

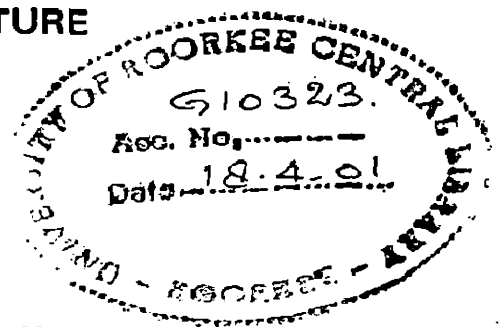
ARCHITECTURAL CHARACTER OF CIVIC SPACES WITH SPECIAL REFERENCE TO MAHARAJ BADA, GWALIOR

A DISSERTATION

Submitted in partial fulfilment of the requirements for the award of the degree of
MASTER OF ARCHITECTURE

By

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JANUARY, 2001

CANDIDATE'S DECLARATION

I hereby certify that the work which is being presented in the dissertation entitled "ARCHITECTURAL CHARACTER OF CIVIC SPACES WITH SPECIAL REFERENCE TO MAHARAJ BADA, GWALIOR" in partial fulfilment of the requirement for the award of the Degree of **MASTER OF ARCHITECTURE** submitted in the **Department of Architecture and Planning** of the University is an authentic record of my own work carried out during the period from July 2000 to January 2001 under the supervision of **Prof. (Dr.) Najamuddin**.

The matter embodied in this dissertation has not been submitted by me for the award of any other degree.




(ARVIND KUMAR AHIRWAR)

This is certified that the above statement made by the candidate is correct to the best of my knowledge.

Place : Roorkee

Dated : December 28 , 2000



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ACKNOWLEDGEMENT

It take this opportunity to express my sincere thanks and deep sense of gratitude to Dr. Najamuddin, Professor, Department of Architecture & Panning, University of Roorkee for giving his kind guidance, many invaluable comments and suggestions on the various technical matter.

I am deeply indebted to Prof. R.K. Jain, Head of Department of Architecture & Planning, Prof. Pushplata, thesis Co-ordinator, for their comments and suggestions at various stage of this dissertation. I shall take the opportunity to thank all the members of faculty of Department of Architecture & Planning for their help and guidance at every stage during this study.

I feel highly obliged to Prof. Y.P. Singh, Head of Architecture Department, M.I.T.S., Gwalior, and Asstt. Prof. Sanjay Singh Jadon for their suggestions invaluable information and help.

I would like to thank all the people who have been of invaluable help in the completion of my dissertation.

I would like to thank my family for their ever lasting support and understanding.

Lastly but not least, I acknowledge my deep sense of gratitude to all my friends who steadfastly stood by me, providing morale support at various crucial stages of this dissertation.


(ARVIND KUMAR AHIRWAR)

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CHAPTER - 1
INTRODUCTION

INTRODUCTION

1.0 INTRODUCTION

People's impression of a building, a particular environment, or a whole city, are, of course, more than visual. Within the city lies many connotations, memories, experiences, smell, hopes, crowds, places, buildings, various activities and the drama of life and death, affecting each person according to his particular predictions. From his environment each person constructs his own mental picture of the parts of the city in physical relationship to one another.

Every work of Architecture affects the details and often the whole of the collective image. The collective mental picture - the image of the city or area is largely formed by many works of Architecture seen in a space.

In fact the essence of the urban environment lies in voids or spaces of town and cities are treated with respect and lined with buildings of different uses which contribute to the character and life of the spaces, spaces further emphasized by the kind of Architecture which not only generates these voids but also nourishes them with adequate space, scale and visual qualities. Presumably it is the quality of architecture which defines the qualities of space enclosed by it.

This is so because the identification of space literally depends upon the physical placement of architecturally conceived masses in juxtaposition to each other with regard to utilitarian aspects.

As history says the town and cities are developed due to many reasons, but the order of expansion has normally been controlled by the location of administrative and trade centers. Therefore, it is important to locate administrative and trade areas as

the primary activity within the city spaces, but the question arises as to why every administrative or civic spaces of a city does not match and harmonize with the other centers of the city. This harmony can maintain the overall image of the city as a whole is one city.

Therefore, it is very essential for a city and towns to maintain his original identity or image in people's mind otherwise city and city part generates the very different picture. In fact this image can be maintained by giving proper attention to keep intact traditional or image forming architectural character in even new developing city civic spaces.

So, it is very strong need to investigate in the city, these image forming elements which collectively form the character of a city and image in the mind of the people, is the main aim of this study.

1.1 IDENTIFICATION OF PROBLEM

The city Gwalior continues to maintain its original role and status as a historic city and in addition to the recently acquired identification as the Counter magnet to the National Capital Region.

Therefore, due to extensive industrialization and economic growth the development work started in extensive way. In these developments the new civic spaces are developing, but it is observed that in these new developing civic spaces, no consideration has been given to keep new civic spaces of Gwalior town in harmony with the old ones. Ideally speaking the new developments should look like an extension of existing city, and should not present aloof picture, which ^{is} quite apparent in Gwalior town. New civic spaces coming in peripheral areas of Gwalior town are presenting an aloof image and are in no way creating ^{ing} the feeling and

essence of Gwalior town. So, this thesis work shall proceed with the detail study of famous and old civic squares and after studying the character of these squares which is unique and distinguishable, appropriate guidelines for new developing civic square can be formulated so as to maintain the image and character of the city.

1.2 AIM

To study the architectural character of existing civic spaces of Gwalior town and to formulate broad guidelines for new developing civic spaces of Gwalior, so as image/character of city can be maintained in the new civic spaces.

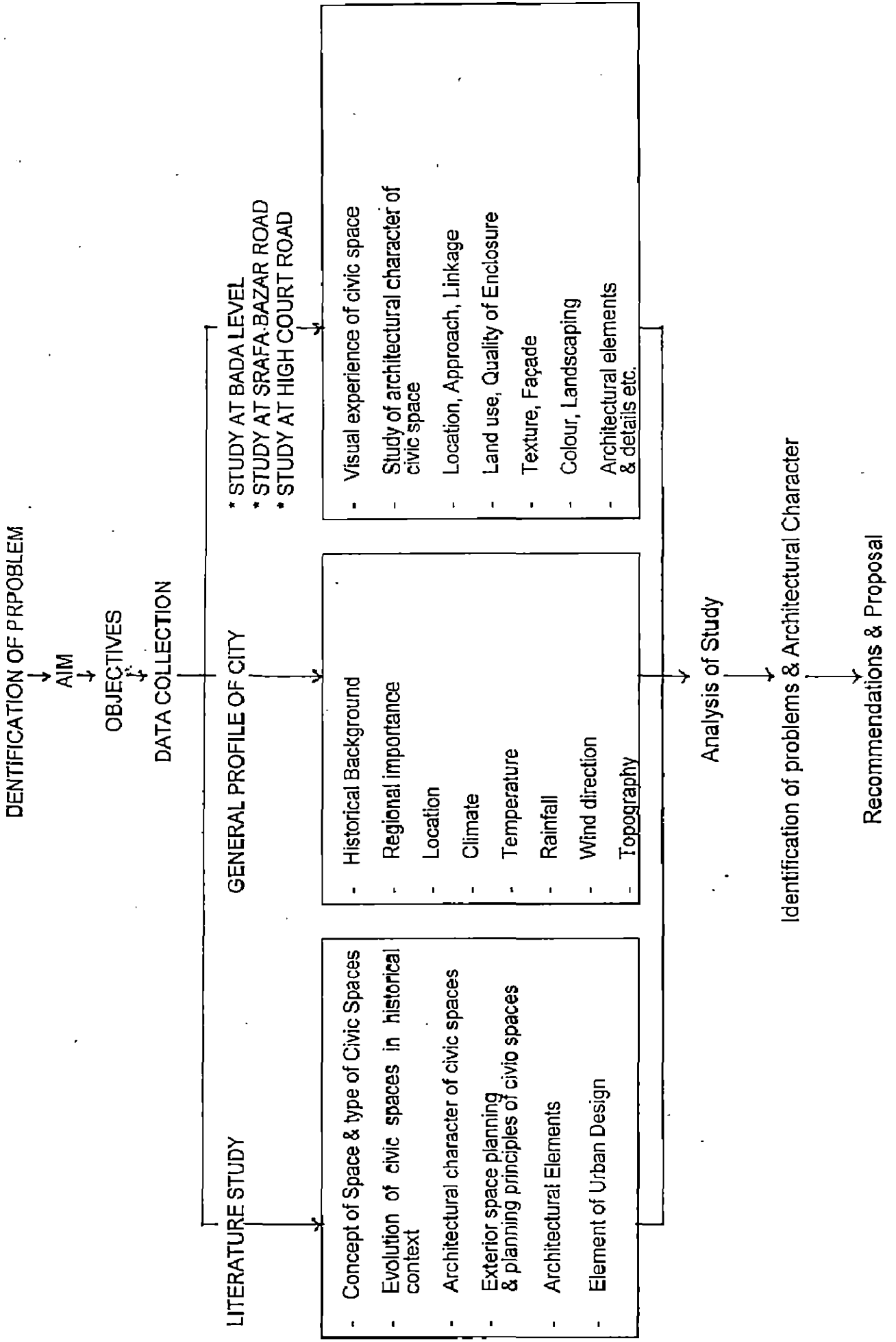
1.3 OBJECTIVES

1. To study the architectural character of important civic spaces of Gwalior town.
2. To identify the elements of important civic spaces which shall help in enhancement of architectural character of new developing civic spaces, so as to make them harmonious with the existing and traditional pattern of civic spaces of Gwalior.
3. To identify the problem of existing civic spaces that can be avoided in new developing civic spaces.

1.4 SCOPE AND LIMITATIONS

- (i) Scope of study would be limited to only important civic spaces of Gwalior.
- (ii) Study is also limited to the architectural character of important civic spaces of Gwalior.
- (iii) Recommendation shall be restricted to the new development of civic spaces of Gwalior town only.

1.5 METHODOLOGY



CHAPTER - 2
LITERATURE STUDY

LITERATURE STUDY

2.1 FUNDAMENTAL VOCABULARY

2.1.1 THE BASIC CONCEPT OF SPACE

Space basically is a relative form and is formed by the relationship between an object and a human being – who perceives it. This relationship is primarily determined by sight but when Architectural space is considered, the relationship may be affected by the smelling audition, and sense of touch. It is usually happens that the same space gives entirely different impressions, according to the change of conditions like in rain, wind, and sunshine. These conditions effect the perception of space condition.

For example, in our daily life, space is created in an unintended way. When a family on a picnic, spreads out a mat in an open ground, then it suddenly converts the place for family enjoyment, a space carved out from the nature. When the mat is folded up, there remains nothing but the open field.

In another example, when a crowd gathers around a speaker in the open air, a space filled with tension develops around the speaker, when the speaker ends his speech and the crowd disperses, such space ceases to exist. Therefore, space is an interesting phenomenon.

Architecture is fundamentally the shaping of space. What distinguishes architecture from other arts in its spatial qualities. Space is a volume defined by physical elements. Man lives in atmospheric space, which achieves form, volume, comprehensibility and scale, only when it is defined by tangible visible elements, and only to the extent that it is so defined. Every physical element above or below the

horizontal ground plane, on which we are standing, defines space, qualities. It gives it weight, depth, simple order, complex structure or indefinite continuity, within the range between agoraphobia and claustrophobia.

What is that, forms the environment itself and how the walls, the surfaces themselves are modulated/ articulated to give a specific character to the city, to define the spaces or the group of spaces, of the city. Then beyond that the most difficult is the value judgement, on the quality of this environment. This certainly include the factor previously mentioned, but also will include a final assessment of the relative quality of a scale of good or bad of the physical visual environment that has been created. For this, we have to develop a whole new fundamental vocabulary.

2.1.2 DEFINING SPACE & CIVIC SPACE

If a bustee in a village is conceived, a cluster of mud and thatch dwellings arranged in shade of three trees all by themselves in the area, than the space thus enclosed by the three trees becomes civic open space of this tiny community.

Urban shape, pattern, grain size, density and texture are primarily aspects of solid form – the building masses of the city. In architecture, it is rather helpful to conceive of a building not only as a solid but as space molded by solids. The space of the city range from the space of the street to a street of a park system and ultimately to the vast space in which entire city exists. It is also helpful to think of these spaces as two different types formal or space usually molded by building facades and city floor, and natural or "open spaces" which present nature brought into and around the city.

The type of spaces which are needed are the principal civic meeting space or spaces, generally associated with the town hall and other municipal buildings,

spaces for forecourts to entertainment buildings, like theatres and cinemas, restaurants, and cafes. Spaces for shopping, like shopping streets, precincts, and markets, and spaces around which office buildings are grouped. Many of these spaces will perform more than one function and there will be all kinds of odd areas, which will be minor, spaces linking the major spaces together. But certain spaces, like the principle civic squares, the shopping streets and the market, will stand out as having very obvious functions.

2.1.3 ENCLOSED SPACES

Space is totally enclosed on all four sides with solid mass or walls. Basically the civic space must be distinguished by predominant characteristics, such as the quality of its enclosure, the quality of its detailed treatment or out fittings, and the activity that occurs in it.

An urban space should ideally be enclosed by surrounding walls, have a floor, which suits its purpose, and have distinct purpose to serve. If however, any one of these qualities is sufficiently strong, it alone may establish the sense of civic space.

