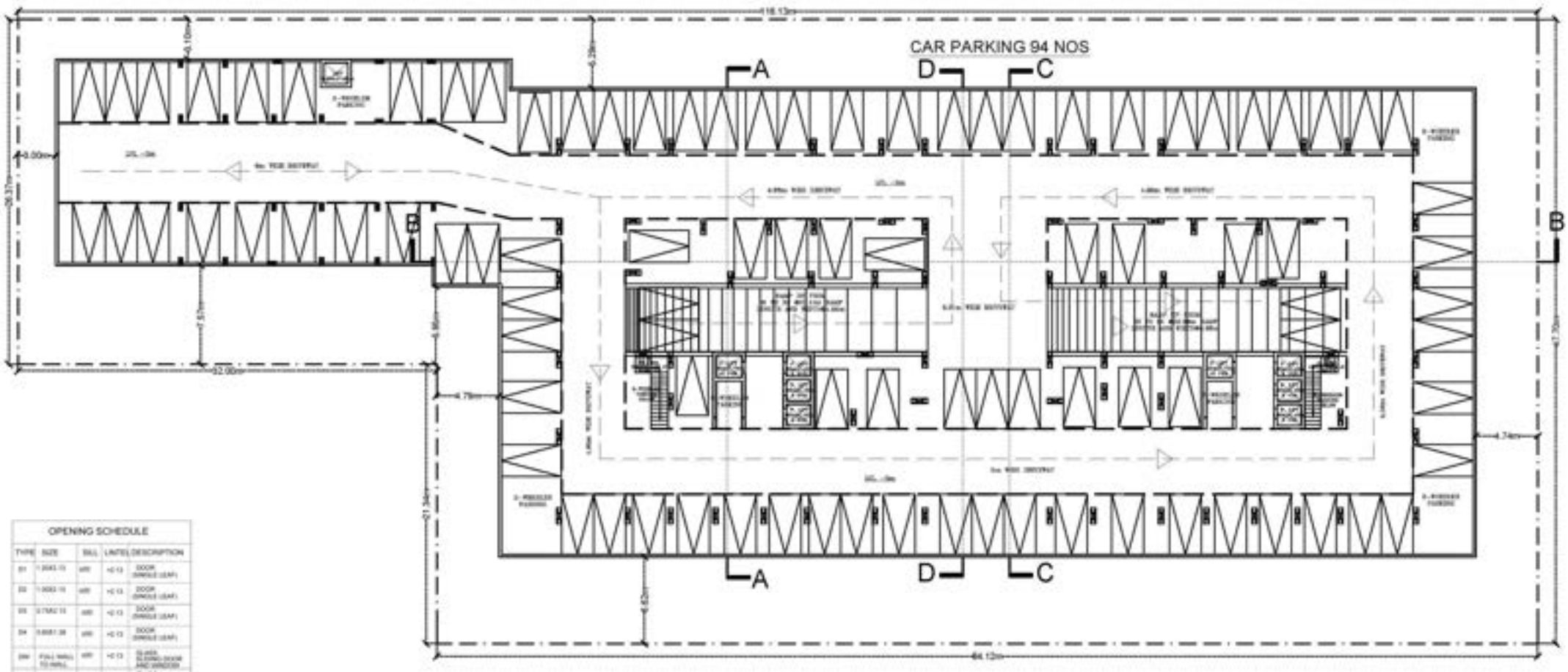
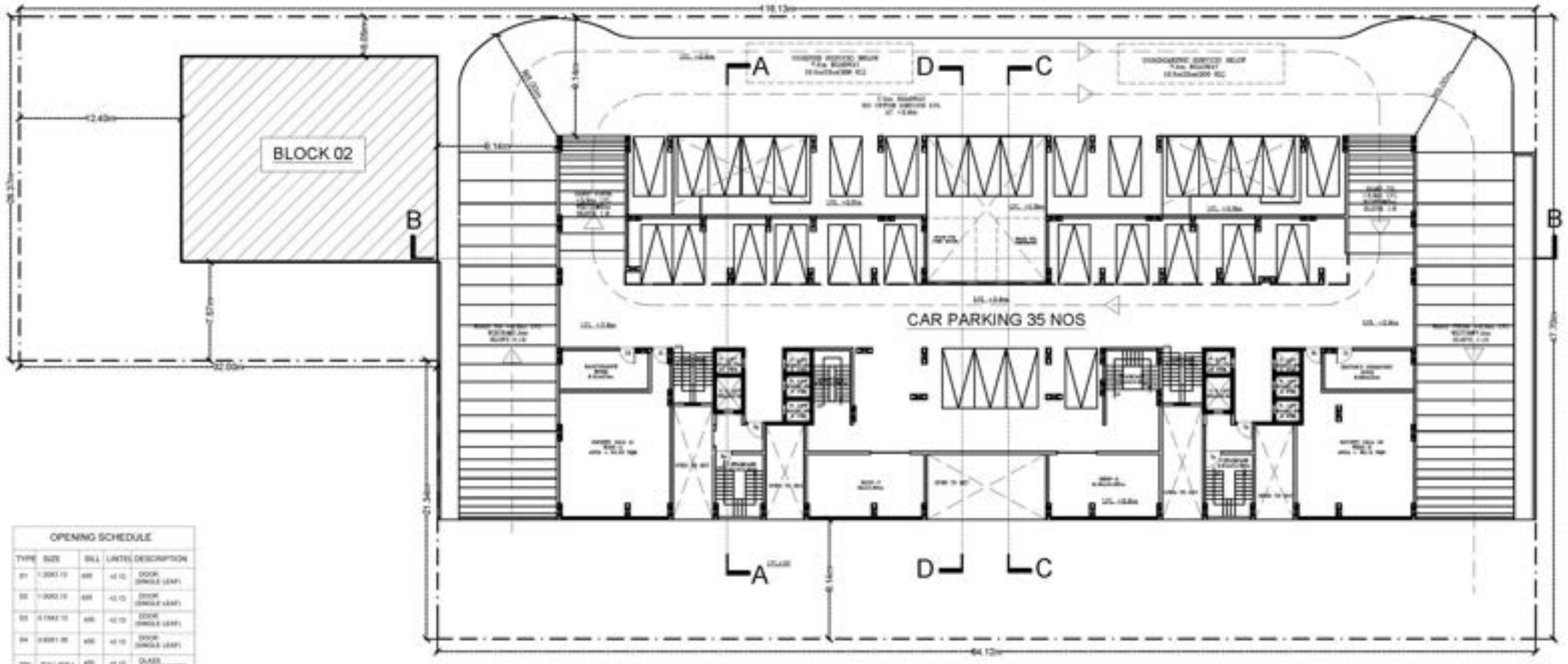
TOTAL BASEMENT (B2) PLAN



OPENING SCHEDULE

TYPE	SIZE	SILL	LINTEL	DESCRIPTION
D1	1.000 (1)	450	+0.13	DOOR (SINGLE LEAF)
D2	1.000 (1)	450	+0.13	DOOR (SINGLE LEAF)
D3	0.750 (1)	450	+0.13	DOOR (SINGLE LEAF)
D4	0.600 (2)	450	+0.13	DOOR (SINGLE LEAF)
D5	FULL WALL TO (WALL)	450	+0.13	GLASS SLIDING DOOR AND WINDOW
D5a	FULL WALL TO (WALL)	450	+0.13	GLASS SLIDING DOOR AND WINDOW
SL	1.000 (1)	450	+0.13	DOOR (SINGLE LEAF)
W1	1.600 (3)	+0.75	+0.13	GLASS WINDOW
W2	1.200 (3)	+0.75	+0.13	GLASS WINDOW
W3	1.500 (3)	+0.75	+0.13	GLASS WINDOW
V	0.600 (2)	+1.20	+0.13	FULLY GLASS VENTILATOR
SG	1.6m	+0.75	450	FIXED STRUCTURAL GLAZING

BASEMENT (B1)/LOWER GROUND FLOOR PLAN FOR PROPOSED BLOCK 01 (B2+B1+LG+UG/S+19 FLOORS) RESIDENTIAL APARTMENT

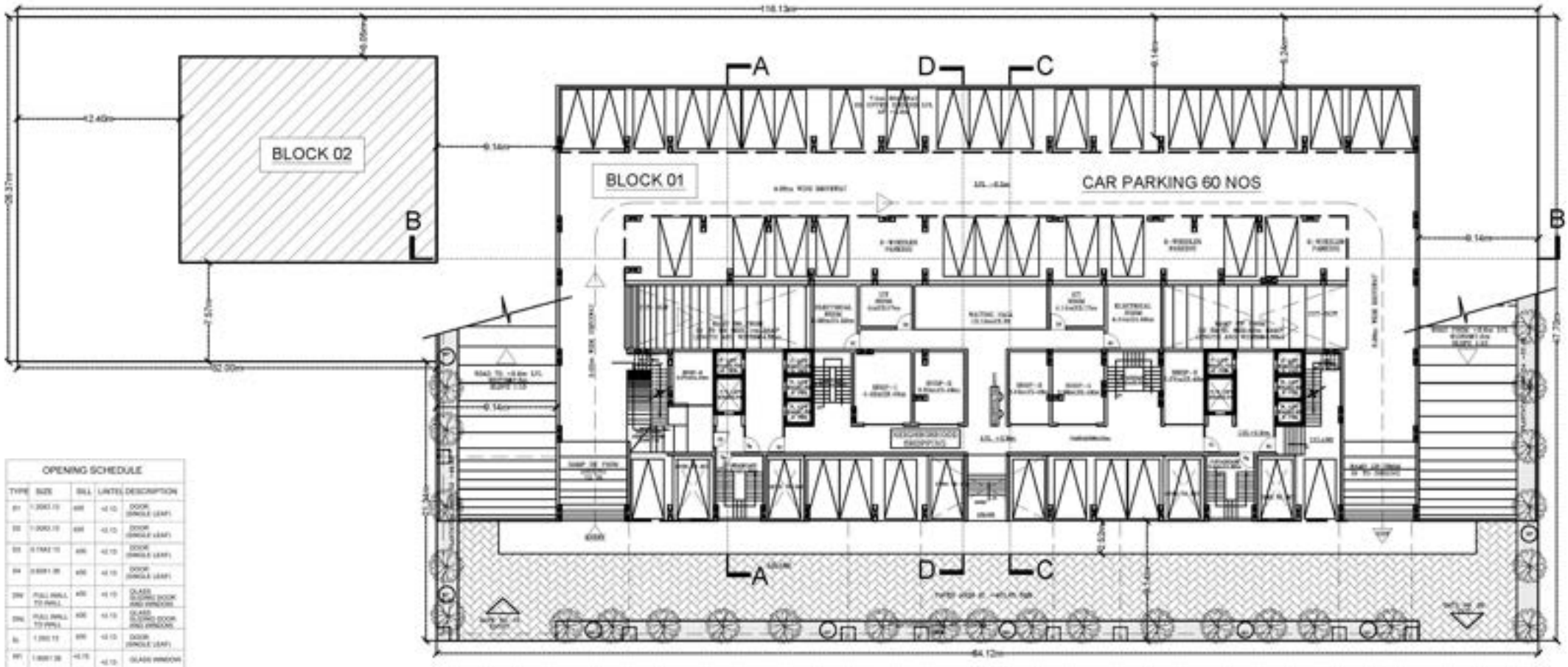


OPENING SCHEDULE

TYPE	SIZE	SILL	LINTEL	DESCRIPTION
D1	1.200 /2.10	600	+2.10	DOOR (SINGLE LEAF)
D2	1.000 /2.10	600	+2.10	DOOR (SINGLE LEAF)
D3	0.750 /2.10	600	+2.10	DOOR (SINGLE LEAF)
D4	0.900 /2.00	600	+2.10	DOOR (SINGLE LEAF)
DW	FULL WALL TO WALL	600	+2.10	GLASS SLIDING DOOR AND WINDOW
DW1	FULL WALL TO WALL	600	+2.10	GLASS SLIDING DOOR AND WINDOW
SL	1.200 /2.10	600	+2.10	DOOR (SINGLE LEAF)
W1	1.800/1.50	+0.75	+2.10	GLASS WINDOW
W2	1.200/1.50	+0.75	+2.10	GLASS WINDOW
W3	1.500/1.50	+0.75	+2.10	GLASS WINDOW
V	0.600/0.60	+1.50	+2.10	FULLY GLASED VENTILATOR
W4	1.8m	+0.75	600	FIXED STRUCTURAL GLAZING

N

STILT/UPPER GROUND FLOOR PLAN FOR PROPOSED BLOCK 01 (B2+B1+LG+UG/S+19 FLOORS) RESIDENTIAL APARTMENT



OPENING SCHEDULE

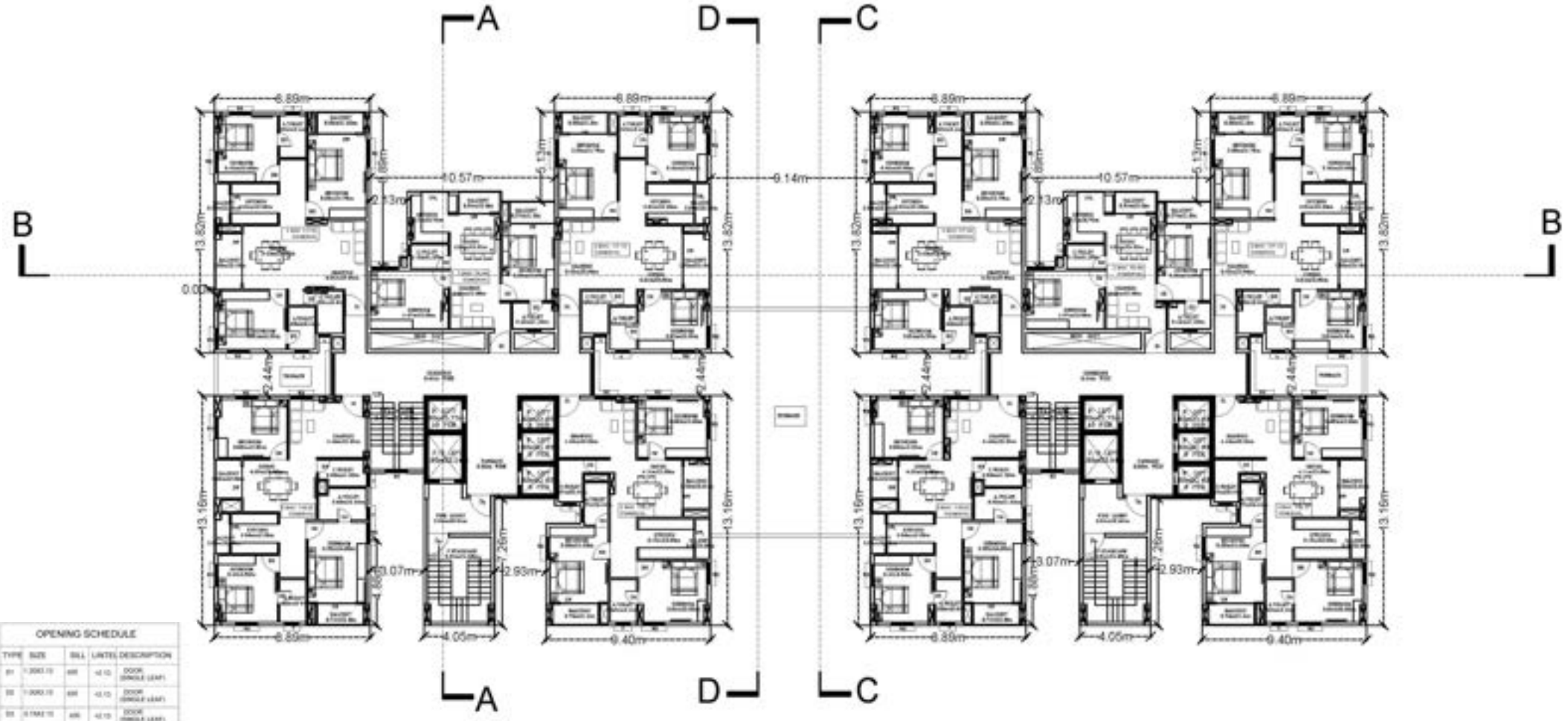
TYPE	SIZE	SILL	LINTEL	DESCRIPTION
D1	1.200X2.10	600	+2.10	DOOR (SINGLE LEAF)
D2	1.000X2.10	600	+2.10	DOOR (SINGLE LEAF)
D3	0.750X2.10	600	+2.10	DOOR (SINGLE LEAF)
D4	0.900X2.00	600	+2.10	DOOR (SINGLE LEAF)
DW	FULL WALL TO WALL	600	+2.10	GLASS SLIDING DOOR AND WINDOWS
DW1	FULL WALL TO WALL	600	+2.10	GLASS SLIDING DOOR AND WINDOWS
D5	1.200X2.10	600	+2.10	DOOR (SINGLE LEAF)
W1	1.800X1.200	+0.75	+2.10	GLASS WINDOW
W2	1.200X1.200	+0.75	+2.10	GLASS WINDOW
W3	1.000X1.200	+0.75	+2.10	GLASS WINDOW
V	0.600X0.600	+1.50	+2.10	FULLY GLASED VENTILATOR
SG	1.8m	+0.75	600	FIXED STRUCTURAL GLAZING

N

FLOOR PLANS FOR PROPOSED BLOCK 01 (B2+B1+LG+UG/S+19 FLOORS) RESIDENTIAL APARTMENT

WING-A (FIRST FLOOR PLAN)

WING-B (FIRST FLOOR PLAN)



BLOCK 01

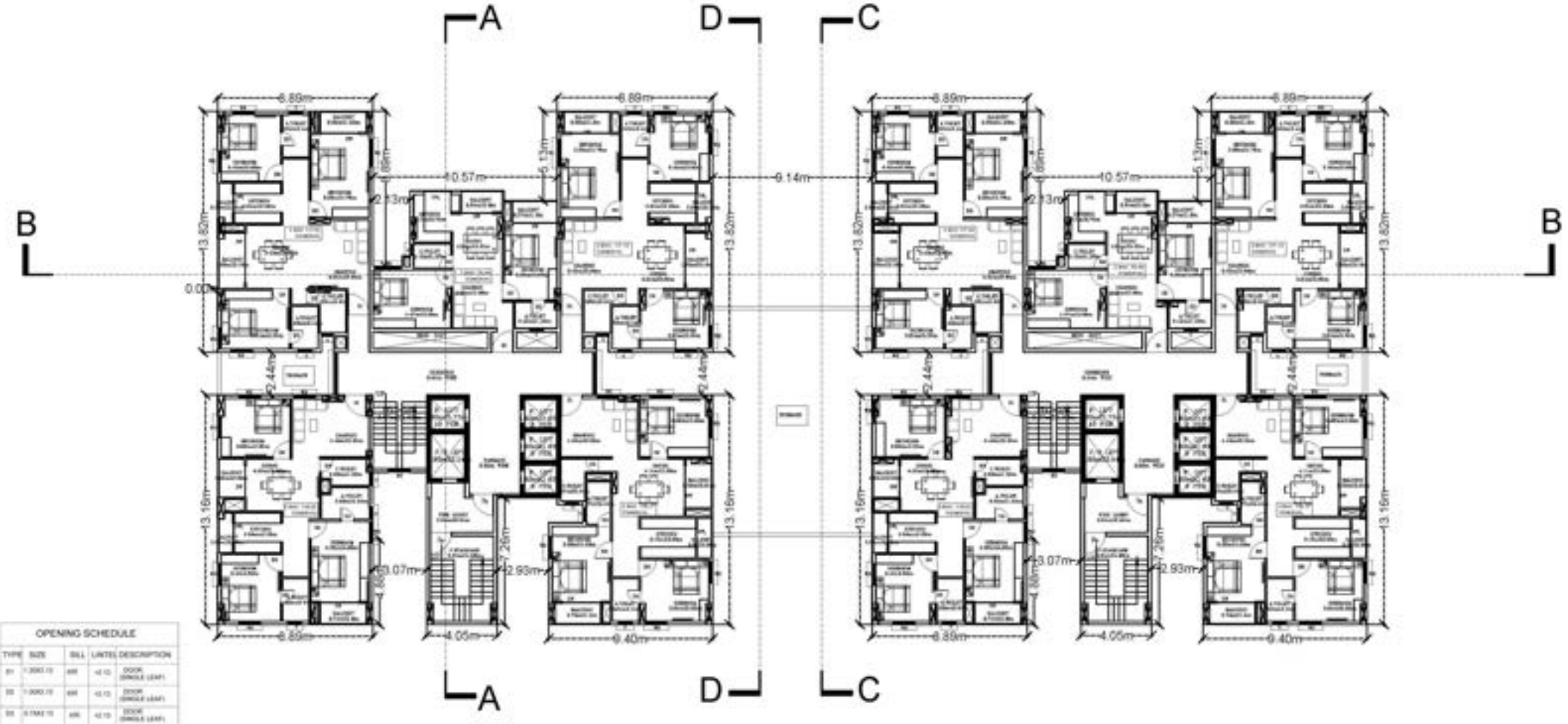
N

OPENING SCHEDULE				
TYPE	SIZE	SILL	LINTEL	DESCRIPTION
D1	1.200X2.10	000	+2.10	DOOR (SINGLE LEAF)
D2	1.000X2.10	000	+2.10	DOOR (SINGLE LEAF)
D3	0.750X2.10	000	+2.10	DOOR (SINGLE LEAF)
D4	0.900X2.00	000	+2.10	DOOR (SINGLE LEAF)
DW	FULL WALL TO WALL	000	+2.10	GLASS SLIDING DOOR AND WINDOWS
DW1	FULL WALL TO WALL	000	+2.10	GLASS SLIDING DOOR AND WINDOWS
D5	1.200X2.10	000	+2.10	DOOR (SINGLE LEAF)
W1	1.800X1.20	+0.75	+2.10	GLASS WINDOW
W2	1.200X1.20	+0.75	+2.10	GLASS WINDOW
W3	1.000X1.20	+0.75	+2.10	GLASS WINDOW
V	0.600X0.60	+1.50	+2.10	FULLY GLAZED VENTILATOR
SG	1.8m	+0.75	000	FIXED STRUCTURAL GLAZING

FLOOR PLANS FOR PROPOSED BLOCK 01(B2+B1+LG+UG/S+19 FLOORS) RESIDENTIAL APARTMENT

WING-A (SECOND TO SEVENTEENTH FLOOR PLAN)

WING-B (SECOND TO SEVENTEENTH FLOOR PLAN)



