SINHGAD TECHNICAL EDUCATION SOCIETY'S SINHGAD COLLEGE OF ARCHITECTURE, PUNE

STUDY TOUR REPORT 2024-25 (B. Arch. I to IV Year)



Architectural Study tours: Every year study tours are conducted for all students of First year to Fourth Year B. Arch. These study tours are linked with Architectural Design Projects, as students design in context progressively from smaller settlements in First year to high order urban areas in fourth year. All study tours are divided into four parts:

- 1. Pre-study of the area and context.
- 2. Survey and study during visit,
- 3. Post-study tour Competition of report & documentation,
- 4. Architectural Design project with context.

This report has been compiled utilizing both primary and secondary sources. The secondary sources encompass information obtained from published books and reputable online resources.

SINHGAD COLLEGE OF ARCHITECTURE.

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Study TOUR

BY I Yr. B. Arch.

Div C



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Why Chandori I

Chandori, is a historic village on the banks of the Godavari, is home to submerged temples the village has rich heritage and spiritual significance.



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Connectivity

- 25 km from Nashik and 14 km from Niphad.
- By Rail: Nearest stations Khervadi (4.7 km), Kasbe Sukene (8 km), and Yeola.
- Local Transport: Bus services, auto-rickshaws, and taxis are available.





Pune to Chandori 216km

Location



Located on state highway 30

Terrain

The terrain is slightly sloping with some undulating areas, supporting both agriculture and human settlements



Chandori has nucleated and linear settlement partern



Study Tour Report 2024-25

Climate

Chandori spans 2,113.47 hectares. The terrain is slightly sloping with some undulating areas, and the village lies near the Godavari River.

It has a tropical climate, with mild summers, heavy monsoons, and cool winters.



Natural resources and Agriculture



Godavari river affecting the soil of Chandori



Soil map

Dominated by agricultural landscape with crops like sugarcane, onions, grapes. Traditional grains as wheat.



Onion





Wheat



Infrastructure



Rail Transport: Access to railway stations at Khervadi, Kasbe Sukene, and Yeola for broader t+ravel.

Local Travel: Public buses, auto-rickshaws, and taxis are available for commuting within and around the village.



Economy and Occupation

The economy is mostly based on Agriculture and sugarcane cultivation. And it also benefits from its role as a pilgrimage destination.

Chandori is a pilgrimage destination in Maharashtra, with thousands of devotees visiting the Khandoba temple.

Occupation

Farmers and livestock farmers72%Business owners11%Government Jobs and Pvt Jobs9%Other8%



Livestock farming







Demography of Population



Total families: 2,284

- Total Population (2011 Census): 12,594
- Males: 6,606
- Females: 5,988 Children (0–6 years): 1,512 (12.01% of total population)

Sex Ratio

• Overall Sex Ratio: 906 females per 1,000 males (Lower than Maharashtra's 929)

• Child Sex Ratio: 756 (Lower than Maharashtra's 894)



	Total	Male	Female
Children	1,512	861	651
Literacy	83.29%	89.31%	76.8%
Scheduled Caste	538	286	252
Scheduled Tribe	2,536	1,268	1,268
Illiterate	3,364	1,475	1,889

Source: 2011 census of india



Culture of Chandori |

- Festivals: Celebrates traditional festivals like Bohada and Pola.
- Spiritual Heritage: Home to Sant Gangadhar Maharaj Samadhi, a significant pilgrimage site.
- Community Life: Strong agricultural roots with a focus on tradition and religious practices.











Maratha Kingdom

(14th–18thCentury) Bahmani Sultanate Mughals Marathas



Temple restoration by Ahilya bai holkar



British rule



NandurMadhyameshwar Dam



Submerged ghats and temple



Recent image submerged temple

(19th–20th Century) British Colonial rule 1907: Nandur Madhyameshwar Dam submerging ancient temples

BEFORE



AFTER

Archittecture Style

Hemadpanthi

Developed by Hemadri Pandit in the 13th century, this style uses local basalt stone for durability. It features intricate carvings, flat roofs, and thick walls. Chandori's temples and ghats along the Godavari River showcase this architecture, resurfacing during droughts.

Wada architecture

Prominent during the Peshwa era in Maharashtra, features multi-story buildings with rooms arranged around open courtyards. This style blends Mughal, Rajasthani, and Gujarati elements with local techniques. While Chandori is known for its Hemadpanthi temples, specific examples of Wada-style structures in the village are limited. However, this architectural style is prevalent in other parts of Maharashtra







Vithal Rukmini



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Rai Rukmini



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Hingane Wada



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Ram Mandir



Ram Mandir



Study Tour Report 2024-25

Ram Mandir



Vitthal Rukmini







Vitthal Rukmini



Rai Rukmini



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Hingane Wada







Hingane Wada



ELEVATION SCALE - 1:50







Site 1



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Site 2



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INTRODUCTION

THIS REPORT EXPLORES A SECTION OF CHAUL VILLAGE IN THE RAIGAD DISTRICT, HIGHLIGHTING ITS VARIOUS ASPECTS AND CAPTURING THE SURROUNDING ENVIRONMENT. THE FIELD STUDY, EXAMINES BUILDING TYPOLOGIES, MATERIALS, CONSTRUCTION TECHNIQUES, CULTURE AND TRADITIONAL ELEMENTS, AND THE ARCHITECTURAL CHARACTER OF THE VILLAGE. THE STUDY AREA PRIMARILY FOCUSES ON THE REGION SURROUNDING THE RAMESHWAR TEMPLE AND GRAMPANCHAYAT, THE VILLAGE'S KEY LANDMARKS.

OBJECTIVE OF STUDY

- 4. TO OFFER AN OPPORTUNITY TO ENGAGE IN GROUP DYNAMICS, WHILE GAINING INSIGHT INTO THE SIGNIFICANCE OF SOCIAL RELATIONSHIPS, PEOPLE, CULTURE, AND LIFESTYLE.
- 2. TO DEVELOP AN AWARENESS OF THE DIVERSE SOCIO-CULTURE PATTERNS, VALUE SYSTEMS, AND SOCIAL PRACTICES IN THE RAIGAD DISTRICT OF MAHARASHTRA.
- 3. TO UNPERSTAND THE SIGNIFICANCE OF CHAVL VILLAGE IN RELATION TO ITS SOCIAL ASPECTS, SURROUNDINGS, FORTS, AND TEMPLE.
- 4. TO UNDERSTAND THE USE OF VARIOUS BUILDING MATERIALS. IN THE RAIGAD REGION THAT COMPLEMENT THE LOCAL CLIMATIC CONDITIONS.
- 5. TO MAP THE NATURAL HABITAT OF CHAVL VILLAGE.





SINHGAD COLLEGE OF ARCHITECTURE, PUNE ACADEMIC YEAR 2024-25 FYBARCH TERM-II DIV-D' SETTLEMENT STUDY TOUR (CHAUL)



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ISSUES-

- . THERE ARE NOT ENOUGH STREET LIGHTS.
- . THERE IS LACK OF WELL DESIGNED COVERED BUS STOPS IN CHAUL VILLAGE
- THERE IS NO FORMAL SPACE FOR THE MEMBERS OF MALE AND FEMALE BACHAT GAT TO CUNDUCT THERE MEETING AND EVENTS.
- · ALL THE PRIMARY RUADS ARE NARROW WHICH CHEUSES TRAFFIC CONGESTION AT DOCTIONS.

OPPORTUNITY !-

• A PERMANENT FORMAL SPACE FOR BACHAT GAT CAN BE PROVIDED IN THE VILLAGE FOR THEIR EASE OF WORK AND CONOMICAL BROWTH.

• ТНЕ ИХОТН ОГ РАТИЯКУ ЙОНД СЯМ ВЕ ІМСКАВО ТО АИОЛИ ТНЕ ТАЛЕГІС СОМБЕВТІОЙ (ТНІ РАОРДЗЯК ІЗ АК ВЕЛИ РАОБСО ВУ СКЛМИЛИКНАТ АКО АРАРОКЕВ ВУ ТНЕ БОУЕКИКАТ)

- · COVERED BUS STOP CAN BE PROVIDED FOR THE BETTERMENT OF THE TRAVELLARS.
- THERE IS ENDUGH SPACE FOR SHOPS OR KISIKG IN THE TEMPLE PREMISE NEAR THE GRAM PANCH-HVAT.

DESIGN BRIEF

BACHAT GAT KENDRA PROPOSAL-CHAUL, MAHARASHTRA.

CHAULIA MISTOIC VILLAGE IN ARIGAL MAHAMASHTATA, IS KNOWN FOR IT'S RICH CULTURAL HEDITAGE, INDO-PORTUGALESE ARCHITECTURE AND COLONIAL-ERA RUINS. TO SUPPORT LOCAL LIVELIHOODS, THE GRAM PHOHAMIT PROPOSES A BACHAT GAT KENDRA FOR MEN AND WOMEN. ENHACING ECONDMIC INDENDENCE AND SOCIAL WELL-BEING

CURENTLY, HETIVITIES THE PUNCE IN A SMALL SPACE PROVIDED BY THE GRAM SEVAK. A NEW SITE HAS BEEN IDENTIFED FOR A DEDICATED CENTRE, HODRESSING KEY DESIGN ASHE -CTS SUCH AS PHYSICAL CONTEXT, ASETHETICS, ANTHROPMETRY, FUCTIONALITY, LIGHTING, USER CAPACITY, CLIMATE, MATERIALS, CONSTRUCTION TECHDIDBY, AND UNIVERSAL DESIGN



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Div A



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INTRODUCTION

Ahmedabad As A World Heritage City

- Ahmedabad is declared as world heritage city by UNESCO in 2017.
- The city is surrounded by wall and has 12 gates.
- The city's architecture is a unique example of multicultural coexistence. It is fusion of Indo-Islamic architecture.

Ahmedabad city then:-

- The old city was settled to the eastern side of Sabarmati river.
- Spread over 481 sq km.
- 18th century map.

Ahmedabad city now:-

- The new city lies in western side of Sabarmati river.
- Area 8087 sq km.
- 21st century map.





History:-

- Ahmedabad was founded in 1411 by Sulta: Ahmad Shah, ruler of the Gujarat Sultanate.
- Ahmedabad was conquered by the Mughal Empire in 1573 and later became a key city in the Maratha Empire.
- In 19th century Ahmedabad became a major textile hub during the British era. Mahatma Gandhi's Sabarmati Ashram, established in 1917, played a significant role in India's struggle for independence.



- The Heritage Walks was initiated by the Ahmedabad Municipal Corporation since 2017 and has been recognized by UNESCO, which declared Ahmedabad as India's first World Heritage City in 2017.
- Length of walk:- 2km

AHMEDABAD HISTORICAL HERITAGE









HISTORIC TIMELINE OF AHMEDABAD





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CITY SKYLINE

GANDHI ROAD ELEVATION











AMENITIES AND SERVICES

Water supply

Ahmedabad gets its water from the Narmada Main canal, Dholka branch canal, and Shedhi Branch Canal. The Ahmedabad Municipal Corporation (AMC) ensures that the water supplied to the city is of good quality. The water taps you are referring to in Manik Chowk, Ahmedabad, are likely part of the traditional architecture and urban infrastructure that caters to both commercial and public needs in this bustling area.



Electricity

The Main 4 DP might refer to the primary power distribution panels located at key intersections or junctions in the chowk.

Other all are streetlight. These points are responsible for feeding various smaller circuits throughout the area. Ahmedabad electricity supply Comes from torrent power limited (navrangpura zonal office).



ACITIVTY MAPPING



Encroachment:-

- In morning time no hawkers was there hence the place was not crowded.
- In evening due to hawkers, the place was more crowded, and vehicles were banned.



Garbage issue:-

- Facility for garbage dumping was not there.
- Due to that garbage was spread all over the street.



2

Parking issue:-

- Due to hawkers and vendors there was no space for parking.
- On node 2 there was parking space for rickshaw but due to parking there was no space for vehicles to move.

Conclusion:-

After studying this area, we concluded that the fabric of street changes as the day passes.

It gets more crowded as the time slot changes.

Due to hawkers and vendors more garbage was generated and there was no proper dumping area.





The Jama Masjid aka Jumah Mosque or Jami Masjid, is a Friday mosque, located in Ahmedabad, in the state of Gujarat, India.

Built in 1424 during the reign of Ahmad Shah I.

Along the south side of the road, the mosque is a short distance beyond the Teen Darwaza or Tripolia Gate.

The Gujarat style of architecture, is a mix of Indo-Islamic and traditional Hindu temple architectural elements



Built with yellow sandstone, the mosque complex is centered on a large rectangular courtyard 75 meters (246 ft) long and 66 meters (217 ft) wide.

The courtyard is lined with a colonnade on three sides, the prayer hall occupies the western side.

In the earthquake of 1819, the lofty minarets were reduced to half their height and became known as the "shaking minarets".






MEASURE DRAWING (SIDDI SAIYYED MOSQUE)



- Location: Ahmedabad, Gujarat, India.
- Construction Year: Built in 1573.
- Famous For: Exquisite stone lattice work and beautifully carved jaali (lattice) windows.
- Architectural Style: Indo-Islamic architecture.
- Cultural Significance: Represents the rich artistic heritage of the region.
- Historical Importance: An important historical site in Ahmedabad.
- Visitor Attraction: Draws many tourists and visitors for its intricate designs and tranquil atmosphere.

Material palette:- Sandstone.





COLUMN

- Slender and tall: Designed to be slender and tall, supporting the mosque's arches.
- Intricate carvings: Feature intricate carvings and ornate details.
- Islamic and Indian influence: Showcase a blend of Islamic and Indian architectural styles.





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INTRODUCTION TO MAJOR PROJECT

□ ARTIST HUB

- 1. Create a knowledge-based project
- 2. Drive an artistic sensible area.
- 3. To conserve Tradition.
- 4. To create an environment responsive space for Art
- 5. To create opportunities for Artists
- 6. To bring different arts under one roof for Public
- 7. Create a Culture that values for arts









SITE:-

The site is situated at Sabarmati riverfront with the area of 4000 sq.m



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KULLU

CHANDIGARH-

CHANDIGARH- KULLU

Climate	Climate Warm humid	Composite		Cold & Cloudy	
Altitude 560 m	560 m	1560 m		1278 m, 1800 m, 2050 m	m, 2050 m
Hydrology		Sukhna Choe		Beas river, Solang river	ng river
Temp.	Max-43 C Min-1.7 C Max-45.3C		ר 3C – ר	Min – 3C Max – 38C	Min – 0 C
Rainfall	650-1800 mm	1000-1200 mm		800-1363-	



LOCATION:

- Kullu is located in the **northwestern Himalayas** of India.
- It lies in the **Beas River** Valley.
- Altitude: ~1,279 meters
- Chandigarh is a Union Territory and the capital city of two Indian states, Punjab and Haryana.
- It is located in northern India, bordered by Haryana to the south and Punjab to the north

ACCESSIBILITY:





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CULTURE OF KULLU

- Language: Predominantly Hindi and Pahari dialects
- Cuisine: Simple dishes like Siddu, Madra, and Kadi.
- Religious Beliefs: Dominated by **Hinduism**, with temples dedicated to local deities. Deep reverence for nature and spirits.





Kullu Mohotsav : the event will feature cultural programmes and canopy stalls. Stalls offering local products, crafts and various cuisines, including traditional Himachali dishes Arts and Crafts:-RenownedforKullushawls,Handicraftslike caps,baskets andwoolen garments.