For example, a group of civic building, like shopping area may contain a space around a designed place or complex road intersection, the floor space being devoted entirely to the traffic. This is a civic space, which has a sense of place in the city. It is a landmark and a traffic node, as well as a shopping node.

A civic space may be a beautifully designed and landscaped as a restful urban park, but it may lack entirely the peripheral building facades, which are needed for a sense of enclosure. Here, we have a poorly enclosed space, but a space nevertheless.

In another example, a particular place in a city may function as the locate of an important activity while possessing neither, physical enclosure nor appropriate floor. Time square in New Park is such an example.

Avenues and streets are the examples of linear urban space, if they are enclosed on two sides or having same unified elements on both sides like building, trees, architectural features. Corridor spaces are the spaces for linear movement. Island and oasis spaces are shopping places, which can, of course be interconnected.

2.1.4 OPEN SPACE

Space within the city with nature or being nature: brought into the city, their scale, given by the trees, shrubs, rocks and ground-surface, rather than their gross width and length and their appearance is characterized by the sight of natural scenes rather than surrounding buildings.

2.1.5 URBAN SPACE

Urban space may be conveniently pictured as rooms and corridors of space. Urban architectural space form a hierarchy of spatial type, based on their size. In urban design this hierarchy ranges from scale of small, intimate court spaces on the ground urban spaces and culminating in the vast space of nature in which the city is set.

The space in the city ranges from a space of the street, a space of park system, ultimately into the entire city, urban space usually molded by the building facades. These are the floors of city. Urban spaces must have distinguished qualities.

Quality of enclosure

Quality of detailed treatment

Activity that occurs in it

If any of these qualities is sufficiently strong, it alone may establish the sense of urban space, some times, these spaces are linear corridors.

The concept of urban space without imposing aesthetic criteria, we are compelled to designate all types of space between buildings in towns and other localities as urban space. This space is geometrically bounded by a variety of elevations. It is only the clear legibility of its geometrical characteristics and aesthetics qualities which allow us consciously to perceive external space as urban space.

2.1.6 URBAN MASS

The ground surface, buildings and objects in space constitute the second basic element of urban design. Urban mass, we can arrange these elements to form urban space and to shape urban activity patterns on both large and small scale. Our eyes and light conditions govern the way we see masses. From a viewing distance which equals the height of a building or object (the 45° angle or 1 to 1 relationship) we tend to notice details more than the whole façade, or object. At the 30° angle or 1 to 2 or (1:2) relationship, we tend to see the object as a whole composition, together with its details. At the 18° angle or 1 to 3 or (1:3) relationship, we tend to see the object in relation to surrounding objects; and at the 14° angle or the 1 to 4 or (1:4) relationship we tend to see the object as a forward edge in an overall scene.

The ground or "floorscape" is the platform of the city. Ground surface can be textured to aid fast walking or induce slow walking.

2.1.7 IMAGE OF THE CITY

In course of time people become aware of many cohesive linkages, and urban indicators, which formulate a particular mental image of the city. It is the product of both the immediate response, and memory of past experience. Professor Kevin Lynch found that there are five basic elements which people use to construct their mental image of a city. These elements are pathways, districts, edges, nodes and landmarks.

PATHWAYS

There are the major and minor routes of circulation which people use to move about. They may be streets, walkways, transit lines, canals, railroads. For many people, these are the predominant elements in their image. People observe the city while moving through it, and along these path, the other environmental elements are arranged and related.

EDGES

They are the boundaries between two phases, linear breaks in continuity. edges may be barriers, more or less penetrable, which close one region, off from another or they may be seams, lines along which two regions are related and joined together. These edge elements, although probably not as dominant as paths, are for many people important organizing features.

DISTRICTS

Districts are the medium to large sections of the city, which are the component parts of the city itself and which have some common, identifying character.

NODES

Nodes are the points, the strategic spots in the city which poses a characteristics activity function. They may be simply concentration, junctions, place of a break in transportation etc.

LANDMARKS

Landmarks are external points of reference. They are prominent visual features in the city, which help people to orient themselves in the city and help in identifying an area. These five basic elements of a city are supposed to be sufficient to make a visual survey of the form of a city.

Their importance lies in the fact, that people think of a city's form in terms of these basic elements.

2.2 HISTORICAL REVIEW OF EVOLUTION OF CIVIC SPACES

Civic spaces which are the activity centres for the cities & towns, where the trade and commerce, and public affairs centres are positively the factors or motives which can be held responsible for the growth of town and cities. A townscape is a changing sequence and one cannot predict what shape as form it will adopt in future. We carefully look through the past which shows that the civic spaces have always been the most delightful core of human settlement, for example shopping space, irrespective of the Ruler's patronage.

In example of civic space it has undergone various important changes not only in its approach but in its structure also. As history shows all the public related spaces are the functioning part act in the city like a part of human body to regulate activities.

The earliest community was self-sufficient within the small areas and few commodities were needed and produced. There was little exchange of goods and money was absent, trade was conducted through the barter system. Looking back at these transactions one may very well imagine the absence of variety of civic spaces, like market, shopping, street or building mass for the field of commerce and Govt. buildings.

Mansara also reserved space in the proposed city plans for a special allocation to government buildings. It gives the full description of the layout of commercial towns.

In Indian ancient history, we find examples of Chandra Gupta Maurya, Kanishka and Ashoka who had ministers of trade and commerce for control of government business affairs within and outside the country.

In medieval times Shivaji and Akbar had in their court Asth-Pradhan and Nav-Ratana respectively reservations for commerce ministers. The history and civilization as interpreted through records tells us that from time known to us the civic spaces area used to throb and pulsate like the human heart in the giant body of the city.

Time changes, scale of activity changes and some times even the nature of activity changes, function remaining the same.

The earliest phase of Indian architecture may be seen from the remains of the ancient cities of Indus Valley culture datable to 3rd cent A.D.

INDIAN EXAMPLES

2.2.1 MOHENJO-DARO

The city of Mohenjo-daro (3000 B.C.) in Sind and Harappa in the Punjab, it is evident that the Indian cities at that early period were scientifically laid out. There were broad roads and smaller lanes with beautiful coloured strings of bazars

throughout the town fabric. The scale was pedestrian and orientation of activity was on true human scale. The civic space in form of specialized market "Katra" was also formed within the city.

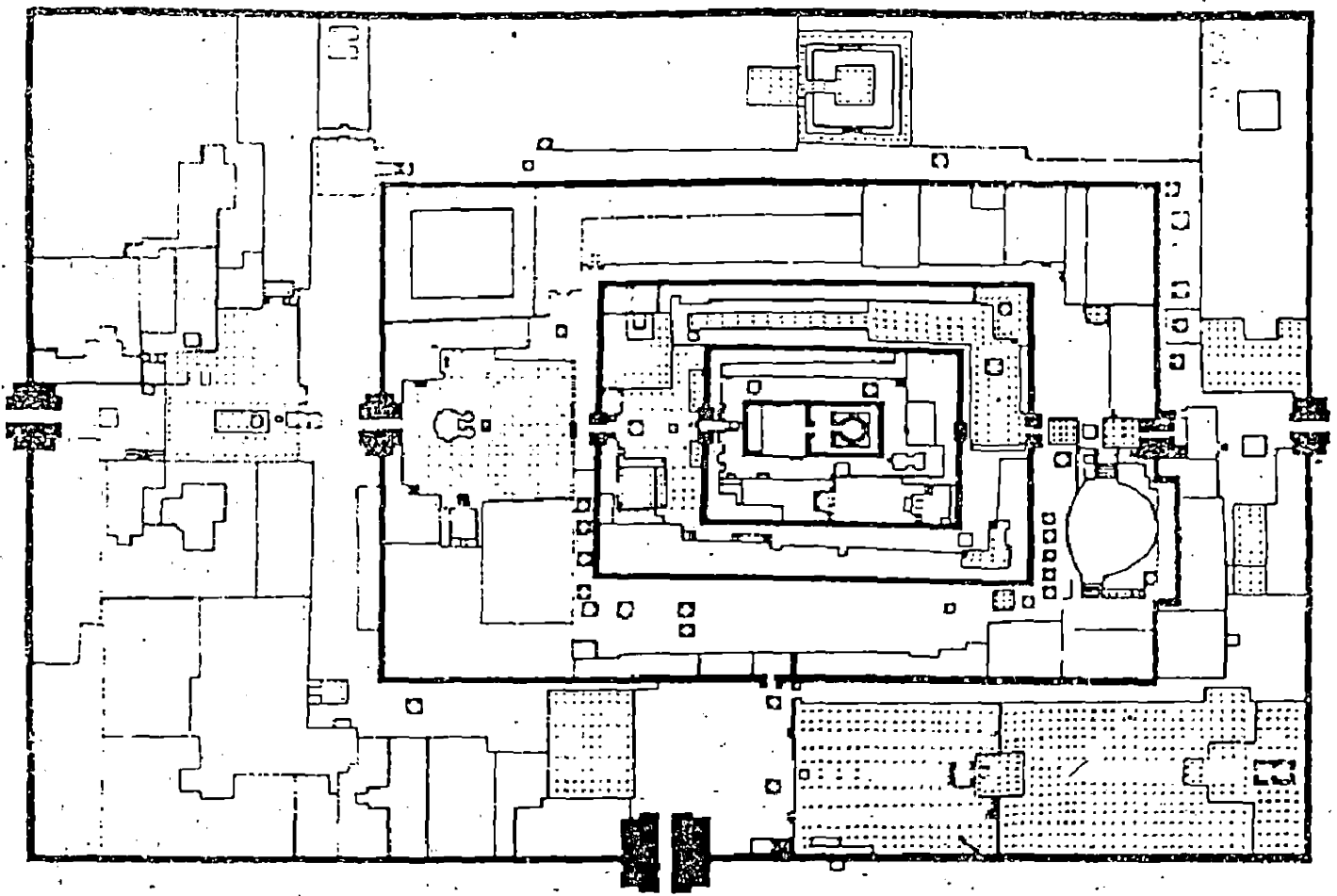
2.2.2 THE TEMPLE TOWN SRIRANGAM

This brief review of history of urban development in India will not be complete without some mention of the temple cities of South India. Srirangam, as typical of many ancient towns in India, is essentially a temple-town located near the confluence of the rivers Cauvery and Coleroon at an elevated plateau and about six miles from Trichirapalli in Tamilnadu State.

Srirangam grew into sizeable town between 6th and 12th cent. A.D. Town grew around a temple. This temple remained to be the core of the town through centuries and it is so even today. Besides being a shrine the worship of Vishnu as the main deity. This temple had generated many activities which intern acted as the dynamic factors deforming the physical, social, cultural and economic profile of the town.

The temple is located in a region with thick vegetation and water bodies. Moderating the climate and providing a scenic setting has been enclosed by eight ramparts and one has to pass through several gates and huge and massive Gopurams Continuously decreasing in height as one approach the temple. Internal streets lined with a single row of houses and outer streets with houses on both sides; streets are planned on four major divisions (Brahma, Davia, Manushya, Pishacha with pavilions rest houses, colleges and halls located in several corners).

A street in Srirangam is primarily a processional route or a movement channel; it is not an integral part of the space volume. The streets through a series of Gopurams leading towards the main temple, in turn, have created concentric



The temple-town of Srirangam based on the precepts of classic mandalas (From Charles Correa, The New Landscape).

enclosures, which are according to religious practices, and have determined the movement pattern as well as the urban pattern. Halls and water tanks defining an intricate organization of space within the outer wall is a rich complex of dwelling units, all forming part of the vast urban canvas? Shopping occupies the major centre of attraction and along the street the shops are planned and forming street market.

2.2.3 JAISALMER

This is another example in Indian context, which has the changing concept of civic space – Jaisalmer is the only living fortress town in India. Not only are its palaces, havelies, fort walls, temples and beautiful houses architecturally unique but the town representing a total concept in urban architecture. For a very long time Jaisalmer had been a quiet sleepy town particularly lost to the world.

The citadel of Jaisalmer is located in the arid plains of west Rajasthan in the midst of the vast Thar Desert. This unique settlement was founded in AD 1156 by Rao jaiselji as a military fort and a trading post on the east-west Caravan route.

The plan of Jaisalmer is an irregular polygon having a double line of fortifications. It is a town within a town. The inner town is a fortress with a strong fort wall, set on top of a triangular hill, which is about 75 meters higher than the surrounding area. The fortress too, is triangular, matching the shape of the hill. Its natural surroundings, climate, topography and the materials available on the site shaped Jaisalmer. But the town also symbolizes the religious and socio-economic aspirations of its people.

When the city used to give shelter to the caravan, the bazaar used to provide shopping facilities to the traders from far and wide. This compulsion of activity gave birth to towns like Jaisalmer – in modern terminology – a trade town which developed at the transport node.

The hill, the city wall, the path, the palace complex, the temple and the houses of the town are of a golden yellow stone creating unique harmony of colour and sculptural forms.

While the layout patterns of the streets in both parts of Jaisalmer differs substantially, their visual character is almost the same. In the upper city, the streets radiate towards the periphery from the royal square of the palace complex called Dussera Chowk. There, the ruler gave audience to his people, met visiting traders and conducted court of justice. A group of temple dedicated to Jain tirthankaras and some of Hindu deity's form another important asset of this part of Jaisalmer. In the lower city the streets are arranged in an irregular gridiron pattern.