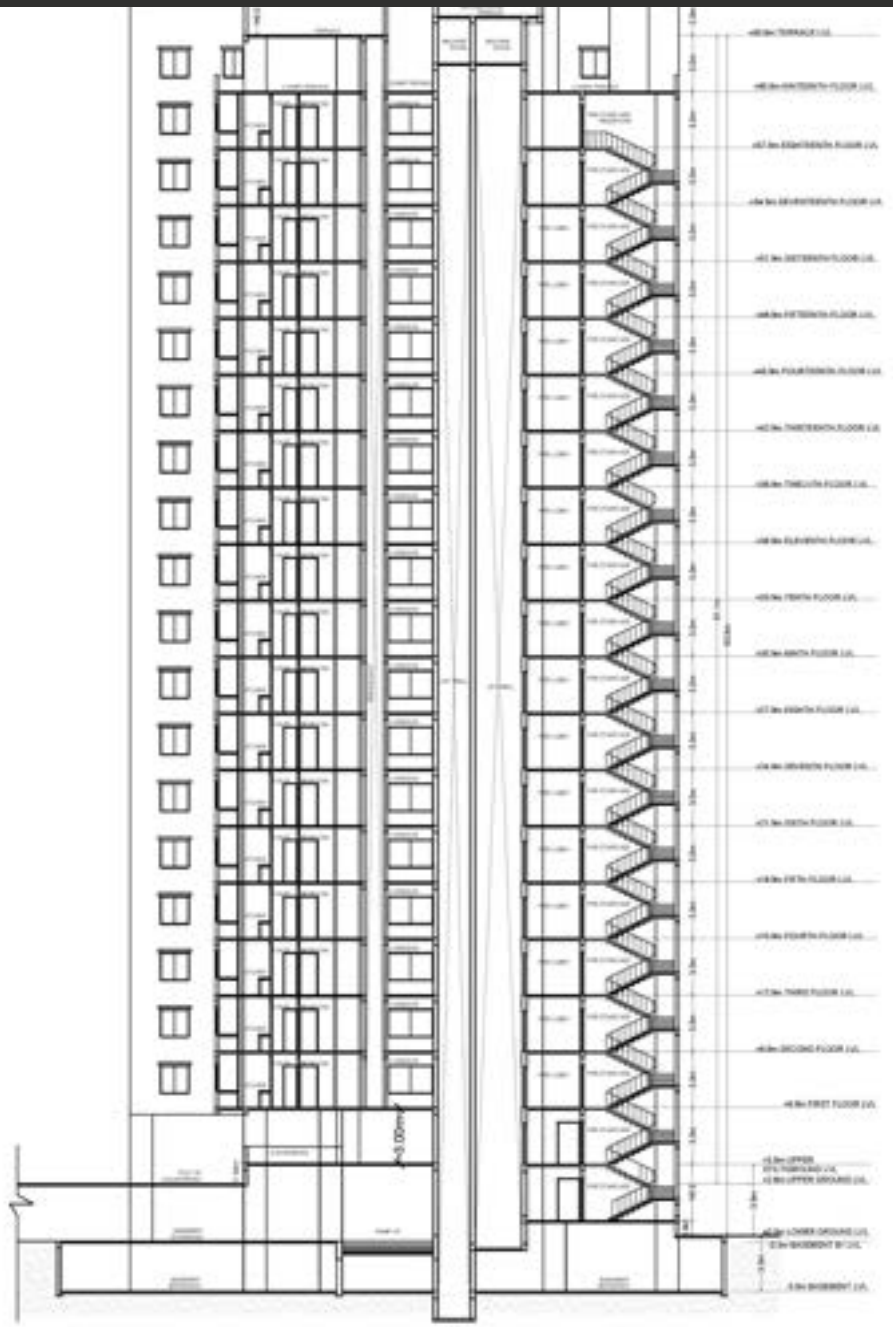
BLOCK 01

N

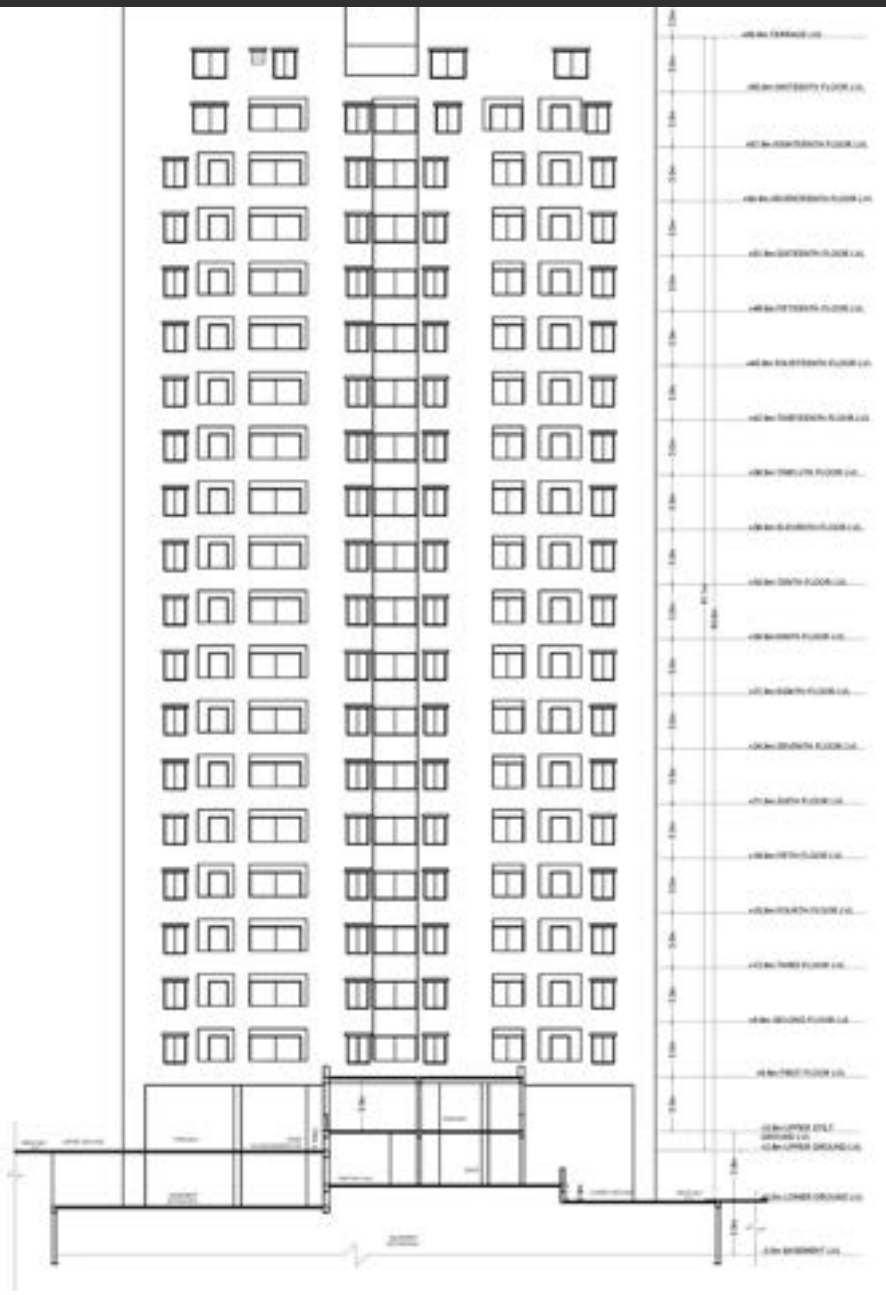
OPENING SCHEDULE

TYPE	SIZE	SILL	LINTEL	DESCRIPTION
D1	1.200X2.10	600	+0.10	DOOR (SINGLE LEAF)
D2	1.200X2.10	600	+0.10	DOOR (SINGLE LEAF)
D3	0.750X2.10	600	+0.10	DOOR (SINGLE LEAF)
D4	0.900X1.80	600	+0.10	DOOR (SINGLE LEAF)
DW	FULL WALL TO FULL	600	+0.10	GLASS SLIDING DOOR AND WINDOW
DW1	FULL WALL TO FULL	600	+0.10	GLASS SLIDING DOOR AND WINDOW
D5	1.200X2.10	600	+0.10	DOOR (SINGLE LEAF)
W1	1.800X1.35	+0.75	+0.10	GLASS WINDOW
W2	1.2X1.35	+0.75	+0.10	GLASS WINDOW
W3	1.8X1.35	+0.75	+0.10	GLASS WINDOW
V	0.600X0.60	+1.50	+0.10	FULLY GLASED VENTILATOR
W4	1.8m	+0.75	600	FIXED STRUCTURAL GLAZING

SECTIONS

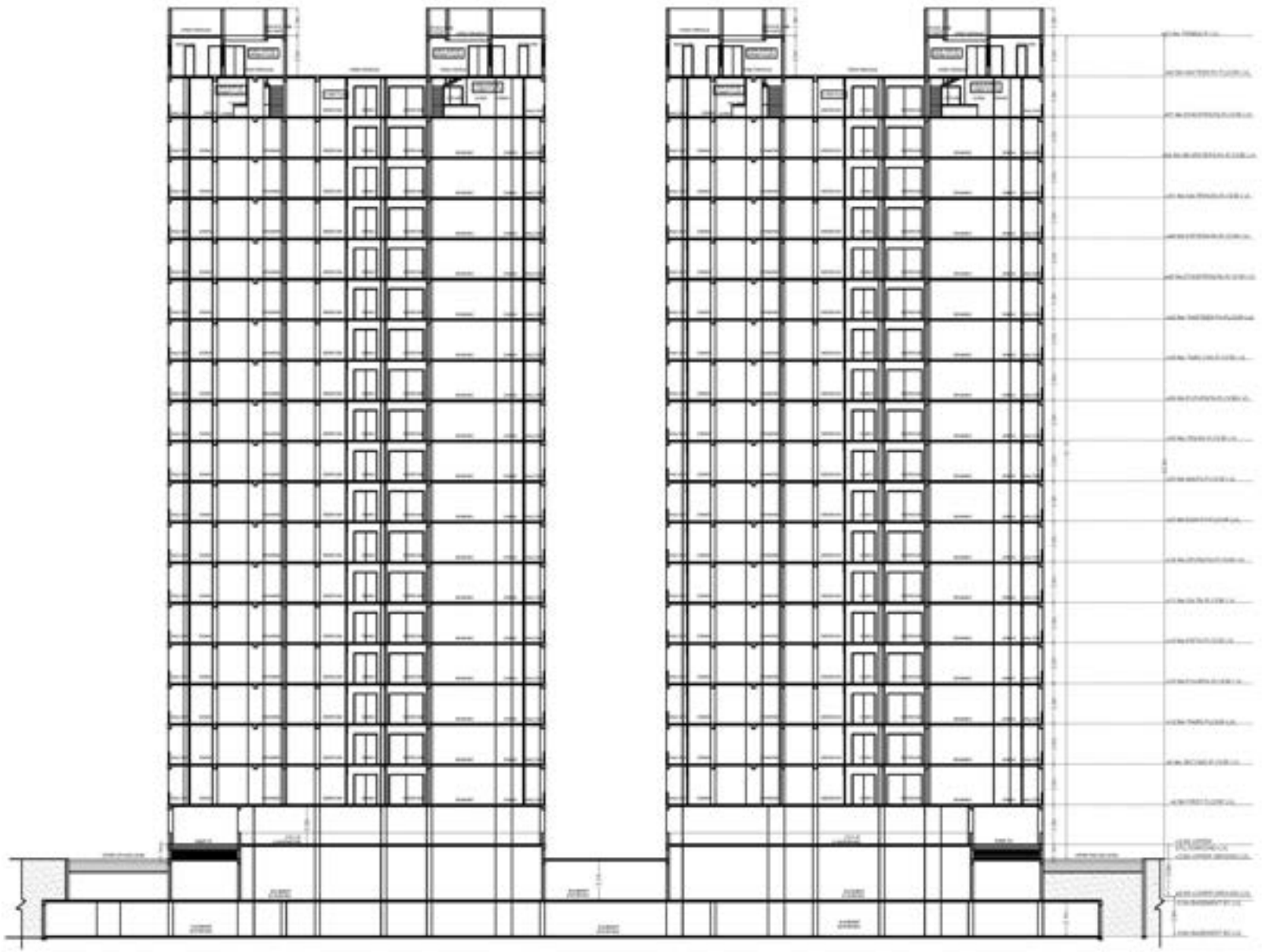


SECTION AA



SECTION CC

SECTION



SECTION BB

ELEVATIONS FOR PROPOSED BLOCK 01(B2+B1+LG+UG/S+19 FLOORS) RESIDENTIAL APARTMENT

NORTHSIDE ELEVATION

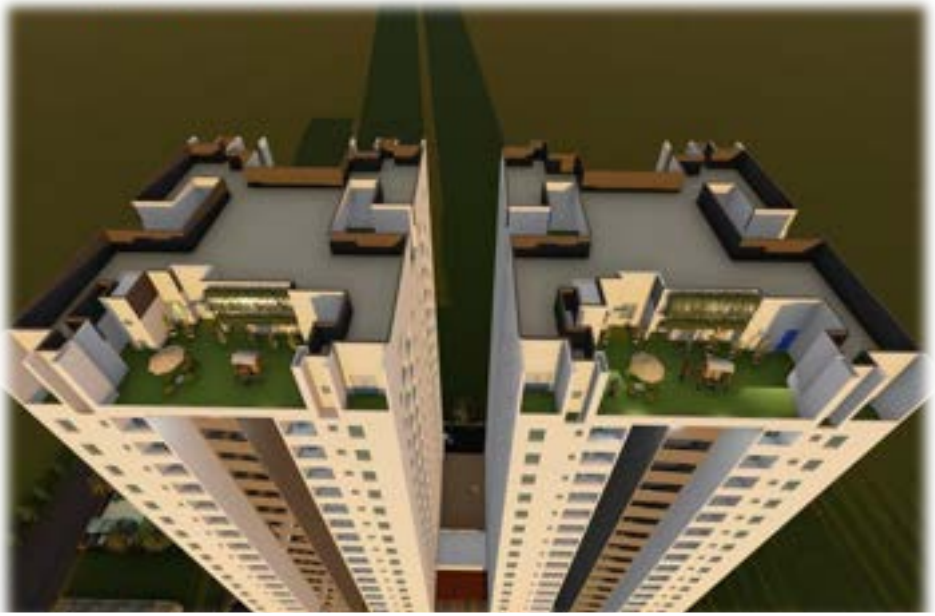
WESTSIDE ELEVATION

ELEVATIONS FOR PROPOSED BLOCK 01(B2+B1+LG+UG/S+19 FLOORS) RESIDENTIAL APARTMENT

SOUTHSIDE ELEVATION

EASTSIDE ELEVATION

VIEWS



- Depiction of sunlight effects highlighting the play of shadows on facades.
- Differentiated unit layouts represented in duplex sections for clarity.

- Perspective imagery of both day and night lighting, highlighting ambient effects.
- Depiction of neighborhood shops, utility areas, and society halls integrated into the community hub.
- Visualization of vibrant, accessible community living.
- Accessibility features like ramps, wide entrances, and designated parking zones.
- Integration of drop-off areas near entrances for ease of movement.

- Green rooftops and terraces enhancing energy efficiency.
- Accurate proportions of buildings and surrounding features for a lifelike representation.
- Depiction of pedestrian-friendly areas with shaded pathways and sitting zones.
- Real-time scale showing human activity and vehicle placement for practicality.
- Natural elements harmoniously blended with urban construction for an inviting ambiance.

VIEWS

- Low-rise design with a compact yet spacious layout.
- Dedicated terrace floor for gatherings and community activities.

- A modern architectural layout with a focus on functionality and aesthetics.
- Visual emphasis on blending residential and community spaces seamlessly.
- High-rise structure with a sleek and symmetrical facade.
- Balconies and large windows enhancing natural lighting and ventilation.
- Well-planned rooftop terraces for recreational purposes.

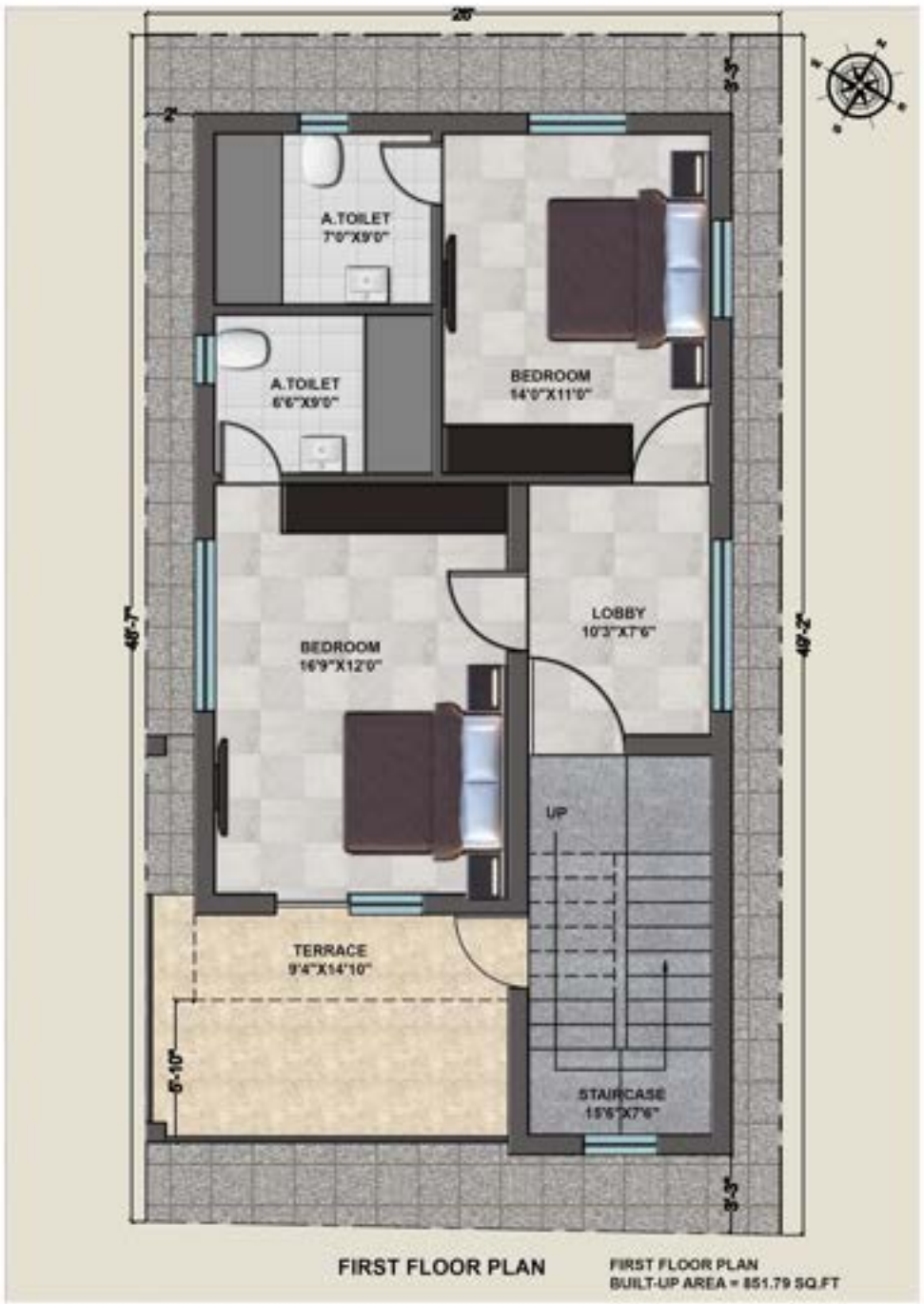
- Realistic views of double basements and stilt parking layouts.
- Convenient road connections visible in site access perspectives.
- Landscaped surroundings complement the buildings, providing a serene environment.
- Open green spaces and tree-lined walkways.
- Views from multiple angles (north, south, east, west) showcasing all design elements.

2.DUPLEX COMPLEX

PLAN DUPLEX-1

GROUND FLOOR PLAN

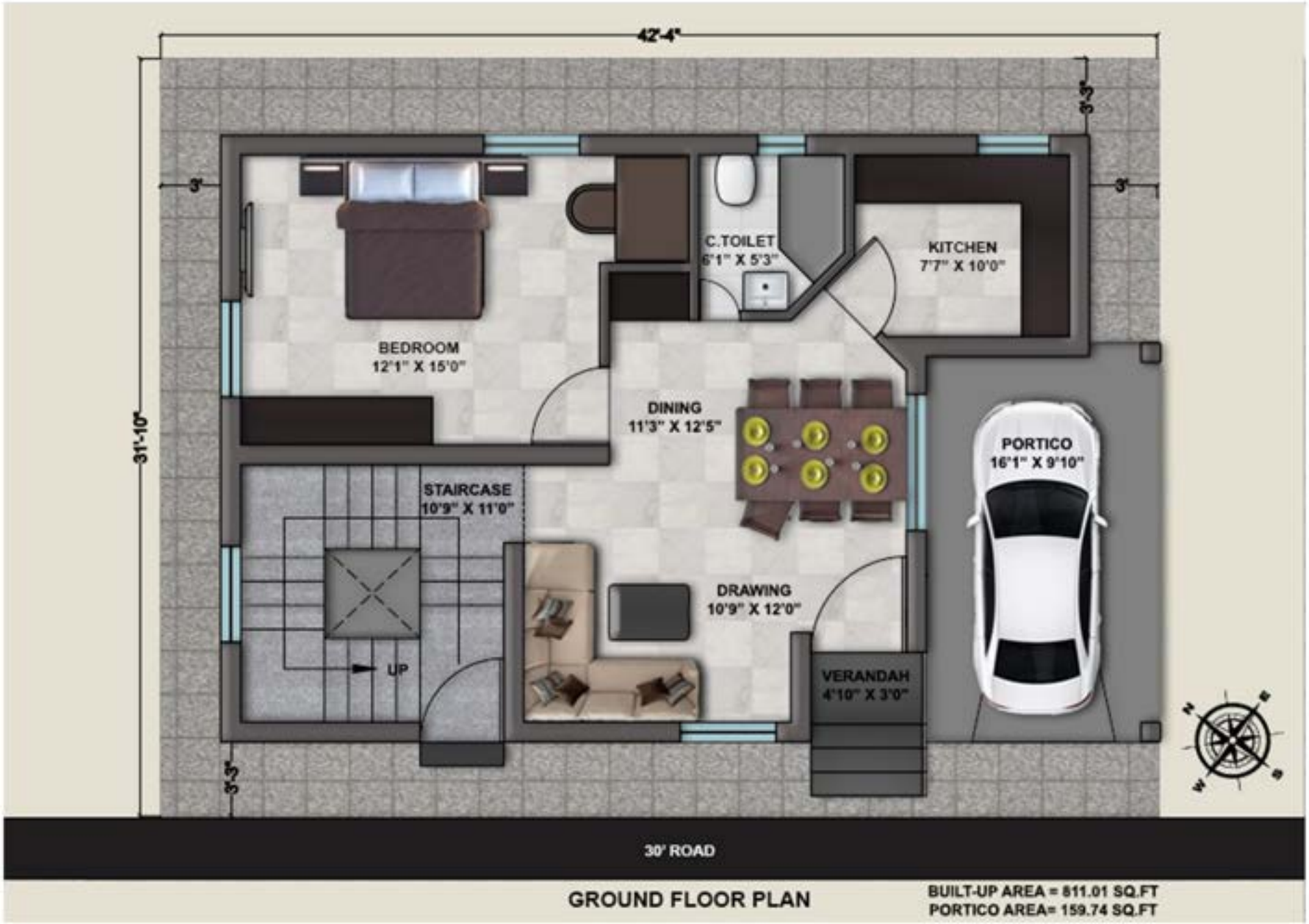
BUILT-UP AREA = 770.8 SQ.FT
PORTICO AREA= 160 SQ.FT