OCCUPATION



Agriculture and Horticulture
 Handicrafts
 Others

2.Tourism :

Tourism is a vital economic driver, with many residents engaged in hospitality services, travel agencies, and guiding tourists. Adventure activities like paragliding, trekking, and river rafting further boost the tourism sector.

1.Agriculture and Horticulture

- The region is famous for its **apple orchards**, which contribute significantly to the local economy.
- Othercultivatedcropsincludeplums,pears,andvariousvegetables,supportinglivelihoodsacross the district.

3.Handicrafts:

The district is known for its **traditional crafts**, such as weaving **Kullu shawls** and other woolen goods. Local artisans rely on these crafts for employment, contributing to both the economy **and preserving cultural heritage**.



Traditional Attire: Men: Woolen coats and caps Women: **Pattoo** (a shawl-like garment) with vibrant patterns.



Music and Dance: Folk music with instruments like **nagara and flutes**. Traditional dances like **Nat**i (a popular group dance).



Apple farming contributes approximately 80-85% of the total fruit economy of Himachal Pradesh, with Kullu being one of the major apple-producing regions.



Paragliding is a popular adventure sport in Himachal Pradesh, with Bir Billing and Solang Valley being famous destinations attracting enthusiasts from around the world.

VEGETATION

Kullu, Naggar, and Manali are adjacent regions in the Himalayas, and as such, they share many similarities in terms of their flora characterized by lush forests, sprawling apple orchards, and picturesque hills covered with pine and deodar trees



Forest Types-

Deodar Forests: found in the higher elevations of the Kullu Valley

Pine Forests: Pine trees often found on lower rocky ridges.-

Broadleaf Forests: These forests are home to a variety of broadleaf tree species, including oak, walnut.etc.

1245 M

1.6%

Agriculture
Forest
Grass land
Wastelands
Snow and glaciers
Water bodies

Spruce: The spruce, a dominant coniferous tree in the vegetation of Kullu District, thrives in the cool, temperate climate of the region, particularly at higher altitudes, contributing significantly to the area's forest cover and biodiversity.



Apple

1615 M

33.86%

An apple tree will live as long as 100 years, possibly Kullu longer when they are not damaged by weather.



Build up From :

Built spaces in Kullu include residential buildings, commercial establishments, temples, and roads.

2. Patterns and Layout

Linear growth patterns align with the road network. Many buildings combine commercial and residential functions, with shops or businesses on the ground floor and homes on the upper levels.

Open Spaces

Nehru Park Sarwari Dhalpur chowk In re areau terra Dhalpur chowk Is s with LEGEND: a ce local lifes

Build form River Road network



The concentration of open spaces is due to the steep terrains which are unsuitable for construction.

Function

In many of the open areas across the terrain, the primary use 's apple cultivation, with orchards playing a central role in the local economy and lifestyle.



1373M

ARCHITECTURAL CHARACTERISTICS



KATH KUNI ARCHITECTURE

Layering and interlocking timber with stones in the walls provides stability, strength and flexibility. Advantage: Can withstand earthquakes.



Typology: The story unit is a cuboid .

- The size of the house increases by placing cuboids side by side and then extending up three levels.

ELEMENTS:

Carved Woodwork: On doors, windows, and beams motifs of local nature, animals, and religious symbols.

Chimneys and Fireplace Verandas and Balconies

Eco-FriendlyDesign:-Environmentallysustainable-Structure blend withits naturalsurroundings.



CHARACTERISTICS

Local Materials: Stone, wood, slate, mud Sloping Roofs: shedding heavy snowfall material: slate tiles or wooden planks. Wooden Construction: mostly timber from local deodar trees. -Provides insulation against the cold -Readily available in the region Stone Foundation: Stability against the shifting mountainous terrain -Protection against the cold.

RUMSU VILLAGE -25 km from Kullu -Near Naggar castle -Local Pahari













ULLU



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RAGHUNATH TEMPLE, KULLU



- Raghunath is a synonym used for Lord Rama and in the same queue, the Raghunathji Temple is one of the oldest and most popular temples of Kullu lying in the heart of the state of Himachal Pradesh, built in a blend of **Pyramidal and Pahari** style, the temple is dedicated to Lord Rama.
- It is believed that Lord Shri ram is the safe guarder of the entire valley. This place is famous in name as the **"Valley of Gods"** because it consists of a lot of temples.
- These temples reflect the rich cultural background of state of Himachal Pradesh. The Raghunath Ji Temple is a visible tribute to Lord Rama. He is also famous as the "Chief Deity" of Pahadis.



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NAGGAR CASTLE

- Built by Raja Sidh Singh in 1460 A.D , was served as hotel but now serves as rest house.
- **CONSTRUCTION TECHNIQUE : Kath kuni architecture** This ingenious method involves interlocking wooden beams and locally sourced stones, entirely avoiding the use of cement or nails
- **BUILDING MATERIALS :** Mud , Deodar Wood [doors, walls] , Stone [foundation ,walls, plinth] , Grey Slate [roof]
- CLIMATE RESPONSE :
- 1. Orientation **South facing**, Positioned to maximize sunlight in winter and minimize heat in summer.
- 2. Roof design **pitched roofs** handle heavy snowfall effectively





GROUND FLOOR PLAN









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KULLU

MASTER PLAN

NAGGAR ,HIMACHAL PRADESH

ROAD NETWORKING

National Highways



MASTER PLAN

MANALI, HIMACHAL PRADESH

Situated on the left bank of river Beas at an altitude of 1,800 meters, Naggar is an ancient town in Kullu ٠ district of Himachal Pradesh. India.

Important roads :

- 1. NH-21 (Manali-Kullu Road)
- 2. Manali-Leh Highway (NH-21)
- 3. Rohtang Pass Road
- Manali-Chandigarh Road (NH-21) 4.

Manali Road Connectivity:-

Manali-Leh Highway (NH-21): 475 ٠



NORTH STUDIO

Location: Naggar, Kullu District, Himachal Pradesh, India Artistic Focus:

Himalayan Art: Paintings, sculptures, installations **Local Artists**: Showcase and promote local talent

Artistic Collaborations: International collaborations and cultural exchange

Facilities and Activities:

Art Workshops: Classes, demonstrations, and workshops Cultural Events: Lectures, performances, and events Artist Residencies: Peaceful and inspiring environment for artists



DECHEN CHOEKHOR MONASTERY

Established: Late 1960s by Tibetan refugees **Materials:** Stone, wood, clay, mud, slate tiles **Architecture:** Tibetan Buddhist style, tiered design **Features:** Vibrant colors, intricate woodwork, beautiful murals

Significance: Center for Tibetan Buddhist teachings, cultural heritage preservation

Activities: Buddhist sessions, festivals (Losar, etc.)



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CHANDIGARH



Varma (left) with Le Corbusier and Pierre Jeanerette





Le Corbusier with Jawaharlal Nehru It was the initial idea of P.L. Varma to have a new capital of Punjab after partition. The Chief Minister of Punjab Bhim Sen Sachar was against a new capital for Punjab. Jawahar lal Nehru played a key roll in supporting the idea of new capital for Punjab.

Nehru vision

- Nehru sought modern city.
- Indian architects were stuck in traditional styles
- Le Corbusier was suggested by Andrei Malraux.
- Le Corbusier designed Chandigarh's master plan.
- Phase 1 included Sectors 1-17.
- Indian architects collaborated with Le Corbusier

People and ideas that made Chandigarh City





Architects team with Le Corbusier





- Nehru sought modernity, but Indian architects were stuck in traditional styles
- Nehru's friend Andrei Malraux suggested Le Corbusier, a renowned Swiss-French architect.
- Le Corbusier designed Chandigarh's master plan, completing Phase 1 (Sectors 1-17).
- Indian architects collaborated with Le Corbusier to bring his vision to life.

M.N.Sharma was appointed

as the first chief architect after P. Jenerette He took over the charge of second phase after

completion of phase one of Chandigarh.

B.V. Doshi:-

- Worked with Le Corbusier (only Indian architect to do so)
- Supervised Capitol Complex in Chandigarh.

Evolution



Development plan of Chandigarh city by Ar. Albert Mayer

Climatic Considerations: Chandigarh's

Chandigarh's design accounts for the local hot and dry climate.

- Climate Mitigation: The city's layout and architecture reduce the impact of the climate.
- Human Scale Design: The city prioritizes pedestrian comfort
- Pedestrian-Friendly Features: Wide sidewalks, controlled traffic flow, and humanscaled buildings.



Development plan of Chandigarh city by Ar. Albert Mayer



- The city of Chandigarh is planned to human scale.
- 2. Head-capitol (place of power)
- ➤ 3. Heart-the city center
- 4. Stomach-the commercial area
- 5. Arms-university and Industrial zone
- 6. Lungs-leisure valley, open spaces
- 7. Arteries-network of roads.
- The city plan was created keeping in view
- the living and habitat of the people where
- in high raised building were ruled out and
- Garden cities were introduced.
- Le modular system.
- Analogous to human body.
- Le Corbusier plan strategies.

CHANDIGARH

HISTORY





CHANDIGARH





The Master Plan of Chandigarh by Le Corbusier is analogous to a Human body.

MASTER PLAN CHANDIGARH





- The master plan of the city has a Grid iron pattern.
- Within each sector, roads run **Parallel** and **Perpendicular** to each other.



- The **8-kilometer**-long continuous parkland that stretches across the city, connecting various sectors and offering a green pathway called **Leisure Valley**.
- Free flow of Green Spaces











CHANDIGARH



The Golden Section: A Hidden Code

Governing Principals

Le Corbusier used the golden section (ϕ) to create harmony and balance. He linked single and double squares, creating a symbolic language that connects us to the universe.

A Double Square of Perfection

The entrance hall is a masterpiece, a double square of defined size that embodies harmony and balance. It's a reflection of Le Corbusier's soul, a testament to his belief in architecture's power to transform and uplift us.

"THE MAJESTY OF LAW AND THE POWER AND FEAR OF LAW."

The High Court building , Le Corbusier employed the concept of parasol , a large - scale overhanging roof structure , to provide a visual metaphor for the law's power .

- The high court was the first structure to be built in the capital complex.
- It was opened in 1956.
- Monumental in scale set against the backdrop of shivalik hills.







VIEW OF HIGH COURT

The symbolism of providing an"UMBRELLA OF SHELTER" of law to the ordinary citizen is most vividly manifested here. The continuity of the concrete piazza running into this space establishes a unique site and structural unity of the structure with the ground





PALACE OF ASSEMBLY

The Palace of Assembly is made in a Hyperbolic shell with an average thickness of 15 cm Constant throughout its surface resulting in a very low cost and a minimum of weight

The program features a circular assembly chamber, a forum for conversation and transactions, and stair-free circulation.

Why this shape ?

Le Corbusier was big on symbols and it is said that the roof's sculptural elements are a reflection of the sun and the moon, which he thought would be a good modern guide for the deliberation of the politician within.



The Assembly Hall



The Palace Assembly



of

Front view of Assembly





SECTION OF ASSEMBLY



PLAN OF ASSEMBLY

Study Tour Report 2024-25

CHANDIGARH

THE SECRETARIAT

- The building is a long horizontal concrete slab of 254 metres long and 42 meters high.
- It is composed of eight storied block divided by expansion joints and measures over 800 feet.
- In this building careful attension is paid to natural lighting and organizational efficiency.

FEATURES

- Fragmented Elevation
- Programmatic Elements
- Sun Breaks
- Energy Efficiency
- Aesthetic Appeal


OPEN HAND MONUMENT

FUNCTION

- The Open Hand Monument is a symbolic structure. According to the architect, the hand is open "to give and receive", and as a sign of optimism
- It is shaped like an open hand with a dove figure in its construction, which symbolizes peace. The hand rotates with the wind, like a weather vane.



Architectural Characteristics:

- The monument is made of metal and is 85 feet tall.
- Below the hand plaza which is, the pit of contemplation, which is provided for debate on public affairs.
- The surface of the vane is covered with polished steel and is fitted over a steel shaft with ball bearings to facilitate free rotation by the wind.



The city of Chandigarh is well known for its road connectivity, the roads of Chandigarh are divided into 7 types the are particularly known as '7 v'

The roads of the city are classified into seven categories known as systems of 7 Vs as below :

•V-1 Fast roads connecting Chandigarh to other towns.

- •V-2 Arterial roads.
- •V-3 Fast vehicular sector dividing roads.
- •V-4 Meandering shopping streets.
- •V-5 Sector circulation roads.
- •V-6 Access roads to houses.
- •V-7 Foot paths and cycle tracks.
- Seven-Road Network ٠
- Efficient Traffic Flow: ٠
- **Residential Area Segregation** ٠
- **Reduced Noise Pollution** ٠
- Sustainable Urban Planning



Landscape around Government Museum and Art Gallery https://urbanplanning.chd.gov.in/



Rock Garden

Road Network Concept: "The 7 Vs" Inspired by Human Circulation Zonal Segregation Sector-Specific Design



Road classification and hierarchy of road



- Diverse Tree Species: 26 types of flowering trees and 22 species of evergreen trees have been planted.
- Extensive Green Coverage: Trees are planted in various areas, including roads, parking, shopping complexes, residential areas, and city parks.
- Multiple Parks: There are over 15 parks in Chandigarh, providing ample green spaces for residents and visitors.

Green Spaces in Chandigarh



- 1. Plan, Leisure Valley
- 2. Plan, Cultural Complex
- The Leisure Valley is a continuous 8 km parkland with various theme gardens, extending from the north- eastern tip of the city to its south-western tip.
- Valley provided an un-obstructed view of the Shivalik foothills and Kasauli peaks to the residents.





CHANDIGARH

TREES IN CHANDIGARH

- Green City Status
- **Tree Plantation**
- **Expert Selection**

CHANDIGARH

Cohesive Landscape



SECTION OF JAN MARG ROAD



Saptaparni tree



Banyan tree



Mango tree



Neem tree



Repetition of trees creates avenue

in sector dividing road between tor 22 and sector 23.

Pure single trees avenue of kigelia pinnata.

Botanical name	Common name	
Chukrasia Tabularize	Modern Neem	
Swietenia macrophylla	Mahogany	
Azadirachta indica	Neem	
Schleichera oleosa	Kusum	
Bischofia javanica	Bishop wood	
Kigelia piñatas	Sausage tree	
Terminalia Billerica	Bahera	
Alstonia scholaris	Scholar tree	

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DRAIN WATER SLOPE

MANHOLE

GROUNI 501L

SAPLAPRANT TREE

SECTOR 22



Sector 22 is a significant part of Chandigarh, offering a blend of residential, commercial, and social spaces. It's a popular area for shopping, living, and enjoying the city's amenities.

Key Features:

•Architecture: Known for its use of jaalis (perforated screens) in older buildings.

•Shastri Market: A famous shopping destination offering a wide variety of goods, from clothing and electronics to handicrafts and jewelry

•Central Location: Its central position in Chandigarh makes it easily accessible from other parts of the city.

•Amenities: The sector provides essential amenities like schools, hospitals, banks, and restaurants.



INDEX







SECTOR 22



CHANDIGARH



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MUSEUM AND ART GALLERY







- 1. Architect: Pierre Jeanneret
- 2. Style: Modernist with regional influences
- 3. Design: Clean lines, functional spaces, minimalist

Key Features

- 1. Blend of modern and regional elements
- 2. Functional and minimalist design
- 3. Part of Chandigarh's broader planning

•Location: Situated in Sector 10, Chandigarh.

•Design Features:

•Simple, **rectangular** structure with **raw concrete facades**.