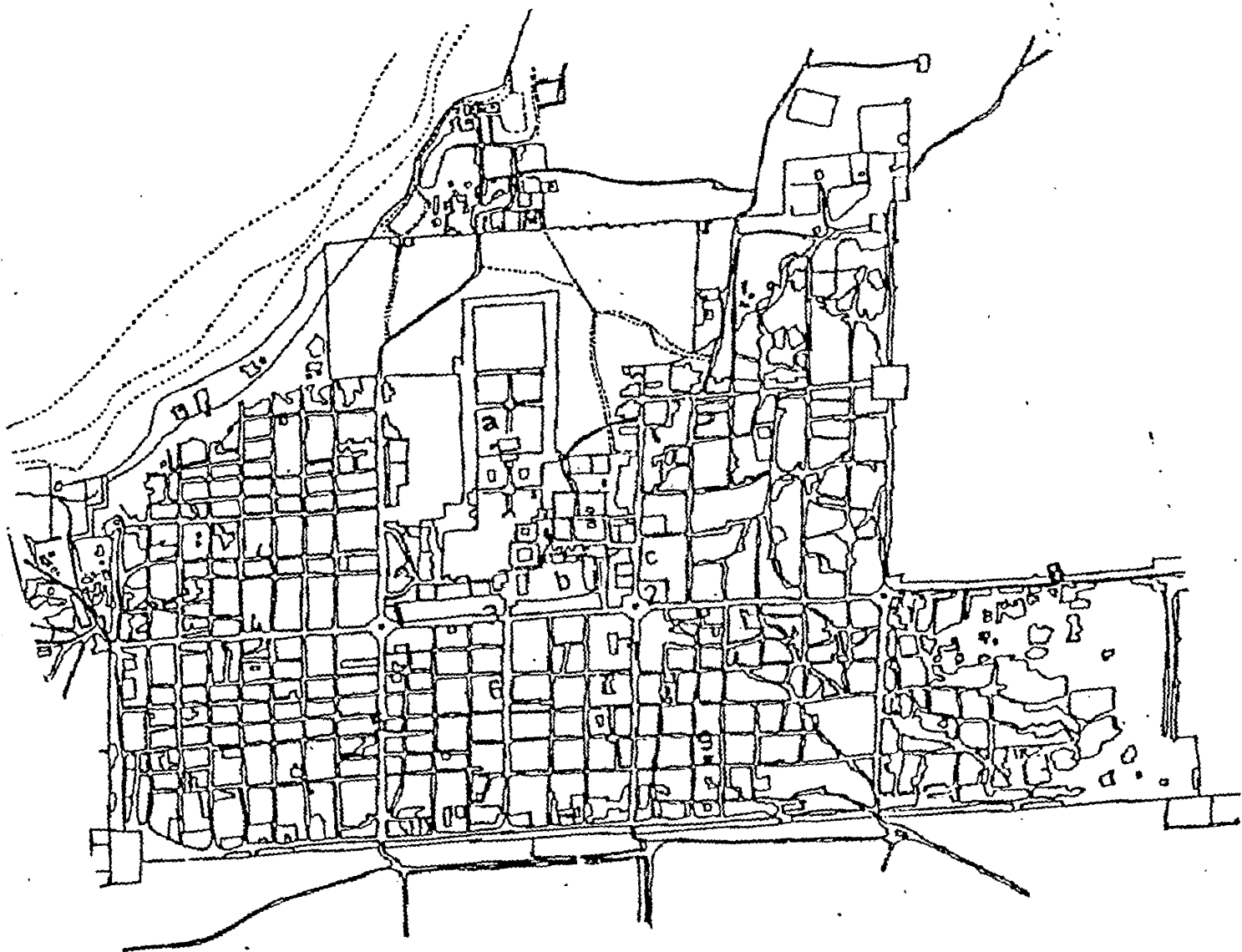
The narrow streets are well shaped by houses generally three to four stories high. Occasionally, they are even six to seven storeyed high. The dominated visual impression is created by a variety of architectural elements such as platforms, thresholds, balconies and Jharokhas – Characteristic projections with small openings. The facades are elaborately carved, particularly on the upper floors.

The Heavily is one of the most outstanding architectural features of Jaisalmer. There are several principles of design with subtle variations in size and treatment.

2.2.4 JAIPUR

The time attains a new change. The state of Swai Raja Jai Singh – the pink city of Jaipur is definite modification over its medieval ancestor – Jaisalmer. Here once gain the function remain same, but intensity increases and the bazaar area sometimes also accommodated chariot and bullock carts.

The space contained between the two rows of shopping, sided from a narrow alley to a wide bazaar area. The spread of bazaar increased with an increase in city size and the various regional linkages.



Plan of Jaipur

- a palace complex
- b observatory
- c hawa mahal
- 1 choti chaupar
- 2 badi chaupar
- 3 tripolia bazaar
- 4 chandpol bazaar
- 5 kishanpol bazaar
- 6 chaura rasta
- 7 johri bazaar
- 8 serajpol bazaar
- 9 housing cluster



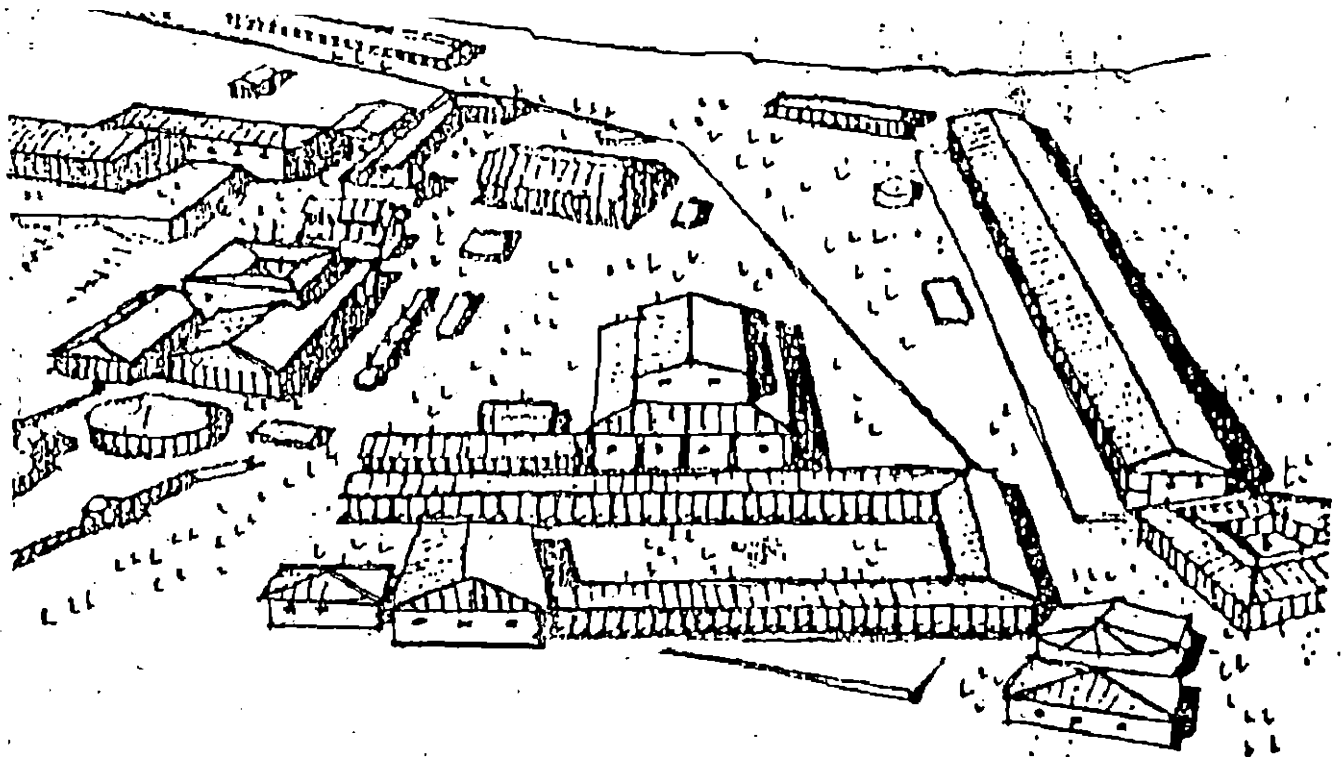
FOREIGN EXAMPLES

2.2.5 GREEK AGORA

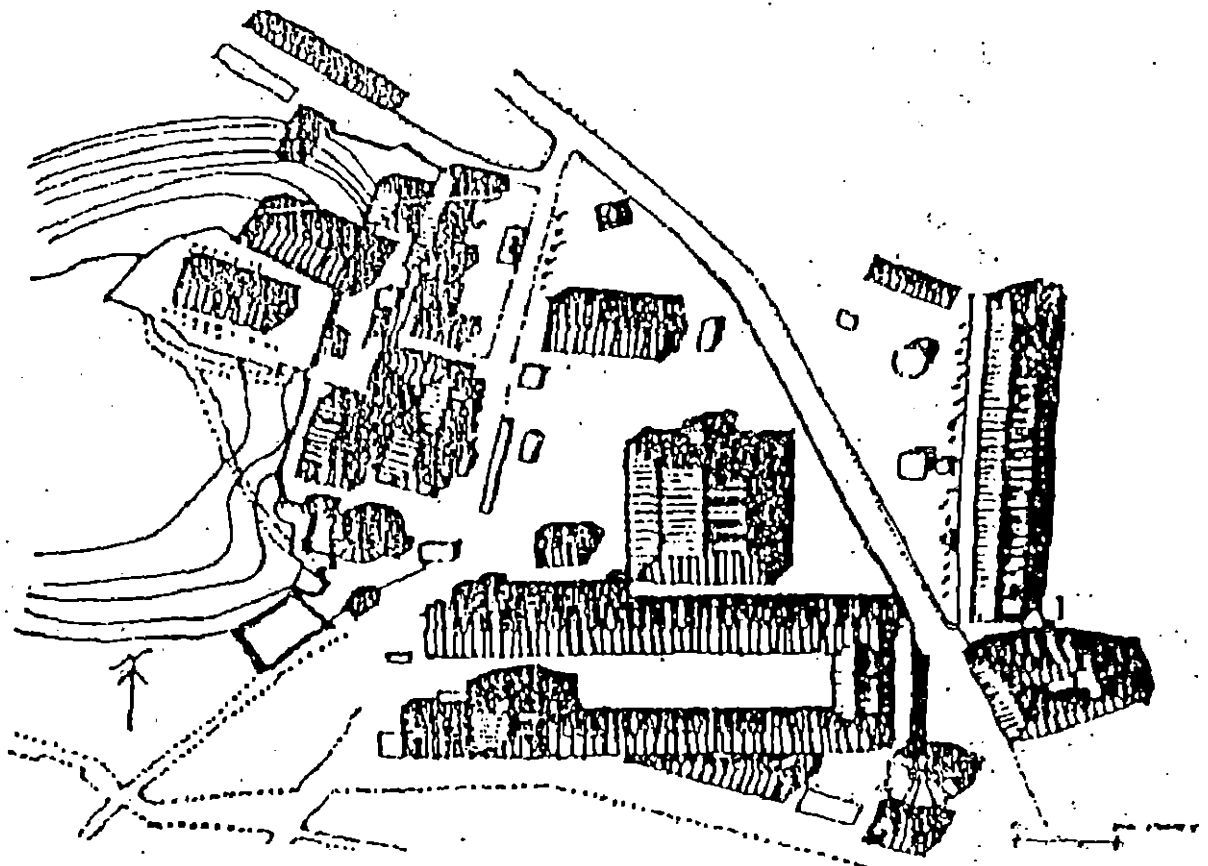
Whereas the Acropolis consisted of masses of articulating space, the buildings of the Agora served as facades to form an enclosed urban space. The Agora too, was built over a long span of time. Its early buildings were small and unified visually by their smaller shapes, details and sizes. The later buildings were longer and more regular. All were grouped around a central open space. Small gaps between the buildings led to smaller peripheral spaces and to pathways to various parts of the city. Because they were low, the buildings created a comfortable sense of spatial enclosure. Statues and other sculptural details accented the central open space here and there. The buildings, being regular and architecturally horizontal, gave a sense of stable repose. A pediment seen outlined against the sky here was balanced by other pediments elsewhere, repeating a theme similar to a range of mountain profiles. The smaller buildings were symmetrical and on varying ground levels. The visual composition of whole group being one of asymmetrical balance. The cohesive design elements gave a sense of visual stability to what would otherwise have been a chaotic assemblage. The lesson of the Agora as an urban space is that urban space is flexible, Like the gridiron plan it allows many changes in its component buildings. Unity is maintained as long as the buildings are reasonably sympathetic in scale.

2.2.6 ROMAN FORUM - REPUBLICAN

Developing alongside the Tiber River at a point that could be crossed, Rome's early settlement was atop one of its seven hills, the capitoline. The base of this hill became a market place and eventually as in Athens, the commercial and administrative heart of Rome --- the old or Republican Forum.