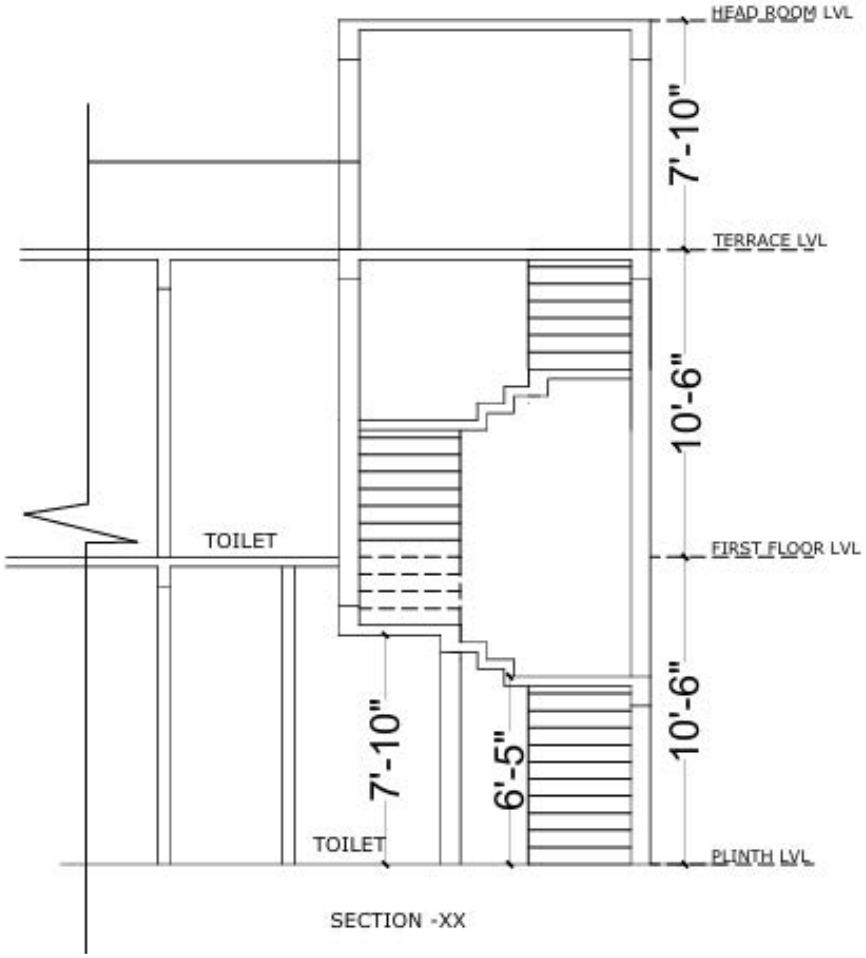
FIRST FLOOR PLAN

FIRST FLOOR PLAN
BUILT-UP AREA = 851.79 SQ.FT

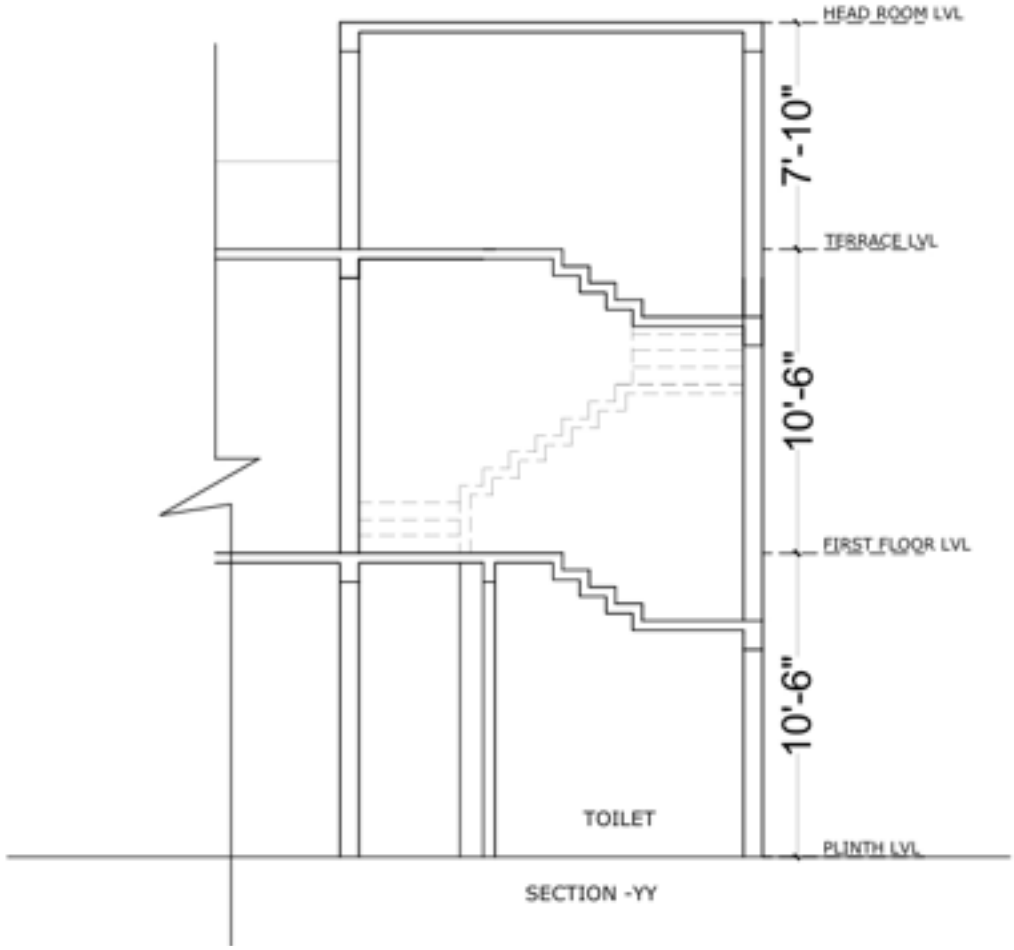
PLAN DUPLEX-2



SECTION



SECTION -XX



SECTION -YY

VIEW

- Depicts the overall layout of the residential area with a focus on landscaping and open spaces.
- Highlights a large central green area surrounded by rows of residential units.
- Highlights a large central green area surrounded by rows of residential units.
- Well-planned, wide roads between the residential units, ensuring easy vehicular and pedestrian movement.

VIEW

- Greenery and landscaped plants along the road add to the aesthetic and environmental appeal.
- Streetlamps visible, ensuring proper lighting and safety for residents.
- Modern, minimalistic design with clean lines and geometric shapes for the building facades.
- Compact yet spacious layout with clear demarcation of private and shared spaces.

3.RESIDENTIAL

PLAN

UTILITY
KITCHEN
BEDROOM
TOILET
BEDROOM
BOX
STORE
DRAWINGROOM
DINING
STAIRCASE
BEDROOM
TOILET
UP
PARKING
BEDROOM
TOILET
TREE
20' WIDE ROAD
13'7" WIDE ROAD
GROUND FLOOR PLAN
AREA= 2298 SQFT
PARKING AREA=690.1 SQFT

PLAN

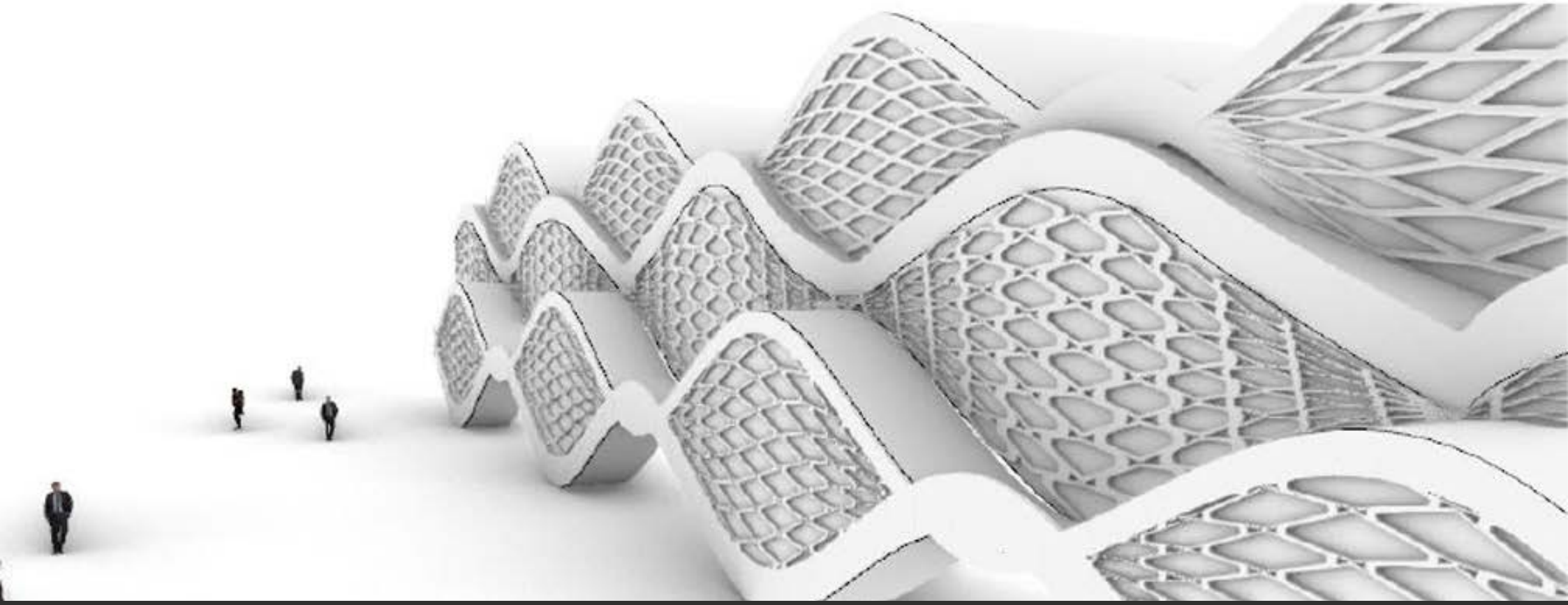
30'
64'-6"
54'-6"
6'-6"
5'-3"
1'-3"
KITCHEN
9'6"X11'5"
BEDROOM
12'0"X11'5"
TOILET
5'0"X8'0"
TOILET
5'0"X9'0"
BOX
5'0"X7'3"
BEDROOM
14'2"X20'5"
STORE
6'2"X6'7"
DRAWINGROOM
20'4"X10'2"
BALCONY
7'0"X9'7"
STAIRCASE
15'4"X14'4"
80'
78'-6"
TOILET
6'0"X6'0"
BOX
6'0"X5'9"
75'-5"
20' WIDE ROAD
KITCHEN
15'5"X9'2"
DRAWING/DINING
21'2"X14'2"
BEDROOM
16'2"X14'9"
UTILITY
8'10"X5'0"
BEDROOM
11'9"X15'2"
TOILET
5'X8'2"
BALCONY
5'0"X15'2"
TERRACE
S
E
W
N
X
X
8'-3"
6'
3'-2"
30'
92'-8"
13'7" WIDE ROAD
Y
Y
FIRST FLOOR PLAN
AREA= 2834 SQFT
PARKING AREA=690.1 SQFT

VIEW

- Distinctive use of vibrant orange accents to break the monotony and provide a striking appearance.
- Efficient use of space with a compact yet practical structure for urban living.
- Open balcony with a railing design that enhances safety and aesthetics.

- Modern design with sharp geometric shapes and clean lines.
- Contrasting color palette of grey, white, and orange, emphasizing bold architectural elements.
- Unique window designs with projecting wooden frames for added depth and visual interest.
- Large, asymmetrical windows for enhanced natural light and ventilation.
- Covered parking space accommodating multiple vehicles.

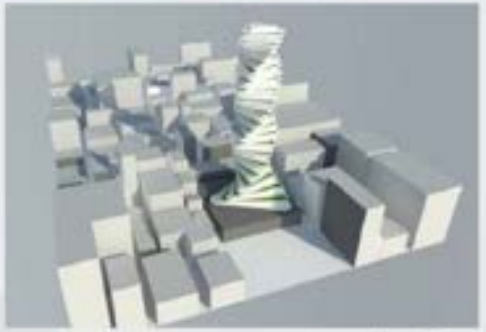
- Pergola-style roofing over the balcony, offering partial shade while maintaining openness.
- Green elements incorporated in the backyard, providing a natural touch to the design.
- Smooth plaster finish on walls for a polished and refined look.
- Use of bold orange structural beams for both functionality and decoration.
- Minimalistic and contemporary style catering to modern architectural trends.



4.PARAMETRIC DESIGN

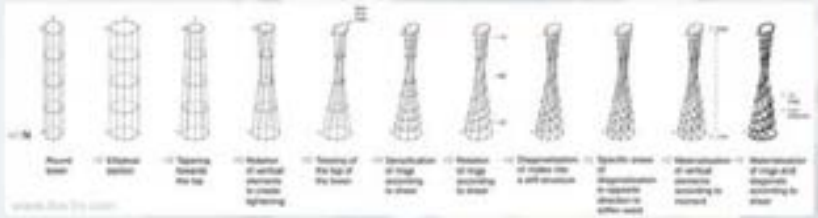
PRISMATIC TWINE

Triangles are one of those basic geometric shapes that people learn to identify their sided framework and sharp angles makes them one of the most recognizable figures around, from angular prismatic abodes to learning triangular towers, this unique architectural designs are utilizing basic geometric shapes to create buildings with spectacularly strong visual appearances.



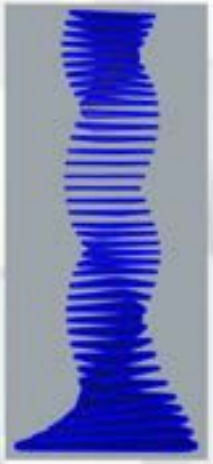
INSPIRATION:

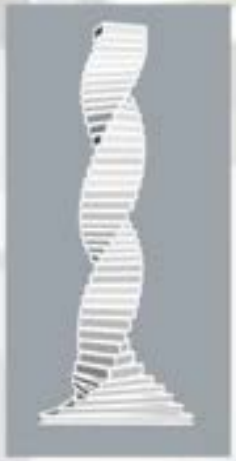
CANTON TOWER, CHINA



LINE-------EQUILATERAL TRIANGLE-------PRISMATIC TWISTED SURFACE

CURVE
EXTRUDE
CAPHOLE
MD SLIDER
DUBLICATE
SERIES
SUBTRACTION
RADIAN
CULL INDEX





PARAMETRIC DESIGN WORKSHOP

5.THESIS

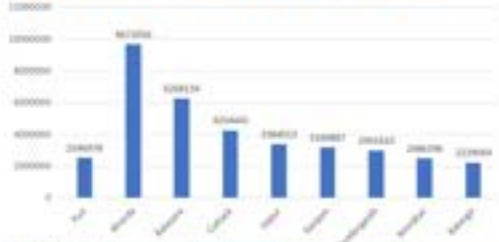
1. INTRODUCTION

TOURISM

Tourism can be defined as the activity of people traveling to and staying in places outside their usual environment for leisure, business, or other purposes. From an urban planning perspective, tourism plays an important role in the development and management of urban areas.

TYPES OF TOURISM

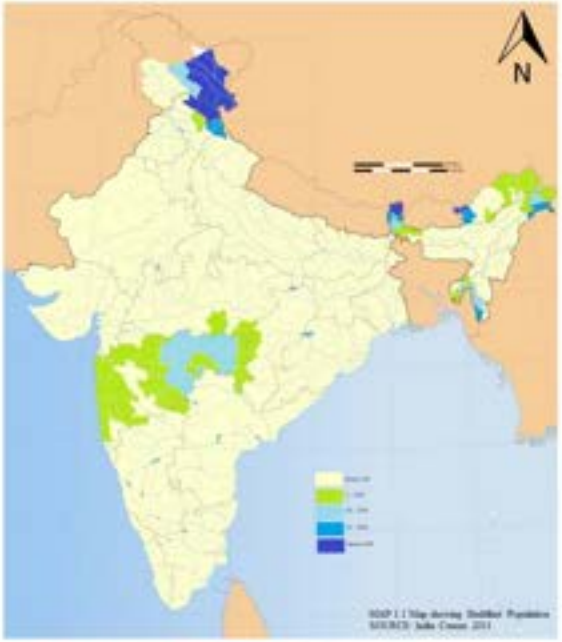
RANK OF TOP TOURIST PLACES IN ODISHA



From the above graph, it is concluded that the study area that is Khorda and Cuttack districts are in 2nd rank and 4th rank respectively with respect to the top 10 tourist places in Odisha.

BUDDHISM IN INDIA

- Buddhism is a major world religion that originated in India in the 5th century BCE and gradually spread to other parts of the world. Religion has had a significant impact on various cultures and societies throughout history.
- After its initial spread in India, Buddhism gradually spread to other parts of Asia, including Sri Lanka, China, Korea, Japan, and Southeast Asia. Buddhist teachings were often adapted to local cultural and religious practices, leading to the development of different schools and traditions of Buddhism.
- Buddhism has also spread to other parts of the world, including Europe and the Americas, where it has gained significant followings. Today, there are estimated to be over 500 million Buddhists worldwide, making it the fourth-largest religion in the world.
- In India, Buddhism significantly impacted the country's culture and spirituality during its early history. However, by the 12th century CE, the religion had largely disappeared from India itself, due to a combination of factors including political changes and the rise of Hinduism.



BUDDHISM IN ODISHA

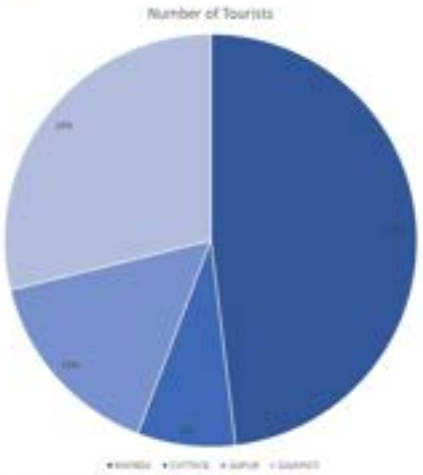
- According to the early Buddhist texts the two merchants,i.e. Tapassu and Bhallika who received the first sermon of Buddha at Gaya, were from Utkala, identified by the scholars as Utkala (Odisha) and are believed to have worshipped stupa containing tooth relic of Lord BuddhaBuddhism started spreading over Orissa only after the invasion of Asoka in 261 BC as Kalinga war was not only the turning point in the life of Asoka but also in the history of Buddhism in India.
- In post-Asokan periods the stupa architecture is believed to have made its appearance in the close vicinity of Sisupalgarh. Buddhism in the early Christian era is attested to by the traditions in the Buddhist literature and sculptural remains of Ratnagiri, Lalitagiri, and Udayagiri in the districts of Cuttack and Jajpur, associated with Hinayana and early Mahayana forms of Buddhism.
- In the post-Gupta period, the Hinayana and Mahayana form of Buddhism co-existed in Odisha. But Mahayana form ascended, especially during Hiuen-tsang's visit to Odisha(639-41 AD).At the beginning of the Bhauma rule (7th century AD), the existence of Buddhism gained momentum due to royal patronage.

SOURCE Google

LOCATION

4th SEMESTER DEPARTMENT OF PLANNING ODISHA UNIVERSITY OF TECHNOLOGY AND RESEARCH	SYNOPSIS	SHREETANYA SWAIN 2125100011	SHEET NO.: 01
PROMOTING AND FACILITATING SPLENDOUR AND VISION OF BUDDHIST TOURISM IN 4 DISTRICTS (KHORDA,CUTTACK, JAJPUR, GAJAPATI) OF ODISHA			REMARKS

LOCATION



SOURCE: Tourist statistical handbook

NEED OF STUDY

- Identification of the potential for Buddhist tourism in the Jajpur, Cuttack, and Gajapati districts of Odisha.
- Assessment of the current state of Buddhist tourism in the identified districts, including the availability of infrastructure, accommodation, and transportation.
- Exploration of the historical and cultural significance of Buddhist sites in the districts and their potential for religious and cultural tourism.
- Examination of the potential economic benefits of promoting and facilitating Buddhist tourism in the districts, including job creation and revenue generation.
- Identification of challenges and obstacles to the promotion and facilitation of Buddhist tourism in the districts and proposing solutions to address these challenges.
- Evaluation of the impact of promoting and facilitating Buddhist tourism in the districts on the local community, environment, and cultural heritage.
- Providing recommendations for the development of a sustainable and responsible Buddhist tourism industry in the Jajpur, Cuttack, and Gajapati districts.

AIM

To create economic development, cultural preservation, and community empowerment through Buddhist tourism in the four districts.

OBJECTIVE

- To analyze various issues and challenges for the growth and development of Buddhist Tourism in Odisha
- To assess the current state of tourism in the area, including visitor numbers, tourism infrastructure, and tourism's economic and social impacts on the local community.
- To highlight the extent of awareness to propel Buddhist Tourism of Odisha in the global context

SCOPE

- Identification and analysis of the potential for developing Buddhist tourism in Odisha's Khorda, Jajpur, Cuttack, and Gajapati districts.
- Exploration of cultural and historical significance of Buddhist sites in the identified districts.
- Assessment of the current state of tourism infrastructure and facilities in the districts.
- Identification of opportunities for improving and developing tourist facilities to attract more Buddhist tourists.
- Evaluation of the challenges and obstacles to the promotion of Buddhist tourism in the districts and proposing solutions to address these challenges.
- Examination of the impact of promoting and facilitating Buddhist tourism on the local community, environment, and cultural heritage.
- Providing recommendations for the development of a sustainable and responsible Buddhist tourism industry in the Khorda, Jajpur, Cuttack, and Gajapati districts.

LIMITATION

- Limited data availability
- Limited scope for community involvement

EXPECTED OUTCOME

- Generating employment and income
- Improvements in infrastructure
- Road and rail improvements, airport development, and improvements in utilities

STUDY AREA

DHAULI

- Dhauligiri Hills is a place marked with the serenity of Daya River and lies at a distance of 8 Km from Bhubaneswar. The famous rock edicts of Ashoka are worth witnessing. Moreover, it is in Dhauli Hills that adopted the path of dharmas which lets only peace and love enter your lives. The concept of dharma- vijay became his ultimate goal as he took Buddhist teachings deep into his heart. The end of the bloody battles was only to serve and favor mankind.

SOURCE: GOOGLE

- With this, the religious and spiritual beliefs of Buddhism spread to different parts of the world. Dhauli Hills in Bhubaneswar takes you to the site of the Vishwa Shanti Stupa. The dome structure of the Shanti Stupa possesses five umbrellas and they symbolize the five essential parts of Buddhism.
- When it comes to visiting a Buddhist pilgrimage, one finds a list of pilgrimages dedicated to the lord Buddha that attract a series of devotees. Here is a list of different Buddhist pilgrimages that are worth visiting in the life of every follower of Lord Buddha.

SHANTI STUPA

- The Shanti Stupa is a white dome-shaped structure built on the top of Dhauli Hill by the Japan Buddha Sangha and the Kalinga Nippon Buddha Sangha in 1972. The stupa is surrounded by a garden and has a height of 22 meters. It is a symbol of peace and non-violence and contains four golden statues of the Buddha in different postures.

SOURCE: GOOGLE

- The Shanti Stupa was built by the Japanese Buddha Sangha and the Kalinga Nippon Buddha Sangha in 1972. The stupa was built to commemorate the 2500th anniversary of the birth of the Buddha and also to promote peace and non-violence.
- Chaitya Hall - The Chaitya Hall is an ancient structure believed to have been built during the Mauryan period. The hall is a semi-circular structure with a raised platform in the center, where a stupa is believed to have been placed. The hall also has a stone elephant at its entrance.
- Rock-cut caves - Dhauli also has several rock-cut caves that are believed to have been used by Buddhist monks for meditation and other religious practices. The caves have carved inscriptions and are decorated with sculptures of the Buddha and other deities.
- Ashokan Edicts - Dhauli also has several rock edicts of Emperor Ashoka that are carved on a boulder at the foot of the hill. These edicts are inscriptions that provide insight into the life and teachings of the Buddha, as well as Emperor Ashoka's efforts to promote Buddhism and non-violence.

UDAYGIRI AND KHANDAGIRI

- Udayagiri and Khandagiri are two adjacent hills located near Bhubaneswar in the Indian state of Odisha. These hills are home to several important Buddhist sites that date back to the 1st century BC.
- The Udayagiri hill is home to several important Buddhist sites, including the famous Rani Gumpha (Queen's Cave), which has intricate carvings depicting stories from the Jataka tales.

SOURCE: GOOGLE

LALITGIRI

- Lalitgiri, locally known as Nalitgiri (Lat. 20° 35' N and Long. 86° 15' E) in Barupa-Chitrotpala Valley, in the Mahanga tehsil of Cuttack district is one of the major centers of Buddhism in Odisha. It is 90 km. away from the state capital, Bhubaneswar.
- The archaeological remains of Lalitgiri were first discovered in 1869 by C.S. Banarji, the then Sub-collector, Jajpur.
- The real nature and significance of the site were identified in 1905 by M.M. Chakravarty, the then Sub-Divisional Officer, Jajpur.

SOURCE: GOOGLE

- The excavation has revealed the remains of a massive stupa on a hilltop, which had two relic caskets kept within containers made of khondalite.
- The innermost gold casket contained the relic or dhatu in the form of a small fragment of bone, arranged in the manner of the Chinese puzzle box.
- Another important discovery at the site is the structural remains of an east-facing large brick-built apsidal chaityagriha measuring 33 x 11m with a 3.3m thick wall with a circular stupa in the centre of the apsidal end of the chaityagriha.
- The discovery of such an edifice was the first of its kind in the Buddhist context in Odisha.
- Other important finds from this area are the Kushana Brahmi inscriptions, a series of shell inscriptions deeply incised on the mezzotone of the threshold of the edifice, a fragmentary railing pillar having a lenticular socket with a half-lotus medallion motif, etc.

DEULI BUDDHIST SITE AND SUNSET POINT

- Deuli is located about 65 km south of Bhubaneswar and is easily accessible by road.
- The site has several remains of Buddhist stupas, chaityas, and monasteries that date back to the 6th-7th century AD.
- The site was discovered in the 1980s and has since been excavated and partially restored by the Archaeological Survey of India.
- The site is surrounded by beautiful greenery and offers a serene and peaceful atmosphere.

SOURCE: GOOGLE

- Deuli is also a popular sunset point and offers a beautiful view of the surrounding countryside.
- Visitors can climb up to the top of the hill to watch the sunset and enjoy the panoramic views.
- The site is not very crowded and offers a peaceful and relaxing experience away from the hustle and bustle of city life.