•Large windows and skylights for natural light.

•Central open-air courtyard for space and ventilation.

•Purpose:

•Acts as a major cultural and historical repository in the city.

This structure aligns with Chandigarh's broader vision of **open spaces**, **functionality**, and **aesthetic simplicity**.



PLAN OF MUSEUM



CHANDIGARH

Pierre Jeanneret

The Pierre Jeanneret House, also known as the Pierre Jeanneret Museum, is a historic house museum.

Design and Architecture

The house was designed by Swiss-French architect Pierre Jeanneret, cousin of Le Corbusier.

architecture: Modernist The house showcases modernist architecture, reflecting Jeanneret's functional and minimalist style.

Architectural feature

- Brick and Concrete Construction ٠
- **Open-Plan Living:** ٠
- Large Windows and Ventilation: ٠
- **Functional Furniture:** ٠
- Integration with Nature ٠
- Simple and Minimalist Facade ٠





- C Elevations
- **D** Section
- **E** Site plan



Pierre Jeanneret Museum



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Spread Across the City Piaza (French word for Open Space) designed by Le Corbusier himself is the City Centre which is main shopping and commercial centre of Chandigarh in **Sector 17**.

- Architecture: Brutalist architecture, marked by the use of exposed concrete, angular shapes, and a focus on functionality.
- **Modern Planning:** Reflects the city's overall modern planning with its emphasis on green spaces and open areas.
- Amenities: Neelam Cinema, Shopping Centers, Street Furnitures.
- **Public Spaces**: The sector features several public spaces, including plazas, parks, and gardens, which provide areas for recreation and socialization.
- **Structural Elements**:Exposed Concrete, Reinforced Concrete Frames, Flat Roofs.







CLIMATE RESPONSIVE BUILT FORM

Brise-Soleil: Vertical or horizontal louvers attached to the facade to block direct sunlight. provide shade on south-facing facades. Angle may be adjusted based on the building's orientation to maximize shading effectiveness. The angle is approximately 45 degrees.



• **Green Spaces:** Abundant vegetation provides shade, reduces air temperature, and increases humidity.



Tower of Winds • **Deep overhangs:** Projecting roofs and provide shade from direct sunlight, reducing solar heat gain.







CHANDIGARH

VIRASAT-E-KHALSA

- Virasat-e-Khalsa is a museum dedicated to Sikhism, located in Anandpur Sahib, Punjab, India. It commemorates 500 years of Sikh history and the 300th anniversary of the birth of the Khalsa
- Designed by renowned architect **Moshe Safdie**, the museum is a masterpiece of modern architecture. Its striking features include:
- **Three Complexes**: Connected by a ceremonial bridge, the complexes house various exhibition spaces, an auditorium, a library, and a memorial building.
- Unique Roof Designs: The concave-shaped roofs, sheathed in stainless steel, reflect sunlight towards the nearby Gurudwara Takht Sri Kesgarh Sahib.
- **Symbolic Design**: The layout and architectural elements incorporate significant symbolism related to Sikhism, such as the five petals of the "Flower Building" representing the Panj Pyare (the first five baptized Sikhs).





PUNJAB UNIVERSITY



Punjab University, nestled in the heart of Chandigarh, stands as a testament to modern architectural vision. Designed by renowned architect Pierre Jeanneret under the guidance of Le Corbusier, the campus exemplifies the principles of modernist architecture.

It features:

•Rational Planning: Grid layout for efficient space use.

•Functionalism: Form follows function, prioritizing purpose.

•Open Spaces: Courtyards and green areas enhance the environment.

•Natural Light & Ventilation: Maximized for comfort.

•Local Materials: Use of red sandstone integrates the campus with the landscape.





Modernist Architecture: Characterized by clean lines, open spaces, and the use of local materials like red sandstone.

•Iconic Buildings: Gandhi Bhavan (the "floating lotus"), A.C. Joshi Library, Fine Arts Museum, and the circular Student Center.

•Focus on Research: Numerous research centers and departments contribute to academic advancement.

•Community Engagement: Fosters interaction between students, faculty, and the surrounding community.

•Sustainability Initiatives: Incorporating eco-friendly practices like solar power, rainwater harvesting, and green roofs.



PROPOSED SITE



CHANDIGARH

Chandigarh, a city so fair,Designed by Le Corbusier, with care.Gridiron planning, a systematic design,Tree-shaded roads, a peaceful align.Capitol Complex stands, proud and tall,Open Hand Monument, symbolizing all.Punjab University's knowledge, a treasure rare,Sukhna Lake's serenity, beyond compare.Rotaries at nodes, a smooth flow ensure,Leisure Valley's charm, with museum's allure.A city of beauty, where architecture meets art,Chandigarh, a gem, that's a joy to the heart.With every step, a story unfolds,Of a city planned, with a vision to behold.Where nature and concrete, blend in harmony,Chandigarh, a city, of symphony.



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Capital: Gangtok

Chief minister: Prem Singh Tamang

Governor: Om Prakash Mathur

Founded: 16 May 1975

Land area: 7,096 km²

Before was: Kingdom of Sikkim

Bird: Blood pheasant

•A major hub for tourism in Sikkim, offering access to nearby monasteries, trekking routes, and natural attractions.

Rich in Buddhist culture, with notable monasteries like Rumtek and Enchey Monastery.

•MG Marg is the main street, known for shopping, dining, and vibrant local culture.. •Gangtok is the capital city of Sikkim, located in northeastern India.

•Situated at an elevation of about 5,410 feet (1,650 meters) above sea level.

•Known for its stunning views of Kangchenjunga, India's highest mountain



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POPULATION PYRAMID GRAPH

Sikkim Religion Wise Population

Religion	Count	Percentage
Hindu	3,52,662	57.76%
Buddhist	1,67,216	27.39%
Christian	60,522	9.91%
Other religions and persuasions	16,300	2.67%
Muslim	9,867	1.62%
Sikh	1,868	0.31%
Religion not stated	1,828	0.3%
Jain	314	0.05%







OCCUPATION:

Agriculture is the major occupation of the people of Sikkim.They grow cardamom, ginger and tea. Apart from this the other principal crops grown here include Mandarin orange, guava, mango, banana and turmeric.



• Tourism related Occupations

Hotel and Restaurant Staff
Tour Guides
Travel Agents.





• Arts and Handicraft occupations

Weavers (making traditional sikkimese clothing and textiles)
Wood carvers
Artists (painters,sculptures and other visual artist)







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THE SIKKIM REVOLUTION

•Sikkim was primarily inhabited by the indigenous **Lepcha community**, who practiced animism and nature worship. •Relations between the Lepchas and Tibetan Bhutias started to develop through cultural exchanges and intermarriages

1500s:

Tibetan

settling

indigenous

including

of

the region. These

descendants of Guru Tashi,

began

the

Lepcha population.

In 16th Century

•Early

Migration

families.

into

groups

among



•Mid-1500s: Cultural exchanges between Tibetan settlers and Lepchas intensified, leading to the blending of their traditions and practices.



Late 1500s: Tibetan Buddhist influence began to grow, with monks traveling from Tibet to spread Buddhism in the region. This laid the foundation for Buddhism becoming central to Sikkim's identity in later centuries.

In 17th Century



of . The Kingdom of Sikkim was established in 1642 under the reign of the first Chogyal (king), Phuntsog

1642-1670

•Formation of a Theocratic Monarchy: Phuntsog Namgyal established Sikkim as a Buddhist kingdom with strong religious influence

•Founding of Yuksom: Yuksom became the first capital of Sikkim



1670 Demise of Phuntsog Namgyal: The first Chogyal passed away, marking the end of his reign. His son, Namgyal, Tensung succeeded him as the second Chogyal.

THE SIKKIM REVOLUTION

In 18th Century

In 19th Century



In the 18th century, Sikkim was invaded by Nepal and Bhutan, and was ruled by both countries for over 40 years.

The state also saw a large migration of Nepalese people.

•Sikkim allied with British India to fight Nepal

•The British East India Company attacked Nepal in 1814, leading to the Anglo-Nepalese War



•1775–1815: Around 180,000 Nepalese people migrated to Sikkim

•1891: Two-thirds of Sikkim's population was Nepalese



•The British established new landholdings in Sikkim

•The British raised a police force in Sikkim

•The British acted on behalf of Sikkim against its enemies if the Chogyal served as a commercial gateway into Tibet



•1888: British troops defeated the Tibetans and northern Sikkim came under British rule

•1894: The capital was moved to Gangtok

 1918: Sikkim regained its independence for domestic affairs



•Sikkim became a Hindu majority state controlled by a Buddhist monarchy

 In 1975, Sikkim was incorporated into India after a referendum abolished the monarchy

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LAND USE MAP













STREET ACTIVITY MAPPING (PANIRASTA)



- The local market which is open for everyday needs of the people
- The market peak timing starts from 5pm onwards
- Open for all seven days week





- The local people gather here for grocery shopping
- The mainly crowd starts from morning 11am to 9pm
- The area is normal crowded



- The panirasta street is mainly high vehicular accessed
- The continuous flow of vehicles is mainly through this street
- The road is crowded with vehicles through whole day and night



- This is the west point mall and a beautiful area
- West point is a shopping mall which is open for seven days
- The crowd mainly starts from evening 6pm





STREET ACTIVITY MAPPING (MG MARKET)



- The local market which is open for everyday needs of the people.
- The market peak timing starts from 5pm onwards.
- Open for all seven days i week.





- The local and tourist people gather here for shopping.
- The mainly crowd starts from morning 12am to 9pm
- The area is mostly crowded



- The MG street is mainly high vehicular accessed
- No vehicular access is allowed on this street.
- The road is crowded with people throughout the day.
- Also street is used for movie shoot purpose.



 This MG market is known for its unique landscaping and various shopping purposes.











GANGTOK : AS A SMART CITY

Rain Water Harvesting



PalaceRejuvenation,RetrofittingAndRedevelopment





Integrated Command And Control Center



Road And Junction

Improvement

Improvement Of Pedestrian Walkway/ Footpath



Integrated Command and Control Center for Gangtok Smart City Multi Level Car Park Near MG Marg

Improvement of pedestrian footpath walkway from Baluakhani to Ranipool, Gangtok East Sikkim

Multi Level Car Park with Shopping Plaza at Old West Point Area

Redevelopment and Retrofitting of Lall Bazar Area

Improvement of various Feeder Roads in Gangtok













ARCHITECTURAL DETAILS

The early architecture was predominantly influence by the Lepcha and Bhutia tribes while the Nepalese introduced their own building styles adding another layer to Sikkim's architectural mosaic

MONASTRIES

Sikkim is renowned for its ancient monasteries with design inspired by Tibetan architectural principal A monastery is a sacred place for monks and nuns that serve both their home and workplace



Gonjan Monastery



Hand carved pillar



Pemayangtse Monastery



The prayer turbines called mane

The use of colors like red, yellow and gold reflects various aspects of Buddhist teaching and associated with Tibetan Buddhism



- Monasteries are characterized by vibrant murals, wood work, and tiered roof
- Many structure in skim incorporate traditional prayer flags and chortens (stupas), symbol of peace and spirituality



Traditional houses

Modern building in Sikkim often incorporates traditional elements such as sloping roofs and wooden facades, while utilizing contemporary materials like concrete and steel.





Traditional houses are built With bamboo ; wood, stone , Feature raised platforms for protection against heavy rains and optimal air circulation







GANGTOK (SIKKIM)












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SITE ANALYSIS

LOCATION

 Location: Near Saramsa garden, Ranipool, Sikkim, India (27°16'33.3"N 88°35'45.7"E) •Site Area: 5800 sa.m. •Setback: 6 m from road side and 4.5 m from all sides. •Distance from gangtok: 35 min (13.1 km).



SITE CONTEXT

•Surroundings: Adjacent buildings are mostly used for residential purpose, and land is majorly used for agriculture purpose.

•Connectivity: The city is connected by National Highway 10, linking it to Siliguri and other major towns. Public transportation includes buses and shared taxis.

•Accessibility: Entry points are from road which is on west side of the proposed site.

•Views and Vistas: The region offers panoramic views of the Kanchenjunga peak.

•Topography: The site is hilly with varying elevations.

•Soil Type: The soil in Gangtok, Sikkim is mainly brown clay, with some red loam and red and yellow soils. •Vegetation: The site has forests and diverse

PHYSICAL CHARACTERISTICS

flora.

•Hydrology: High rainfall creates streams and rivulets; manage drainage to prevent erosion.

•Climate: Gangtok has a temperate climate with heavy monsoons.

•Winds: Predominantly from the south during monsoon.

SUN POSITION







TOPOGRAPHY



TEMPERATURE (LOW AND HIGH)

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SITE PICTURES







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CLIMATE AND GEOGRAPHY

•The city is located in a sandy and dry area.

•Mostly **flat terrain** except for the small hills of Thaltej-Jodhpur Tekra.

•The **Sabarmati River** bifurcates the city into eastern and western parts



Average High and Low Temperature

DESIGN CONSIDERATION:-





Open courtyards to facilitate cross-ventilation and reduce heat.



Walls and floors made of materials like brick or stone to absorb and release heat slowly.





Overhangs, pergolas, or trees to block direct sunlight.

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PLACES VISITED



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HISTORY OF AHMEDABAD

11TH to 15TH Century

•11th Century: The area was known as Ashaval and was ruled by the Chaulukya dynasty.

•1411: Sultan Ahmed Shah I founded the city of Ahmedabad on the banks of the Sabarmati River.

•1413: Construction of the Bhadra Fort was completed.

- •1423: The Jama Masjid was completed.
- •1485: The Dada Harir Stepwell was constructed



Chronicles of Ahmedabad's Transformation

Contraction of the local division of the loc



20th Century

•1915: Mahatma Gandhi established the Sabarmati Ashram, which became a center for the Indian independence movement. •1947: India gained independence, and

Ahmedabad became part of the newly formed nation.

•1960: Ahmedabad was declared the capital of the newly created state of Gujarat.

Present

odern History

•2010: Ahmedabad was declared India's first UNESCO World Heritage City.

•2014: The Sabarmati Riverfront project, an urban regeneration project, was inaugurated. •2019: The Statue of Unity, the world's tallest statue, is located nearby, attracting tourists to Ahmedabad.

•Present: Ahmedabad continues to thrive as a vibrant, culturally rich city with rapid urban development.

DEVELOPMENT HISTORY OF AHMEDABAD

Foundation (1411 CE)
Founded by Sultan Ahmed Shah.
Walled city with gates, mosques (e.g., Jama Masjid).
Mughal Period (1573 - 1758)
Part of the Mughal Empire.
Trade and textiles flourished.

British Era (1818 - 1947)

•Major textile hub ("Manchester of

Sabarmati Ashram established.



Maratha Rule (1758 - 1818) •Decline in trade; rise of haveli

architecture.





India").

Post-Independence (1947 - 2000)

 Industrial growth, modernist architecture (IIM, CEPT).

Contemporary Era (2000 - Present)

- UNESCO World Heritage City (2017).
 - Urban projects like Sabarmati Riverfront, Metro.





THE SULTANATE PERIOD 1411-1570 MUGHAL AND MARATHA PERIOD 1571-1800

INFERENCE:-

AHMEDABAD'S EVOLUTION AS THE 'MANCHESTER OF INDIA' HIGHLIGHTS ITS PIVOTAL ROLE IN INDIA'S TEXTILE INDUSTRY, DRIVING BOTH ECONOMIC AND CULTURAL GROWTH.