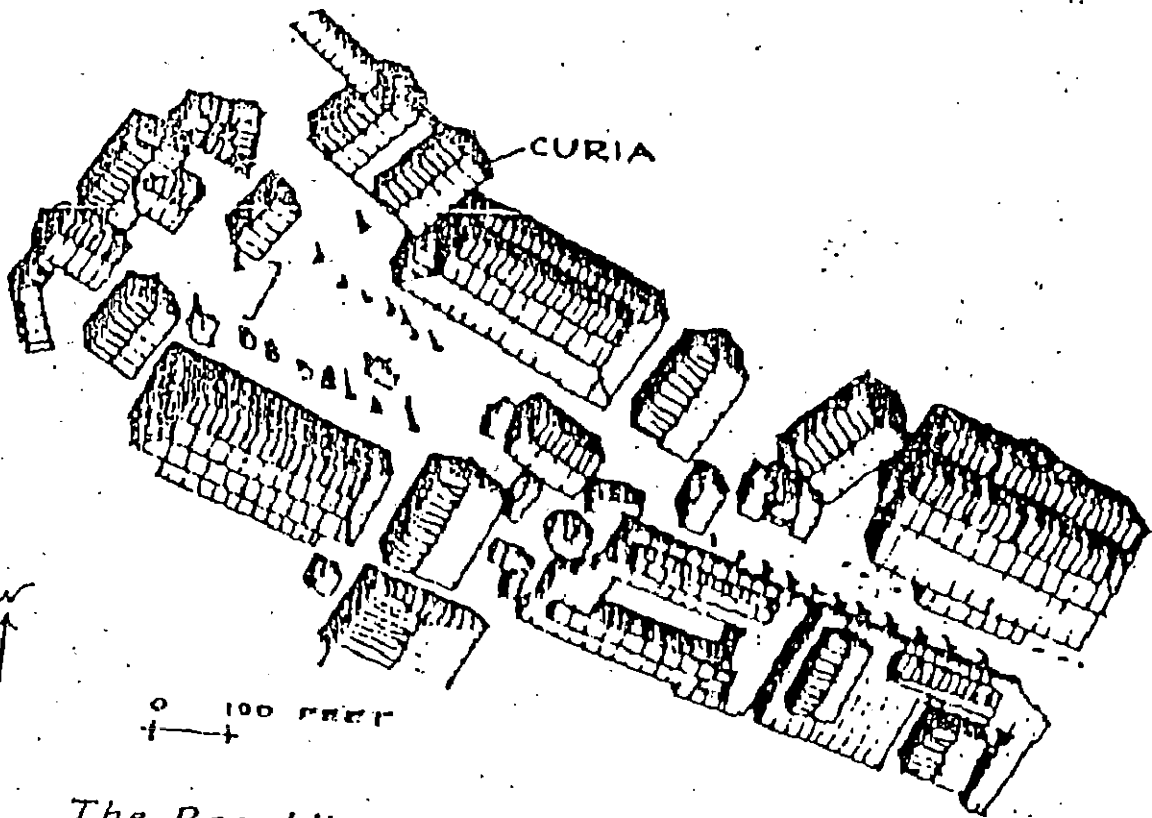
The Agora of Athens: as seen looking down from the Acropolis.



Plan of the Athenian agora, 2nd century B.C.



The Republican Forum. The Curia (Assembly) is the center building.



The Republican Forum in Rome. The buildings were erected one by one along an irregular axis.

Because the level area was small, only about five to six acres, buildings were crowded close together. They were conceived as individual objects with no formal relationship between each other except for their location along a common narrow space, about a thousand feet long on an east west axis. Each of the forum's buildings, big or small was in fact a monument to its sponsor, commemorating him or some event associated with him.

2.2.7 ROMAN FORUM - IMPERIAL

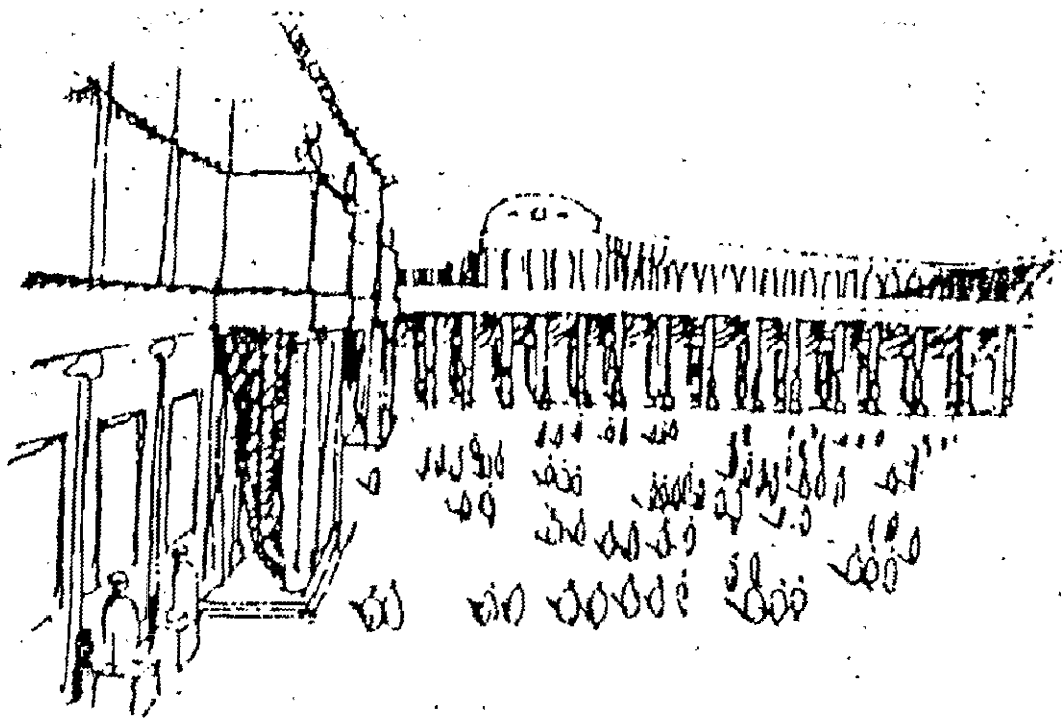
The extension of the forum during the period of the Empire of 27 B.C.-476 A.D. It was built along an axis determined by the space left between hills in central city. This axis started about midway along Republican Forum's axis and proceeded in a northwesterly direction for over a thousand feet. The design concept of the Imperial - Forum was as different from that of the Republican Forum. Here, again, architectural and urban masses were made subordinate to spaces.

The Imperial forum was composed of square, rectilinear, and semicircular plazas, each formed by a colonnade and acting as a setting for a key focal building' a temple at the end of the space.

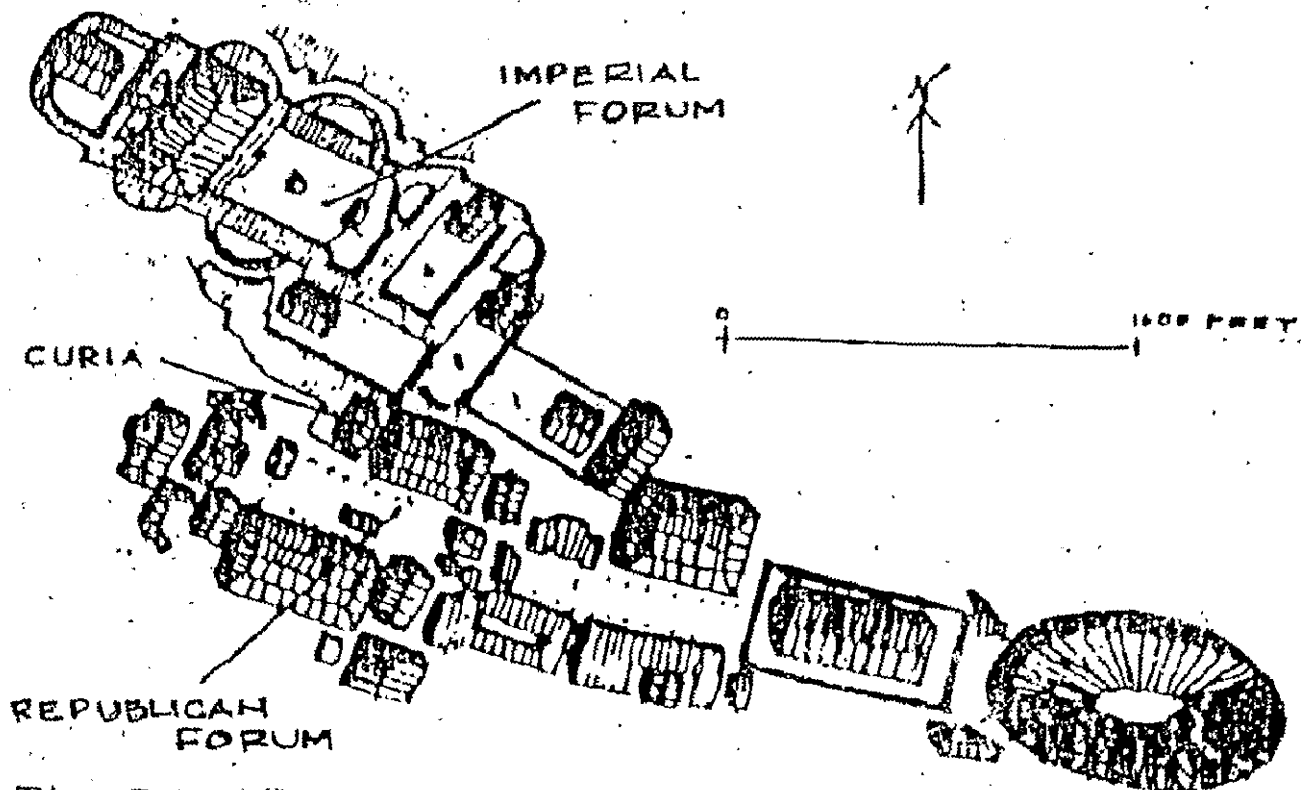
2.2.8 SIENA, PIAZZA DEL CAMPO

Medieval, Italian town Siena is composed of several political sections, each occupying prominent topography, each with its local small square, but together focusing on one of the finest piazzas in the world and, a short distance from the piazza, on a central dominating cathedral.

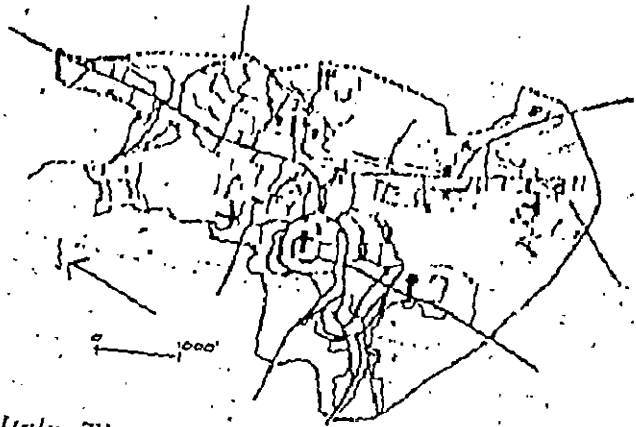
The city of Siena has a pattern of streets which follow the most logical topographical lines, converging on the central Piazza Del Campo, a large outdoor



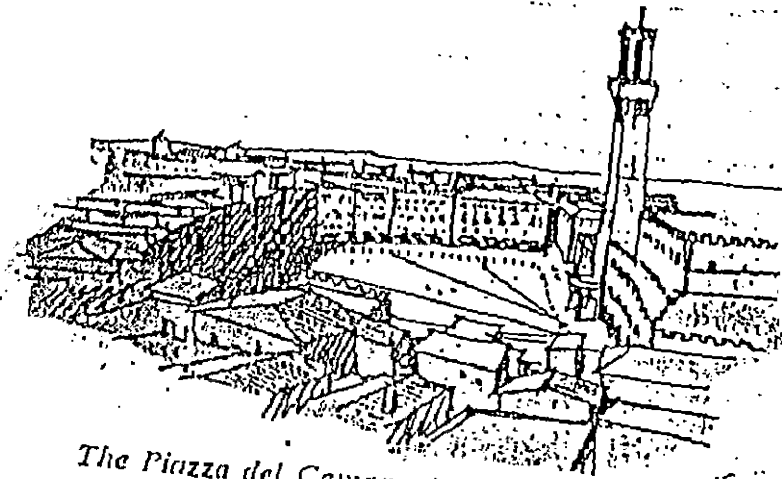
The Imperial Forum. The buildings were designed to form large regular spaces.



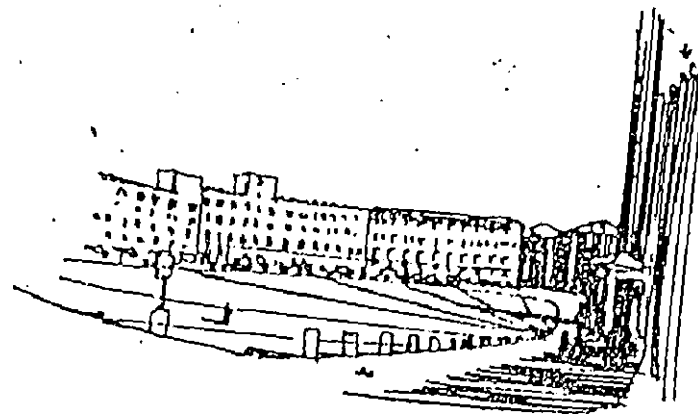
The Republican and Imperial Forums together.