4th SEMESTER DEPARTMENT OF PLANNING ODISHA UNIVERSITY OF TECHNOLOGY AND RESEARCH	SYNOPSIS	SHREETANYA SWAIN 2125100011	SHEET NO.: 02
PROMOTING AND FACILITATING SPLENDOUR AND VISION OF BUDDHIST TOURISM IN 4 DISTRICTS (KHORDA,CUTTACK, JAJPUR, GAJAPATI) OF ODISHA			REMARKS

UDAYAGIRI

Udayagiri is a Buddhist site located in Jajpur district, Odisha, India. The site is situated on a hilltop and is known for its ancient caves, rock-cut sculptures, and inscriptions. Udayagiri is approximately 100 km from Bhubaneswar, the capital city of Odisha. It is one of the oldest and largest Buddhist complexes in Odisha, with evidence of continuous habitation and development from the 3rd century BCE to the 13th century CE.

SOURCE Secondary survey

RATNAGIRI

Ratnagiri is one of the most important and well-preserved Buddhist complexes in Odisha, with evidence of continuous habitation and development from the 5th century CE to the 13th century CE. It was an important center of Buddhist learning and scholarship, attracting pilgrims and scholars from across India and Southeast Asia.

SOURCE Secondary survey

LANGUDI

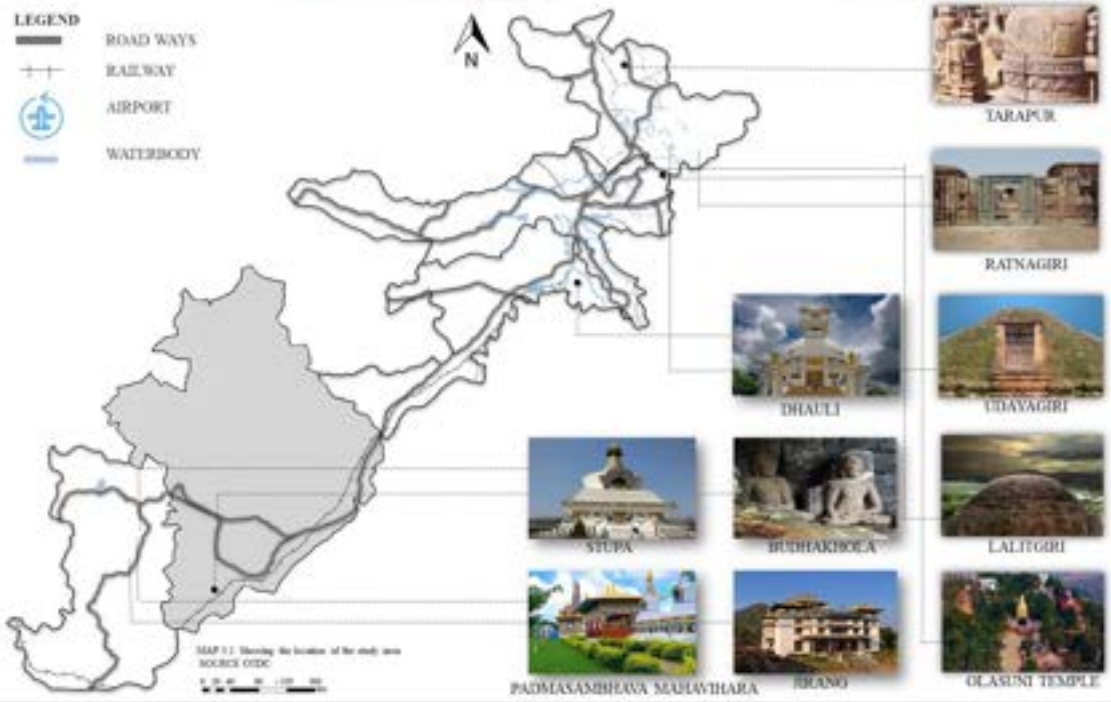
Langudi is a Buddhist site in the Jajpur district, Odisha, India, known for its ancient stupas and monasteries. It is approximately 25 km from the town of Jajpur and 85 km from the capital city of Bhubaneswar. It has important inscriptions in Brahmi and Sanskrit scripts, including the famous Langudi Rock Inscription of King Kharavela and the spread of Buddhism.

SOURCE Secondary survey

JHRANG

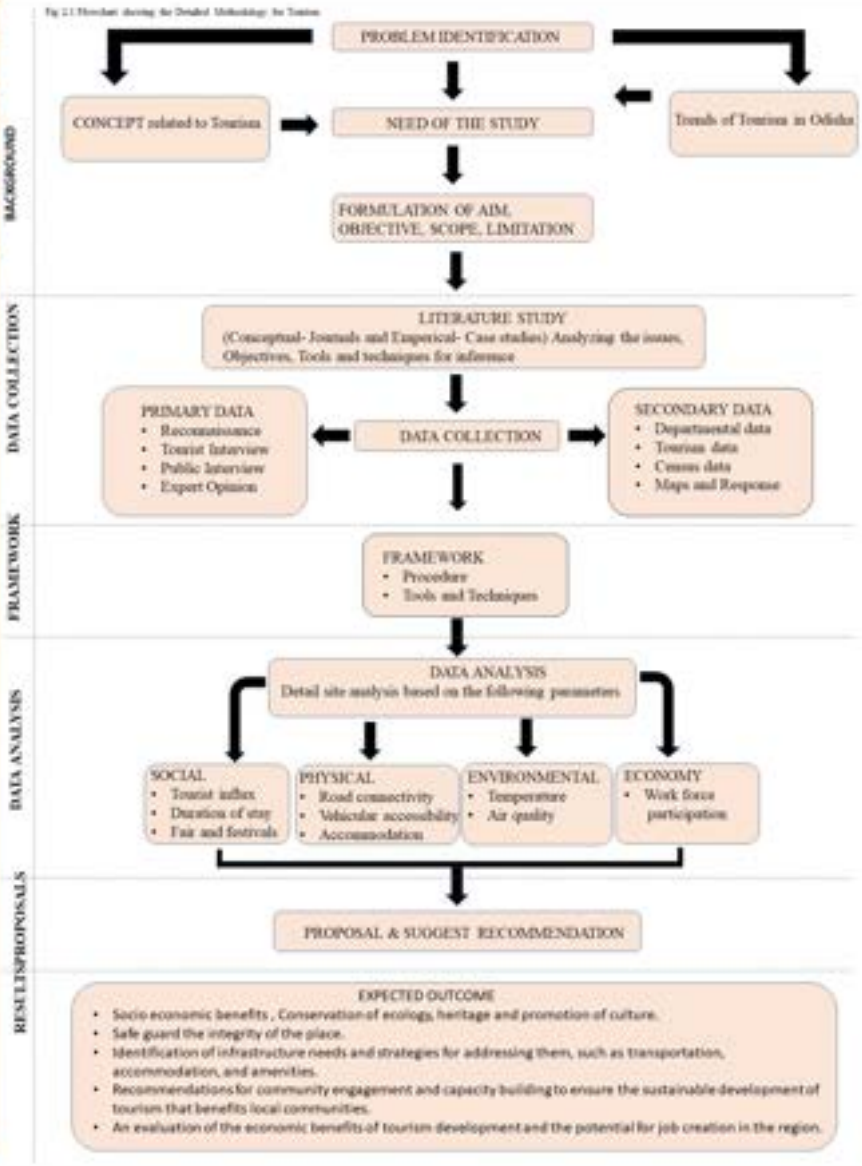
Jhrang, also known as Padma Sambhava Mahavihara, is the largest Buddhist monastery in Eastern India. It is located in Chandragiri, Gajapati district, Odisha state and was inaugurated by the Tibetan guru, Dalai Lama in 2010. It serves as a residence-cum-college for Buddhist monks from all over India who come to study.

SOURCE Secondary survey



MAP 1.1 Showing the location of the study area
SOURCE OTDC

METHODOLOGY



4th SEMESTER DEPARTMENT OF PLANNING ODISHA UNIVERSITY OF TECHNOLOGY AND RESEARCH	SYNOPSIS	SHREETANYA SWAIN 2125100011	SHEET NO.: 03
PROMOTING AND FACILITATING SPLENDOUR AND VISION OF BUDDHIST TOURISM IN 4 DISTRICTS (KHORDA,CUTTACK, JAJPUR, GAJAPATI) OF ODISHA			REMARKS

CONCEPTUAL

JOURNALS TITLE	CONCEPTS/KEY LEARNINGS	INFERENCE
2.1.1 The Mediterranean Natural Parks of Spain: A Study of Perceived Value and Future Behavioural Intentions in Ecotourism Mauricio Carvache-Franco (2021)	• The study looks into visitors' intentions to engage in future ecotourism-related behaviours in Spain's Mediterranean Natural Parks. This includes plans to visit the parks again, tell others about them, and practice sustainable habits. • Tourism enhancement implies planning, development, management, and continuous improvement. • Multimedia information systems allow museums to involve a worldwide network of potential visitors in the production of the cultural service.	• Visitors who place a high value on the natural parks are more likely to tell others about them, which could lead to an increase in visits and good word of mouth. • A collaborative approach between stakeholders, including the government, tourism industry, and local community, is crucial to ensure sustainable tourism development that benefits all parties involved. • It should prioritize the preservation of cultural heritage and natural resources when designing tourism development plans.
2.1.2 Tourism and Inclusive Growth: Evaluating a Diagnostic Framework Martine Bakker (2010)	• The study offers a framework for diagnosis that seeks to assess how tourism affects inclusive growth in a particular location. • The framework evaluates how tourism can benefit local communities, especially marginalised groups, by creating jobs, income, and business opportunities. • The weighted Sum Method is used to assess the potential of tourist sites to have a total tourism potential value of the district.	• For inclusive growth to be achieved, tourism development must be approached holistically, going beyond purely economic factors. This entails weighing the relative importance of economic, social, cultural, and environmental factors as well as the empowerment and well-being of local communities. While selecting the Circuit, the tourism potential of the places should be considered. • The loop is connected to diverse tourist destinations with well-planned infrastructure system elements which enhance the aesthetic appeal of the circuit. • Circuit can be visited in a trip of a limited period of time and expenditure.
2.1.3 Mapping urban tourism issues: a network visualisation analysis of research perspectives Merjan Hocevar, Tomaz Bartol (2021)	• The research uses network visualisation to map and examine the intricate connections and relationships between various urban tourism issues. • Urban planning for sustainable tourism development develops strategies could be used to balance the needs of tourists and the local community. • Community participation in tourism planning helps to ensure that tourism benefits are distributed fairly and sustainably.	• The research provides a thorough overview of urban tourism issues by synthesizing existing knowledge, allowing for more informed policy development and decision-making in urban planning and tourism management. • The development of infrastructure such as roads, transportation, and accommodations is crucial to support tourism activities in peripheral destinations. • Public-private partnerships can be used to leverage investment in tourism development and ensure the sustainability of the industry in the long run.

EMPERICAL LITERATURE

2.2.1CASE STUDY 1 (INTERNATIONAL ON SUSTAINABLE TOURISM DEVELOPMENT)

TITLE - Towards Sustainable Tourism Development in Urban Areas: Case Study on Bucharest as Tourist Destination

AUTHOR- Andreea Zamfir & Razvan Andrei Corbos

SOURCE: Journal (Bucharest Sustainable Tourism)

2.2.1.a. STUDY AREA

Bucharest is the capital city and industrial and commercial center of Romania. It is located in the southeast country and lies on the banks of the Dambovita River. It has an area of 228 sq km. Bucharest is a city with a rich cultural heritage and a popular tourist destination in Eastern Europe.

2.2.1.b. ISSUES

- Overcrowding and strain on infrastructure
- Environmental degradation
- Cultural preservation

2.2.1.c. OBJECTIVES

- To promote sustainable tourism development in Bucharest while also preserving the natural and cultural environment of the city.
- To identify the challenges and opportunities associated with sustainable tourism development in urban areas.
- To examine how urban planners can promote sustainable tourism development in Bucharest while also ensuring that the benefits of tourism are distributed equitably among the local population.
- To highlight the importance of stakeholder collaboration and community participation in achieving sustainable tourism development in urban areas.

2.2.1.d. TOOLS AND TECHNIQUES

- Sustainable tourism planning
- Community participation
- Public-private partnerships
- Policy and regulation
- Education and Awareness

2.2.1.f. INFERENCE

- Sustainable tourism development in urban areas is a complex process that requires a multi-stakeholder approach and the consideration of economic, social, and environmental factors.

2.2.1.e. CONCLUSION

- Among the success factors for managing sustainable tourism development in urban areas, the strategic planning plays an important role.
- This study consist of identifying the main ways of developing sustainable tourism in Bucharest based upon empirical research conducted with the aid of a survey. These ways of developing sustainable tourism in Bucharest.

2.2.2 CASE STUDY 1 (INTERNATIONAL ON TOURISM CIRCUIT)

TITLE - City Branding and Urban Tourism: A Case Study of Seoul and Taipei

AUTHOR- Yu Eun Young

SOURCE: Journal (City Branding and Urban Tourism: A Case Study of Seoul and Taipei)

2.2.2.a. STUDY AREA

Yu Eun Young's study examines Seoul and Taipei's urban tourism strategies and city branding. It looks at how these cities have improved their urban tourism appeal and attracted tourists by using branding strategies.

2.2.2.b. ISSUES

- Inadequate infrastructure
- Environmental degradation

2.2.2.c. OBJECTIVES

- To identify tourist
- To identify the potential of tourist sites through Weighted Sum Method (WSM).

2.2.2.d. TOOLS AND TECHNIQUES

- The data was calculated to find out the tourist demand in terms of percentage and ranking weightage.
- Afterwards destinations were classified with four supply components namely, a) popularity, b) accessibility, c) seasonality, and d) importance.
- Both scores are calculated, and potential destinations were found out with an average score of demand plus supply.
- Afterwards each destination was joined depending upon possible connectivity from line connectivity.
- Finally highest scored circuit evaluated is identified as the best tourist circuit Accord Tourism.
- A map of the circuit was prepared to display the circuit along with the destination roads.

2.2.2.e. CONCLUSION

- To ensure that all the destinations spread across the region are equally successful the three key destination service characteristics.

2.2.2.f. INFERENCE

- The respective tourist sites should be identified by the Tourism department of the state of national level importance as it will enhance the tourist influx by providing an attractive tourism package.
- Circuit can be visited in a trip of a limited period of time and expenditure.

2.2.3 CASE STUDY 1 (NATIONAL ON TOURISM CIRCUIT)

TITLE - Tourism Circuit Development in Peripheral Destinations: Case of Tripura, India

AUTHOR- Supriya Dam

SOURCE: Journal (Tourism Circuit Development in Tripura)

2.2.3.a. STUDY AREA

Amongst the tourism circuits in Tripura, West-South Tourism Circuits (WSTC) are the most revered tourist routes in the state situated in the North East Region (NER) of India

2.2.3.b. ISSUES

- Inadequate transportation facilities, lack of proper accommodation options, and insufficient tourist information centers.
- Lack of community involvement in the planning and development process.

2.2.3.c. OBJECTIVES

- Conduct an in-depth analysis of tourism circuits in Tripura
- Examine the operational characteristics of circuit tourism development in India with a view to applying them for circuit development in the state
- Explore the gaps and opportunities of WSTC and suggest ways and means of promoting international tourist influx in the state.

2.2.3.d. TOOLS AND TECHNIQUES

- The study is based on secondary data. The data on the pattern and volume of circuit tourism have been collected from different sources i.e. articles, reports, books, newspapers, internet documents, etc.
- The framework of the paper starts with the introduction of tourism circuits on tourist inflow, geographical positioning, and a number of tourism sites followed by a literature survey.
- Key circuit development parameters are verified against available data for the state of Tripura.

2.2.3.e. CONCLUSION

- The need for a holistic approach to tourism urban planning in peripheral destinations, one that takes into account the needs of local communities, the preservation of cultural heritage, and the promotion of sustainable tourism practices.

2.2.3.f. INFERENCE

- The lack of adequate infrastructure, community involvement, and marketing strategies are identified as major issues that need to be addressed.

4th SEMESTER DEPARTMENT OF PLANNING ODISHA UNIVERSITY OF TECHNOLOGY AND RESEARCH	LITERATURE REVIEW	SHREETANYA SWAIN 2125100011	SHEET NO.: 04
PROMOTING AND FACILITATING SPLENDOUR AND VISION OF BUDDHIST TOURISM IN 4 DISTRICTS (KHORDA,CUTTACK, JAJPUR, GAJAPATI) OF ODISHA			REMARKS

TOURISM POTENTIAL

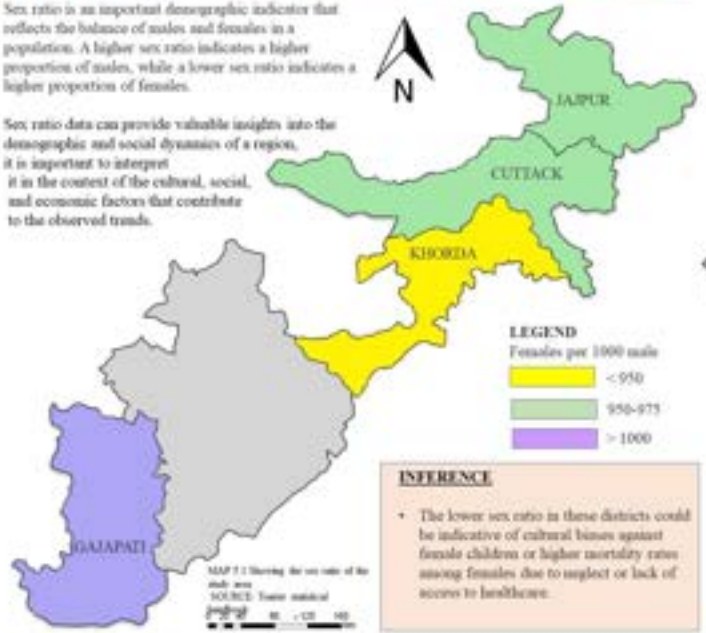
- Tourism potential assessment is a process of evaluating the potential of a destination for tourism development. It involves analyzing various factors such as the destination's social, physical, environmental, and economic aspects to determine its suitability for tourism.
- In the case of Jirang, Lalitgiri, Udayagiri, Langudi, and Ratnagiri in Odisha have great potential for tourism due to their rich cultural and religious significance, natural beauty, and historical importance. The destinations offer unique opportunities for tourists to explore and learn about the region's rich cultural heritage and history.

SOCIAL ATTRIBUTE

The social potential of these destinations is high as they are associated with the rich history and cultural heritage of Odisha. They have great religious and cultural significance and offer tourists unique opportunities to explore and learn about the region's rich cultural history. The social attributes are Annual Tourist Influx, Average Duration Stay, and Frequency of fairs and festivals.

SEX RATIO

- Sex ratio is an important demographic indicator that reflects the balance of males and females in a population. A higher sex ratio indicates a higher proportion of males, while a lower sex ratio indicates a higher proportion of females.
- Sex ratio data can provide valuable insights into the demographic and social dynamics of a region, it is important to interpret it in the context of the cultural, social, and economic factors that contribute to the observed trends.



MAP 5.1 Showing the sex ratio of the study area
SOURCE: Tourist statistical handbook

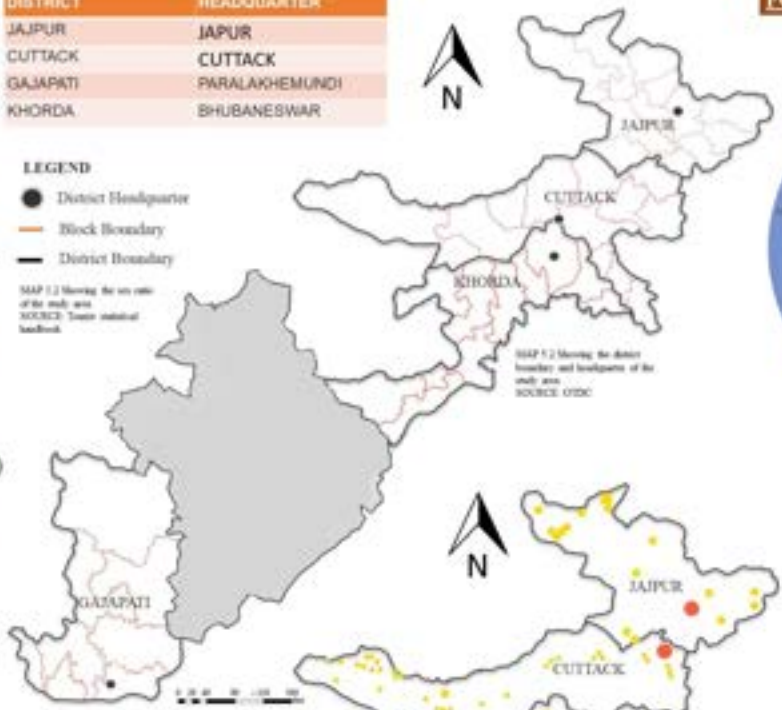
INFERENCE

- The lower sex ratio in these districts could be indicative of cultural biases against female children or higher mortality rates among females due to neglect or lack of access to healthcare.

JIRANG, LALITGIRI, UDAYAGIRI, RATNAGIRI AND LANGUDI

The study area is within the jurisdiction of different district headquarters, they are often promoted together as part of a larger tourism circuit in the region. By working together and leveraging their unique strengths and resources, these destinations can create a more compelling and attractive tourism product for visitors, and help to drive economic development in the region.