DEVELOPMENT HISTORY OF AHMEDABAD

Ahmedabad's urban evolution began as an organic city (1411-1817), growing along the Sabarmati River with narrow streets and clustered neighborhoods. The organized city phase (1818-1861) saw British influence, introducing structured planning and improved infrastructure.



From 1862 to 1930, Ahmedabad became the "Manchester of India" with its booming textile industry, driving expansion beyond the walled city. In the economic consolidation phase (1931-1950), the city diversified, industrialized, and solidified its status as a modern economic hub..

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WALLED CITY



Foundation stone was laid at the site known as Manek bhurj



over the 15 century cities grows and flourished inside the newly built walls, and it became home to different communities



In 1486, the boundaries of medieval Ahmedabad expanded, and demarcated with fortification and Arched Gateways

During 1411, Sultan Ahmed Shah I and the Sheikh Ahmed Khattu (known as Sufi Saint of Sarkhej) chose an area in the old town of Ashaval

TOWN PLANNING (CLAIMED BY NARRATIVES)

> VASTU PURUSHAM



KARMUKHA



CHA

DANDAK

AK SARU

SARVATOBHADRA





Darwaza's served as entry points for trade and commerce, and now they stand as historical landmarks and vibrant cultural symbols.

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WALLED CITY (POLS OF AHMEDABAD)

Pols, The old city of Ahmedabad located on the Eastern banks of the Sabarmati river is made up of around 360 pols within a fortified compound. The earliest 'Pol' to be incorporated was aptly named 'Mahurat Pol' and was built adjacent to Manek Chowk.



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THE CENTRAL AXIS



THE CENTRAL AXIS



MANEK CHOWK

This bustling square functions as a vegetable market in the morning, transforms into a jewelry market in the afternoon (the second-largest in India), boasting an annual turnover of around 3 million rupees. However, it is most renowned for its food stalls that emerge around 9:30 in the evening, offering a variety of local street snacks. Manek Chowk is particularly celebrated for its Kulfi.



VEHICULAR MOVEMENT

HERITAGE AXIS

SEATING SPACES FOR EATERIES

PEDESTRIAN ZONE

BUILDING USE MAP



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DEVELOPMENT AROUND RIVER







ECONOMY



- PHARMACEUTICALS
- TEXTILES AND GARMENTS
- OTHER SECTORS



INFERENCE THE TEXTILE INDUSTRY HOLDS A DOMINANT POSITION IN AHMEDABAD'S ECONOMY, CONTRIBUTING SIGNIFICANTLY TO ITS INDUSTRIAL GROWTH AND GLOBAL EXPORTS.

અમદાવાદ

TOURISM



SITE IDENTIFICATION SITE 1 SITE SLUMS **RELIANCE MALL** OLD CIT LOCATION : NEAR SWAMI NARAYAN CHOWK DISTANCE FROM RAILWAY STATION : 3.6KM DISTANCE FROM AIRPORT : 3.6KM • SITE AREA :- 15,000 Sqm BUSSINESS PARKS SITE 2 SITE OLD CITA LOCATION : NEAR KANKARIA LAKE DISTANCE FROM RAILWAY STATION: 2.1KM DISTANCE FROM AIRPORT : 7.6KM • SITE AREA : 16000 SQ.M HIRABHAI MARKET અમદાવાદ

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PROJECT PROPOSALS

1. Textile

Hub:-

Ahmedabad has a rich history as a textile city, and with textile markets nearby, the site becomes a focal point for consolidating textile-related activities. The proximity to existing markets and artisans ensures accessibility and synergy.

Proposal: The textile hub can include exhibition spaces, retail outlets, and workshops for weaving, dyeing, and designing. It could also provide infrastructure for modern textile manufacturing and innovation





The Mills Fabrica, Hong KONG

2. Skill Development Centre :-

The presence of slums with furniture makers highlights a local workforce skilled in craftsmanship but lacking formal training. A skill development center can enhance their expertise, covering textiles, furniture design, and more.

Proposal: This center can offer vocational training in tailoring, weaving, woodworking, and entrepreneurship. It could also include educational programs on market trends and technology integration.





Jawahar Kala Kendra, India



SITE 1.

SKILL DEVELOPMENT CENTER

Introduction:

Skill Development Center is envisioned as a modern, flexible facility designed to promote skill development while honoring local crafts and cultural heritage. The center will provide a functional environment for handson learning, community engagement, and the promotion of indigenous skills such as weaving, pottery, carpentry, metalworking, and more. It will integrate sustainable design, local materials, and contemporary educational tools.

 Goal: To design a Skill Development Center at Ahmedabad, Gujrat.

Objectives:

- Focus on Local Industries: Providing professional training for home-based skills like handicrafts and woodworking can help grow local industries, improve livelihoods, and preserve Ahmedabad's heritage.
- Accessible Location: Build the center near public transport hubs like BRTS or metro stations for easy access.
- Affordable and Inclusive: Provide affordable programs for youth, women, underprivileged groups, and differently-abled individuals.
- Practical and Modern Training: Include hands-on skill labs, digital learning tools, and entrepreneurial support to prepare for real-world jobs.

local businesse

 Schable and Sustainable Design: Ensure eco-friendly in the room for expansion as demand



SITE 2.

TEXTILE HUB

Introduction:

The Textile Hub is envisioned as a dynamic and collaborative space designed to strengthen Ahmedabad's legacy as the "Manchester of India." It will serve as a center of excellence for textile innovation, skill development, and entrepreneurship. The hub will integrate traditional techniques like weaving and dyeing with modern technology and sustainable practices, providing a platform to preserve cultural heritage while driving economic growth.

Aim:

To design a Textile Hub in Ahmedabad, Gujarat, that promotes innovation, sustains traditional textile practices, and empowers the local community.

Objectives:

- 1. Preserve Textile Heritage: Provide training in traditional crafts like handloom weaving, block printing, and tie-dye to protect Ahmedabad's rich textile culture.
- Accessible Location: Establish the hub in proximity to key transport routes for ease of access to artisans, students, and businesses.
- Inclusive Development: Offer affordable programs for artisans, women, and underprivileged communities to enhance livelihoods.
- Innovation and Modernization: Incorporate modern textile technologies, design labs, and R&D facilities to encourage innovation and global competitiveness.
- Sustainable Design and Practices: Use eco-friendly infrastructure and promote green practices like natural dyes and sustainable production techniques.
- 6. In stry Collaboration: Partner with textile industries and port has ses to provide skill training, job







SITE PICTURES

- Ahmedabad lies in a semi-arid zone, characterized by hot summers and mild winters. This
 climate allows for the use of passive cooling strategies in architecture, such as shaded courtyards,
 water bodies, and wind towers.
- Ahmedabad is a UNESCO World Heritage City with significant landmarks like the Pols (traditional housing clusters), Sabarmati Ashram, and iconic works by architects like Le Corbusier, Louis Kahn and B. V. Doshi. Adaptive reuse and heritage conservation projects, combined with contemporary architectural interventions, can create a balance between old and new.
- Ahmedabad is an economic hub with key industries like textiles, pharmaceuticals, and IT. It is also a major center for education, home to institutions like IIM-A. Projects such as co-working spaces, educational hubs, and urban infrastructure can benefit from the city's economic strength
- Ahmedabad, as part of India's Smart Cities Mission, is integrating technology into urban governance to enhance residents' quality of life. The city's 2025 development plan includes projects such as the Dholera International Airport, expected to be operational by December 2025, aiming to improve connectivity and support economic growth. Additionally, the Ahmedabad Development Plan 2041 focuses on sustainable transport, public transit expansion, and green space development, promoting a livable and equitable urban environment.



CONCLUSION

Cultural Heritage and Modernity

Ahmedabad beautifully balances its rich cultural heritage with modern development, showcasing its historical landmarks and contemporary growth.

Strategic Location

Situated on the banks of the Sabarmati River, the city's central location contributes to its role as a key economic and cultural hub in Gujarat.

Dynamic Economy

Known as the 'Manchester of India,' Ahmedabad's economy is diverse, with strengths in textiles, IT, pharmaceuticals, and small-scale industries, driving both local and national growth.

Sustainable Urban Development

The city embraces sustainable urban planning through initiatives like the Sabarmati Riverfront and Smart City projects, focusing on green infrastructure and connectivity.

Future Potential

With ongoing development projects like the Dholera International Airport and green infrastructure expansion, Ahmedabad is positioned for continued growth and global recognition.

Model for Other Cities

Ahmedabad serves as a model for other cities in India, demonstrating how to integrate historical preservation with modern urbanization and economic growth.



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INTRODUCTION

WHY DID WE SELECT MCLEODGANJ AS STUDY AREA?

The architecture of McLeod Ganj, India, is a blend of traditional Tibetan and local Himachali styles. It reflects the town's Tibetan culture and heritage, and offers a peaceful atmosphere for those seeking spiritual solace.

Benefits of McLeod Ganj's architecture

- Cultural fusion
- Spiritual atmosphere
- Historical significance.
- Visual appeal
- Artistic value



Origin of Dharamshala:-

The name Dharamshala comes from the Hindi words dharma and shala, which translate to "house of Dharma" or "spiritual dwelling". The town's name comes from a Hindu sanctuary and a pilgrims' rest house that were originally located in the area

ACCESIBILTY

Kangra valley railway line 20Km The nearest Railhead is Pathankot 85 Km.





McLeodganj, a hill station in Himachal Pradesh, India, was named after Sir Donald Friell McLeod, who was the Lieutenant Governor of Punjab during British colonial rule. The suffix "Ganj" is a Persian word that means "neighborhood".



HISTORY

Evolution:

McLeod Ganj, located in the Indian state of Himachal Pradesh, is a small town with a rich and interesting history. It is part of Dharamshala and is known as the "Little Lhasa" due to its strong Tibetan cultural influence, primarily because it has been home to the Tibetan government-in-exile and the Dalai Lama since 1959.





How has this movement of Tibetan people to Mcleodganj affected the region?

- Cultural fusion
- Political Significance
- Tourism Development
- Tibetan Craftsmanship
- Festivals and Events
- Refugee-Local Interaction
- Conservation Effort



Architectural Influence

Monasteries and Temples: The Tsuglagkhang Complex, which includes the Dalai Lama's residence and the Namgyal Monastery, is a major architectural landmark that attracts both devotees and tourists. Its design incorporates Tibetan architectural styles,

Tibetan-Style Markets: The local markets, especially in McLeod Ganj, have evolved to reflect Tibetan cultural aesthetics. The streets are lined with shops selling Tibetan jewelry, clothing, and art.
TOPOGRAPHY

Topography

- For the purposes of this report, the geographical coordinates of Mcleod ganj are 32.220 deg. latitude, 76.320 deg longitude, and 4,449 ft elevation
- The slope analysis of McLeod Ganj reveals its topographical diversity, shaped by its location in the Dhauladhar range of the Himalayas.



The area with higher slope gradient consist of built structure. Meanwhile,land with low slope gradient are utilized as farmlands as it has low runoff.



Contour patterns shown using colour gradients

Geological Challenges

The steep gradients combined with high rainfall during monsoons pose risks of landslides and soil erosion.
Sustainable development requires slope stabilization measures and careful planning to prevent environmental degradation.

This varied slope profile influences McLeod Ganj's urban planning, ecological balance, and appeal as a hill station.









Map showing scattered settlements and modular built forms of houses built to tackle geological challenges

CLIMATE AND VEGETATION :

Climate: 380 mm 40°C 320 mm McLeod Ganj experiences a subtropical highland 30°C 280 mm climate, characterized by mild summers, cool winters, 240 mm 20°C and significant seasonal rainfall. 200 mm 160 mm 10°C 120 mm 80 mm Average daytime temperatures reach a dift min comfortable 27°C in June. In January, the coolest month of the year, temperatures drop to a chilly 10°C. 1. Summer (March to June): •Temperature Range: 22°C to 30°C (72°F to 86°F) during the day, cooler nights. At night, you can expect cooler temperatures, with 2. Monsoon (July to September): around -0°C during this averages dropping to •Rainfall: Heavy rainfall due to the southwest monsoon, with annual precipitation around 2,500 mm. month. 3. Winter (December to February): recording 1519 mm of rain/snowfall per year. •Temperature Range: -1°C to 12°C (30°F to 54°F).

Vegetation:

The Upper Dharamsala generally has pine, oak and rhododendron as the flora. Dharamsala is a good starting point for a number of trekking expeditions. One can find forests containing deodar, Himalayan oak and pine trees in abundance in these forests. Deers and wild goats are seen in the surrounding flora of Dharamsala.

Trees	Scientific name	Uses
Deodar	Cedrus deodara	Furnniture and construction
Pine	Pinus spp.	Construction
Oak	Quercus spp.	Flooring and construction
Rhodendron	Rhododendron arboreum	Medicinal properties
Sal	Shorea robusta	Production of Paper , furniture



POPULATION AND TOURISM

Demographic Profile:

Population of Dharamshala Planning Area includes 33 revenue villages as per Planning Area notification. The population of the Planning Area as per the census 2001 was 51,871, which increased to 62,279 in 2011. The Table below shows the increase in population and growth rate of the Planning Area during the decade 2001-2011.

	Total	Male	Female
Children (Age 0-6)	13,986	7,340	6,646
Literacy	85.77%	81.56%	72.16%
Scheduled Caste	24,722	12,547	12,175
Scheduled Tribe	19,479	9,767	9,712
Illiterate	31,419	12,943	18,476



Percentage of visitors

Source: Census of India- 1981, 1991, 2001 and 2011

Tourism:

March to June: The weather is pleasant and ideal for outdoor activities. September to November: The monsoon season is over, and the weather is clear and cool.

December to February: Winters can be cold, and you may even experience snowfall, which is great for snow sports but requires preparation for the cold.

Reasons to visit:

- · Trekking / Camping
- Paragliding
- Spirituality
- Trip / Vacation



IDENTIFIED STUDY AREA



BUILT AND UNBUILT SPACES :-





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· The structures are mostly g+2 and above as the construction type was framed structure



RESIDENTIAL DETAIL



ELEVATION

MATERIAL USED :-

Stone: Used extensively for walls and structural elements due to its abundance and durability.

Wood: Employed for structural supports, beams, pillars, and intricate carvings.

Slate: Applied to cover sloping roofs, especially in regions with higher rainfall.



SECTION



REFRENCE IMAGES



FIRST FLOOR PLAN

GROUND FLOOR PLAN

COMMERCIAL STRUCTURES



COMMERCIAL DETAIL



LANDMARK



Kashmiri-Gate To Mcleod-Ganj-Dharamshala is one of the busiest transportation routes since it connects the major cities of India

4 Min From Main Square



The temple has been highly revered by the Hindus and the Gorkha Community. The sacred shrine is famed for its two pools that are believed to have



Nestled in the heart of Mcleodganj, Main Square is the vibrant epicenter of this charming hill town. Offering a blend of tranquility and bustling energy. Main Square

WALKING DISTANCE





The Kalachakra Temple is a popular temple among all Tibetans, and it was built in 1992. It is mainly dedicated to Buddha's teachings on the wheel of life

1 Min From Main Square



8 Min From Main Square



23 Min From Main Squarealing properties Dharamsala

Skyway, a remarkable 1.8 kilometer ropeway system that transports passengers from Dharamshala to Mcleodganj



The Dalai Lama Temple stands as a beacon of tranquility and spiritual enlightenment. The architectural beauty of the Dalai Lama Temple reflects the timeless elegance and spiritual essence of Tibetan Buddhism

12 Min From Main Square

AMENITIES



PUBLIC TOILET 8 Min From Main Square



PUNJAB NATIONAL BANK 1 Min From Main Square



ANALYSIS

- Steep slopes influence the architecture and land usage.
- Significant presence of tourism-related infrastructure like hotels, guesthouses, and restaurants.
- Mixed-use developments in commercial zones, combining shops, eateries, and accommodations







Gaden Shartse is community of eleven Khangstens. Khangsten means monasteries with limited size and functions (like a faculty of Universit y). 8 Min From Main Square

GYM

4 Min From Main Square

this is the primary health care clinic in Mcleod-Ganj which offers a variety of services, including general medical care, preventative care, diagnostic testing, vaccinations etc

13 Min From Main Square

TEMPLE DETAIL

Kalachakra Temple – Cultural Gem In McLeodganj

SOUTH SIDE ELEVATION

The Kalachakra Temple is a beautiful Tibetan heritage site dedicated to Lord Buddha's 'Kalachakra' (wheel of time) teachings. The temple is of utmost significance, both culturally and historically.