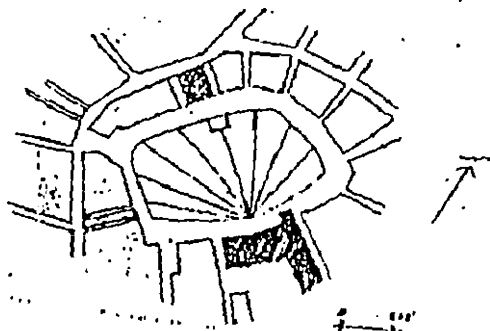
*Siena, Italy. The Piazza del Campo is at the center.
The Cathedral is to its northwest.*



*The Piazza del Campo. An outdoor living room
for the entire town.*



The Piazza del Campo.



*The Piazza del Campo in Siena climaxes the minor
plazas and the entire street network of the town.*

living room for the whole town. The streets are all quite narrow, and the passage from them into an open piazza is dramatic.

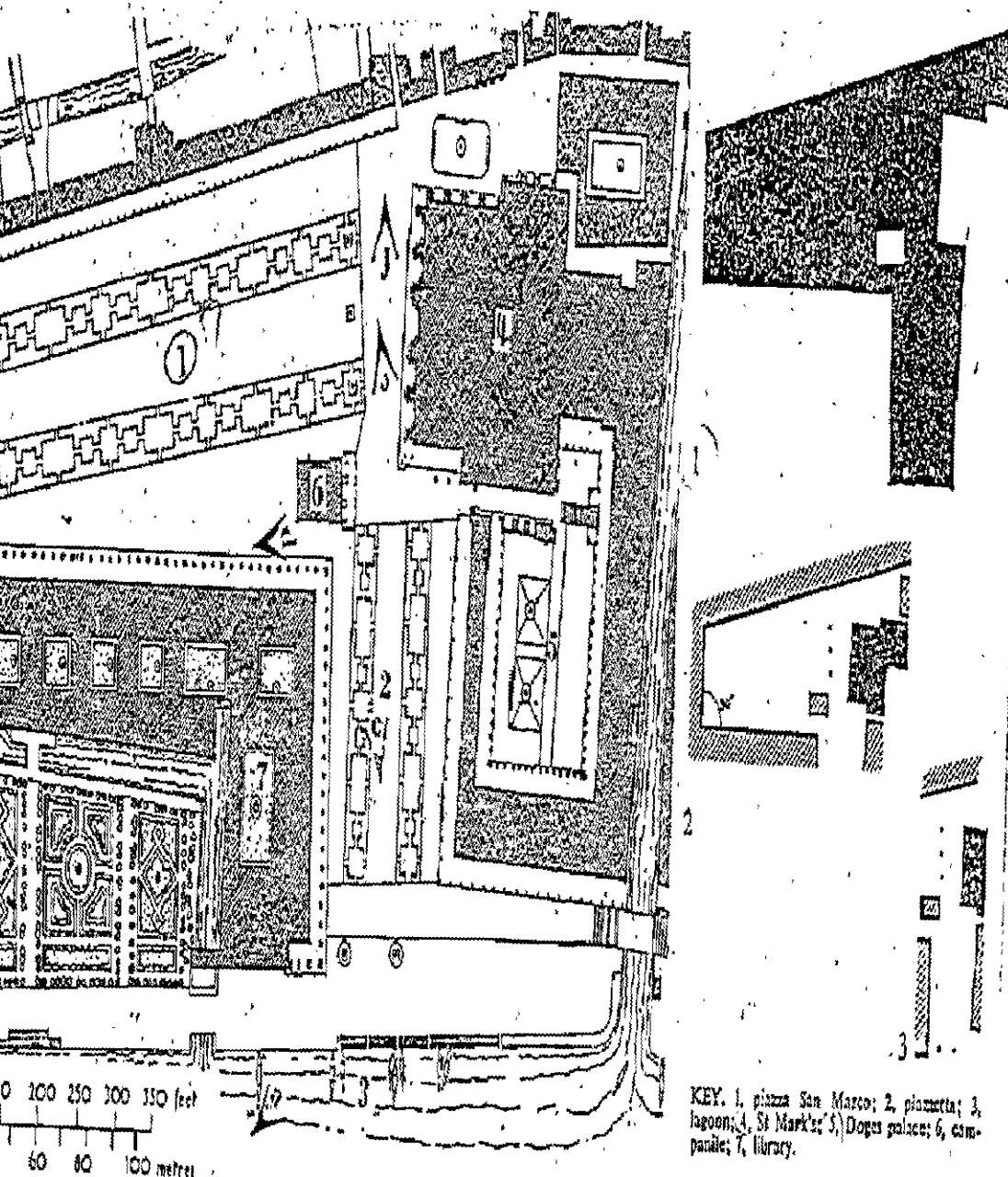
The main streets are those which are most regular. Lined with shops, they run from the town gates to the main piazza and consequently bear the greatest volume of traffic. ^{In} Most of the Italian towns, the entrance views of a piazza were determinants in the placing of towers, and obviously the detailing of ~~the~~ important public buildings was strongly influenced by how it was seen from various places in the piazza.

2.2.9 VENICE, PIAZZA AND PIAZZETTA SAN MARCO

This famous civic centre, the only place for public assembly in Venice, has evolved from AD. 830. The buildings are grouped to form two spaces, the Piazza and the Piazzetta, the former being the main civic space for the city, the latter the principal entrance to Venice from the sea. It is an illustration of three distinct spatial type: an enclosed space (the piazza), a space with open end walls (the piazzetta) and a space as a setting for architecture. As plan shows the space in its simplest terms : an L-shape with a detached bell tower placed in the re-entrant corner, and with one end open. There are no parallel walls in the composition, but any possibility of conflict between the irregular spaces and the rectangular buildings is resolved by three adjacent walls to the space joining each other at right angles.

The two piazzas combine into one space because of the spatial extension between them; because the bell tower acts as a fulcrum, and the basilica as a common focus, and because San Sovino's old library and mint forms adjacent sides of both piazzas.

The basilica, both functionally and aesthetically, is generally regarded as being the most important building in the group.



PLAN OF VENICE, PIAZZA
AND PIAZZETTA SAN MARCO

The piazza is a long space which might be described as a "U", with the main façade of a principal building placed in the open end, but it is, of course, for more complicated and subtle than this.

The "U" shaped space has a very marked sense of enclosure due to the built-up corners, and the ground floor colonnade which both hides the openings in the walls and knits the building together. St Mark's appears to project into the open end of the "U" because the space extends on either side of it. The Doges Palace is linked up to it. Mark's with the consequence that it closes the view from the piazza.

2.3 LOCATIONAL HIERARCHY AND TYPE OF CIVIC SPACES

Civic facilities are to be provided at different levels in urban centres for example at the city level and at small district level, and these areas predominantly dominated by two main forms.

- (1) Principal civic group
- (2) Business group

2.3.1 PRINCIPAL CIVIC GROUP

The type of spaces which is needed for the principal civic meetings grouped with variety of buildings generally associated with the town hall and other municipal buildings. Spaces for fore courts to entertainment buildings, like theatres and cinemas restaurants and cafes etc. Some times these spaces are also have religious buildings, monumental buildings, public buildings, council chamber, indoor meeting space outdoor square for social meeting.

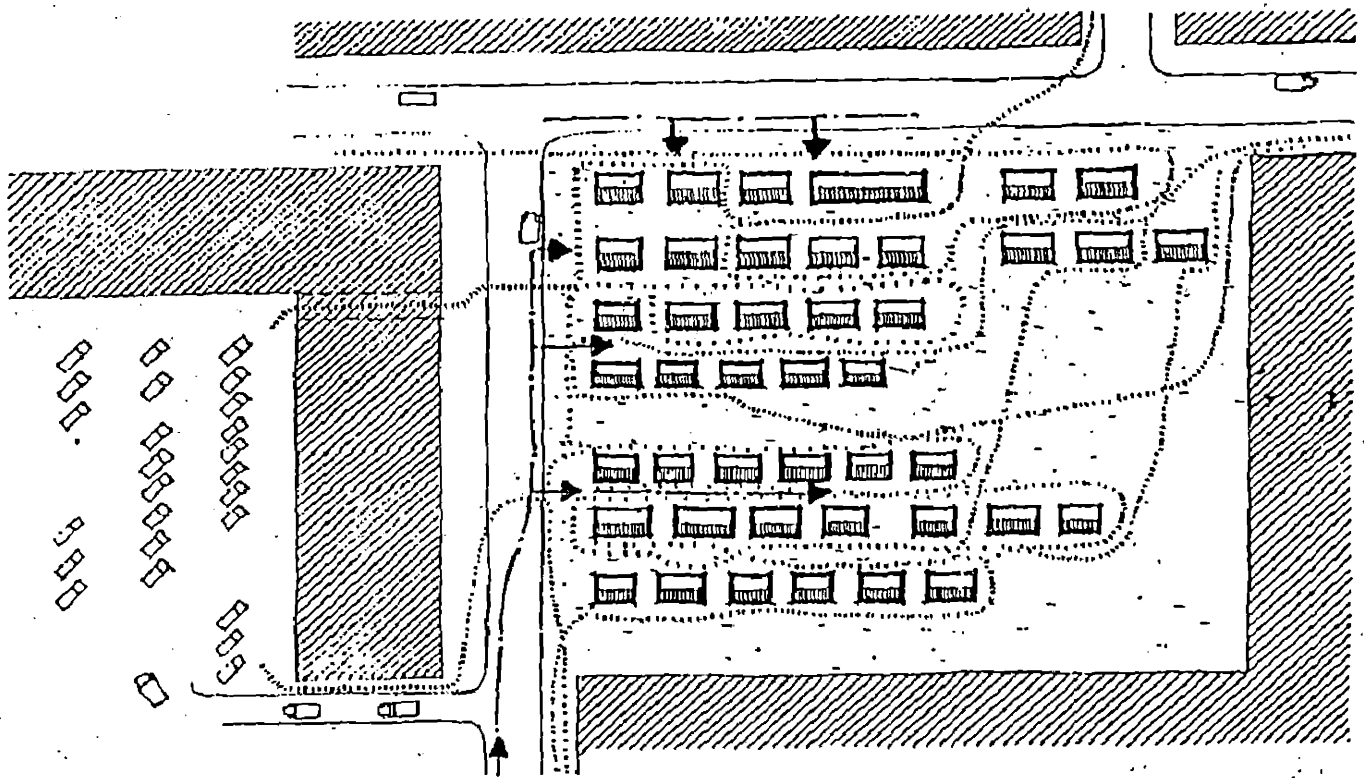
3.2 BUSINESS GROUP







Which may be sub divided into the market, the shopping street, the departmental store and the shopping precinct.

3.2a THE MARKET

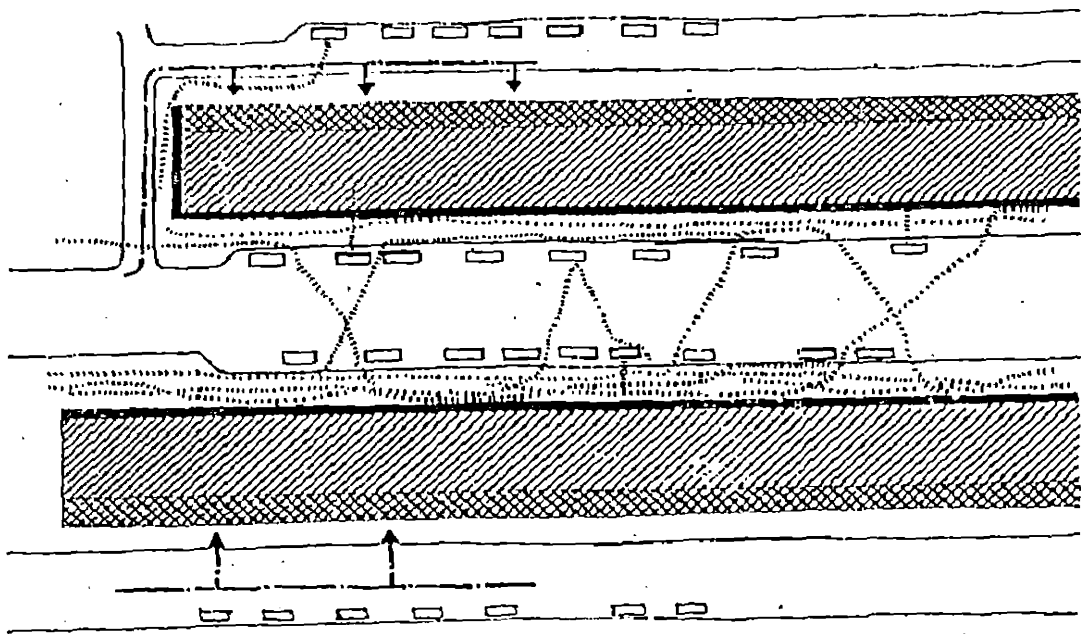
This is the oldest form, the market, consists of a series of stalls or booths lined up in rows in an open space, or some times, covered space, around which the public can circulate. The goods are for the most part market-gardening produce, clothing, households utensils, and other convenience goods since little capital is required, and overheads are small, the market is essentially a centre for cheap goods. The goods are arranged on stalls, or even on the ground, which performs the functions of the display window, the counter and the storage space. There is thus no separation between the shopper and the shop owner, one can finger and inspect it to the closest detail without purchasing, and one can bargain about the price. A lively throng of people is the essence of the market scene and so, even when there is ample space, the stalls are hooded together to concentrate the activity. The usual arrangement is to place them end-on in parallel rows, the alternative space between the rows being for public, the vendors standing behind the stalls back to back.