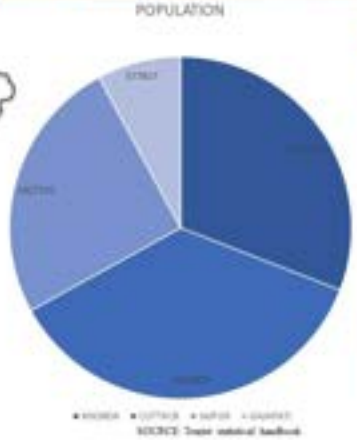
DISTRICT	HEADQUARTER
JAJPUR	JAJPUR
CUTTACK	CUTTACK
GAJAPATI	PARALAKHEMUNDI
KHORDA	BHUBANESWAR



MAP 5.2 Showing the sex ratio of the study area
SOURCE: Tourist statistical handbook

MAP 5.2 Showing the district boundary and headquarter of the study area
SOURCE: OTDC

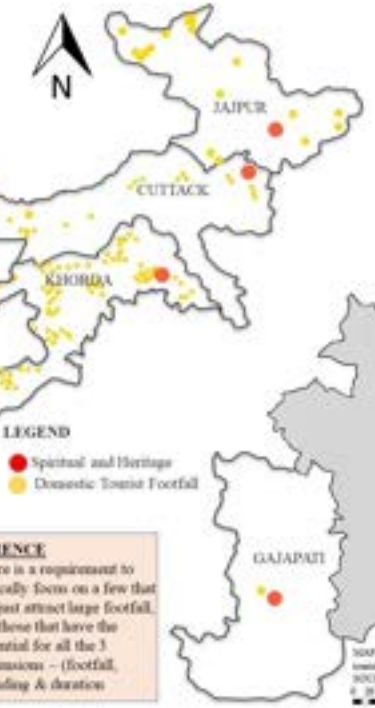
POPULATION



SOURCE: Tourist statistical handbook

RELIGION	POPULATION (%)
HINDU	93.63
MUSLIM	2.17
CHRISTIAN	2.77
SIKH	0.05
BUDDHIST	0.03
JAIN	0.02
OTHER RELIGION	1.32

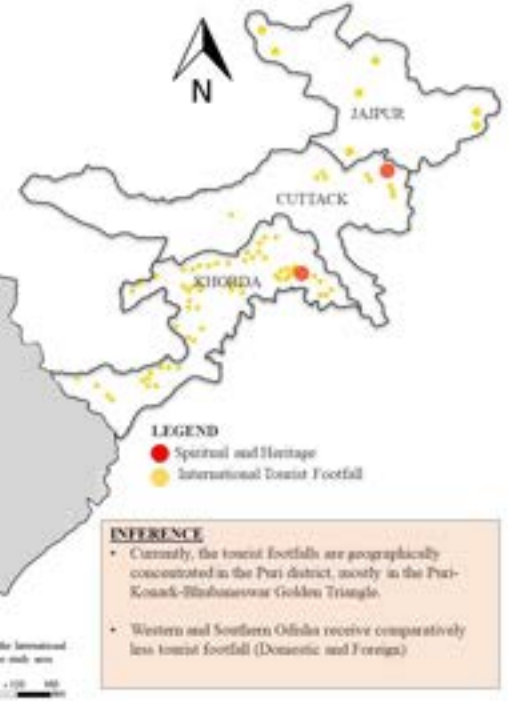
SOURCE: Tourist statistical handbook



MAP 5.3 Showing the domestic tourist footfall of the study area
SOURCE: OTDC

INFERENCE

- There is a requirement to critically focus on a few that not just attract large footfall, but those that have the potential for all the 3 dimensions – (footfall, spending & duration)



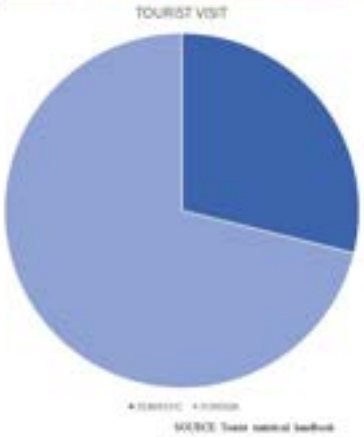
MAP 5.4 Showing the international tourist footfall of the study area
SOURCE: OTDC

INFERENCE

- Currently, the tourist footfalls are geographically concentrated in the Puri district, mostly in the Puri-Konark-Bhubaneswar Golden Triangle.
- Western and Southern Odisha receive comparatively less tourist footfall (Domestic and Foreign)

	4th SEMESTER DEPARTMENT OF PLANNING ODISHA UNIVERSITY OF TECHNOLOGY AND RESEARCH	DATA ANALYSIS	SHREETANYA SWAIN 2125100011	SHEET NO.: 05
	PROMOTING AND FACILITATING SPLENDOUR AND VISION OF BUDDHIST TOURISM IN 4 DISTRICTS (KHORDA,CUTTACK, JAJPUR, GAJAPATI) OF ODISHA			REMARKS

SITE 1- KHORDA

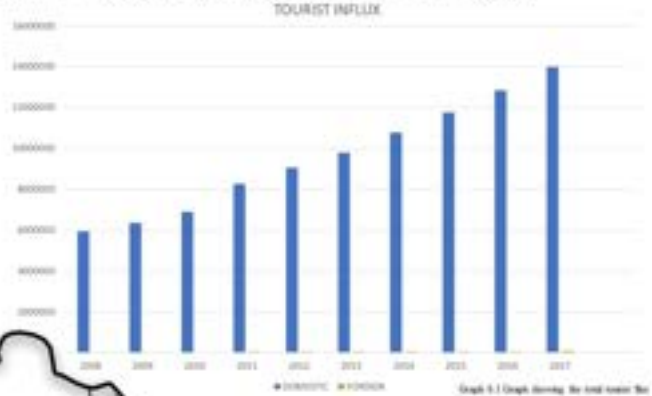


- Khordha is a city located in the Indian state of Odisha and is known for its rich cultural heritage and historical significance. The city has several Buddhist sites, including the famous Dhauli Hill and Udayagiri-Khandagiri Caves, which are important pilgrimage destinations for Buddhists and tourists alike.
- Buddhist influence in Khordha is a testament to the city's rich cultural heritage and the significant role it has played in the development of Buddhism in India. Today, these sites continue to attract visitors from around the world who come to learn about the history and teachings of Buddhism and to experience the unique cultural and spiritual traditions of the region.

SOURCE: Tourist statistical handbook

DHAULI

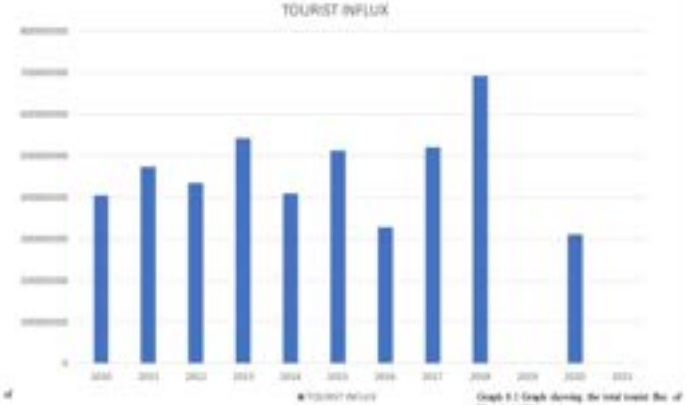
Dhauli is a significant Buddhist site located in the state of Odisha, India. It is believed to be the site where the famous Kalinga War was fought in 261 BCE between the Mauryan Empire led by Emperor Ashoka and the Kalinga Kingdom. It is said that this war was one of the bloodiest in Indian history and left a deep impact on Emperor Ashoka, who after witnessing the suffering caused by war, decided to embrace Buddhism and renounce violence. This event is considered a turning point in the history of Buddhism and is believed to have led to the spread of Buddhism in India and beyond.



Graph 5.1 Graph showing the total tourist flux of Dhauli
SOURCE: Tourist statistical handbook

KHANDAGIRI-UDAYAGIRI

The caves are known for their unique rock-cut architecture, which blends elements of Buddhist and Jain styles. The Udayagiri caves have a predominantly Buddhist influence, while the Khandagiri caves have a Jain influence. The caves are decorated with intricate carvings and sculptures depicting scenes from the life of the Buddha, Jain tirthankaras, and other deities. The architecture of the caves is also notable for its use of natural light and ventilation, which helps to keep the interiors cool and airy.



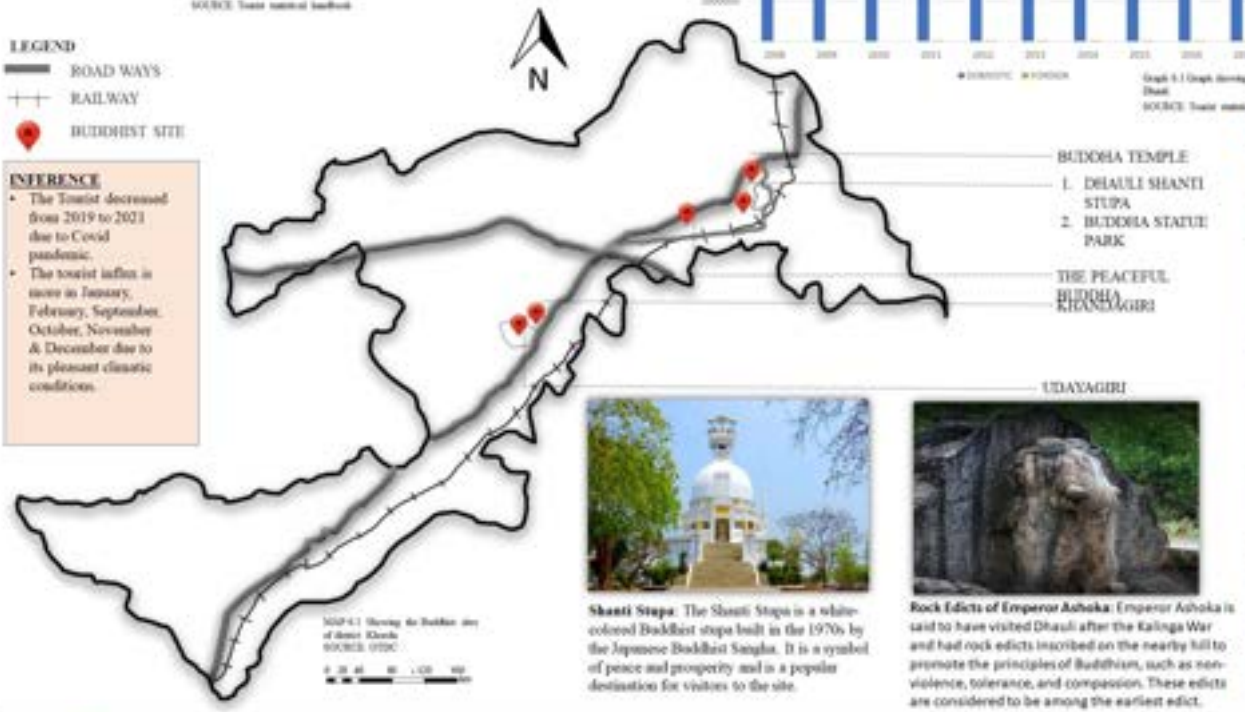
Graph 5.1 Graph showing the total tourist flux of Khandagiri-Udayagiri
SOURCE: Ministry of Tourism

LEGEND

- ROAD WAYS
- RAILWAY
- BUDDHIST SITE

INFERENCE

- The Tourist decreased from 2019 to 2021 due to Covid pandemic.
- The tourist influx is more in January, February, September, October, November & December due to its pleasant climatic conditions.



MAP-5.1 Showing the Buddhist sites of district Khordha
SOURCE: OTDC

Shanti Stupa: The Shanti Stupa is a white-colored Buddhist stupa built in the 1970s by the Japanese Buddhist Sangha. It is a symbol of peace and prosperity and is a popular destination for visitors to the site.

Rock Edicts of Emperor Ashoka: Emperor Ashoka is said to have visited Dhauli after the Kalinga War and had rock edicts inscribed on the nearby hill to promote the principles of Buddhism, such as non-violence, tolerance, and compassion. These edicts are considered to be among the earliest edict.

FEATURE	DHAULI	UDAYAGIRI-KHANDAGIRI
Location	Located on a hilltop on the banks of the river Daya	Located about 6 km from Bhubaneswar, Odisha
Historical Significance	It is the site of the famous Kalinga War, which Emperor Ashoka won and then converted to Buddhism, leading to the spread of Buddhism in India	It is a complex of rock-cut caves and carved Jain temples, dating back to the 1st century BCE
Main Attractions	Shanti Stupa, ancient rock edicts of Emperor Ashoka, Dhauli Hilltop, and a museum	Udayagiri Caves, Khandagiri Caves, Rani Gumpha, Hathi Gumpha, Ananta Cave, and a museum
Entry Fee	INR 25 per person for Indians and SAARC country nationals, INR 300 per person for foreign nationals	INR 25 per person for Indians and SAARC country nationals, INR 300 per person for foreign nationals
Timings	Open from 7:00 am to 6:00 pm on all days of the week	Open from 7:00 am to 6:00 pm on all days of the week
Best Time to Visit	October to March, when the weather is cool and pleasant	October to March, when the weather is cool and pleasant
Nearby Attractions	Pipli village (famous for its applique work), Konark Sun Temple, Lingaraj Temple, Mukteswara Temple, and others	Rajarani Temple, Mukteswara Temple, Lingaraj Temple, and others

4th SEMESTER DEPARTMENT OF PLANNING ODISHA UNIVERSITY OF TECHNOLOGY AND RESEARCH	DATA ANALYSIS	SHREETANYA SWAIN 2125100011	SHEET NO.: 06
PROMOTING AND FACILITATING SPLENDOUR AND VISION OF BUDDHIST TOURISM IN 4 DISTRICTS (KHORDA,CUTTACK, JAJPUR, GAJAPATI) OF ODISHA			REMARKS

RATNAGIRI

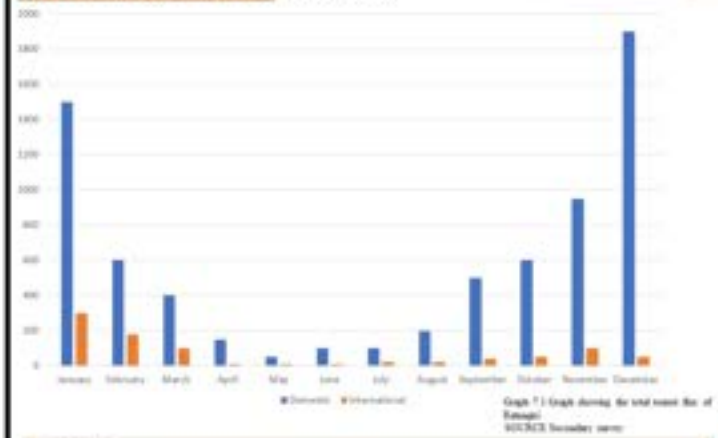
- Ratnagiri 'hills of jewels', is an isolated low hill of chondrite formation of the Asia range in the Jajpur district of Odisha. It is surrounded on all sides by three rivers, the Brahmani, the Kimiria, and the Birupa, and their offshoots. The major part of the habitation of the present village of Ratnagiri has cropped up on the southern and contiguous portions of the eastern and western slopes of the hill.
- The top of the hill affording a panoramic view of the surrounding was chosen for the Buddhist establishment rightly on account of its isolated eminence which could attract the attention of the people from countryside far and near.
- It is also not unlikely that the ruling princess made land grants to the monastic establishment to meet the necessities of the inmates and the expenses for ritualistic worship.

SOURCE Secondary survey

SOURCE Secondary survey

TOTAL TOURIST INFLUX

TOURIST INFLUX



Graph 7.1 Graph showing the total tourist flux of Ratnagiri
SOURCE Secondary survey

INFERENCE

- The tourist influx is more in January, February, September, October, November & December due to its pleasant climatic conditions.
- There is fewer International Tourist Flux as there is only one 3 Star accommodation near Ratnagiri ie Toshali Ratnagiri Resort which is currently under construction.
- There is no Tourist bus facilty to visit these destinations.

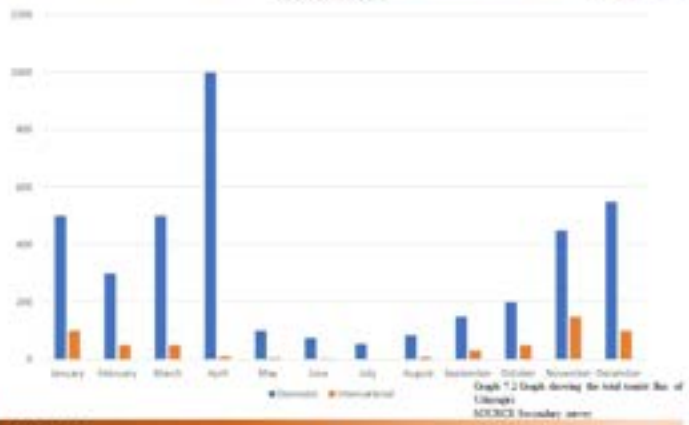
UDAYAGIRI

- The excavations at Udayagiri-1 (Madhavapura Mahavihara) have brought to light the remains of a huge monastic complex comprising a Mahastupa and an east-facing square monastery. The excavations at Udayagiri-2(Simhaprastha Mahavihara) have also brought to light the remains of a brick-built double-storied monastic complex with pradakshinapatha around the sanctum, vaulted windows, the existence of an upper shrine chamber on the first floor, Abutted to its back wall is a brick-built water reservoir used mainly in the dry season. A massive shrine complex exhibiting niches on its walls enshrining Buddhist divinities around presiding, the large inscribed image of Avalokiteswara.

SOURCE Secondary survey

SOURCE Secondary survey

TOURIST INFLUX

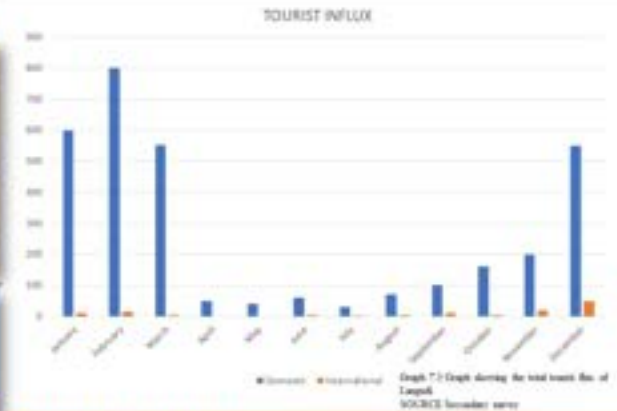


Graph 7.2 Graph showing the total tourist flux of Udayagiri
SOURCE Secondary survey

LANDUGI

- Langudi is an important archaeological site in Odisha that is known for its Buddhist and Jain relics.
- The site contains several rock-cut caves and stupas that date back to the 2nd century BCE, indicating the existence of a thriving Buddhist community in the region during that time.
- Langudi is surrounded by scenic natural beauty and offers visitors an opportunity to explore the lush green forests, hills, and waterfalls in the region.

TOURIST INFLUX



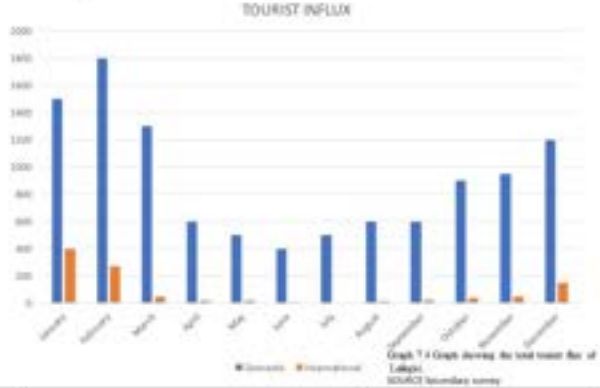
Graph 7.3 Graph showing the total tourist flux of Langudi
SOURCE Secondary survey

SITE=3 LALITGIRI

- A small scale excavation was undertaken at Lalitgiri by Utkal University in 1977. Later the Bhubaneswar Circe of the Archaeological Survey of India cad out large-scale excavations at Lalitgiri between 1985 and 1991. The excavation has revealed the remains of a massive stupa on hilltop. Inside the stupa, two relic caskets were kept in containers made of chloudrite.

- . This discovery was the first of its kind in the eastern India. Within the stone container, was found a steatite casket enclosing a silver and a gold caskets. The inner-most gold casket contained the relic in the form of a small fragment of bone. These un-inscribed baskets were arranged in the manner of Chinese puzzle box.

TOURIST INFLUX



Graph 7.4 Graph showing the total tourist flux of Lalitgiri
SOURCE Secondary survey

4th SEMESTER DEPARTMENT OF PLANNING ODISHA UNIVERSITY OF TECHNOLOGY AND RESEARCH	DATA ANALYSIS	SHREETANYA SWAIN 2125100011	SHEET NO.: 07
PROMOTING AND FACILITATING SPLENDOUR AND VISION OF BUDDHIST TOURISM IN 4 DISTRICTS (KHORDA,CUTTACK, JAJPUR, GAJAPATI) OF ODISHA			REMARKS

SITE4 JIRANG

Jirang is a small village in the eastern state of Odisha, India, known for its rich cultural heritage and natural beauty. The village is home to several Buddhist sites, including the Jirang Monastery and the Jirang Stupa, which attract tourists and pilgrims from all over the world.

Some of the key tourist attractions in Jirang include:

- **Jirang Monastery:** The Jirang Monastery is one of the most important Buddhist sites in the region, dating back to the 7th century AD. The monastery is known for its ancient architecture and beautiful surroundings, making it a popular destination for tourists and pilgrims alike. The monastery is known for its unique architecture, which is a blend of traditional Odisha style and Tibetan Buddhist style. It has a central shrine surrounded by smaller shrines and prayer halls. Jirang Monastery is home to a large community of monks who lead a simple and austere life dedicated to the practice of Buddhist teachings. The monastery also provides education and training to young monks and promotes Buddhist culture and values.

SOURCE: Secondary Survey

- **Jirang Stupa:** The Jirang Stupa is a massive Buddhist structure that is over 20 meters in height. The stupa is said to date back to the 1st century AD and is a popular destination for those interested in Buddhist history and architecture.

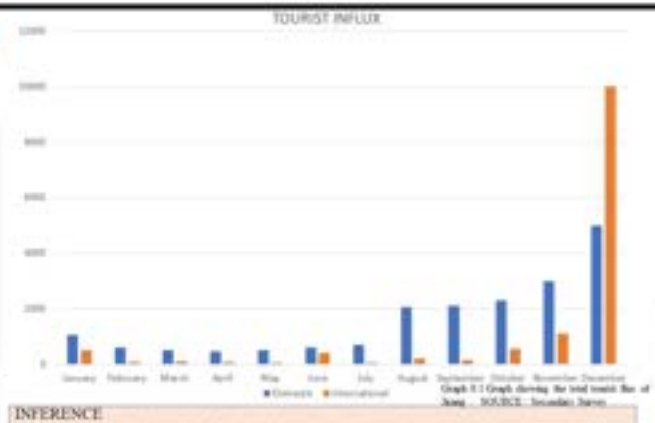
SOURCE: Secondary Survey

- **Padmasambhava Mahavihara Monastery:** The monastery is named after Acharya Padmasambhava, who was born in Odisha and is believed to have spread Buddhism to Tibet in 7th century. Driving through the roads of Jirang, visitors are welcomed to the Buddha Vihar with Buddhist flags on both sides of the road. Inaugurated by Dalai Lama in 2010, it has been built as per the 'Atsupuri style of Nalanda' and in the assembly hall, a 23-foot-high idol of Lord Buddha along with his two disciples have been installed.

SOURCE: Secondary Survey

- **Jirang Waterfall:** The Jirang Waterfall is a beautiful natural attraction located near Jirang village. The waterfall is surrounded by lush green forests and offers visitors a refreshing break from the heat and humidity of the region. The waterfall is popularly known as **Khasad Waterfall** and is located between three mountains that have crystal clear water. The place can be developed into a beautiful getaway. One can pitch a tent and trek upstream. Also can visit a few temples near to Khasada waterfall.

SOURCE: Secondary Survey



Graph 5.1 Graph showing the total tourist flux of Jirang. SOURCE: Secondary Survey

INFERENCE:

- The International Tourist Influx is highest on New Year ie 10000. Buddhist all over world gather to celebrate in Jirang.

SOURCE: Google

SOURCE: Google

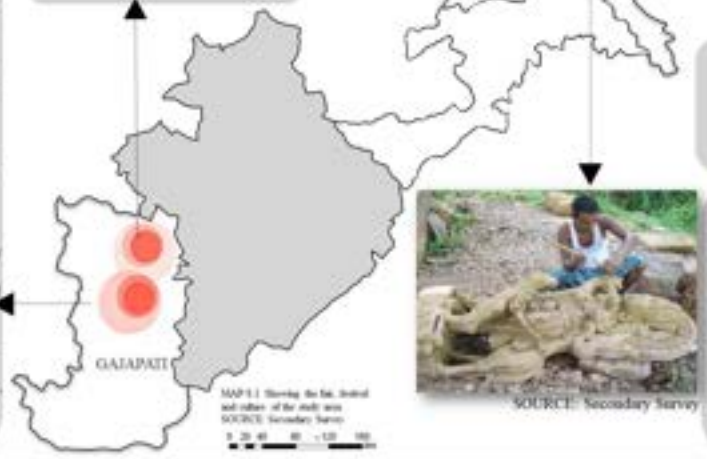
Buddha Jayanti - Buddha Jayanti, also known as Vesak or Buddha Purnima, is a major Buddhist festival celebrated across the world. It is celebrated in May or June and commemorates the birth, enlightenment, and death of Lord Buddha.

Drukpa Tshezhi - Drukpa Tshezhi is a four-day festival celebrated in September or October. It is an important festival for the Mahayana Buddhists and is celebrated to honour the four significant events in the life of Lord Buddha.

Losar - Losar is a Tibetan New Year festival celebrated by the Tibetan Buddhists. The festival falls in February or March and is marked by various rituals, including prayers, offerings, and cultural shows.

Saga Dawa - Saga Dawa is another important Buddhist that falls in May or June and is celebrated to commemorate the birth, enlightenment, and death of Lord Buddha. The festival is marked by prayers, offerings, and various other rituals.

The festival is also famous for the **'Taptapani Snana'**, which is a ritual bath taken in the hot springs located near the temple.



MAP 5.1 Showing the fair, festival and culture of the study area SOURCE: Secondary Survey

FAIR, FESTIVALS AND CULTURE

SOURCE: Secondary Survey

Chugada Pooja is an annual festival celebrated on the occasion of Pana Sankranti in some parts of Odisha, India. During this festival, a Shiv linguna is ceremoniously taken out of the water by a priest and worshipped with traditional rituals. After the rituals are completed, the Shiv linguna is immersed back into the water body. This festival is believed to symbolize the divine presence of Lord Shiva and is celebrated with great devotion and enthusiasm by the local community.