Kalachakra is a term often used in Hindu and Buddhist mythologies emphasizing the importance of time



MOVEMENT PATTERN:-

TYPES OF ROADS





SECONDARY



PRIMARY

Road width 6m to 7.5m



Road width 4.5m to 6m



TERTIARY



Road width 3m to 4.5m And small paths included





KEY PLAN

MOVEMENT DISTRIBUTION :-



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SERVICES:-



MAIN JUNCTIONS:-





MAIN SQUARE



The Main square is a gathering and start for the Market



KEY PLAN

Intersections of streets create strategic meeting points that are directed to multiple directions.

TOWARDS RESIDENTIAL













ARCHITECTURAL MATERIALS:-

MATERIALS	Stone	Bricks	Wood	Slate Tiles	RCC
IMAGES					
TRAITS	 used in building foundation and walls. Provide thermal insulation. Abundant availability and durability 	 Affordability Durability Asthetic Appeal vailability And 	 Aesthetic and cultural significance. Earthquake resistant, thermal insulation 	 Have high quartz content, frost resistant. Low maintenance. Invulnerable to rot and insects. Provide moisture 	 Seismic Resistance Low Maintenance Durability
DO		CTURAL FE	ATURES	COLUMNS COLUMNS BRACKETS	ARCHES COLOURS

ISSUES AND OPPORTUNITIES :

ISSUES



Unplanned Urba Development



Strain on Public Infrastructure



Loss of Tradition



Seasonal Climatic Changes.

OPPORTUNITIES



Public transport solutionsDesigning pedestrian



Fourism centric levelopments



Ieritage conservation



Sustainable design nitiatives

Outlined design proposal options to address issues

Tourist Interpretation

Centre

- Promotes sustainable and informed tourism
- Provides information on Tibetan art, religion, and monasteries.

Spiritual and Wellness Retreat

- Spaces for yoga and wellness activities.
- Herbal spa utilizing traditional Tibetan medicinal practices.

Multiverse center at Mc Leood Ganj

- Workshops for Handicraft making
- A multipurpose hall for Tibetan music and dance performances.
- Shops to sell local handicrafts, souvenirs, traditional clothing.

Mini Himachal Theme Park

- Offers spaces for local handicraft and cuisine stalls.
- Includes miniature models of famous sites (temples, monasteries).

SITE ANALYSIS

Site information

Nearby Places

- Location: McLeod Ganj, Himachal Pradesh.
- Site area: 10,000 SQ.M

Existing Vegetation

Dominant Tree Species -

- Abundant in Deodar (Himalayan cedar)
- Himalayan Oak, .
- . Pine,
- Rhododendron Trees ٠

Visual Analysis



Dalai Lama Temple SITE PLAN

SITE





FOREST

W 06

115 M

6M WIDE ROAD

NCA

FOREST





STRENGTH

- Located in a scenic views of . the Dhauladhar range.
- · Proximity to the famous Dalai Lama temple, attracting high tourist footfall.

WEAKNESS

- Being a tourist's hotspot, the site may face accessibility issues during peak seasons.
- Hilly topography may increase construction costs and complexity.

PPORTUNITIES

- The site can serve as a hub for celebrating Local Art, Handicrafts, and History.
- Scope for sustainable, ecofriendly architectural designs

HREATS

Risks like Landslides or Earthquakes pose structural and safety challenges.







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INTRODUCTION

The study tour as per the curriculum was an exposure trip to Himanchal Pradesh, **IT WAS 6 DAYS TOUR FROM 3rd JANUARY 2025 TO 6th JANUARY 2025.** It gave a golden opportunity to student to know about the different aspects of urban context and the city

The purpose of the trip was mainly to give students useful physical insights about what one needs to effectively consider in an architectural built environment of a highly vegetated topography- such as that of the Kullu Valley. The students were given the opportunity to visit Raison Village, Naggar Palace, Hadimba Devi Temple,. We did settlement study, urban development and learning the material and construction technique of the place. The underlying act behind the whole process is associated with the idea that the students get to interact, evolve and expand their creative capabilities to a new horizon.

AIM

Study the
urban context
of Kullu ,
Himanchal
Pradesh and to
identify gaps
and suggest
design
proposals .

Surveys & Interviews Conduct surveys of local residents to understand their needs and concerns related to urban environment

METHODOLOGY

Study and Documentation of condition of structure

 Pedestrian movement

Activity

mapping

Vehicular

 movement
 Uses of different

spaces

Primary data collection

Photographs

 Collecting information of building typology, usage etc

OBJECTIVES

- To study urban areas
- To understand problems in urban areas
- Investigate the overall urban morphology of Kullu considering factors such as street layout, building typologies , and open spaces.
 - To identify an architectural design project as an inserts Into the urban context.



LOCATION

Located along the Beas River, Kullu is often referred to as the **"Valley of the Gods"** due to its rich spiritual traditions and numerous temples dedicated to Hindu deities.

It lies between the majestic peaks of the Great Himalayan Range and the Dhaula Dhar mountains, offering breathtaking views, lush greenery, and a tranquil environment.

There are **12 districts** in Himachal Pradesh and **6 Tehsil** in Kullu district

ACCESSIBILITY

1. By Air:

- Nearest airport: Bhuntar (Kullu Manali Airport), 10 km away.
- Limited flights, mainly from Delhi.

2. By Train:

- Nearest station: Joginder Nagar (125 km away).
- Alternatively, travel to Manali or Chandigarh by train, then use road transport.

3. By Road:

- ٠ Kullu is connected by road to Delhi (500 km), Chandigarh (267 km), and Manali (40 km).
- National highway NH 21
- 4. Local Transport: Taxis, buses, and auto-rickshaws are available for local travel within Kullu.

HISTORY







Area of Kullu District: 5503 Sq. Km Area of Kullu Town: 8.2 Sq.Km Latitude :31.9592* N Longitude:77.1089* E Climatic Zone : Cold and Cloudy

Kullu has strong mythological roots in Hinduism. According to local beliefs, it is associated with the worship of Lord Raghunath (a form of Lord Rama) and is often called the "Valley of the **Gods**" due to the numerous temples scattered across the region. The valley is said to have م po been the abode of the sage Ŭ Vasishtha, who meditated in the 5 area, and the ancient epic Mahabharata also mentions the Valley region. KULLU

"The

GEOGRAPHY AND TOPOGRAPHY T



The geography of Kullu, India is characterized by its mountainous terrain, valleys, and rivers.

The soil in Kullu varies based on altitude, topography, and vegetation, making it ideal for diverse agricultural and horticultural practices:

In Kullu, the soil texture ranges from sandy loam to clay loam; color varies from brown to dark brown and the depth of the soil from 50 to 100cm. Generally, the soil is acidic . Agriculture land use in Kullu is 10.33 % and Forest is 32.86%.







 Type of wood used in construction in Kullu and its percentage.

Apple Orchards

1.Deodar - 50-60% 2.Chir Pine - 20-30% 3.Blue Pine - 10-15% 4.Oak - 5-10%

CLIMATE: COLD AND CLOUDY ZONE

Seasons	Summer	Monsoon	Autumn	Winter
Months	Months Mar to Jun Jul to Sept		Oct to Nov	Dec to Feb
Тетр	Temp 15°C to 30°C 15°C to 25°C		10°C to 20°C	0°C to 15°C
Weather	Pleasant and mild, Peak tourist season.	Moderate to heavy rainfall.	Clear skies, mild weather Beautiful autumn foliage.	Cold with occasional snowfall.

Key Climate Features:

- Altitude Impact: Higher elevations experience cooler temperatures year-round.
- **Humidity:** Generally moderate but increases during the monsoon season.
- **Agricultural Dependence:** Climate supports horticulture (apples, plums, cherries) and cereal crops (maize, wheat).

Valley Of Gods"

The The

DEMOGRAPHY

Kullu Population 2011 - 2001

Description	2011	2001	
Population	4.38 Lakhs	3.82 Lakhs	
Actual Population	437,903	381,571	
Male	225,452	198,016	
Female	212,451	183,555	
Population Growth	14.76%	26.17%	
Sex Ratio (Per 1000)	942	927	
Average Literacy	79.40	72.90	
Male Literacy	87.39	83.98	
Female Literacy	70.91	60.88	
ACE CROUB AND CENDED BELICION			

Area (Per cent)

21.90 22.07

17.6

10.33

100.00

1972 1989 2000 2005

19.56 18.20 17.87

20.34 21.69

12.51 11.43 9.21 8.87

34.97 33.59 33.10 32.80

3.80 3.76 3.78 3.79

6.66 8.38 10.07

2.17 2.94 4.07 4.48

100.00 100.00 100.00

Total population of kullu city is 76,812 and kullu district is 4.38 lakhs. Estimated 2025 population of kullu = 5 lakh

1989





2000

2005

Valley Of God

"The

OCCUPATION POPULATION AGE GROUP AND GENDER RELIGION (Revenue Based) Primary ■ Secondary ■ Tertiary 94.92 Primary Occupation: Agriculture, Male Population
 Female Population Horticulture Muslim 0.68 % Secondary Occupation Chrishtian 0.36.9 Tourism(Hotels, Homestays, travel gencies, guiding & taxi services), 0.32 9 floriculture, poultry farming. Tertiary Occupation: Handicrafts Buddhist 3.51 % Female Male



1972

Land us e/land cove

Permanent Snow/Glacier

Rocky/ Barren Surface

Open Land/Pasture

River Bed/Channel

Settlement/ Built-up

Agriculture/Horticulture

Class

Forest

CULTURE / TRADITION

The People of Kullu

- 1. Simple and Traditional.
- 2. Fond of flowers, colorful dresses, and bold ornaments.
- 3. Love singing and dancing.
- 4. Initially reliant on agriculture and horticulture, now diversified

Language in Kullu

- 1. Official language: Hindi
- 2. Local dialect: Kulvi (Western Pahari language) also knows as Ku
- 3. Influenced by Punjabi due to geographical proximity.

Costume in Kullu

- 1. Warm clothing due to cold climate.
- 2. Traditional attire: pajama, kurta, and Kullu cap for men.
- 3. Women wear headdresses (Dhatu and Thilu) and shawls (patto). **Religion in Kullu**
- 1. Predominantly Hindu.
- 2. Unique blend of pan-Indian deities and local tribal gods.
- 3. Hadimba Temple and Raghunath Temple is a notable example.

Festivals/Fairs in Kullu

- 1. Kullu Dussehra (October 7 days festival)
- 2. Pipal Jatra (Mini Dussehra)
- 3. Phagli fair (February and March)
- 4. Doongri fair (Feb welcoming of spring season)
- 5. Sair (Mid September)
- 6. Buddhi Diwali fair (Three days lights festival in December)
- 7. Bhuntar mela (June and July)
- 8. Shamshi vishu (April one day festival)
- 9. Bhadoli Fair (Once every three years Three days festival)
- 10. Saiinj Fair (April 1 day Festival)







Lalharhi Dance





Raghunath Temple





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TOURISM

			15%
Sr no	Type Of Tourist Attraction	Tourist Attraction Sites	40%
1	Nature	Raison, Katrain, Jagatsukh, Solang Valley, Jogini Falls, Nehru Kund, Kothi, Vashisht Hot Springs, Kalath Hot Springs	20% • Adventure
2	Religious	Bijli Mahadev Temple (Kullu), Raghunath Temple (Kullu), Hidimba Temple & Manu Temple (Manali), Gadhan Thek chhokling Gompa Monastery (Manali), Gayatri Temple (Jagatsukh), Tripura Sundari Temple (Naggar), Shiva Temple (Jagatsukh), Sandhya Devi temple (Jagatsukh), Arjun Gufa (Prini), Vashist Muni Temple (Vashisht), Tripura Sundri temple (Naggar), Docha-Mocha Temple, Gajan, Vasuki Nag temple (Hallan)	 Heritage Nature Nature Religious • Best Time to Visit • March to June: Ideal for adventure and sightseeing. • September to November:
3	Heritage	Naggar castle, Rorrich Art Gallery (Naggar), Kullu Palace, Museum of Himachal Culture & Folk Art (Manali)	Perfect for cultural experiences and enjoying the orchards.
4	Adventure	Solang Valley, Katrain, Raison, Jagatsukh, Club House (Old Manali), Paragliding (Manali), River Rafting (Manali-Kullu), Skiing	•December to February: For snow lovers and winter sports enthusiasts.



Raghunath Templ

6.00.0



Naggar castle



Feb March April May June July Aug Sept Oct Nov Monthly Tourist – inflow in Kulu-District 2015-2019 Relationship Between Tourism and Economy

Tourism significantly boosts the economy by generating jobs, supporting local businesses, enhancing infrastructure. However, managing its impact sustainably is essential to ensure long-term economic, environmental benefits.



Tax Revenue





KULLU "The Valley Of Gods"

100/

The government earns revenue through taxes on accommodations, travel, and entertainment, which can be reinvested into local development.

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STUDY AREA



The area is historically significant, as Raja Jagat Singh moved the capital from Naggar to Sultanpur in the mid-17th century. Sultanpur is situated approx 0.5 kilometers from the Kullu Bus Stand and is in close proximity to the Raghunathji Temple, a prominent religious site in the region.



Kullu has a partially developed sewage treatment system, managed by the Jal Shakti Vibhag.





The **Raghunath Temple** Dedicated to Lord Raghunath, The architectural features is traditional **Pahari style** with sloping roofs, a pagoda-like structure, intricate wood carvings, and Shikhara influences





The **Beas Riverfront in Kullu** is a scenic area known for its natural beauty and cultural significance. The riverfront offers picturesque views, lush greenery, and opportunities for adventure activities like river rafting. It is also a hub for local markets, providing insight into Kullu's traditions and handicrafts popular spot for both tourists and locals

The **Regional Hospital in Kullu** follows a functional architectural design suited for the region's healthcare needs. The building is designed to handle a large influx of patients, especially during the tourist season, with multiple floors for different medical departments. Its layout focuses on accessibility, with clear signage and easy access to key areas like emergency rooms, wards, and outpatient services. The hospital incorporates local building materials, combining practicality with the region's climate ensuring durability and sustainability in the Himalayan environment.

The **Dhalpur Ground** in Kullu is a large open space primarily known for hosting the renowned **Kullu Dussehra festival**, a UNESCO-recognized cultural event.

The ground features a pavilion and seating arrangements, often upgraded for events, and is strategically located near the town center. Its design emphasizes flexibility, accommodating diverse activities like fairs, exhibitions, and sports, while blending with the scenic Himalayan landscape.