The shopping activity is essentially a pedestrian one, and the only times when vehicles appear on the scene are before the market opens and the stalls and their display are set up, and when it is over and they are removed. Visitors from outside the town will come by car, and some of the vendors will bring their produce in their own vehicles, and so parking area near to the market spaces are required, a requirement which is made even more difficult in those towns where the market square is used for parking on non market days. There are many successful street markets, but generally, the nearer square the space is, the better, because the eye can embrace more of the scene and it is easier to cut across from one stall to



- | | | | | | |
|--|-------|--|------------------------|--|------------------|
|  | Shops |  | Pedestrian circulation |  | Display frontage |
|  | Cars |  | Service vans |  | Service areas |

THE MARKET



THE SHOPPING STREET

another. In all facts that is essential to market with flat surface and surrounding enclosure which can provide the appropriate civic space.

2.3.2b THE SHOPPING STREET

The shopping street which developed through the old market stalls becoming permanent structures, is now the most popular form of shopping space. It consists of a street bounded on one or both sides by shops which have show windows and entrance doors at the back edge of the pavement and storage space and goods access at the rear, facing a service way or road, if it is provided.

In shopping streets the movement of public is both by foot and by private vehicles. The resultant conflict between the need of vehicle and the needs of the pedestrian poses a complicated problem. Most of the streets are two sided, and since it is undesirable for one side to be dead and the other alive, and since, in shopping, liveliness means number of people, the pedestrian must be able to cross and recross the space between the two rows of show windows.

The essential requirement for the shopping streets may be summarized as follows :

A continuous window display uninterrupted by other building users or architectural features.

A balance of interest both between opposite sides of a street, and between the various lengths of the street. The arrangement of wide pavement in front of shopping show windows, easy pedestrian access across the street, facilities for private cars both to pull up at the side of the pavement, provision of park within short distances of shop windows, and separate movement track for the service vehicles in shop premises.

2.3.2c THE DEPARTMENTAL STORE

The departmental store which has different kinds of shops under one roof. It has characteristics both of the market and of the shopping street. Different stores may specialize in different type of goods, and their merchandise may be aimed at different sections of the community, but the typical departmental store is that which sells every kind of goods, from pins to pianos and for every pocket.

The goods are displayed in show windows facing the street as in a shopping street, but in addition to this there is an internal display which may be linked to the market stall. As the store is a series of shops, the customer is not limited to a particular range of goods, and is encouraged to circulate inside without being pestered to buy. Knowing this, he will enter more willingly, and there is not the same psychological barrier between the pavement and the inside of the premises as with a shop.

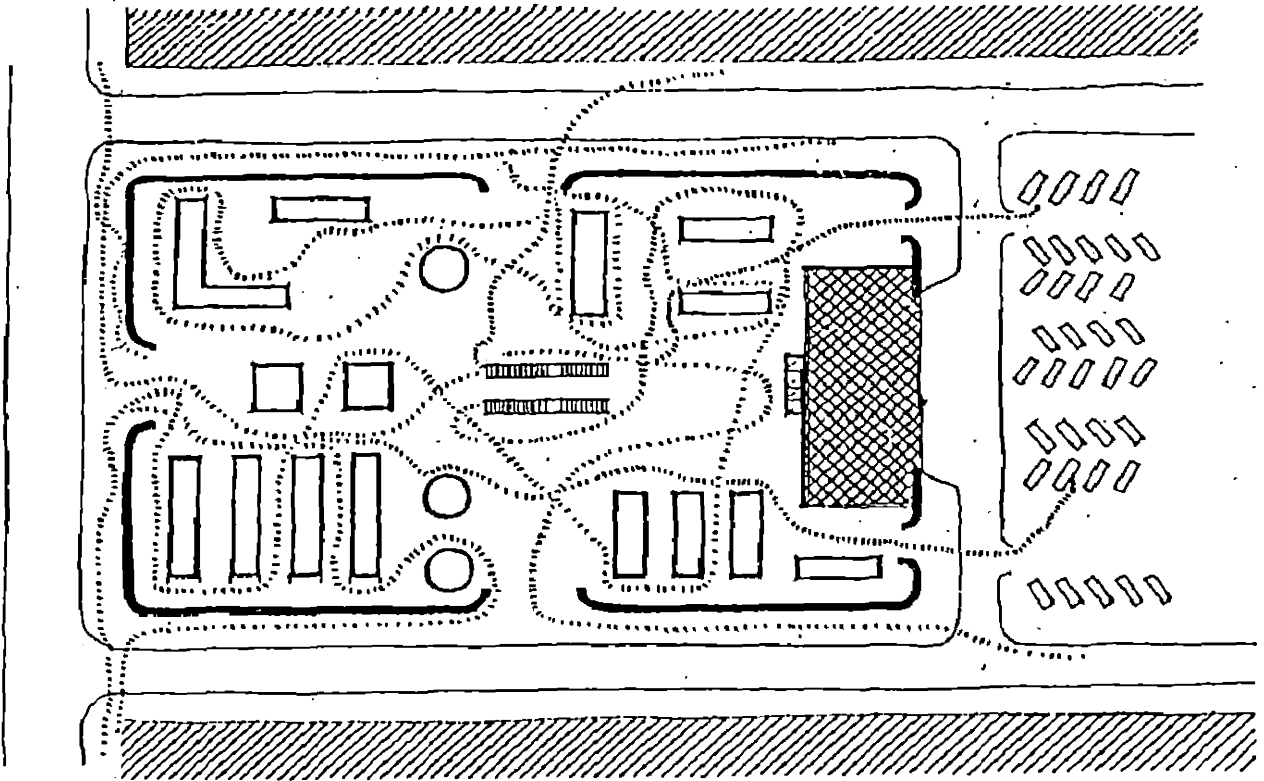
The internal display functions in the same way as the stalls of the market. The goods can be seen and handled at close quarters, but with the shops advantage that they are under cover.

The essential requirements may be summarized as a continuous window display, broken only by the entrance leading to the internal display, a square or nearly square selling space, equipped with lavatory and other communal services, stock and administrative space located on the least important areas wide pavements, large adjacent car parks, and a rear service way with loading docks.

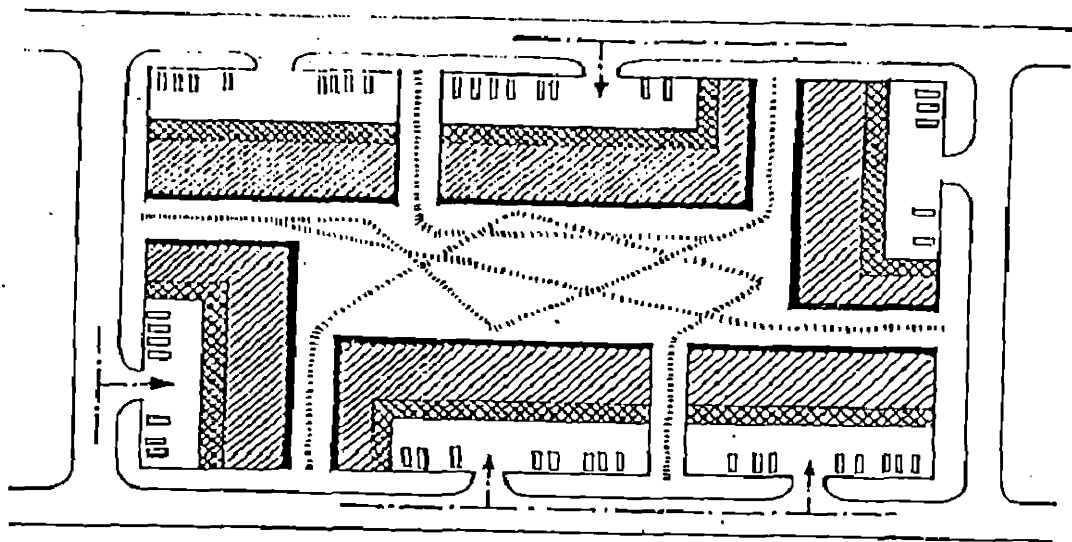
2.3.2d THE SHOPPING PRECINCT

The shopping precinct is shopping space free from vehicular traffic in shopping area. It can be divided in three basic forms.

Alleys, which have not been wide enough for vehicles, shopping streets closed to wheeled vehicles, and precincts designed as such from the outset. The



THE DEPARTMENTAL STORE



THE SHOPPING PRECINCT

essential requirements are a paved open space, on long rectangular rather than square shape, with no physical barriers, surrounded by shops having their display window facing it, a combined service and access road parallel to, but outside the main shopping frontages, with service boys to the rear of the shops. Parking area ranged off the road around the periphery of the site, and finally numerous pedestrian connections between the car parks and roads and the precinct.

2.4 PLANNING PRINCIPLES OF CIVIC SPACES

2.4.1 VARIETY OF CIVIC SPACES

The development of town and cities the various types of spaces which are needed are : The principal civic meeting space or spaces generally associated with the town hall and other municipal buildings, spaces for entertainment buildings, like theaters and cinemas, restaurants, and cafes. Space for shopping, like shopping streets, precincts, and markets, and spaces around which office buildings are grouped. Many of these spaces will perform more than one function, and there will be all kinds of odd areas, which will be minor spaces linking the major spaces together. But certain spaces, like the principal civic spaces, the shopping street and the market, will stand out as having very obvious functions.

2.4.2 DOMINANT ELEMENT OR CROWN

The civic centre is a composition in its own right, and for that composition to have unity it will require a dominant element or crown. The dominant element may be a single building which, by its size, towers over all the other buildings, like Cairo Mosque, it may be a group of tall buildings, like the towers of San Gimignano, it may be a group of quite small buildings which, being on an elevated position overshadow the rest of the town, it may dominate, through its setting. "As a first principle

it may be said that the major civic buildings must be in themselves the most impressive in scale and architectural character, and must occupy the most impressive site.

- ◆ The dominant building or group of buildings appears as a plastic body in space, with the characteristics of mass and Silhouette.
- ◆ The dominant building may be placed on the dominant space as one grand climax to the centre, but it does not follow that always coincide

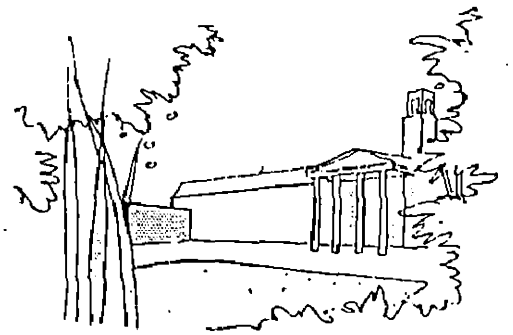
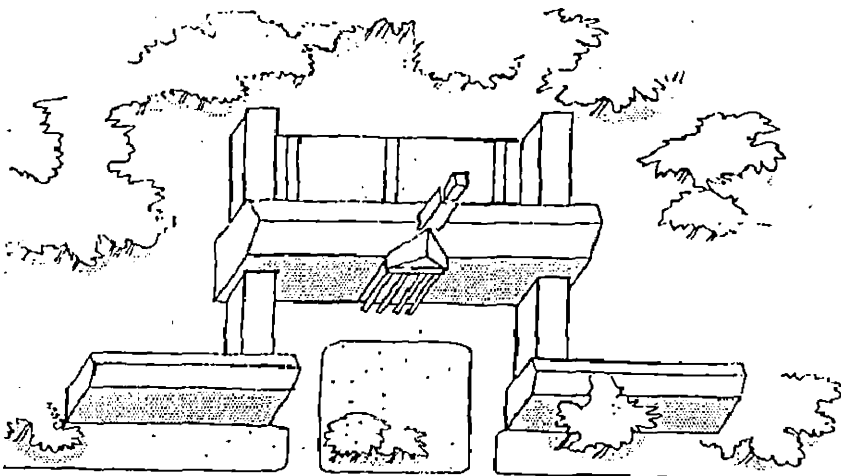
2.4.3 VARIETY OF BUILDINGS ON THE CIVIC SPACE

Building like temple, palaces and college and have all been separated from the main civic space without ill effect on the functioning of the centre, but it is unwise to separate the council chamber and the town hall as being expressive of the corporate life of the town, they have an intimate relationship with the civic space – the buildings as an indoor civic meeting space, the square as an outdoor one.