SOURCE: Secondary Survey

Ratnagiri Festival is an annual cultural event that takes place in the Ratnagiri Buddhist complex located in the state of Odisha, India. The festival is celebrated in the month of January and attracts a large number of tourists, scholars, and enthusiasts interested in the history and culture of Buddhism. The festival includes cultural programs, exhibitions, and lectures on Buddhist art, philosophy, and literature.

SOURCE: Secondary Survey

The **Dhauni festival** is also famous for the 'Ghata Parah' ritual, in which clay pots filled with water are decorated with flowers and then offered to the goddess. The water from these pots is considered to be sacred and is distributed among the devotees as 'Prasad'.

SOURCE: Secondary Survey

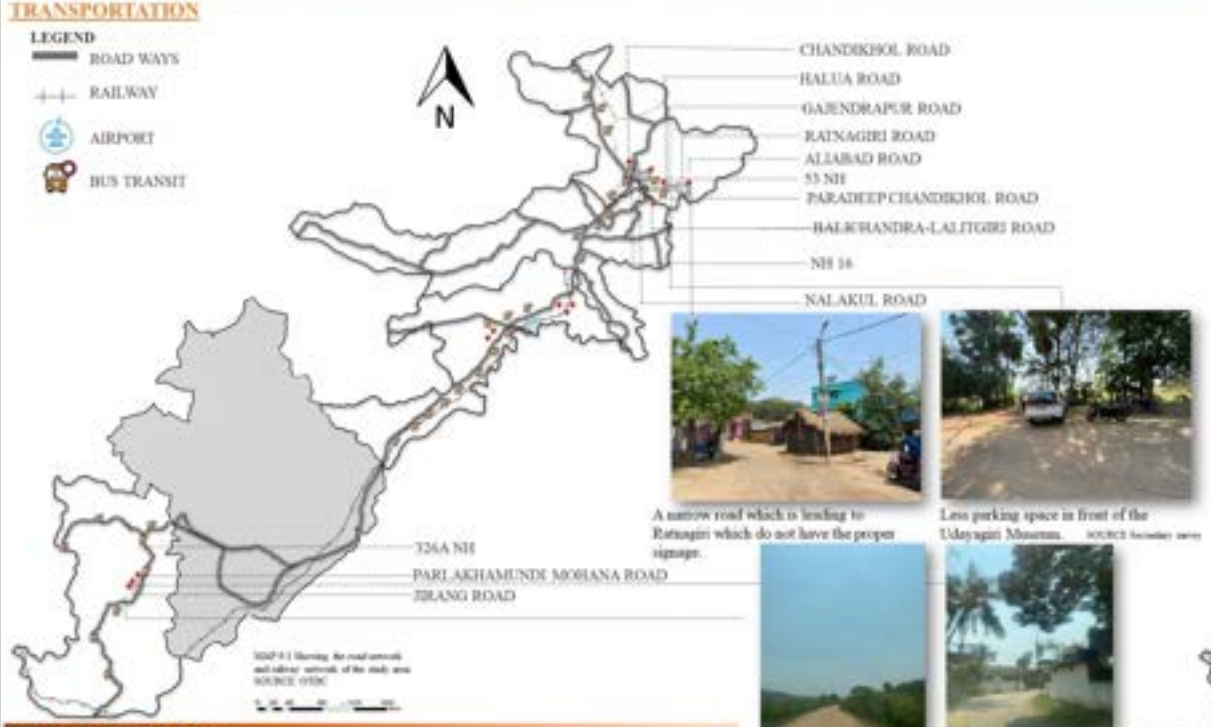
Sukhapada is a small craft village located near Lalitgiri in the Indian state of Odisha. Lalitgiri is a famous Buddhist pilgrimage site and one of the oldest Buddhist centers in the world. Sukhapada is known for its traditional handicrafts, including stone carving, wood carving, and traditional pottery.

The artisans of Sukhapada have been practicing their craft for generations, and their skills have been passed down from father to son. The stone carvers create intricate sculptures and carvings from the local sandstone, while the woodcarvers specialize in intricate designs and motifs on furniture and other wooden objects.

4th SEMESTER DEPARTMENT OF PLANNING ODISHA UNIVERSITY OF TECHNOLOGY AND RESEARCH	DATA ANALYSIS	SHREETANYA SWAIN 2125100011	SHEET NO.: 08
PROMOTING AND FACILITATING SPLENDOUR AND VISION OF BUDDHIST TOURISM IN 4 DISTRICTS (KHORDA,CUTTACK, JAJPUR, GAJAPATI) OF ODISHA			REMARKS

PHYSICAL ATTRIBUTE

TRANSPORTATION



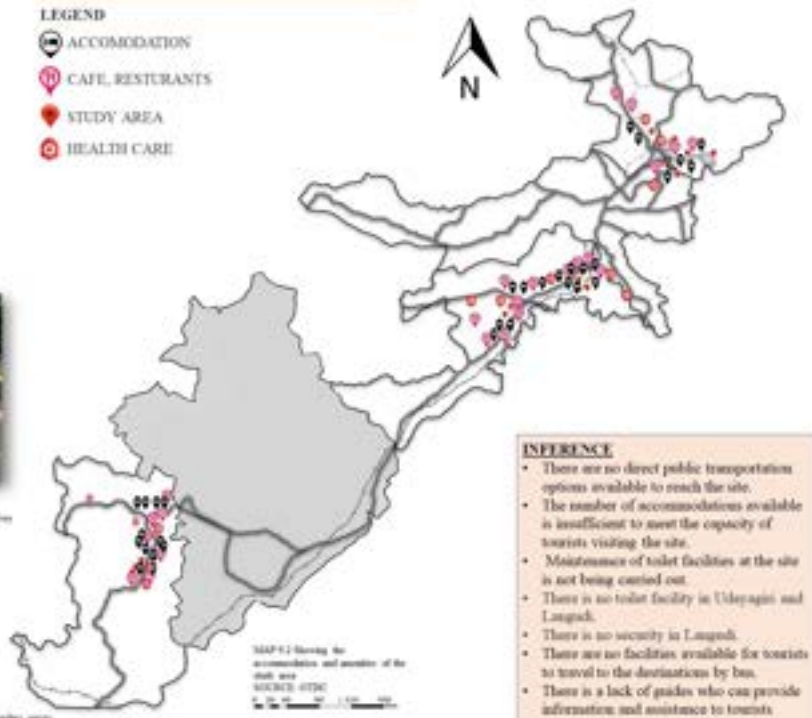
A narrow road which is leading to Ratnagiri which do not have the proper signage.

Less parking space in front of the Udayagiri Museum. SOURCE Secondary survey

Uneven Roads

Blind Spot does not have the proper signage. SOURCE Secondary survey

ACCOMMODATION AND AMENITIES



INFERENCE

- There are no direct public transportation options available to reach the site.
- The number of accommodations available is insufficient to meet the capacity of tourists visiting the site.
- Maintenance of toilet facilities at the site is not being carried out.
- There is no toilet facility in Udayagiri and Langudi.
- There is no security in Langudi.
- There are no facilities available for tourists to travel to the destinations by bus.
- There is a lack of guides who can provide information and assistance to tourists visiting the sites.

HIERARCHY OF ROADS

STUDY AREA	ROAD	TYPE OF ROAD
JIRANG	NH 16 326A NH PARLAKHAMUNDI MOHANA ROAD JIRANG ROAD	HIGH WAY HIGH WAY ARTERIAL ROAD COLLECTOR
LALITGIRI	PARADEEP CHANDIKHOL ROAD BALICHANDRA-LALITGIRI ROAD NALAKUL ROAD	HIGH WAY SUB ARTERIAL ROAD COLLECTOR
UDAYAGIRI	RATNAGIRI ROAD HALAU ROAD	SUB ARTERIAL ROAD COLLECTOR
RATNAGIRI	53 NH PARADEEP CHANDIKHOL ROAD RATNAGIRI ROAD ALIABAD ROAD	HIGH WAY ARTERIAL SUB ARTERIAL COLLECTOR
LANGUDI	NH 16	HIGH WAY
KHANDAGIRI-UDAYAGIRI	NH 16	HIGH WAY
DHAULI	NH 316	HIGH WAY

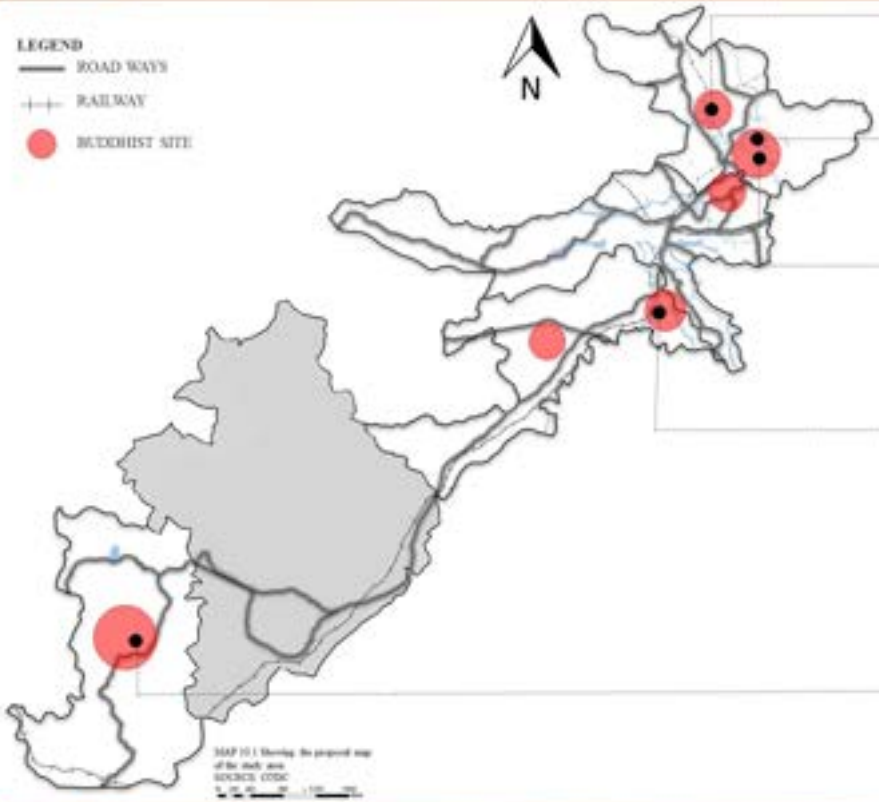
ANALYSIS PROCESS

Weight Sum Method (WSM) is a quantitative approach to urban planning that involves assigning weights to different factors based on their importance to the overall goals of the plan.

FACTORS	WEIGHT	JIRANG	LALITGIRI	UDAYAGIRI	RATNAGIRI	LANGUDI	DHAULI	KHANDAGIRI-UDAYGIRI
HISTORICAL SIGNIFICANCE	0.3	8	9	10	10	7	10	8
ACCESSIBILTY	0.2	6	7	9	7	8	9	9
ACCOMODATION	0.15	4	6	5	5	5	8	8
LOCAL CULTURE AND HOSPITALITY	0.15	7	8	8	7	7	9	10
NATURAL BEAUTY	0.1	7	8	6	7	7	9	10
AMENITIES	0.1	5	6	6	5	5	8	9
TOTAL	10	37.9	44.1	46.0	46.4	39.0	53	54

4th SEMESTER DEPARTMENT OF PLANNING ODISHA UNIVERSITY OF TECHNOLOGY AND RESEARCH	DATA ANALYSIS	SHREETANYA SWAIN 2125100011	SHEET NO.: 09
PROMOTING AND FACILITATING SPLENDOUR AND VISION OF BUDDHIST TOURISM IN 4 DISTRICTS (KHORDA,CUTTACK, JAJPUR, GAJAPATI) OF ODISHA			REMARKS

PROPOSAL



- PROPOSAL FOR TOILETS AND SECURITY
- PROPOSAL OF PROPER PARKING SPACE
- PROPOSAL FOR UPGRADATION OF VEHICULAR ACCESSIBILITY
- PROPOSAL ELEMENTS FOR THE REJUVENATION
- PROPOSAL FOR ECO-TOURISM
- PROPOSAL OF SMALL COTTAGES FOR ACCOMMODATION
- PROPOSAL FOR PARAGOLA FOR SHADING PURPOSE
- PROPOSAL OF PROMOTION AND AWARENESS OF OTHER BUDDHIST SITES
- PROPOSAL OF ORGANISING KIOSKS AND SIT OUT BLENDING WITH LANDSCAPE AND BUDDHIST ARCHITECTURAL PLANNING
- PROPOSAL FOR FAIR AND FESTIVALS
- UPLIFTMENT OF THE ECONOMY THROUGH TOURISM

MAP 10.1 Showing the proposed map of the study area
SOURCES: CODC

CONCEPT

The pagoda evolved from the stupas of ancient Nepal and took on its own characteristics upon reaching China, India and Japan.

Stupas began as pre-Buddhist burial mounds in Nepal.

Stupas were adopted by Buddhists to hold sacred relics, scripts, and rules of monks, as well as to be a site of meditation

As Buddhism spread to East Asia, the existing architectural styles blended with the stupa to create the pagoda design.

The pagoda is traditionally a tiered tower of an odd number of levels, with multiple eaves.

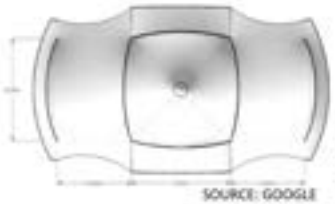
SITE 1 KHORDA DHAULI

SOURCE: Secondary Survey

SOURCE: GOOGLE

SOURCE: GOOGLE

SOURCE: GOOGLE



SOURCE: GOOGLE

SOURCE: GOOGLE

- Landscape design: Develop a landscape design inspired by Buddhist architecture, incorporating traditional elements such as water features, rock formations, and plantings.
- Sit-out design: Design comfortable and functional sit-outs that can accommodate visitors and provide a relaxing space to appreciate the landscape.
- Hoarding design: Incorporate hoarding designs that showcase information about other Buddhist sites in Odisha, encouraging visitors to explore the wider region.
- Signage design: Develop signage designs that guide visitors through the sit-outs and landscape design, providing information about the design and history of the area.
- Sustainability: Implement sustainable design practices, such as the use of native plant species, water conservation, and energy-efficient lighting.
- Accessibility: Ensure that the sit-outs and landscape design are accessible to all visitors, including those with disabilities, by providing accessible pathways, ramps, and seating.
- Safety: Consider safety aspects such as the design of walkways, lighting, and fencing to ensure the safety of visitors.
- Tourism management: Develop a tourism management plan that identifies ways to manage visitor numbers, minimize negative impacts on the environment, and support local communities.
- Economic viability: Conduct a feasibility study to assess the economic viability of the sit-outs and landscape design, including potential revenue streams from tourism activities.

Develop shading pergolas designs that are aesthetically pleasing, functional, and compatible with the surrounding environment. Implementing sustainable design practices, such as using renewable materials and integrating greenery, to enhance the shading pergolas' environmental and visual appeal.

4th SEMESTER DEPARTMENT OF PLANNING ODISHA UNIVERSITY OF TECHNOLOGY AND RESEARCH	PROPOSAL	SHREETANYA SWAIN 2125100011	SHEET NO.: 10
PROMOTING AND FACILITATING SPLENDOUR AND VISION OF BUDDHIST TOURISM IN 4 DISTRICTS (KHORDA,CUTTACK, JAJPUR, GAJAPATI) OF ODISHA			REMARKS

PROPOSAL

SITE 2 JAJPUR

MAP 11.1 Showing the proposed map of Jajpur
SOURCE: OTDC

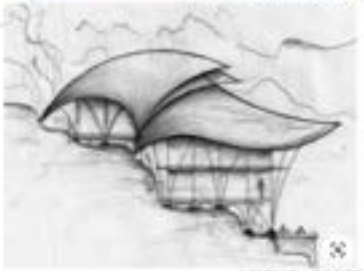
PROPOSAL FOR ECO-TOURISM

Eco-tourism in a Buddhist site is highly important and significant, as it has the potential to promote sustainable tourism practices while preserving cultural and natural heritage.

- **Sustainable tourism practices**: Eco-tourism emphasizes responsible tourism practices that minimize negative impacts on the environment and preserve natural resources. By promoting eco-tourism in a Buddhist site, we can encourage sustainable tourism practices that help to protect and preserve the natural environment.
- **Cultural preservation**: Many Buddhist sites are rich in cultural heritage, including ancient temples, monasteries, and other architectural wonders. By promoting eco-tourism in these sites, we can help preserve the cultural heritage and promote awareness of Buddhist values and traditions.
- **Economic development:** Eco-tourism can provide significant opportunities for economic development, especially in rural areas where traditional economic opportunities may be limited. By promoting eco-tourism in a Buddhist site, we can create new economic opportunities for local communities while supporting the preservation of cultural and natural heritage.
- **Education and awareness:** Eco-tourism provides an opportunity for visitors to learn about the importance of environmental conservation and sustainability, as well as the cultural and historical significance of a site. By promoting eco-tourism in a Buddhist site, we can raise awareness about the importance of sustainable tourism practices and promote cultural understanding.
- **Community involvement:** Eco-tourism can involve and benefit local communities, as it provides opportunities for community members to participate in tourism activities and benefit from tourism revenue. By involving local communities in the planning and implementation of eco-tourism initiatives, we can ensure that they are sustainable and benefit the community.

SOURCE: Secondary Survey

SOURCE: Secondary Survey


SOURCE: GOOGLE

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SITE 4 JIRANG
PROMOTION OF HANDICRAFTS AND ARTEFACTS

SOURCE: GOOGLE

- The promotion of handicrafts and artefacts in Jeerang Monastery can help to preserve traditional skills and techniques and provide economic opportunities for local artisans and craftspeople.
- Jeerang Monastery can establish a handicraft centre or craft village where artisans can create and showcase their work and offer workshops and training programs for visitors interested in learning about traditional skills and techniques.
- Jeerang Monastery can also organize handicraft fairs and exhibitions to promote local handicrafts and artefacts, attracting tourists interested in learning about local culture and traditions.
- Jeerang Monastery can collaborate with local community organizations and handicraft associations to develop initiatives that promote handicrafts and artefacts, such as market linkages and training programs for artisans.
- Jeerang Monastery can also promote the use of locally sourced and sustainable materials in handicraft production, which can contribute to sustainable tourism practices and reduce the carbon footprint of tourism.
- By promoting handicrafts and artefacts in Jeerang Monastery, we can also promote intercultural exchange and understanding, as tourists can learn about local cultures and traditions while supporting local communities and economies.
- The promotion of handicrafts and artefacts in Jeerang Monastery can also help to raise awareness about the importance of preserving cultural heritage and promoting sustainable tourism practices.

PROPOSAL FOR UPGRADATION OF VEHICULAR ACCESSIBILITY

- Car parking facility -There should be adequate car parking facilities in tourist places in order to avoid on-street parking which results in a reduction of the carriageway and hindrance in the mobility of the vehicle. The parking zone will be maintained by the revenue generated from the nominal charges collected for the individual vehicles and facilities like adequate public toilets & water should be provided.
- Electric vehicles -There is a proposal to initiate electric vehicles for travelling within the tourist circuit. The EV vehicle will be classified into a wheeler, 3-wheeler & 4-wheeler so that it can address the visitor travelling in all-weather conditions resulting in a sustainable approach.
- Bicycle sharing system -The bicycle sharing system will be enabled by application based with adequate parking facilities at every 5-10 km distance.

SOURCE: GOOGLE

SOURCE: GOOGLE

4th SEMESTER DEPARTMENT OF PLANNING ODISHA UNIVERSITY OF TECHNOLOGY AND RESEARCH	PROPOSAL	SHREETANYA SWAIN 2125100011	SHEET NO.: 11
PROMOTING AND FACILITATING SPLENDOUR AND VISION OF BUDDHIST TOURISM IN 4 DISTRICTS (KHORDA,CUTTACK, JAJPUR, GAJAPATI) OF ODISHA			REMARKS

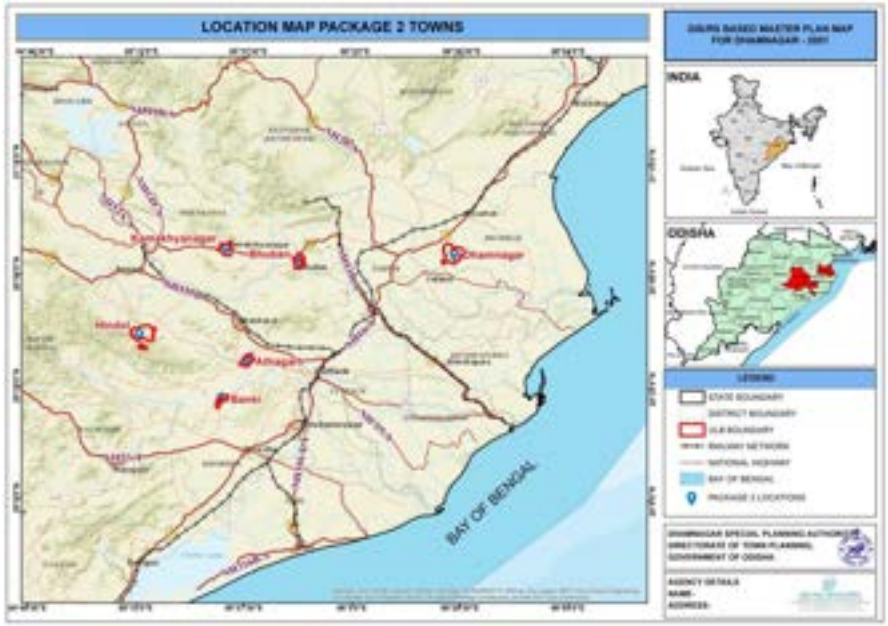
ODISHA
AARVEE ASSOCIATES – INTERN

DHAMNAGAR

PROJECT BACKGROUND

- The Directorate of Town Planning, Odisha, invited tenders for selection of consultants for "Preparation of GIS/RS Based CDP/ Master Plan.
- Package-1 &2, with 12 towns has been awarded to the consultants M/s. Aarvee Associates Architects Engineers & Consultants Pvt. Ltd, Hyderabad.
- The town does not have a Master Plan and thus it is required to duly integrate the existing development, deviations, and future needs of developmental activities in various sectors for planned growth of the town.