KULLU "The Valley (

LOCATION



Group 2 - The area adjacent to the Beas rives and Sarvari nalla passes through this area. Also Tehsil office, and other Govt Buildings lie here



Group 4 - The area consist of Public Gathering Spaces such as Amphitheatre , Multipurpose Hall The area also has Community services like Water Tank



Dividing our study area in four parts

Additionally, the riverside terrain poses unique challenges like stabilizing structures against both seismic forces and soil erosion, making it a Challenging for innovative design solutions.

Group 1 – The area has very known **Raghunath Temple** from where the Settlement started Raghunath Temple Kullu dates back to 1637 AD during the reign of Raja Jagat Singh, the ruler of Kullu Valley.. .



Residential

Commercia Mixed Use

Induatrial Use

Recreational

Public and Semi-Public
 Utilities

Transportation & Communication

Group 3 -

The area is adjacent to the Beas rives and has the regional hospital of the Kullu along with the main ground where all the important festivals take place .



S.		Kullu-E	Bhuntar Aggloi	meration
No.		Area (Ha)	% of Developed	% of tota
1	Residential	408.25	55.78%	22.46%
2	Commercial	27.99	3.82%	1.54%
3	Mixed Use	60.31	8.24%	3.32%
4	Industrial Use	21.71	2.97%	1.19%
5	Public and Semi-Public	53.64	7.33%	2.95%
6	Utilities	5.50	0.75%	0.30%
7	Recreational	24.86	3.40%	1.37%
8	Transportation & Communication	129.67	17.72%	7.13%
	Sub Total	731.93	100.00%	40.27%
9	Agricultural	528.33	-	29.06%
10	Wastelands / Scrub land	22.98	-	1.26%
11	Water Bodies	150.87	-	8.30%
12	Green Buffer	77.78		4.28%
13	Forest / Tree Clad Area	305.87	-	16.83%
	Sub Total	1085.82		59.73%
	Total	1817.75	-	100.00%
1.88% 0.73 9.09%	7% 16.24%		56.73%	Gods"
1.99%				(")

KULLU "The Valley

6.59%

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MAPPING BUILDING USE



Dominant Residential Character: The high percentage of residential buildings (60%) highlights the primary function of Kullu as a place of dwelling.
Moderate Mixed-Use Development: The presence of mixed-use buildings (12%) suggests a move towards integrating commercial and residential spaces, potentially fostering walkability and reducing reliance on transportation.
Limited Commercial Sector: The relatively low percentage of commercial buildings (2%) focuses on logal businesses

buildings (8%) focuses on local businesses and a potential need for further development in this sector.

•Importance of Green Spaces: The presence of green spaces is a positive aspect, contributing to the well-being of residents and the ecological balance of the area.

•Emphasis on Vertical Development: The vertical development, potentially due to factors like limited land availability or a desire to preserve green spaces.

•Moderate-Density Urban Fabric: The dominance of G+2 buildings indicates a focus on moderate-density development, likely guided by regulations that balance •efficient land use with maintaining a comfortable urban environment.

•Controlled Vertical Growth: The limited presence of taller G+3/G+4 structures suggests regulations that restrict excessive vertical growth, potentially to preserve viewsheds, maintain the character of the area, TEMPLES 4 or address concerns about infrastructure PERFORMENT.





100 + VRS

HOSPITAL - 12 GOV BUILDINGS - 3 BUS STAND - 1 EDUCATIONAL BUILDINGS - 6

Preservation & Adaptive Reuse: The oldest structures (100+ years) in the north, representing Kullu's historical core, will likely become a focus for preservation efforts. Mid-age structures may undergo renovation or adaptive reuse.

Continued Southern Expansion & Densification: densification within existing mid-age zones (51-100 years) may occur as land becomes scarce. •**Infrastructure & Policy Considerations:** Southern expansion will necessitate infrastructure

improvements (roads, utilities). Urban planning policies and regulations are crucial for managing growth, balancing it with preservation and sustainability.

•Potential for Economic Influence: Unmanaged southern expansion risks urban sprawl. Economic factors and investment patterns will significantly influence the pace and type of future construction.

•Centralized Core: The concentration of key amenities likely points to a defined town center, where commercial and civic activities are clustered. This could influence pedestrian traffic and urban design in that area.

•Service Accessibility: The spread of amenities like banks and ATMs suggests an attempt to provide relatively convenient access for residents across the town. •Potential for Mixed-Use Development: The

•Potential for Mixed-Use Development: The proximity of different types of amenities could encourage mixed-use development, where commercial, residential, and civic functions are integrated within the same area. •Consideration for Public Spaces: The

presence of temples and the sabji mandi supports the importance of public spaces for social interaction and community gatherings.

ACTIVITY MAPPING





SERVICES – WATER SUPPLY

Water supply and drainage in Kullu, Himachal Pradesh, face several challenges due to the region's mountainous terrain and seasonal variations in water availability.

Water Supply:

Sources: The primary sources of water supply in Kullu are rivers, streams, springs, and groundwater.

Challenges: Uneven Distribution: Water availability varies significantly across the region, with some areas facing scarcity during dry seasons.

Accessibility: The mountainous terrain makes it difficult to reach many areas with traditional water supply infrastructure.

Water Quality: Contamination from agricultural runoff and sewage can be a concern in some areas.

Water Conservation: Rainwater harvesting and other water conservation measures are being promoted to ensure sustainable water use.

Water Treatment: Efforts are being made to improve water treatment facilities to ensure safe drinking water

Waste Management: Improper waste disposal can contaminate water sources and exacerbate drainage problems. Efforts are being made to improve waste management practices to reduce pollution and protect water resources.

Overall, water supply and drainage in Kullu are complex issues that require ongoing attention and investment. By addressing these challenges, it is possible to ensure a sustainable and reliable water supply for the region's growing population.

KULLU "The Valley Of (

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- The sewage systems in Kullu district are located in urban centres such as Bhunter, and Manal with some on going projects in surrounding areas like Patlikul, Katrain, and Naggar.
- These systems aim to manage waste water from households, commercial establishments, and public utilities

Kullu Town STP

- Location: Ramshila to Gandhinagar
- Capacity: 5.45 MLD (Million Liters per Day)
- Treatment Process: Uses conventional methods for primary and secondary treatment. Treated water is discharged into local water bodies.

Sewage system

- Collection: Wastewater from homes, hotels, and businesses is collected through an 1. underground network of pipes and manholes.
- Transportation: The collected sewage is transported to centralized Sewage 2. Treatment Plants(STPs).
- Sewage Treatment Plant (STP) located in the Lanka Bekar area. This facility has 3. a capacity of 2.57 million litres per day (MLD) Additionally, there is an STP in the Badah area of Kullu with a capacity of 5.45 MLD.
- Disposal and Reuse: Treated water Is discharged into rivers or reused for non-4. potable purposes Luke irrigation and landscaping. Solid sludge is processed and either used as fertilizer or safely disposed of.

Significance: Protects the Beas River. Reduces environmental pollution and health

hazards caused by untreated sewage. Challenges: Managing untreated sewage in areas not covered by the system. Ensuring O proper operation during peak tourist seasons Valley Of



KULLL "The Val

ARCHITECTURAL CHARACTERISTICS



KATH KUNI ARCHITECTURE Layering and interlocking timber with stones in the walls provides stability, strength and flexibility. Advantage: Can withstand earthquakes.

ELEMENTS:

Carved Woodwork: On doors. windows, and beams motifs of local nature, animals, and religious symbols. **Chimneys and Fireplace** Verandas and Balconies **Eco-Friendly Design:**

-Environmentally sustainable -Structure blend with its natural surroundings.

CHARACTERISTICS

Local Materials: Stone, wood, slate, mud Sloping Roofs: shedding heavy snowfall

material: slate tiles or wooden planks.

Wooden Construction: mostly timber from local deodar trees. Kitchen

-Provides insulation against the cold

-Readily available in the region

Stone Foundation: Stability against the shifting mountainous terrain

-Protection against the cold







Living area

Cattle shed

Storage

Entertainment room

The inclusion of streetlights and pedestrian walkways promotes safety and walkability.

The combination of traditional and modern architectural styles

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heritage. The section showcases a development that integrates traditional Kullu architecture with modern the section showcases a development that integrates traditional Kullu architecture with modern the section showcases a development that integrates traditional Kullu architecture with modern the section showcases a development that integrates traditional Kullu architecture with modern the section showcases a development that integrates traditional Kullu architecture with modern the section showcases a development that integrates traditional Kullu architecture with modern the section showcases a development that integrates traditional Kullu architecture with modern the section showcases a development that integrates traditional Kullu architecture with modern the section showcases a development that integrates traditional Kullu architecture with modern the section showcases a development that integrates traditional Kullu architecture with modern the section showcases a development that integrates traditional Kullu architecture with modern the section showcases a development that integrates traditional Kullu architecture with modern the section showcases are the section showcases are the section showcases are the section showcases are the section showcase are the section showcases are entering from the other side of the same building might be the first floor due to the changing ground level (split level/terraced building) The Valley

Study Tour Report 2024-25

INTERVIEW SURVEY

Title: "Urbanization in Kullu: Resident Perspectives"

This survey aims to gather your valuable insights on the impact of urbanization in Kullu. Your honest feedback will help us understand the community's experiences and shape a more sustainable future for the region.

Section 1: Demographic Information

Question 1: Age (Multiple Choice: Age Ranges)

Question 2: Gender (Multiple Choice: Male, Female, Other)

Question 3: Occupation (Multiple Choice: Options like Student, Farmer, Business Owner, Retired, etc.)

Question 4: Place of Residence (Multiple Choice: Specific Villages/Towns in Kullu)

Question 5: Length of Residence in Kullu (Multiple Choice: Ranges like <5 years, 5-10 years, 10-20 years, etc.)

Section 2: Perceptions of Urbanization

Question 6: Positive Impacts of Urbanization (Checkboxes: Improved infrastructure, Job opportunities, Better access to services, etc.)

Question 7: Negative Impacts of Urbanization (Checkboxes: Environmental degradation, Loss of traditional culture, Traffic congestion, etc.)

Question 8: Overall Opinion on Urbanization (Linear Scale: Strongly Disagree - Strongly Agree)

Section 3: Impact on Daily Life

Question 9: Traffic and Transportation (Paragraph: Describe any impacts on your daily commute)

Question 10: Access to Services (Multiple Choice Grid: Rate access to healthcare, education, and markets before and after urbanization)

Question 11: Environmental Concerns (Multiple Choice: Have you noticed any changes in air/water quality, waste management?)

Section 4: Cultural and Social Impact

Question 12: Impact on Traditional Culture (Paragraph: Describe any changes in cultural practices or values)

KULLU ^{TP} (The Valley Of Gods" Question 13: Impact on Community Life (Linear Scale: Rate the impact on community interaction and social cohesion) Section 5: Future of Kullu

Question 14: Ideal Future for Kullu (Paragraph: Describe your vision for the future, considering both development and sustainability)

Question 15: Suggestions for Improvement (Paragraph: Share specific measures or policies to address challenges)



Study Tour Report 2024-25

Sr.	Town Planning Norms of	URDPFI	Current	Calculations	Town Planning Norman Abalysis		Sr. No	Town Planning Norms of	URDPFI Guidelines	Current Capacity	Calculations		Gap Analysis	
No	Himachal Pradesh	Guidelines	Capacity		Himachal Pradesh	URDPFI Guidelines	1.	Himachal Pradesh Police Station					Town Planning Norms of Himachal Pradesh	URDPFI Guideli
1. a)	Schools Nursery School							Population per unit	Population per unit	Existing facility	5,00,000 / 90,0	00 - 5		
uj	Population per unit =2,500	Population per unit =2,500	Existing facility = 154	5,00,000 / 2,500= 200 200-154= 46	Gap of 46 units	Gap of 46 units	2.	= 90,000	= 90,000	= 3	5-2=3 Police s		Gap of 2 units	Gap of 2 units
b)	Primary School	=2,500												
-,	Population per unit =5,000	Population per unit	Existing facility = 62	5,00,000 / 5,000= 100 100-62= 38	Gap of 38 units	Gap of 38 units		Population per unit = 1,25,000	Population per unit =2,00,000	Existing facility = 2	5,00,000/1,25,000 5,00,000/2,00,000		Gap of 2 units	No Gap
c)	Secondary School	=5,000					4.	Community Room						
()	Population per unit =7,500	unit	Existing facility = 40	5,00,000 / 7,500= 67 67-40= 27	Gap of 27 units	Gap of 27 units		Population per unit =5000	Population per unit =5000	Existing facility = 0	5,00,000 / 5,000 100-0=100 Commu		Gap of 100 units	Gap of 100 un
	School for	=7,500	raemty = 40	07-40-27			5.	Multipurpose Hall						
d)	handicap	Develotion and						Population per unit =15,000	Population per unit =15,000	Existing facility = 0	5,00,000 / 15,00 33-0= 33 Multipury		Gap of 33 units	Gap of 33 uni
	Population = city level	Population per unit	Existing facility = 0	5,00,000 / 45,000= 11 11-0= 11	Gap since no existing schools for handicap	Gap of 11 units	6.	Post Office						
e)	General College	=45,000	-					Population per unit =15,000	Population per unit =10,000	Existing facility = 4	5,00,000/15,000 = 5,00,000/10,000 =		Gap of 29 units	Gap of 46 un
-,	Population	Population per unit	Existing	5,00,000 / 1,25,000=	No gap	No gap	7.	Meditation and spiritual center	-10,000	-4	5,00,000/10,000 -	- JU-4- 40		
	= 1,25,000	=1,25,000	facility = 4	4-4= 0	No gap	No gap		Population per unit	Population per unit	Existing facility	5,00,000 / 1,00,0	000 = 5	Gap of 5 units	Gap of 5 uni
f)	ITI/ Polytechnic							=1,00,000	=1,00,000	= 0	5-0=5 Spiritual	Centre	Gap of 5 units	Gap of 5 uni
_	Population	Population per unit	Existing	5,00,000 / 10,00,000	No gap	No gap	8.	Old age home	n 14 - 1		5,00,000/1,25,000) = 4-1=3		
ι.	Hospitals							=1,25,000	Population per unit =5,00,000	= 1	5,00,000/5,00,000) = 1-1= 0	Gap of 3 Old Age Homes	No Gap
a)	Dispensary Population per unit =15,000	Population per unit =15,000	Existing facility = 6	5,00,000 / 15,000= 33 33-6= 27	Gap of 27 units	Gap of 27 units		ırrent Capaci Kullu		rements ling to URI		Proposed Improveme		
,)	Nursing Home and child welfare									0			:	
	Population per unit	Population per unit	Existing facility	5,00,000 / 45,000= 33						High efforts 100% coverage		Protect sensitive zones. Enhance GIS systems for disaster managem		
	=45,000	=45,000	= 2	33-6= 27	Gap of 27 units	Gap of 27 units		derate	High	overage			rist hubs and transp	<u> </u>
c)	Polyclinic							6 coverage	0	overage			digitize heritage site	
	Population per unit	Population per unit	Existing facility	5,00,000 / 1,00,000= 5	Gap of 3 units	Gap of 3 units		enters	6 center				cultural centers.	
	=1,00,000	=1,00,000	= 2	5-2 =3	Gap of 5 units	Gap of 5 units	60%		100%	.5			dband access.	
Ð)	intermediate Hospital (A)							ic connectivity		ter connectivity		ntroduce new railway lines.		
		Population per unit		5,00,000 / 1,00,000= 5	No gap	No gap		utes	5 routes	~			able car routes.	
	=1,00,000 Intermediate Hospital	=1,00,000	= 7	7-5=2		8-1	1 airport			Expanded capacity		Upgrade the airport for higher capacity.		
e)	(B)						500 toilets		750 toil	750 toilets		Install 250 additional toilets.		
	Population per unit =1,00,000	Population per unit =1,00,000	Existing facility = 7	5,00,000 / 1,00,000= 5 7-5=2	No gap	No gap	Lim	ited	High		Build	d multi-	level parking lots.	
Ð	Family Welfare						3 terminals		6 termi	6 terminals		Create modern transport hubs.		
1	Centre			5,00,000/45,000 = 11-2=9			Limited facilities		Safe dis	sposal	Build	d hazaro	lous waste disposal	sites.
	Population per unit =45,000	Population per unit =50,000	Existing facility = 2	5,00,000/50,000 = 10-2=8	Gap of 9 units	Gap of 8 units	Moderate programs			Extensive programs		Expand women's support and safety program		
1.	Recreational Club						60% Limited		100%	100% Fully decentralized		Upgrade e-governance services. Empower local councils.		
	Population per unit	Population per unit		5,00,000 / 1,00,000 = 5	Gap of 5 units	Gap of 5 units			ž					annaige -
	= 1,00,000	= 1,00,000	0	5-0= <mark>5</mark>			Few campaigns		-	Frequent campaigns		Expand public health awareness campaigns. Double mobile clinic numbers.		
2.	LPG Godown							5 units 10 units Moderate access Specialized services					ored care for vulnera	ble groups
	Population per unit = 1,00,000	Population per unit =50,000	Existing facility = 3	5,00,000/1,00,000 = 5-3=2 5,00,000/50,000 = 10-3=7	Gap of 2 units	Gap of 7 units		v engagement		ized service			zen participation pl	
	-,	,	-				LOW	v engagement	µ ngn ei	gagement	Linns	ance citi	zen participation pl	