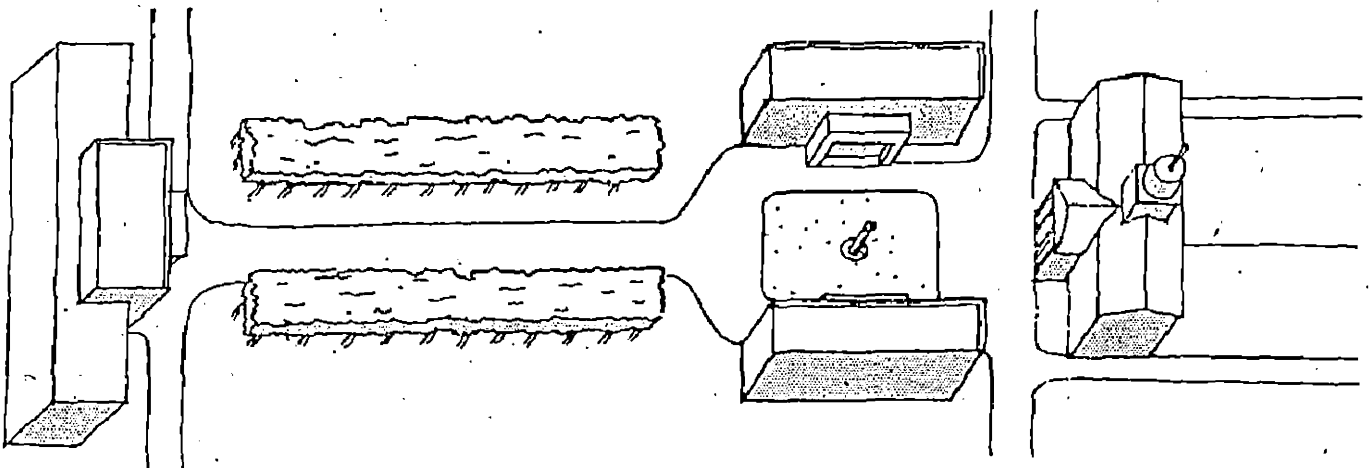
- ◆ Introducing buildings which serve quite different purposes, as they will help to produce varied and continuous activity in space, and it has great attractions as an urban space because of the different activities it generates.
- ◆ Provision of entertainment buildings, like café, restaurants, theatres, and even some shops, into the civic space, although there must not be so much of them that the character of the square is changed from a civic to an entertainment one, their function being to act as supporting element to the civic buildings rather than major composition in their own right.

4.4 CIVIC BUILDING IN LANDSCAPE

If a building is designed as a complete and self-contained monument, it is generally most easily sited when set in the landscape well away from other buildings



CIVIC BUILDING IN LANDSCAPE



AVENUES, VISTAS AND FOCAL POINTS

as there is then the maximum contrast from natural forms, and no conflict from other geometric ones.

When there are several civic buildings, it is important that there should be adequate space round them for large trees to be planted to separate their forms.

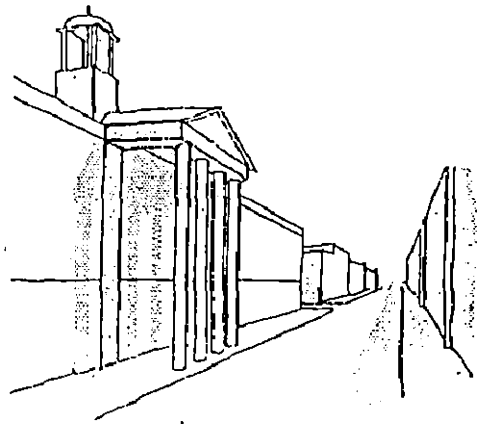
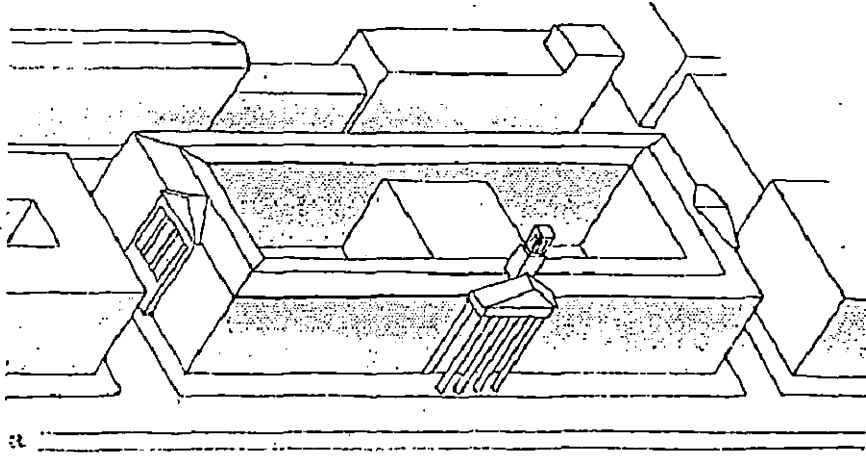
In his ideal town, Ebenezer Howard suggested that all the civic buildings should be stood in a park in the centre of the city, a proposal which is being followed at Welwyn and in other towns designed in the garden city manner.

2.4.5 PUBLIC BUILDING IN THE STREET PICTURE

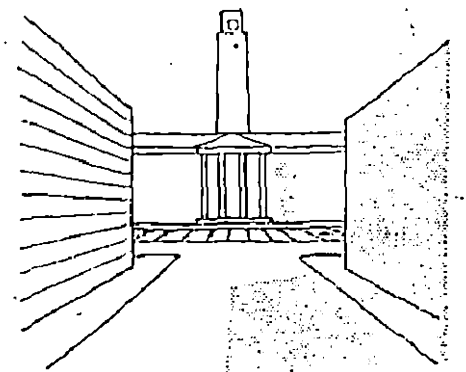
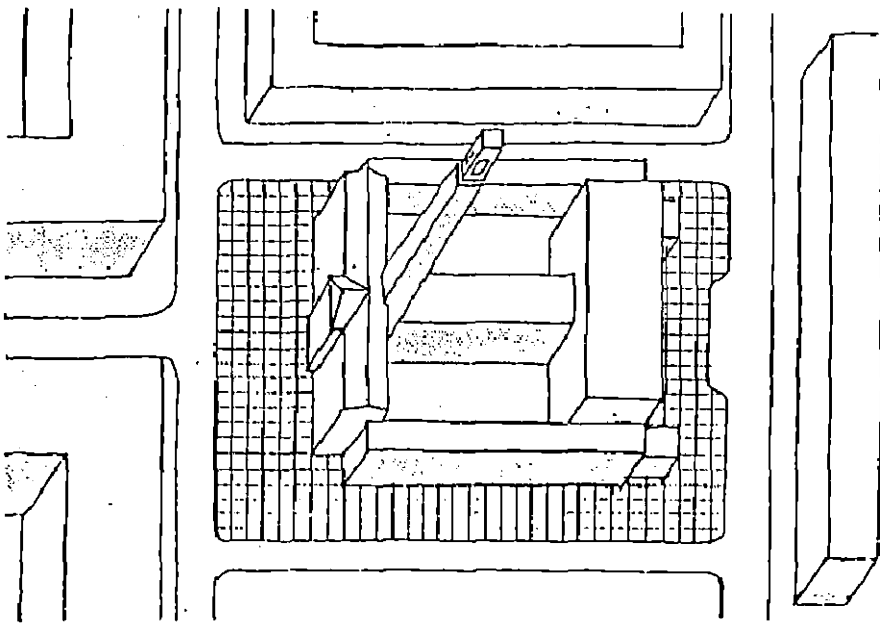
When we consider civic buildings as element in the street picture, the civic space plan takes the traffic out of the principal streets but there is still left the important problem of the composition of the street facades. In fact the visual interest of the existing towns arises from the diversity and texture of the buildings ranged side by side on the street-frontage and, whereas we tend to impose overall elevation control (building height, materials and so on) in the interest of unified design, there are many instances where the introduction of contrasting or even discordant forms of public buildings, like library or temple, will give vitality to the scene.

Public building that may be appropriate to the character of the street will be designed as part of the street composition, which means considering existing heights and building lines and devising forms of a sympathetic character rather than imitating architectural style.

There are instances where strong visual emphasis may be desirable because of the function of the building or through a change of direction in the street, in which case a tower or projection in the façade may provide the answer.



PUBLIC BUILDING IN THE STREET
PICTURE



THE CIVIC GROUP AS A SPACE

In case of tower or spire, must be well above the average roof line, so that by standing in Silhouette well clear of the rest of the sky line, its verticality will contrast with the horizontally of the street.

2.4.6 RELATIONSHIP BY AXIAL VISTAS

The common method of relating buildings by controlled view points is the axial vistas. In this system the buildings designed as symmetrical compositions about a principal line, and they are then ranged to face each other in such a way that their central lines coincide to form an axis. The buildings thus bear a spatial relationship to each other by the common vista down the centre line of the axis. It is all important that the line of the axis should run through a clear open space, because the vista from building to building is the objective, not an imaginary centre line.

2.4.7 AVENUES, VISTAS & FOCAL POINTS

As shown in figure, one building is shown at some distance from the others, and to emphasize the ideal view point the path of the vista is enclosed by avenue planting, the building thus becoming the focal point to a framed view. All the buildings may be separated so that they face each other down long avenues, each one becoming a focal point or terminal feature to a long vista.

The system brings the avenue or the street into the spatial picture, and is thus altogether more grand in scale than one in which buildings are merely related axially across a void, and as we might expect, it has been a favourite method of composing large government centres, like New Delhi and Washington.

2.4.8 THE CIVIC GROUP AS A SPACE

When the building stand in a space, the facades of each one of them meet at an external angle, and there is an effect of mass, when the process is reversed and

they are ranged round the space, the facades of adjacent buildings meet at an internal angle and there is an effect of volume. The greater the similarity between the facades of adjacent buildings, and the fewer the gaps between them, the greater will be the sense of spatial enclosure, provided always that the relationship between height and width does not become so great that the walls of the space fall apart.

The paving of the floor will have the same hand character as the walls as compared with natural materials like grass and the closer the horizontal and vertical planes are in material and design the greater will be the overall unity.

2.4.9 SIZE AND PROPORTION OF CIVIC SPACE

No plastic space body can be formed when the floor area is so great that the walls of the surrounding buildings bear no relationship to it. There is a practical limit on building height, but none on floor area, and we find that the countless urban spaces fail because they are so large that the buildings appear to stand on the edge of the space. The walls and the floor of the space become dissociated and there is no sense of spatial enclosure.

Judging from the size of many urban spaces designed today, it is obvious that there is still confusion between the relative importance of floor area and spatial volume. A large space can be less impressive than a small one, in fact beyond a certain point, the larger the square the less impressive it is. It is only on plan that we can appreciate a large area, in actuality we look across the space at buildings, and when we do so, the greater the space between us and their facades, the less impressive they look. Furthermore, the greater the void around us, the less we feel the sense of spatial enclosure.

There is an excuse for making civic space large when it is to be used for demonstrations of military or political gathering. Although it is a two dimensional

floor rather than as a volume. There is point to a large space as a foreground to an exceptionally large building, particularly if it is designed to be filled with a vast crowd, but there is no excuse whatsoever when it is to perform normal civic functions.

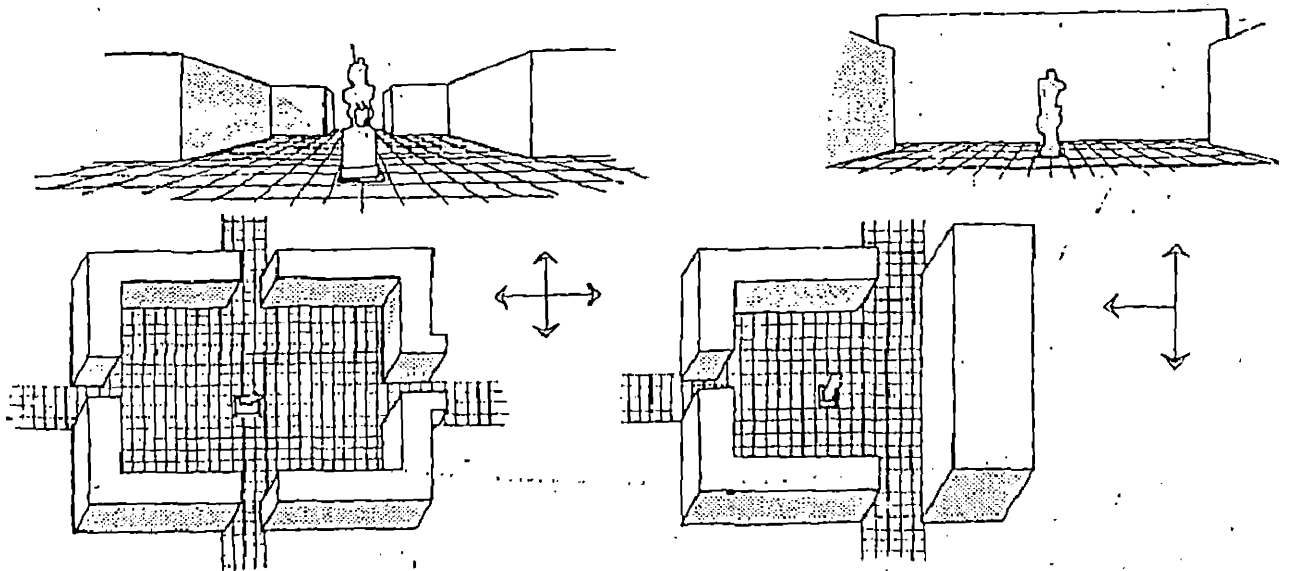
As per the Sitte the average dimension of the great squares of the old cities are 465 x 190 ft or 142 m x 58 m. Further, suggested that the relationship of the height to width of the volume, and of the architectural character of the building, the minimum dimension of the square ought to be equal to the height of the principal building in it and that its maximum dimension ought not to exceed twice that height, unless the form, the purpose, and the design of the buildings, will support greater dimension.

Hegemann and Peets say that in order to see a building as a whole, the observer should be separated from it by a distance equal to about twice its height, which means it should be seen at an angle of 27° degrees. And further, that if the observer wants to see more than just one building, say a civic centre group, he should see it at an angle of about 18 degrees, a distance of three times its height.