Sl. No.	District	Package 2 towns/Cities	Area in sq. kms (approx.)	Population (Census 2011)
1	Bhadrak	**Dhamnagar (N)**	**46.92**	**35,984**
2	Cuttack	Athagarh (N)	16.99	17,304
3		Banki (N)	10.06	17,521
4	Dhenkanal	Bhuban (N)	18.85	22,200
5		DHAMNAGAR (N)	21.85	21,345
6		Hindol (N)	50.42	17,387



METHODOLOGY

STAGE 1 Project Initiation

STAGE 2 Digital Base map Validation

STAGE 3 Field Survey, Data Collection And Updation of Digital Base Map

STAGE 4 Seminar & Workshop

STAGE 5 Preparation of Master Plan

STAGE 6 Investment & Implementation Planning

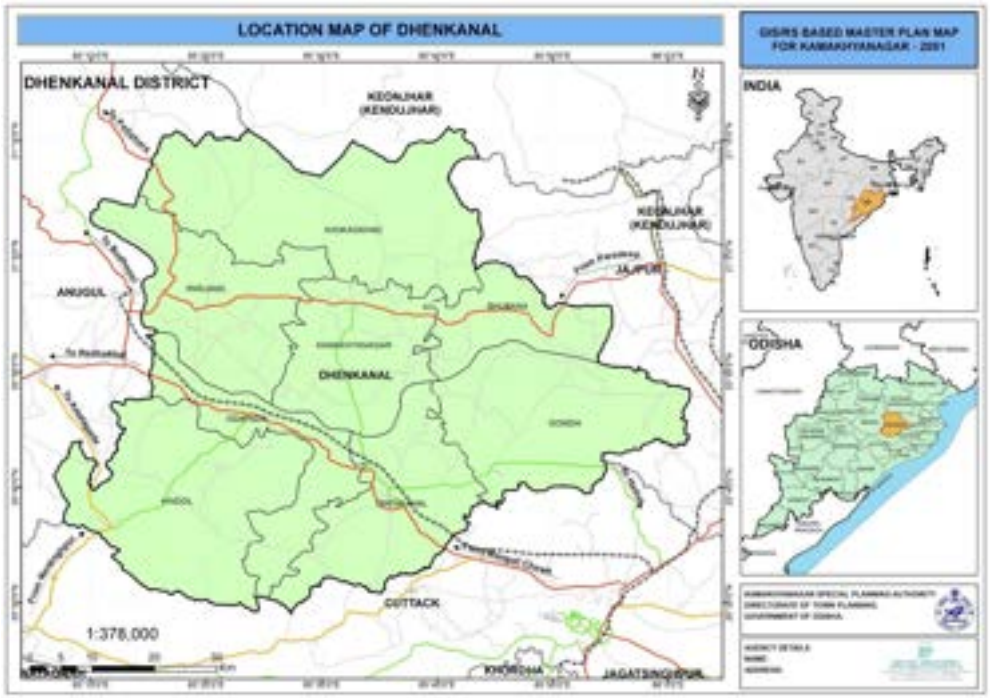
STAGE 7 Notification of Draft Plan Inviting Objections & Suggestions

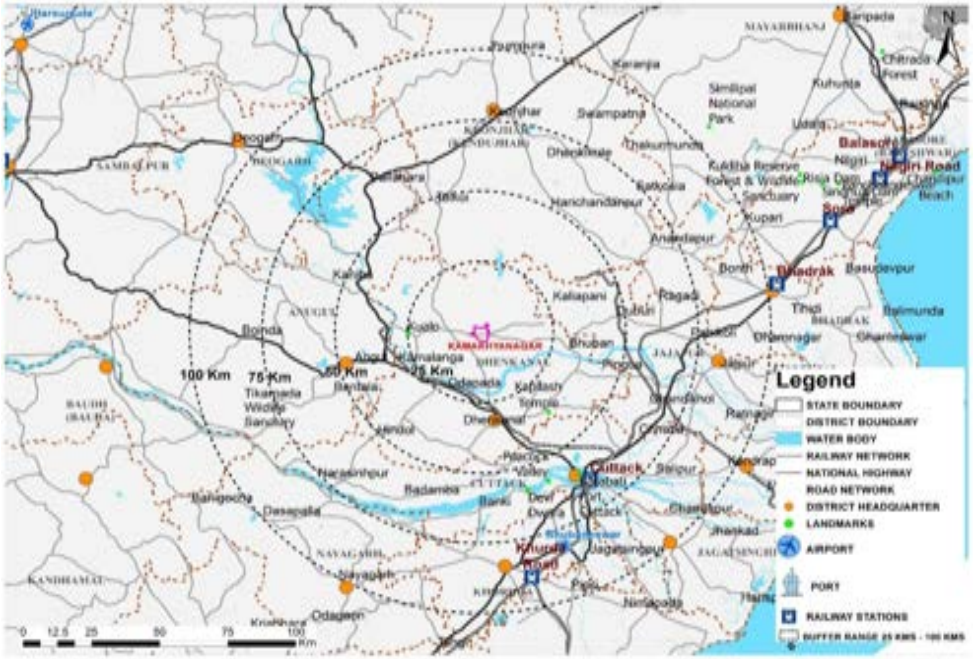
STAGE 8 Finalization of Draft Master Plan

STAGE 9 Delivery Of Final GIS Database

REGIONAL SETTING

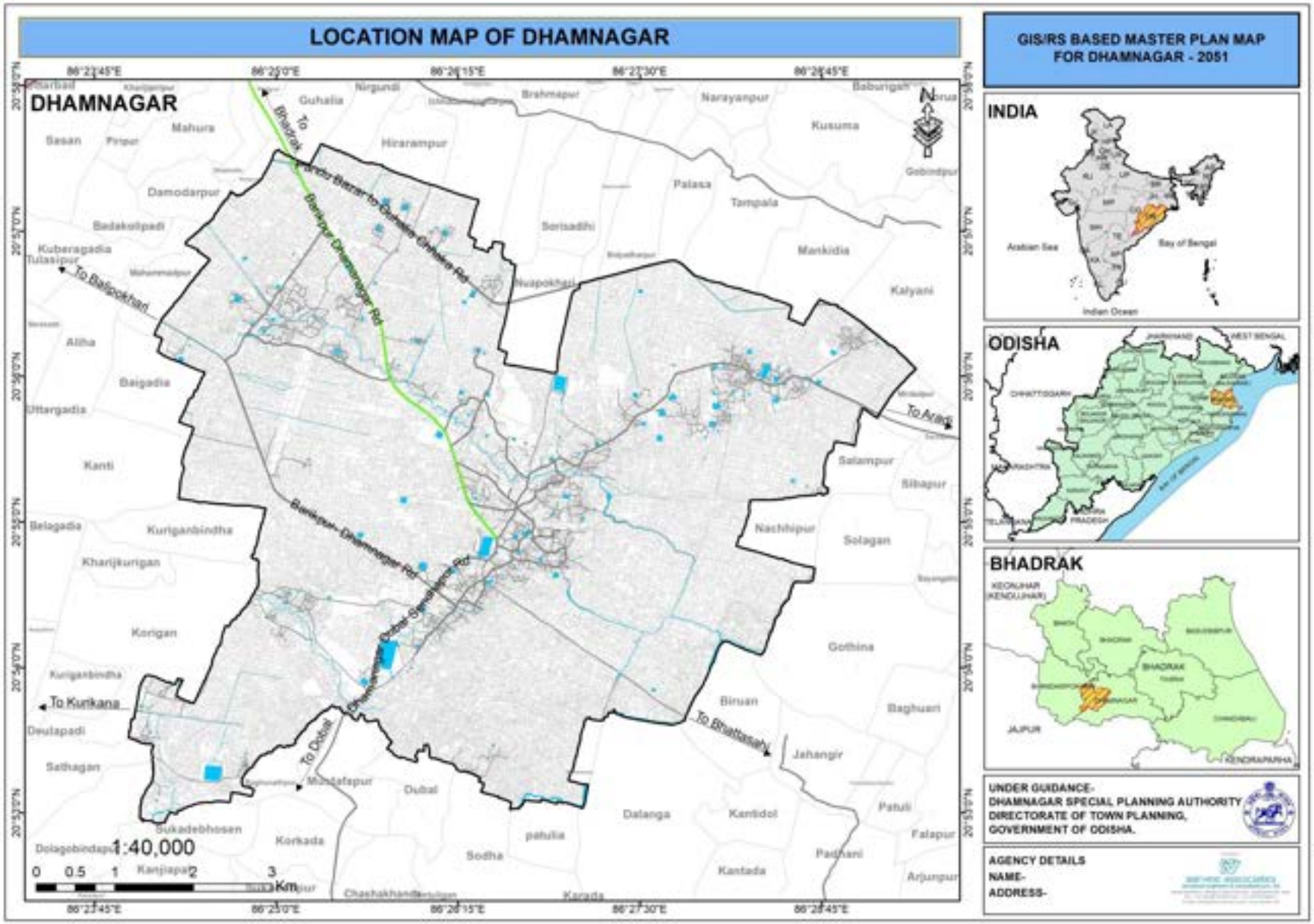
- Dhamnagar town is a part of Bhadrak district, whose headquarters are located in Bhadrak town.
- The district is bounded by Balasore District on the North, Jajpur District and river Baitarani on the South, Keonjhar District on the West and Bay of Bengal and Kendrapada District are on the East.
- It covers an area of 2,505 sq km.
- Home of Elephants and Tigers of the country.
- The district has 7 tahasils and 7 blocks.
- Baitarani river passes through the district from west to east which nurture the district throughout all the seasons.
- Agrarian economy which cultivates the fruits like mangoes, bananas, and jackfruits.
- Rich in mineral resources of Chromite and coal.
- Also known for the Pattachitra painting, known for its intricate patterns and mythological themes, influences local art in Bhadrak District.
- The major tourist spots like Kualo and kapilash temple lies within 25 km radius from the town.
- Towns such as Angul, Dhenkanal, Hindol and Cuttack are within 75 km radius from the town.
- The nearest airport is Biju Patnaik International Airport at 125 km away from the town.



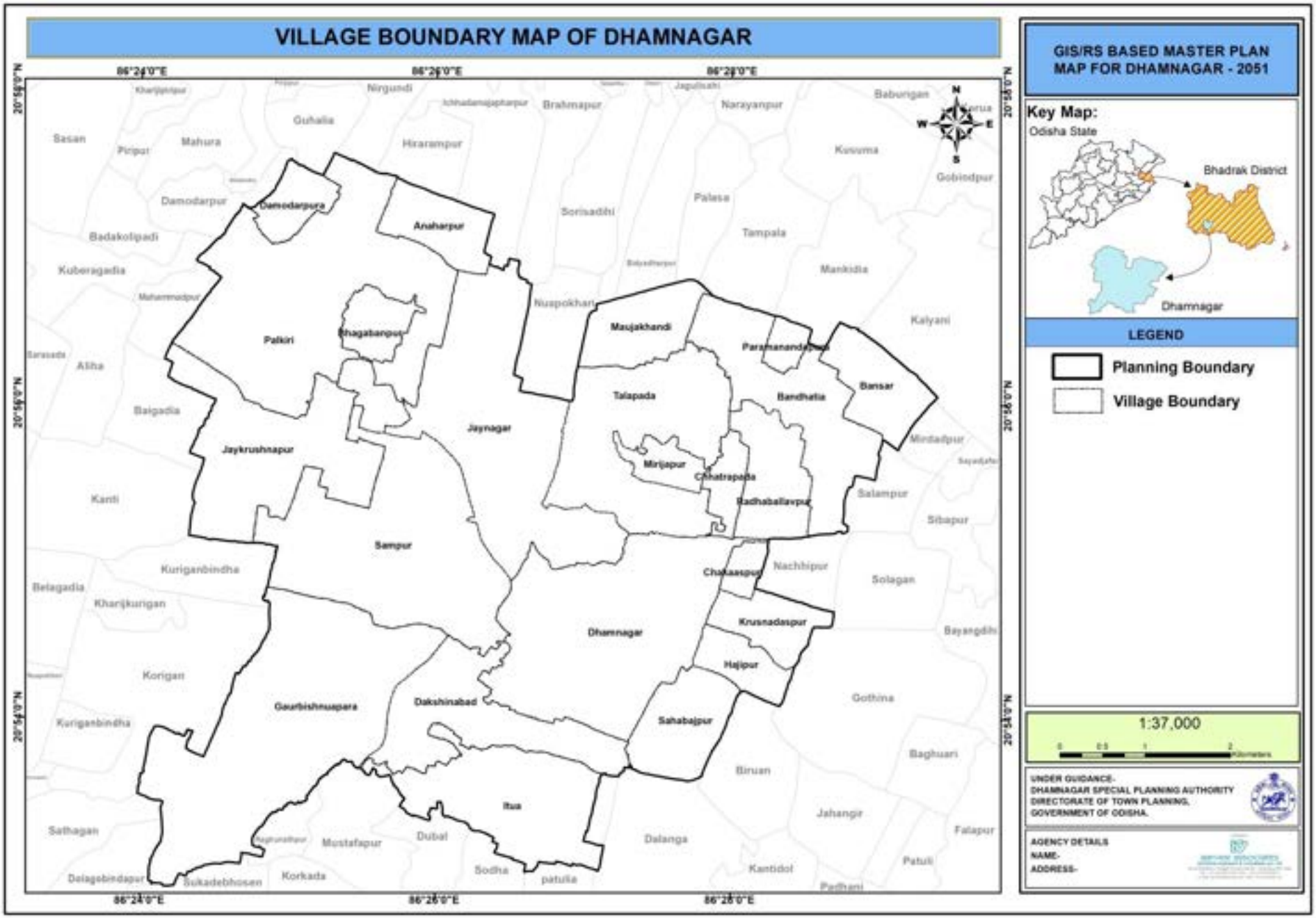


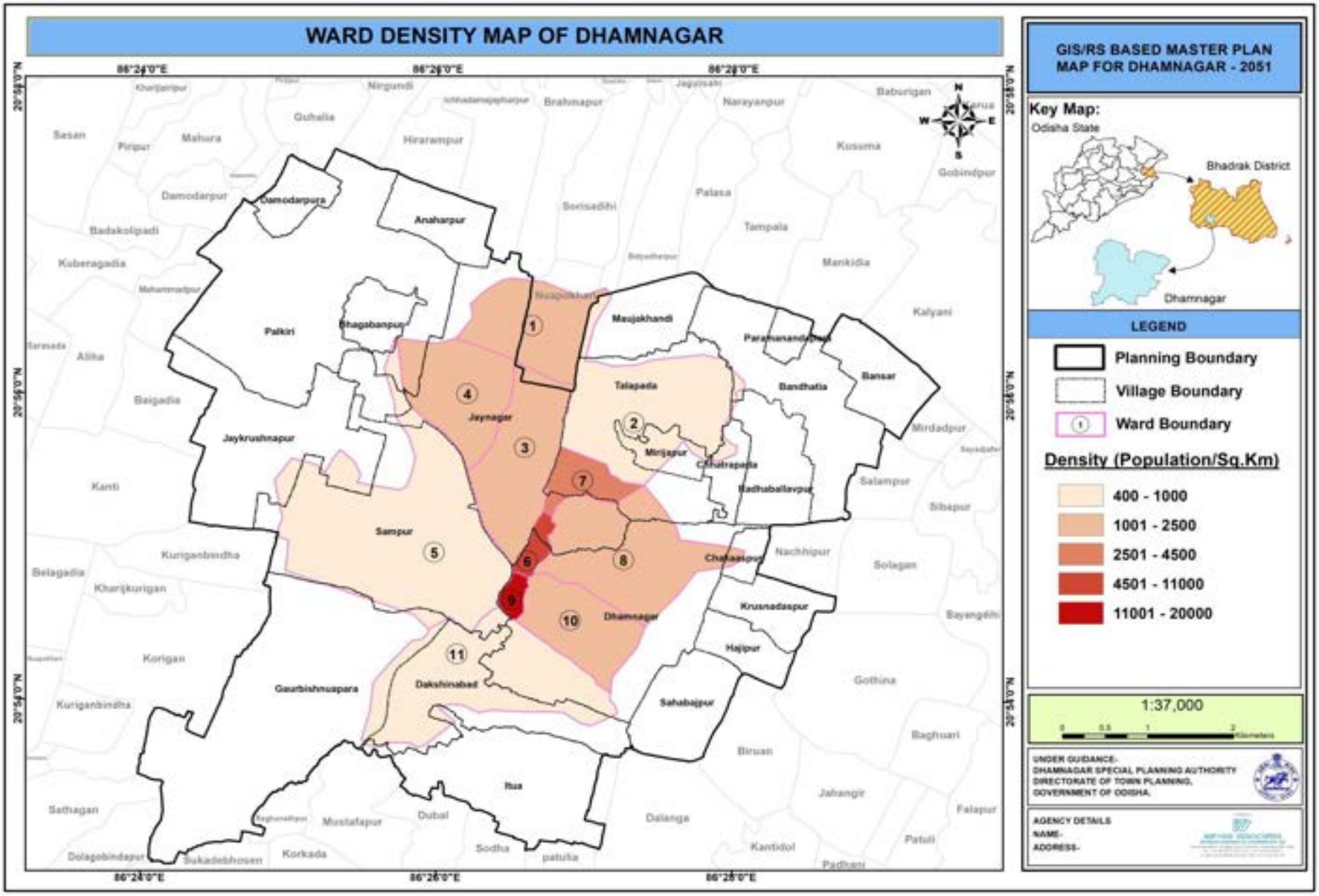
TOWN PROFILE

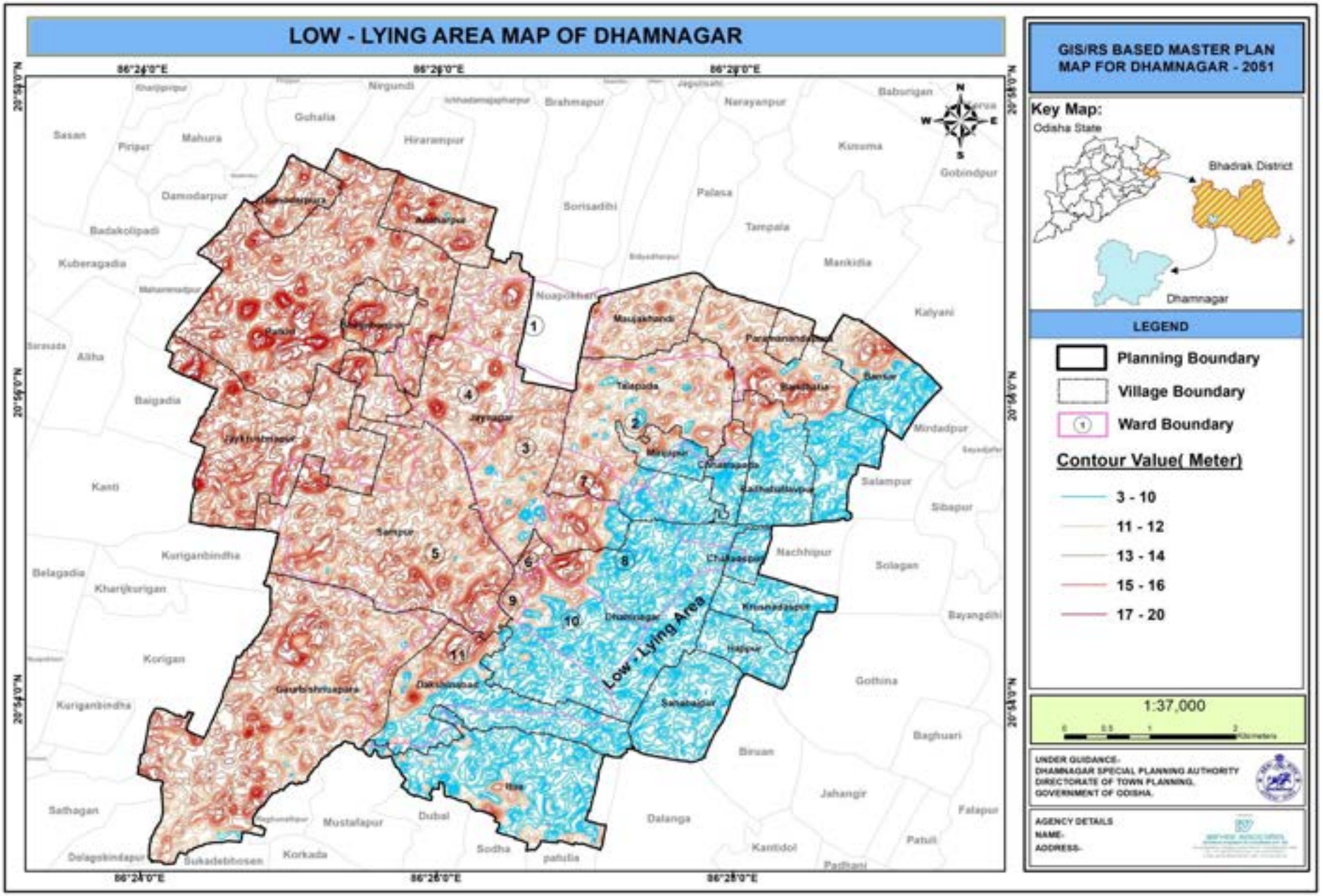
- The Dhamnagar NAC came into existence on 21.09.2014 with Government Notification No. 23620/HUD, 21.09.2014.
- According to census 2011, the population of the town is 35,760 which is spread over an area of 46.92 sq. km.
- Consist of 23 revenue villages which again divided in 11 wards.



TOWN PROFILE




WARD DENSITY MAP OF DHAMNAGAR
GIS/RS BASED MASTER PLAN MAP FOR DHAMNAGAR - 2051
Key Map:
Odisha State
Bhadrak District
Dhamnagar
LEGEND
Planning Boundary
Village Boundary
Ward Boundary
Density (Population/Sq.Km)
400 - 1000
1001 - 2500
2501 - 4500
4501 - 11000
11001 - 20000
1:37,000
UNDER GUIDANCE-
DHAMNAGAR SPECIAL PLANNING AUTHORITY
DIRECTORATE OF TOWN PLANNING,
GOVERNMENT OF ODISHA.
AGENCY DETAILS
NAME-
ADDRESS-
86°24'0"E
86°26'0"E
86°28'0"E
20°58'0"N
20°56'0"N
20°54'0"N
Damodarpura
Anaharpur
Palkiri
Bhagabanpur
Jaykrushnapur
Jaynagar
Sampur
Gaurbishnupara
Dakshinabad
Ilua
Sahabajpur
Hajipur
Krusnadaspur
Dhamnagar
Chhatrapada
Mirjapur
Talapada
Bandhatia
Bansar
Masjakhandi
Paramanandapur
Mankidia
Tampala
Palasa
Sorisadhi
Brahmapur
Narayanpur
Kusuma
Gobindpur
Baburigan
Kalyani
Mirdadpur
Salampur
Sibapur
Nachhipur
Solagan
Bayangdhi
Gothina
Baghuari
Biruan
Jahangir
Falapur
Patuli
Kantidol
Padhani
Dalanga
Sodha
patulia
Korkada
Dubal
Mustafapur
Sukadebkhosen
Dolagobindapur
Sathagan
Kuriganbindha
Korigan
Kuriganbindha
Belagadia
Kharijkurigan
Kanti
Baigadia
Aliha
Saresada
Kuberagadia
Badakolipadi
Damodarpur
Piripur
Mahura
Sasan
Guhalia
Hirarampur
Nirgundi
Kharijanipur


LOW - LYING AREA MAP OF DHAMNAGAR
GIS/RS BASED MASTER PLAN MAP FOR DHAMNAGAR - 2051
Key Map:
Odisha State
Bhadrak District
Dhamnagar
LEGEND
Planning Boundary
Village Boundary
Ward Boundary
Contour Value(Meter)
3 - 10
11 - 12
13 - 14
15 - 16
17 - 20
Low - Lying Area
1:37,000
UNDER GUIDANCE-
DHAMNAGAR SPECIAL PLANNING AUTHORITY
DIRECTORATE OF TOWN PLANNING,
GOVERNMENT OF ODISHA.
AGENCY DETAILS
NAME-
ADDRESS-
86°24'0"E
86°26'0"E
86°28'0"E
20°58'0"N
20°56'0"N
20°54'0"N

TOWN PROFILE

Garbage Generated (TPD)		1
Garbage Lifted (TPD)		1
Door to Door Collection (Households)		Yes
Bins Provided		Yes
Segregation of waste		Yes
Type of Vehicles for collection and transportation of waste	BOV	12
	Cesspool	1
	Tricycles	22

Source- DHAMNAGAR NAC

TREATMENT AND DISPOSAL

- MCC (Micro Composting Centre)Capacity- 4 TPD
- MRF-Capacity- 10 TPD

MCC & MRF Facility

DEMAND GAP ANAYSIS FOR PROJECTED POPULATION

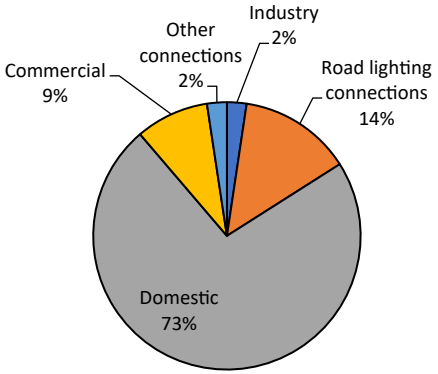
Particulars	2021	2031	2041	2051
Projected Population	44,537	56,170	70,659	88,005
Solid Waste (in MT)	1	1	1	1
Existing Generation (MT)	0.02	0.02	0.03	0.03
Per capita Waste(kg)	1.00	1.39	1.92	2.63
SWM Generation	1	1	1	1

Roadside Cleaning

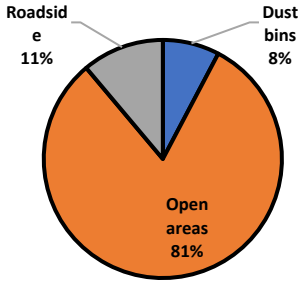
MO KHATA Selling

- As per the sample survey conducted among 686 Households, 81% dispose waste in open areas and 53% households claims to have door to door collection facility.
- Only 22% households gets the Daily service for garbage clearance.