URBAN INSERT



MAJOR DESIGN PROPOSAL

- Fruit Processing industry and resort
- 2. Development of Logistic Park (Freight Complex + Truck Terminal + Wholesale & Trade)

GROUP 1 : DEVELOPMENT OF PUBLIC PARK GROUP 2 : RIVER SIDE DEVELOPMENT AND SURROUNDING STREET AREA **AREA : 6400 SQ.M AREA : 4900 SQ.M**

Focus: Heritage preservation and enhancement. This project centers on respectful integration of new design with existing heritage. The design should enhance the temple's presence without overshadowing it. Justification: Preserves cultural identity, promotes tourism, improves quality of life by enhancing the temple's setting and creating a public gathering space.

GROUP 3 : DEVELOPMENT OF INTERSECTION - AREA : 3400 SQ.M

Focus: Improved urban flow and a vibrant public space. This project emphasizes efficient movement and clear wavfinding.

Justification: The intersection is a critical node in the town's transportation network. Addresses traffic issues, creates a community hub, enhances the festival experience by improving connectivity and safety.

Focus: Environmental sustainability and civic space. This project focuses on harmonizing the built environment with the natural

environment.

Justification: Utilizes natural resources. improves environmental health, creates a civic focal point along the riverfront.

GROUP 4 : PUBLIC SQUARE AREA : 6300 SQ.M.

Focus: Multi-functional public space for community events. This project focuses on creating a flexible and adaptable space that can accommodate a variety of events and activities. Justification:

Addresses community needs for event venues, enhances public life by providing a gathering space, promotes sustainability with features like a water



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3D VIEWS & PICTURES



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Div B







Sikkim is a small but breathtaking state in northeastern India, bordered by Nepal, Bhutan, and China. Known for its stunning landscapes, it is home to snow-capped peaks, lush valleys, and dense forests. The state is famous for Kanchenjunga, the third-highest mountain in the world, which towers over the region. It is also one of India's greenest states, with a strong focus on environmental conservation and sustainability.

WHY SIKKIM ?

We chose Sikkim for our Urban Studies as it perfectly aligned with our syllabus objectives to anaylise the complex issues of Urbanization in diverse context with different teerain. Sikkim unique blenfd of location, climate, socio culture, cuision ,etc.

LOCATION





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SOCIO CULTURE

GANGTOK | SIKKIM



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Landslide map

Sikkim, especially areas like Gangtok, Pelling, and the North Sikkim Highway, is prone to landslides due to its steep terrain, heavy rainfall, and frequent seismic activity. Zones at high altitudes and along major roads, including the National Highway 10, are particularly vulnerable to landslides during monsoon season.

GEOLOGY

BRICH TREE Oak Tree Sal Tree



Birch Tree

LANDCOVER MAP

Gangtok, located in the eastern Himalayas, primarily has acidic, clayey, and loamy soils. The soil is rich in organic matter, especially in the lower and mid-hill areas, but it can be prone to erosion due to the steep terrain and heavy rainfall in the

> ALLUVIAL SOIL 5% RGANIC SOIL 25% LOAMY SOIL35



TYPES OF SOIL	LOCATION	CHARACTERISTICS	CROPS SUPPORTED
ALLUVIAL SOIL	RIVER VALLEYS, LOWLANDS	FERTILE, NUTRIENT RICH	RICE, MAIZE, VEGETABLES
LOAMY SOIL	MIDDLE HILLS REGIONS	FERTILE, WELL DRAINED	CARDAMOM,MAIZE, HORTICULTURE
RED SOIL	LOWER SLEVATIONS	RICH IN IRON, LOW HUMUS	GINGER, CARDAMOM
MOUNTAIN SOIL	HIGH ALTITUDE REGIONS	THIN, ROCKY, ACIDIC	BARLEY, BUCKWHEAT
ORGANIC SOIL	FORESTED AREAS	HUMUS RICH, ORGANIC	CARDAMOM, ORGANIC FARMING CROPS.

SOIL TYPE DATA

ALLUVIAL SOIL LOAMY SOIL



GANGTOK | SIKKIM

RED SOIL

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Sal forests are primarily found in the tropical and subtropical regions, and they can be classified into two types based on their moisture conditions

Quercus forests in Sikkim are primarily composed of oak species, such as Quercus semecarpifolia. These forests thrive at mid to high altitudes

Rhododendron scrub in Sikkim consists of dense, shrubby vegetation primarily made up of various rhododendron species. Found at higher altitudes The Asiatic black bear (Ursus thibetanus) is found in the forests of Sikkim. It has a distinctive white chest patch and is omnivorous, feeding on fruits, insects, and small animals. It is classified as vulnerable due to habitat loss and poaching.

The **snow leopard** (Panthera uncia) is a large, elusive cat native to the mountainous regions of the Himalayas, including Sikkim.

The **red panda** (Ailurus fulgens) is a small, arboreal mammal native to the eastern Himalayas, including parts of Sikkim. It has a distinctive reddishbrown fur, a bushy tail, and is primarily herbivorous, feeding on bamboo, fruits, and acorns

















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09:00 AM : Moderate foot traffic (10-15 people) observed due to road crossing at the junction. Significant vehicle crowd.

12 pm :Reduced pedestrian and vehicular activity observed, leading to relatively low crowd density.



ACTIVITY MAPPING



SINGHTHAM ROAD

GANGTOK | SIKKIM

















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RANIPOOL CHOWK

09:00 AM : Moderate foot traffic (10-15 people) observed due to road crossing at the junction. Significant vehicle crowd.

12 pm :Reduced pedestrian and vehicular activity observed, leading to relatively low crowd density.









ISSUE IDENTIFICATION ٠

Some of the major issues identified in economic sector are

· Lack of proper industrial development. From the analysis of existing land use, it was found that land under industrial use is very less that is less than 1%. There is lack of large manufacturing base.

· Commercial centers are not distributed properly and mostly concentrated in the core part of the city.

• Tourism potentials are not utilized properly in the rural part.

AIM

"To make Gangtok an economically vibrant city with inclusive growth high-end and provision of infrastructure".



• Lack Educational of Infrastructure



Ranipool, like other semi-urban areas in India, faces several challenges regarding educational infrastructure. These challenges impact the quality of education, accessibility, and overall development of students.



Addressing educational infrastructure issues in Ranipool will improve accessibility, enhance the quality of education, and create better opportunities for students. By investing in modern facilities, vocational training, and inclusivity, Ranipool can transform into an educational hub, benefiting both the local population and the overall development of Sikkim

• Iack of commercial spaces



- Ranipool faces a shortage of suitable commercial spaces due to rapid urban development and limited land availability.
- This lack of space hinders the growth of local businesses, reduces economic opportunities, and forces entrepreneurs to operate from informal or inadequate locations. With few dedicated areas for retail. offices, and services. businesses struggle to attract customers and expand.









GANGTOK | SIKKIM

ISSUE IDENTIFICATION

• Improper Public Utilities



Ranipool, being a growing semi-urban area near Gangtok, faces challenges related to inadequate and mismanaged public utilities. Public utilities such as water supply, sanitation, electricity, waste management, and street lighting are essential for maintaining the quality of life.



Additionally, unstable internet connectivity and inadequate public transport infrastructure hinder daily life.

• Limited public toilets, poorly maintained drainage systems, and a lack of proper waste segregation exacerbate health and environmental issues.



ISSUE IDENTIFICATION

• Transportation and Connectivity



- Ranipool faces significant transportation challenges due to its hilly terrain and growing population.
- The area lacks well-connected public transport systems, with limited bus services and inadequate infrastructure like proper bus stops and shelters. .





- Lack of Pedestrian Infrastructure
- Poor Traffic Management
- Inadequate Parking Facilities
- Overdependence on Private Vehicles

Lack of Open Spaces



- Ranipool struggles with a lack of open spaces due to rapid urbanization, hilly terrain, and unplanned development.
- The absence of parks, playgrounds, and community areas limits recreational opportunities, impacts mental and physical health, and reduces environmental quality.







3D VISUALIZATION

GANGTOK | SIKKIM



MARKET PLACE CONCEPT



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Constituted as Municipality

192



UIT was formed Under Rajasthan urban 195 improvement Act 9



est.

Upaj Mandi

Corporation

Udaipur-Ahmedabad Meter **Gauge Railway** Line 1 Master Plan 199 for year 2022 Krishi 2005

194 Granted to GOI

Princely state of British India

Redevelopment of maharana pratap Airport

2nd Master Plan 2013 for year 2031 Udaipur 201 Municipal

200

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Smart City



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03



JAGADISH TEMPLE



GHNGHUR GHAT



THE SWARUPSAGAR LAKE

123 16



FATHE SAGAR



TRIPOLIYA GATE



ISLAND PALACE JAGNIWAS



CITY PALACE ENTRANCE



CITY PALACE



PICHOLA LAKE





03



HATHI POLE



OLD CITY





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Solid Waste Management Site, Titardi



Water Treatment Plant



Solar Panels On The Roof Of Saraswati Library O GOVERNMENT BUILDINGS MUNICIPAL COOPERATIONS SEWAGE TREATMENT PLANTS WATER TREATMENT PLANTS ELECTRICITY PLANTS



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Jagdish temple



Jama masjid



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06

Site 1 Commercial zone Site area -24,832.91 Sq.m Retail and Leisure hybrid complex

•Retail Spaces:

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Anchor stores, boutiques, pop-up stores, department stores, and convenience shops.

•Leisure and Entertainment:

Cinemas, arcades, indoor theme parks, bowling alleys, ice skating rinks, escape rooms.

•Recreational Spaces:

Fitness centers, spas, yoga studios, outdoor gardens, water features.



CATEGORY	ACCESSIBILITY	INFRASTRUCTURE	DEVELOPMENT	VISUAL AMBIENCE
FINDINGS	Good road access and central location.	Basic utilities and services available.	Mixed-use areas emerging nearby.	Mix of urban and open areas.
INFERENCE	Easily reachable for visitors.	Ready for development.	Opportunity for integrated retail and leisure.	Ideal for a vibrant space.
ISSUE	Limited public transport nearby.	Outdated infrastructure.	Uncoordinated growth.	Urbanization could reduce open spaces.
POSSIBILITIES	Improve transit links and walkability.	Implement modern, tech-driven facilities.	Plan an organized hybrid complex.	Create interactive, inviting retail and leisure zones.



07 PROPOSALS

O Theatres O Restaurants -

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******* *** Ŏ Site 2 10000 Government Site area- 153600 sq.m Ţ **Parking and Intermodal Station** •Transport Integration: SITE AREA 153600 SQ M Platforms for various modes (train, bus, metro, etc.), connections, and transfer points. •Passenger Facilities: Waiting areas, ticket counters, restrooms, and food Θz & beverage outlets. •Operational & Support Areas: Control rooms, staff offices, luggage storage, maintenance areas, and security



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NFERENCEPotential transport hub.Ready for upgrades.Mixed-use potential.Evolving commerce hub.SSUEWeak transport integration.Aging utilities, no smart tech.Uncontrolled development risks.Risk of losing cultural identity	ATEGORY	ACCESSIBILITY	INFRASTRUCTURE	DEVELOPMENT	EVOLUTION	Dar	
SSUE Weak public transport integration. Aging utilities, no smart tech. Uncontrolled development risks. Risk of losing cultural identity POSSIBILITIES Intermodal transit Add smart utilities. Balanced mixed- Sustainable,	FINDINGS	roads; poor transit			transformation		
transport integration. smart tech. development risks. cultural identity POSSIBILITIES Intermodal transit Add smart utilities. Balanced mixed- Sustainable,	INFERENCE		Ready for upgrades.			The state	
	ISSUE	transport				KA	A
growth	POSSIBILITIES		Add smart utilities.		heritage-sensitive	1 for	

Site 3 Public utility Site area – 36,295 sq m

Educational hub

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07

Academic Facilities:

Schools, colleges, research centers, libraries, and auditoriums.

•Student Amenities:

Hostels, cafeterias, recreational areas, and sports facilities.

•Support Infrastructure:

Administrative offices, transport systems, and healthcare services.





CATEGORY	ACCESSIBILITY	ILITY INFRASTRUCTUR ENVIR E		MOBILITY
FINDINGS	Well-connected, near city center.	Basic utilities and services in place.	Green areas and natural surroundings.	Car-centric, limited walkability.
INFERENCE	NFERENCE Accessible to all. F		Potential for eco- friendly buildings.	Potential for better mobility.
ISSUE	ISSUE Poor pedestrian infrastructure Outdated s		Risk of environmental damage.	Lack of safe pedestrian zones.
POSSIBILITIE S	Improve walkways and public transit access.	Upgrade to smart, modern infrastructure.	Build sustainable educational facilities.	Add pedestrian paths and bike lanes.



Institutions

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Site 4

Commercial Site area -28555 sq.m

Experience based Commercial center

and walkability.

•Immersive Experiences:

Interactive retail stores, VR zones, art installations, and themed attractions.

•Entertainment & Leisure:

Cinemas, live performance spaces, gaming zones, and event areas.

•Community & Engagement:

CATEGORY

Co-working spaces, workshops, pop-up events, and dining areas with experiential elements.



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	Y	E		
FINDINGS	Good road access, weak transit.	Basic utilities available.	Combination of nature and urban.	Urban growth underway.
INFERENCE	Accessible for vehicles.	Room for modern infrastructure.	Potential for green spaces.	Becoming a commercial hub.
ISSUE	Limited pedestrian access.	Aging systems.	Environmental degradation risks.	Risk of chaotic development.
POSSIBILITIE	Improve transit	Turn I among a survey of the she	Design eco-	Plan for

Implement smart, tech

driven infrastructure

ACCESSIBILIT INFRASTRUCTUR ENVIRONMENT

S

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friendly,

sustainable spaces.

EVOLUTION

experience-driven

development.

Site 5
Public and semi public
Site area -107709 sq.m

Orphanage

07

•Residential Facilities:

Dormitories, dining areas, and common spaces for children.

•Educational & Recreational Areas:

Classrooms, libraries, play zones, and activity rooms. •Support Infrastructure:

Administrative offices, healthcare rooms, and counseling spaces.





CATEGORY	ACCESSIBILITY	ENVIRONMENT	VISUAL AMBIENCE	HERITAGE
FINDINGS	Well-connected by roads.	Green spaces available.	Scenic location with greenery.	Near cultural landmarks.
INFERENCE	Easy access for services.	Healthy living environment.	Calm and nurturing environment.	Opportunity for cultural learning.
ISSUE	Lack of transit and last-mile connectivity.	Risk of environmental damage.	Unorganized development affecting aesthetics.	Heritage sites at risk.
POSSIBILITIES	Ensure safe access and transit for children.	Build using eco- friendly practices.	Design a peaceful, green campus for children.	Integrate cultura education programs.



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Site 6

Public and semi public Site area- 100300 sq.m

Sustainable urban lab

•Green Infrastructure:

•Energy-efficient buildings, renewable energy sources, rainwater harvesting, and green spaces.

•Sustainable Mobility:

•Public transport hubs, pedestrian-friendly pathways, cycling tracks, and EV charging stations.

•Community & Resilience:

•Mixed-use developments, waste management systems, and community spaces for social interaction.



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CATEGORY	ACCESSIBILIT Y	INFRASTRUCTUR E	DEVELOPMENT	EVOLUTION
FINDINGS	Good roads; weak transit.	Basic, outdated systems	Emerging mixed- use growth.	Gradual urbanization.
INFERENCE	Moderate connectivity.	Ready for upgrades.	Urban innovation scope.	Regional hub potential
ISSUE	Weak public transport integration.	Lacks eco-friendly utilities.	Unregulated expansion risks	Risk to ecological balance
POSSIBILITIE S	Improve public transport links.	Add smart, sustainable systems.	Sustainable mixed- use planning.	Focused eco- sensitive growth

10.0

07

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SITE AREA 100300 SQ M

By 2050, these proposals could significantly reshape Udaipur.

The retail and leisure hybrid complex, coupled with the experience-based commercial center, would transform the city into a vibrant destination, attracting tourists and boosting the local economy. The parking and intermodal center would alleviate traffic congestion and improve urban mobility, enhancing accessibility for residents and visitors.

The educational hub would foster a skilled workforce and drive innovation, contributing to long-term economic growth.

The orphanage, with its focus on cultural integration, would provide vulnerable children with opportunities to thrive.

Finally, the sustainable urban lab would guide ecofriendly urban development, ensuring Udaipur's resilience and environmental sustainability in the face of climate change.

Together, these proposals create a more prosperous, accessible, and sustainable future for Udaipur.















08 VISION

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DHARAMSHALA

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02.PLANNING & ADMINISTRATIVE BOUNDARIES DEVELOPMENT PATTERN IN DHARAMSHALA



Particulars	Previous Development plan (perspective year 2001)	Development plan 2035 proposed
Total no. od revenue villages	13	33
Municipal status	Municipal council	Municipal corporation
Municipal area	10.63sq.m	27.60sq.m
Total planning area (urban and rural)	18.15sq.km	41.63sq.m



03.DEMOGRAPHICS DEMOGRAPHIC PROFILE



††††† ††††

Population

11akh+

Area (acres) 6000+





Tourist (per year) International tourist 15 lakhs 15%



			POPU	ATION	<u></u>	Growth Rate
S. No.	Description	1981	1991	2001	2011	(%) 2001– 2011
1	Dharamshala Planning Area	22,161	41,109	51,871	62,279	32.92
2	Dharamshala Urban (Municipal Limit + Outgrowth)	14,522	17,493	19,124	30,764	60.87
3	Dharamshala Rural	7,639*	23,616	32,747	31,515	13.64
4	Urban Rural Ratio	65.53	42.55	36.87	49.40	-

MALE & FEMALE LITERACY RATE IN PLANNING AREA



Source: Census of India-2011

Source: Census of India- 1991, 2001 and 2011

Source: Census of India-2011

RELIGION-WISE POPULATION - DHARMSALA TEHSIL SEX RATIO OF DHARAMSHALA PLANNING AREA

Religion	Total		Male	Female
Hindu	122,663	(89.84%)	62,495	60,168
Muslim	1,109	(0.81%)	708	401
Christian	555	(0.41%)	265	290
Sikh	992	(0.73%)	557	435
Buddhist	10,925	(8%)	5,998	4,927
Jain	71	(0.05%)	38	33
Other Religion	11	(0.01%)	5	6
No Religion Specified	210	(0.15%)	112	98



Source: Census of India-2011



04.HISTORY

Dharamshala originated as an army subsidiary cantonment for troops stationed at Kangra and adopted its name from an old Hindu sanctuary, called '**Dharamshala**'.

CULTURAL BACKGROUND


05.ARCHITECTURAL ELEMENTS & MATERIALS

SYMBOLISM





tches done by Kundan Rale 4th Yr -D



Wood and stone in walls



Slate roof



PC: Mrudula Waghmare 4th Yr -D

Pine wood lintels



Prayer flags : are a traditional part of tibetan buddhist culture, symbolizing the spreading of goodwill and compassion. The flags are usually arranged in five colors, each representing an element:

Blue: sky or space.
 White: air or wind.
 Red: fire.
 Green: water.
 Yellow: earth.



"om mani pad me hum"



Tibetan Buddhist temples







Prayer Wheels D

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e 4th Yr

06.GEOGRAPHY & TOPOGRAPHY

SLOPE ANALYSIS



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08.LAND USE



Post office



Hotel



Residential





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LEGEND ROADS



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10.BUILDING HEIGHTS









G+ 1

G+2

G+3

G+4

G+1

Ground

LEG	END
Ground	
G+1	
G+2	
G+3	
G+4	



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11.URBAN INTERVENTION

The Dalai Lama Temple, also known as Tsuglagkhang Complex, in Dharamshala is a spiritual and cultural hub for Tibetan Buddhism and a prominent pilgrimage site. It holds immense significance as the residence of the 14th Dalai Lama and serves as a center for learning, meditation, and Tibetan cultural preservation. The temple symbolizes peace, compassion, and resilience, attracting devotees and tourists worldwide who seek spiritual solace and insight into Tibetan traditions.



Commercial zone





Market Street at the Dalai Lama Temple

Spiritual zone PC: Ishika Pawar 4th Yr -D

KEVIN LYNCH ANALYSIS FOR URBAN INTERVENTION

Kevin Lynch's analysis can be applied to the urban design and planning of Market Street at the Dalai Lama Temple, Dharamshala. Lynch's five key elements of city image — **paths**, **edges**, **districts**, **nodes**, **and landmarks** to provide a structured framework for understanding the spatial characteristics and functionality of the area.

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DISTRICT

D EDGES

D PATH

NODE

□ LANDMARK





KHARA DHANDA NODE



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DISTRICT

McLeod Ganj known for its Tibetan culture & as residence of the Dalai Lama.

Market area -

- commercial market zone
- spiritual zone near temple
- quieter residential areas on periphery.

SUGGESTIONS:

Strengthen the identity of each district with thematic design elements like signage, paving, or street lighting.







RESIDENTIAL ZONE

COMMERCIAL ZONE

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TI IT

DISTRICT

D EDGES

Edges over here include natural boundaries like sloping terrain of Himalayas & man-made structures like shopfronts, retaining walls, and temple enclosures.

SUGGESTIONS:

Enhance the visual harmony between natural & built environments by suggesting landscape or cultural motifs to make edges inviting and coherent with Tibetan scape.



DISTRICT

D EDGES

D PATH

The primary path is the main Market Street that leads to the Dalai Lama Temple, which is likely bustling with pedestrians, monks, and tourists, forming a vibrant route.

CHALLENGES:

Congestion during peak tourist seasons, as the paths may become crowded.

SUGGESTIONS:

Clear signage with designated areas for pedestrian flow and spaces for pause or rest coherent with the contours.



DISTRICT

D EDGES

PATH

NODE

Major Junction- The intersection of Market Street and the entrance to the Dalai Lama Temple.

SUGGESTIONS:

Enhance nodes with seating areas, shade, or small green pockets coherent with the contours.

Create interpretive signage to share cultural or historical information.



DISTRICT

D EDGES

PATH

NODE

LANDMARK

The Dalai Lama Temple itself is the most prominent landmark.

Other potential landmarks could include Buddhist prayer wheels, large prayer flags, or notable statues.

SUGGESTIONS:

Place being landmark itself on a regional scale, incorporate lighting or such conservative features to highlight landmarks during evening hours.





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PROPOSAL FOR STREET CHARACTER DEVELOPMENT IN MCLEOD GANJ

Aims to create a vibrant, pedestrian-friendly, & eco-conscious market street that harmonizes with the spiritual significance of the Dalai Lama Temple.

Objectives:

- Enhance pedestrian comfort and safety while celebrating Tibetan culture through architectural elements.
- Promote sustainability.
- Support local artisans and vendors.
- Community engagement
- Zones: handicrafts zone, food zone, performance spaces, covered walkways.

Street guideline:

Width norms:

- Local streets: 6-12 meters.
- Pedestrian path width: min. 1.8-3 meters.

Gradient and slope norms

- Local streets: $\leq 10\%$.
- Drainage gradient: ≥ 0.5%.



Well-designed streets generate higher revenues for businesses and higher values for homeowners.



In addition to providing space for

travel, streets play a big role in the

public life of cities & communities.



Streets Are Ecosystems Streets should be designed as ecosystems where man-made systems interface with natural systems.



Interim public plazas & low-cost safety improvements should used to enhance public life. Use signal priority tools, leading

Use signal priority tools, leading pedestrian intervals, with desired modal priority.

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12.ISSUES IN DHARAMSHALA HARMING THE ENVIRONMENT







Visual comparison of development occurred in landslide active zones in the year 2014 and 2024 respectively.

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ISSUES

- Less awareness towards Clean and Affordable Energy
- Dependence on Non-Renewable Energy



SOLUTIONS

- Expand solar and wind projects in rural areas.
- Use microgrids and improve roads for energy access.
- Adopt energy-efficient technologies and promote savings.
- Focus on smaller hydropower projects with environmental assessments.



lttar Prad

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ISSUES

- Less awareness towards Clean and Affordable Energy
- Dependence on Non-Renewable
 Energy



WIND ENERGY



SOLUTIONS

- Expand solar and wind projects in rural areas.
- Use microgrids and improve roads for energy access.
- Adopt energy-efficient technologies and promote savings.
- Focus on smaller hydropower projects with environmental assessments.



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ISSUES

- Inadequate Infrastructure
- Unplanned Urbanization
- Tourism-Driven Challenges



SOLUTIONS

- Develop holistic amenities infrastructure through schemes like- AMRUT.
- Adaption of cluster development with focus on playgrounds, hospitals and other community needs.
- Building a strong eco-tourism management network through tourism policies by
 generating opportunities for local residents.











OBSERVATION

Socio- economic variation

ISSUES

- Infrastructure and Accessibility Concerns
- Environmental Degradation



SOLUTIONS

- Upgrade roads, improve public transport, smart infrastructure solutions.
- Efficient enforcement of existing regulations.



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ISSUES

- Climate-Induced Hazards
- Ignorance towards Slope Stability
- Ignoring the Natural Drains
- Balancing Development & Climate Action



SOLUTIONS

- Set up early warning systems, and conduct hazard assessments.
- Renewable energy, Development aligned to topography layout.
- Use eco-friendly construction materials, regulate sustainable urbanization, and preserve zones.

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ISSUES

- Insufficient Data and Monitoring
- Weak Multi-Stakeholder Partnerships



13. SUSTAINABLE DEVELOPMENT GOALS (SDGs) Less awareness towards . Inadequate Infrastructure Infrastructure Climate-Induced Hazards • and • Insufficient Data and and Affordable Clean Unplanned Urbanization Accessibility Concerns Ignorance towards Slope ISSUES • Monitoring Energy Tourism-Driven • Environmental Stability Weak Multi-Stakeholder Dependence on Non-Challenges Degradation Ignoring the Natural Drains • Partnerships Renewable Energy Balancing Development and Climate Action PARTNERSHIPS FOR THE GOALS CLIMATE INDUSTRY, INNOVATION SUSTAINABLE CITIES 3 ACTION AND COMMUNITIES AND INFRASTRUCTURE Develop holistic amenities • Expand solar and wind Set up early warning Strengthen public-private ٠ • Upgrade roads, improve • ٠ infrastructure conduct partnerships. projects in rural areas. through public transport, smart systems, and microgrids hazard assessments. Use schemes like- AMRUT. Develop robust data collection and infrastructure solutions. SOLUTIONS improve roads for energy systems and digital platforms of cluster • Renewable Adaption Efficient enforcement of • energy, development with focus on Development aligned to for tracking progress. access. existing regulations. energy-efficient playgrounds, hospitals and topography layout. Facilitate regular forums for Adopt other community needs. Use eco-friendly collaboration technologies and promote • among Building a strong ecosavings. • construction materials, government. Focus on smaller tourism management regulate sustainable hydropower projects with network through tourism urbanization, and preserve environmental policies by generating green zones. opportunities for local assessments. residents.

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15.REQUIRED	Sr.no	Category	Existing	Smart city	URDPFI (REQUIRED)	AREA PER UNIT
AMENITIES	01	Pre-primary school	41	85	120	0.08ha
POPULATION 2001: 19,124	02	Primary school	19	65	60	0.40ha
	03	Senior secondary school	20	45	40	1.80ha
	04	School for physically challenged	04	8	7	0.70ha
05 06 POPULATION 2011: 07 30,764 08	05	School for mentally challenged	1	2	1	0.20ha
	06	College	3	5	3	5.00ha
	07	Nursing home(25-30 beds)	4	5	3-5	0.20-0.30ha
	08	Intermediate hospital ,Category A (80 beds)	3	5	3	1ha
POPULATION 2021: 1,00,000	09	Intermediate hospital ,Category B (200 beds)	6	6	3	3.70ha
	10	Multi-Speciality Hospital (NBC) (200 beds)	3	5	3	9.00ha
	11	Speciality Hospital (NBC) 200 beds	2	5	3	3.70ha
	12	General Hospital (NBC) 500	1	2	1	6.00ha
	13	Anganwadi - Housing area/ cluster	20	45	60	200-300 sq.m
▼ 14 POPULATION 2035: 15 1,50,000 16	14	Community Room	20	50	60	750 sq.m
	15	Old age home	2	5	1	Max 1000 sq.m
	16	Recreational Club	7	10	3	10,000 sq.m
17 18	17	Orphanage/ Children's Centre	8	10	1	Max 1000 sq.m
	18	Night Shelter	1	2	1	Max 1000 sq.m
	19	Socio- Cultural centre/ Exhibition cum fair ground	1	2	1	15ha
	20	Science Centre	5	7	1	As per requirement
	21	Music, dance and drama Centre	6	10	3	1000 sq.m
	22	Meditation and spiritual Centre	7	10	3	5000 sq.m
Carlona and	23	International Convention Centre			City level	As per requirement
Proposed site	100101	an and States	dian.			









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