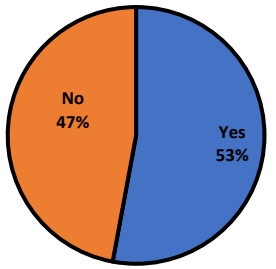
No. of connections



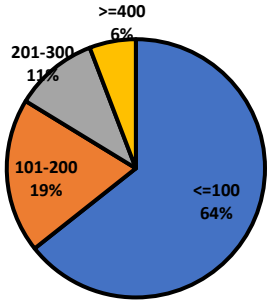
Location for household disposal



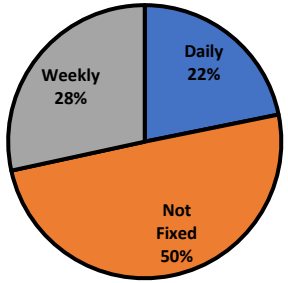
Door to Door Collection



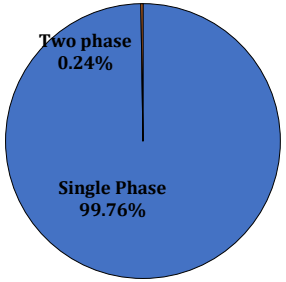
Distance travel to Dump the Waste



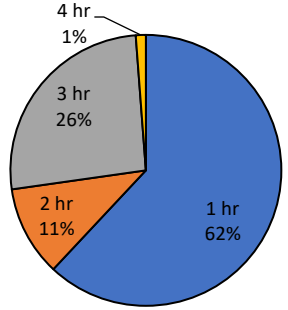
Frequency of Garbage Clearance



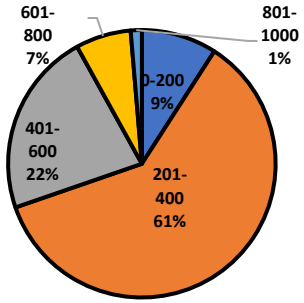
Type of Phase



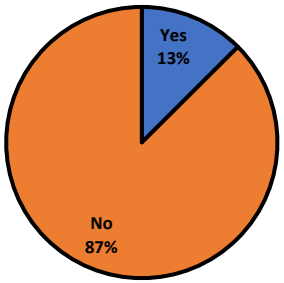
Duration of Power Cut



Average Monthly Bill

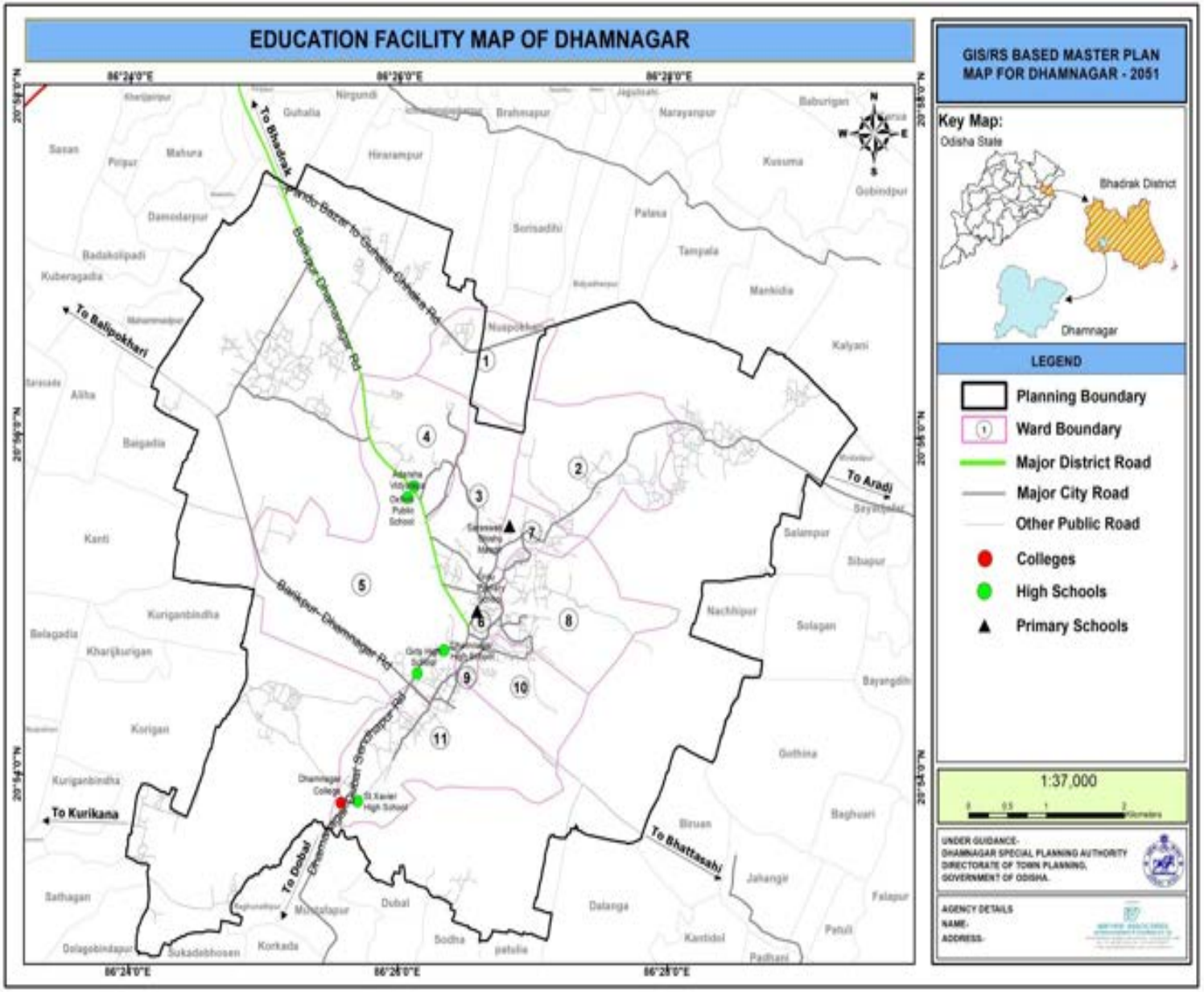


HT line passing through the area



INFRASTRUCTURE

EDUCATION



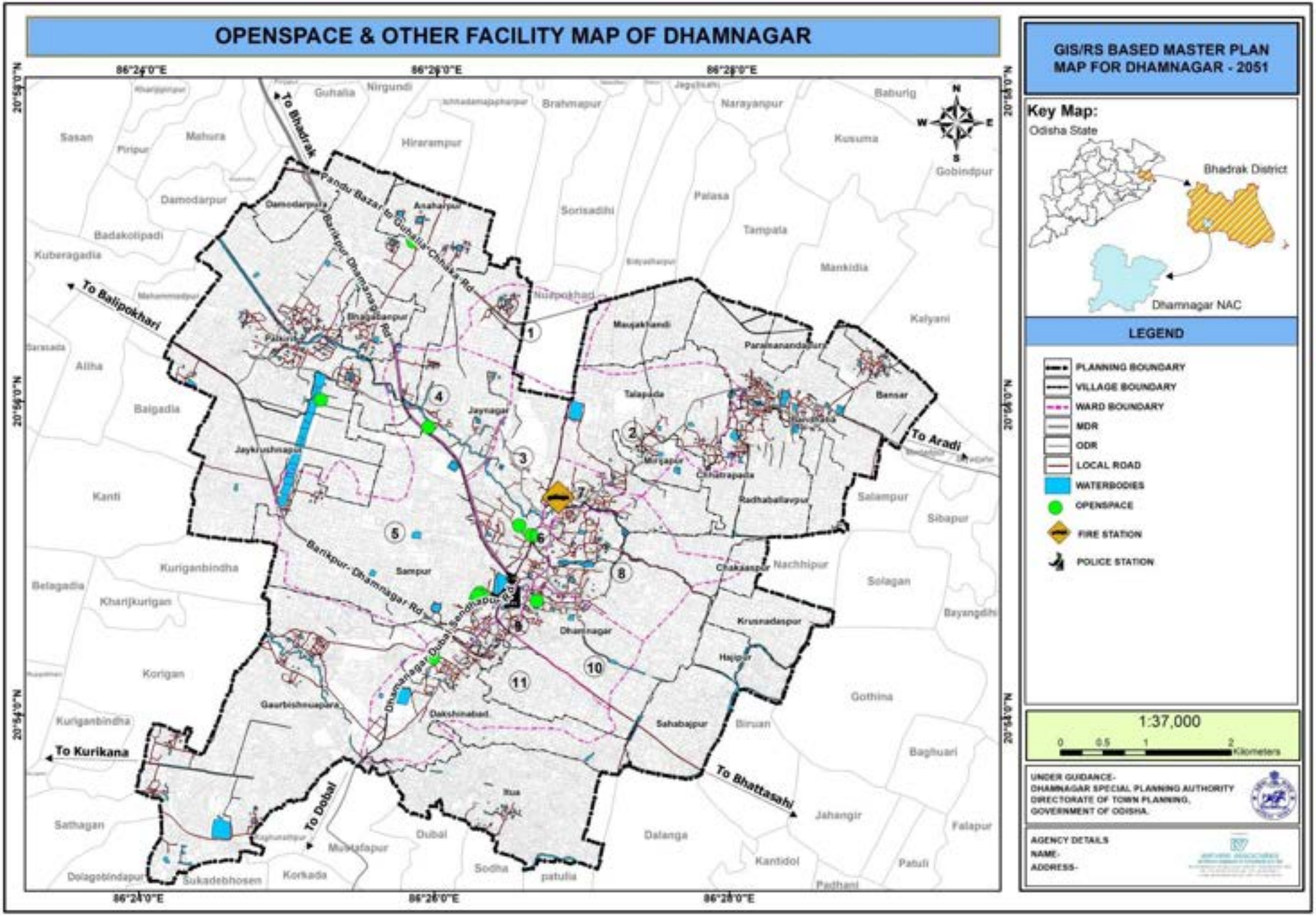
SOCIAL INFRASTRUCTURE

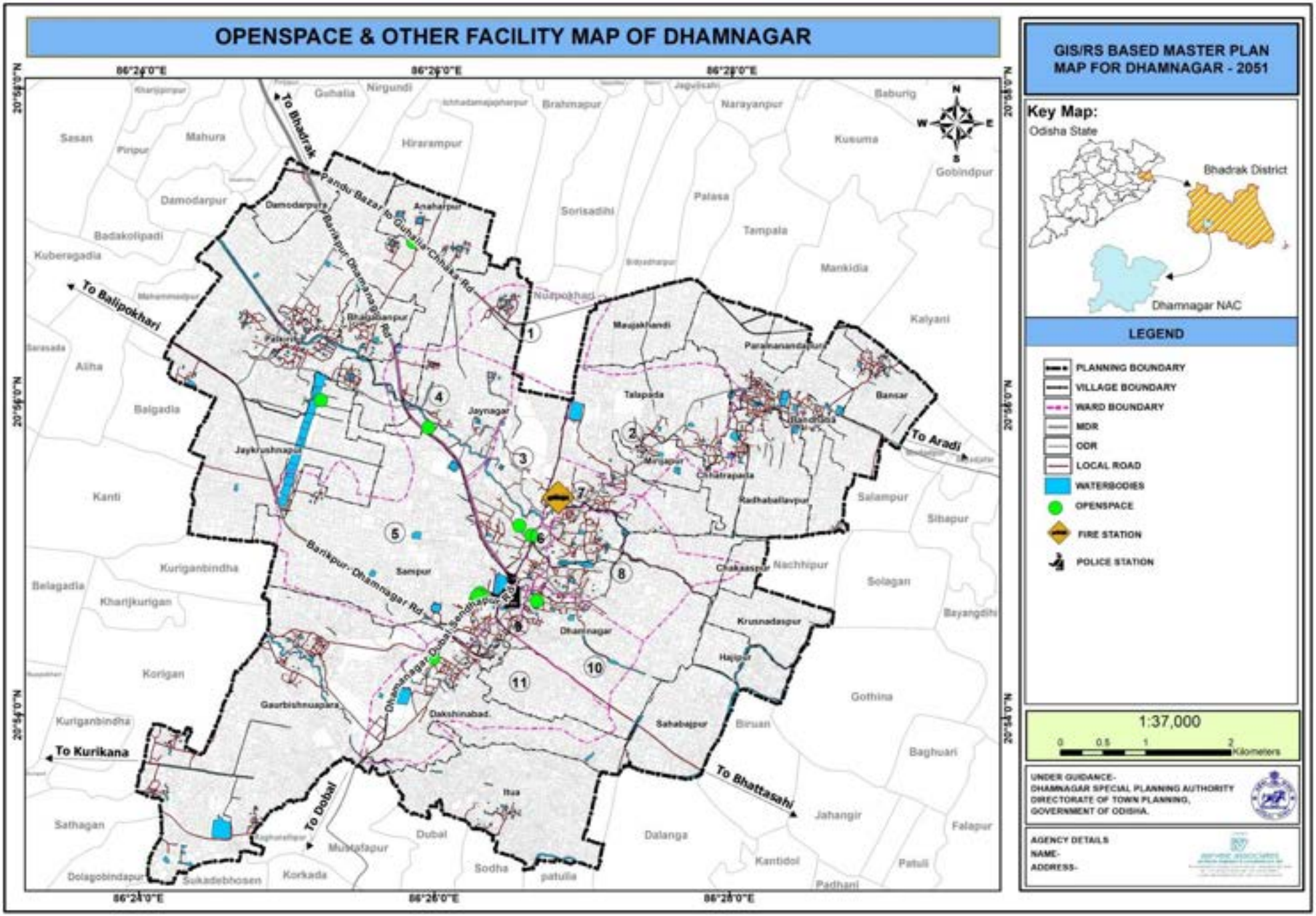
S. No.	Institute	Number
1	Primary only (1-5) Govt	10
2	Primary with Upper Primary (1-8) govt	5
3	Upper Primary only (6-8) Govt	1
4	Upper Primary with secondary and higher secondary (6-12) Govt.	1
5	Primary with upper primary and secondary (1-10)Madrasa	1
6	Dhamnagar collage Govt.	1
7	Private school	5
8	Madrasa recognized (by Wakf board / Madrasa Board) (Primary)	5
9	Adarsh Vidyalaya, Dhamnagar	1

INFRASTRUCTURE

Category of Facility	Population served per unit	Area (in Ha)	Existing units	2021			2031			2041			2051		
				Required units	Additional units required	Additional Area requirement (in Ha)	Required units	Additional units required	Additional Area requirement (in Ha)	Required units	Additional units required	Additional Area requirement (in Ha)	Required units	Additional units required	Additional Area requirement (in Ha)
Pre-Primary, Nursing school	2,500	0.08	33	18	-15	-1.20	22	-11	-0.88	28	-5	-0.40	35	2	0.16
Primary School	5,000	0.40	32	9	-23	-9.20	11	-21	-8.40	14	-18	-7.20	18	-14	-5.60
Senior Secondary School	7,500	1.80	71	6	-65	-117.00	7	-64	-115.20	9	-62	-111.60	12	-59	-106.20
Integrated School with Hostel Facility (Class I-XII)	1,00,000	3.50	0	0	0	0.00	1	1	3.50	1	1	3.50	1	1	3.50
School for Physically challenged	45,000	0.70	0	1	1	0.70	1	1	0.70	2	2	1.40	2	2	1.40
School for Mentally Challenged	10,00,000	0.20	0	0	0	0.00	0	0	0.00	0	0	0.00	0	0	0.00
College	1,25,000	5.00	6	0	-6	-30.00	0	-6	-30.00	1	-5	-25.00	1	-5	-25.00
University Campus	-	10 – 60	0	0	0	0.00	0	0	0.00	0	0	0.00	0	0	0.00
ITI, Polytechnic	10,00,000	4.00	1	0	-1	-4.00	0	-1	-4.00	0	-1	-4.00	0	-1	-4.00
Engineering college	10,00,000	6.00	1	0	-1	-6.00	0	-1	-6.00	0	-1	-6.00	0	-1	-6.00
Medical College	10,00,000	15.00	0	0	0	0.00	0	0	0.00	0	0	0.00	0	0	0.00
Other Professional colleges	10,00,000	2.00	0	0	0	0.00	0	0	0.00	0	0	0.00	0	0	0.00
Sub Total			144	34	-110	-166.70	42	-102	-160.28	55	-89	-149.30	69	-75	-141.74

INFRASTRUCTURE




OPENSPACE & OTHER FACILITY MAP OF DHAMNAGAR
GIS/RS BASED MASTER PLAN MAP FOR DHAMNAGAR - 2051
Key Map:
Odisha State
Bhadrak District
Dhamnagar NAC
LEGEND
PLANNING BOUNDARY
VILLAGE BOUNDARY
WARD BOUNDARY
MDR
ODR
LOCAL ROAD
WATERBODIES
OPENSPACE
FIRE STATION
POLICE STATION
1:37,000
0 0.5 1 2 Kilometers
UNDER GUIDANCE-
DHAMNAGAR SPECIAL PLANNING AUTHORITY
DIRECTORATE OF TOWN PLANNING,
GOVERNMENT OF ODISHA.
AGENCY DETAILS
NAME-
ADDRESS-
To Bhadrak
To Balipokhari
To Aradi
To Kurikana
To Bhattasahi
To Dobal
Pandu Bazar to Guhalia-Chhaka Rd
Barikpur-Dhamnagar Rd
Dhamnagar-Dobal Sandhapur Rd
Guhalia
Nirgundi
Brahmnapur
Narayanpur
Baburig
Kusuma
Gobindpur
Hirarampur
Sorisadihi
Palasa
Tampala
Mankidia
Kalyani
Damodarpur
Badakolipadi
Kuberagadia
Sasan
Mahura
Piripur
Aliha
Balgadia
Kanti
Kuriganbindha
Belagadia
Khatjkurigan
Korigan
Sathagan
Dolagobindapur
Sukadebhosen
Korkada
Mukhafapur
Dubal
Sodha
patulia
Dalanga
Kantidol
Padhani
Patuli
Falapur
Jahangir
Baghuari
Birsuan
Gothina
Solagan
Bayangdihi
Nachhipur
Salampur
Sibapur
Bansar
Talapada
Maujakhandi
Paramanandapur
Jaynagar
Jaykrushnapur
Sampur
Dhamnagar
Dakshinabad.
Sahabajpur
Krusnadaspur
Chakaspur
Radhaballavpur
Chhatrapada
Mirzapur
Nuapokhari
Bhagabanpur
Damodarpur
Anaharpur
Itua
Gaurbishnuapara
Kuriganbindha
1
2
3
4
5
6
7
8
9
10
11

INFRASTRUCTURE

HEALTH

DEMAND GAP ANAYSIS FOR PROJECTED POPULATION

Category of Facility	Population served per unit	Area (in Ha)	Existing units	2021			2031			2041			2051		
				Required units	Additional units required	Additional Area requirement (in Ha)	Required units	Additional units required	Additional Area requirement (in Ha)	Required units	Additional units required	Additional Area requirement (in Ha)	Required units	Additional units required	Additional Area requirement (in Ha)
Dispensary	15,000	0.08 – 0.12	1	3	2	0.20	4	3	0.30	5	4	0.40	6	5	0.50
Nursing Home, Child welfare and Maternity center	45,000 to 1 lakh	0.20 – 0.30	42	1	-41	-10.25	1	-41	-10.25	1	-41	-10.25	1	-41	-10.25
Polyclinic	1,00,000	0.20 – 0.30	14	0	-14	-3.50	1	-13	-3.25	1	-13	-3.25	1	-13	-3.25
Intermediate Hospital (Category A) (200 Beds)	1,00,000	3.70	0	0	0	0.00	1	1	3.70	1	1	3.70	1	1	3.70
Intermediate Hospital (Category B) (80 beds)	1,00,000	1.00	0	0	0	0.00	1	1	1.00	1	1	1.00	1	1	1.00
Multispecialty Hospital (NBC) (200 Beds)	1,00,000	9.00	1	0	-1	-9.00	1	0	0.00	1	0	0.00	1	0	0.00
Speciality Hospital (NBC) (200 beds)	1,00,000	3.70	0	0	0	0.00	1	1	3.70	1	1	3.70	1	1	3.70
General Hospital	2,50,000	6.00	1	0	-1	-6.00	0	-1	-6.00	0	-1	-6.00	0	-1	-6.00
Family welfare center	50,000	0.05 – 0.08	1	1	0	0.00	1	0	0.00	1	0	0.00	2	1	0.07
Diagnostic center	50,000	0.05 – 0.08	11	1	-10	-0.65	1	-10	-0.65	1	-10	-0.65	2	-9	-0.59
Dispensary for pet animals	1,00,000	0.03	1	0	-1	-0.03	1	0	0.00	1	0	0.00	1	0	0.00
Sub Total			72	6	-66	-29.23	13	-59	-11.45	14	-58	-11.35	17	-55	-11.12

INFRASTRUCTURE

OTHER FACILITIES

DEMAND GAP ANAYSIS FOR PROJECTED POPULATION

Category of Facility	Population served per unit	Area (in Ha)	Existing units	2021			2031			2041			2051		
				Required units	Additional units required	Additional Area requirement (in Ha)	Required units	Additional units required	Additional Area requirement (in Ha)	Required units	Additional units required	Additional Area requirement (in Ha)	Required units	Additional units required	Additional Area requirement (in Ha)
Anganwadi	5,000	0.02 – 0.03	0	9	9	0.23	11	11	0.28	14	14	0.35	18	18	0.45
Community room	5,000	0.07	10	9	-1	-0.07	11	1	0.07	14	4	0.28	18	8	0.56
Community hall/Marriage Hall	15,000	0.20	13	3	-10	-2.00	4	-9	-1.80	5	-8	-1.60	6	-7	-1.40
Library	15,000	0.20	2	3	1	0.20	4	2	0.40	5	3	0.60	6	4	0.80
Music, dance and drama center	1,00,000	0.10	0	0	0	0.00	1	1	0.10	1	1	0.10	1	1	0.10
Meditation and spiritual centre	1,00,000	0.50	0	0	0	0.00	1	1	0.50	1	1	0.50	1	1	0.50
Recreational club	1,00,000	1.00	0	0	0	0.00	1	1	1.00	1	1	1.00	1	1	1.00
Old age home	5,00,000	0.10	0	0	0	0.00	0	0	0.00	0	0	0.00	0	0	0.00
Sub Total			25	24	-1	-1.65	33	8	0.55	41	16	1.23	51	26	2.01

INFRASTRUCTURE

OTHER FACILITIES

DEMAND GAP ANAYSIS FOR PROJECTED POPULATION

Category of Facility	Population served per unit	Area (in Ha)	Existing units	2021			2031			2041			2051		
				Required units	Additional units required	Additional Area requirement (in Ha)	Required units	Additional units required	Additional Area requirement (in Ha)	Required units	Additional units required	Additional Area requirement (in Ha)	Required units	Additional units required	Additional Area requirement (in Ha)
Electric crematorium	1 for large size towns	2.00	0	1	1	2.00	1	1	2.00	1	1	2.00	1	1	2.00
Cremation ground	5,00,000	2.50	4	0	-4	-10.00	0	-4	-10.00	0	-4	-10.00	0	-4	-10.00
Burial ground	5,00,000	4.00	6	0	-6	-24.00	0	-6	-24.00	0	-6	-24.00	0	-6	-24.00
Dhobi ghat	1,00,000	0.50	1	0	-1	-0.50	1	0	0.00	1	0	0.00	1	0	0.00
Post office (without delivery)	15,000	0.0085	1	3	2	0.02	4	3	0.03	5	4	0.03	6	5	0.04
Head post office with delivery office	2,50,000	0.75	1	0	-1	-0.75	0	-1	-0.75	0	-1	-0.75	0	-1	-0.75
Head post office and administrative office	5,00,000	0.25	1	0	-1	-0.25	0	-1	-0.25	0	-1	-0.25	0	-1	-0.25
Bank	15,000	0.0075	1	3	2	0.02	4	3	0.02	5	4	0.03	6	5	0.04
ATM	15,000	0.0006	1	3	2	0.00	4	3	0.00	5	4	0.00	6	5	0.00
Bank with locker, ATM and other banking facilities	1,00,000	0.25	1	0	-1	-0.25	1	0	0.00	1	0	0.00	1	0	0.00
Sub Total			17	10	-7	-33.72	15	-2	-32.95	18	1	-32.93	21	4	-32.92

THANK YOU!

CONTACT US

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