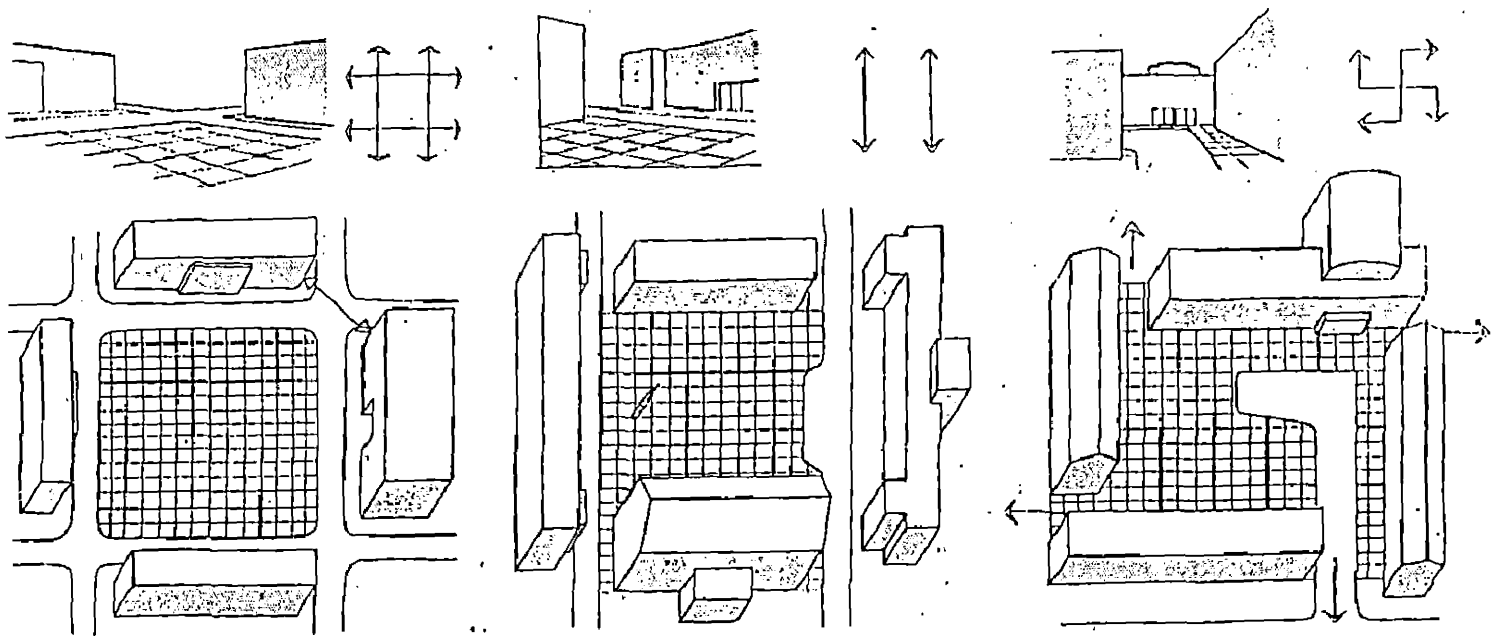
2.4.10 SPACES WITH OPEN CORNERS

The following situation occurs in the gridiron cities civic spaces. Simply a super block left as a paved open space, and surrounded by the buildings, with open corners.

- ◆ It has the obvious defect that the roads separate the walls of the space from the floor, which becomes a centre island.
- ◆ It has the less obvious defect that the roads, meeting at right angles at the corner of the space, separate the walls by wide breaches.
- ◆ When there is only one street entering the corner, the side of the space on the street frontage can be extended beyond the façade of the building at right angles



SPACE WITH BUILT-UP CORNERS



SPACE WITH OPEN CORNERS

to it. This brings the facades of the buildings rather than their corners, into relationship, and reduces the breach. Walking along the road one can look straight out of the space, but in practice there are generally buildings beyond which will close the view.

- ◆ When the circulation allows it, the square can be arranged so that the gaps in each corner are opposite a wall, it forms a most interesting plan, for whichever way one looks into the space, the eye is always closed by buildings. This system occurs in the Piazza Signoria, Florence, the Cathedral Square at Pistoia and Ravenna.

Sitte stated that the device should be considered as one of the conscious, or sub-conscious principles of ancient city buildings.

2.4.11 SPACES WITH BUILT-UP CORNERS

Spaces with built up corner of the square, make the apertures on its centre lines. This is an essence a space formed round crossed foot paths and it places very great restriction on the design of the buildings which tend to be L-shaped on plan and to a common mould. The space, too, is seldom satisfactory as inside it there are avoids on the natural focal points and from outside one looks straight through the space. A large statue placed on the centre resolves the difficulties by becoming the dominant focus from both inside and out the space, in effect, becoming a setting for a monument. Otherwise it is a minor space leading to another more important ones.

The square becomes more satisfactory when the apertures are reduced to three and when those opposite each other are moved off the centre line. There is still the defect that one can look straight through the square in one direction but in the other the view is closed, giving an opportunity for siting a dominant building.

2.4.12 SPACES WITH BRIDGED GAPS

The Piazza Del Campo at Siena has its corners strengthened by the apertures being kept away from them, but it also makes use of another device for obtaining spatial enclosure, namely the arch or bridge. There are no less than eleven entrances to the space, but as the majority of them are arched over in a similar way to the general ground floor treatment of the piazza, the surrounding wall appear unbroken.

2.4.13 SPACE ASSOCIATED WITH A PRINCIPAL BUILDING

Forecourts are usually associated with important buildings, to form their main approach and across which their plastic qualities may be appreciated. The forecourt is generally surrounded by other buildings which give it significance as a space and control the views of the architectural composition. Should the space be dominated by the principal building, then it may appear as a setting for architecture rather than a space in its own right with many American skyscrapers the design process begins with the building rather than the space.

The space as a setting for the façade of a principal building will develop from the architectural design and perhaps the only points worth making are Sitte's, that a tall narrow façade seems to suggest a deep space in front of it and a broad and comparatively low façade, a wide space.

2.4.14 SPACE FLOORS AT DIFFERENT LEVELS

The designing the principal building, the temple, to be the dominant object in an architectural space setting and they underlined its importance by raising it on a stylobate above the general level of the space floor, so that the spectator looked up at the composition. Heightening the interest of an architectural composition is but

one of the effects that changes in level between space floors can give, far more important is that the intimate diversity of prospects obtained by rising or lowering the spectators view point. For example, when the floor is raised above eye level there is, from the lower level, a sense of expectancy as to the nature of the upper one, the chance to Silhouette objects against the sky and the possibility of simultaneous movement on both levels, whilst from the upper level there is a chance of distance views and the strangeness of forms truncated by the edge of the platform.

2.4.15 DOMINANT BUILDING INSIDE A SPACE

When a dominant building is placed inside a space, then the walls of the space become a background, rather than a frame, to the views of the principal building and the principal building itself is seen as a plastic mass, rather than as a two-dimensional space wall.

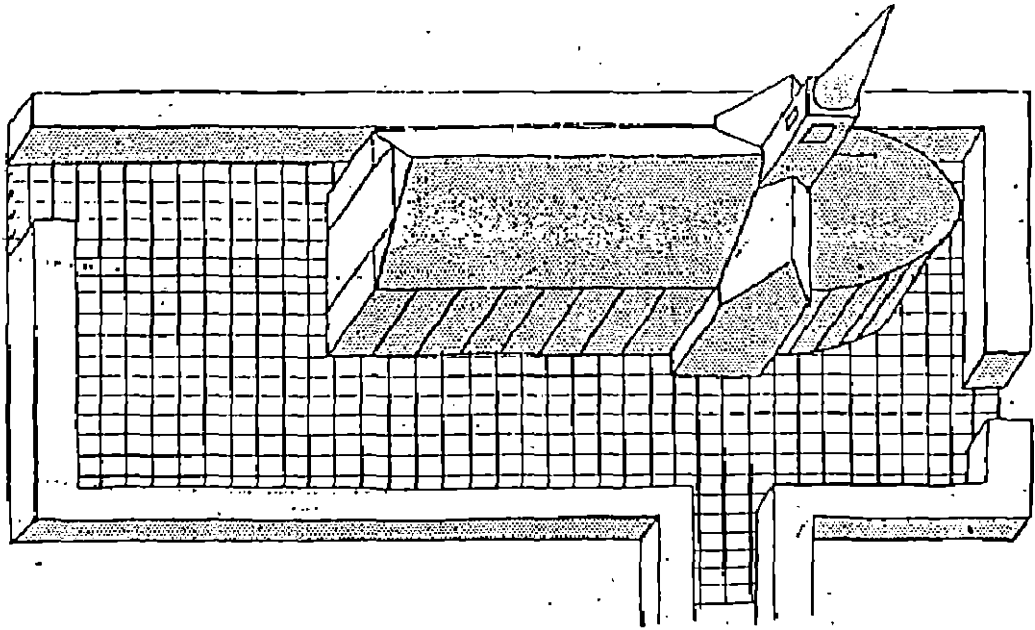
When a principal building of symmetrical form is placed in the dead centre of a rectangular space, the relationship to the surrounding walls is constant, the space appearing to flow round the building, and whichever way we enter the space, or wherever we walk inside it, the eye is always drawn to the centrally-placed building mass.

Above discussed principles are the few which are commonly used in various civic space design.

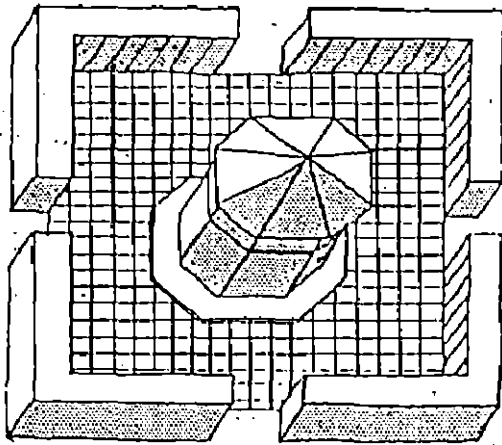
2.5 ARCHITECTURAL CHARACTER OF CIVIC SPACES

Civic spaces must be distinguished by predominant characteristic such as the quality[&] its enclosure, the quality of its detailed treatment or outfitting, and the activity that occurs in it.

There are two definite aspects : Quantitative & Qualitative



DOMINATED BUILDING
INSIDE A SPACE



DOMINATED BUILDING INSIDE A SPACE

- (i) **Quantitative :**
- * Activity pattern
 - * Relationship between man-made to natural elements.
- (ii) **Qualitative:**
- * Aesthetical quality of enclosure, or esthetical quality of buildings.
 - * Aesthetical quality of space elements. like landscaping elements, other natural and man made elements.

Further the architectural character will be determine by the content and context of the space.

CONTENT

- ◆ Size, volume,
- ◆ Proportion,
- ◆ Colour, Focal point
- ◆ Architectural details and elements like façade, Balcony, roof form, Column etc.
- ◆ Landscaping elements like street furniture fountain, sculpture, tree form etc.
- ◆ Texture (ground –paved water, open, building)
- ◆ Street lighting, road furniture advertisement sign etc.

CONTEXT OF SPACE RELATION TO SURROUNDING

- ◆ Amorphous space (without any defined boundary)
- ◆ Discernible delineation (seen clearly or definable)
- ◆ Mystery, clarity, elements of surprise, silhouette, which are common in both cases.
- ◆ Building skyline, visual mechanism, role of surroundings in influencing the character of space.

2.5.1 QUALITY OF CIVIC SPACES¹³

PERMEABILITY

There should be number of access to a place and from this place to another place.

- ◆ This provides the variety of choices to the users. This quality is known as permeability

For example gridiron pattern of layout gives maximum choice of access to various places to the users while development of dead ends offer minimum choices.

Permeability reduced by the three type of design:

- (i) Increasing the scale of development
- (ii) Use of hierarchical layouts
- (iii) Pedestrians and vehicle segregation, because they have separate system of routes.

VARIETY

It deals with the variety of experiences a particular place with respect to variety of forms, its use and meaning.

- ◆ Variety of use should be given more importance
- ◆ Variety in building should be given more importance including their visual forms, to variety of peoples coming at different times for variety of reasons
- ◆ Place should offer maximum activities, forms and different users in different places
- ◆ Variety increases positive interaction between different people
- ◆ Variety is not achieved merely by mixing activity on a site, but for efficient use of these activities should support each other mutually

LEGIBILITY

Legibility is the quality, which makes place graspable, that is feed to his mind the layout of the place.

- ◆ The legibility of form and use is lost in modern environment as compared to old cities.
- ◆ The old cities were legible in terms that important places of public relevance could easily be identified in most of the cities.
- ◆ Modern cities are legible in the sense ~~of~~ they emphasize power of big financial institution.
- ◆ The public relevant places and facilities are left behind these financial institutions.
- ◆ So, in modern development legibility is continuously being eroded and there is need to design physical layouts and patterns of use, which will give more clear and accurate image of that place.
- ◆ One important point that should be kept in mind is that it is the user who forms these images in his mind rather than the designer.
- ◆ Key elements contributing to formation of these images are, which is suggested by the Kevin Lynch. The American planner. According to K. Lynch five points are important.

Nodes, Edges, Paths, Districts and Landmark

In forming the strong image of the city or place

ROBUSTNESS

The place should be designed for multiple uses. In other words the place, which offers more choices.

For example, market square, wherein people can sit and talk, some do window shopping, some are waiting for buses, some come for evening walk, children

can play and parent watch. Somebody sitting in a corner and sitting. So, these particular places may have variety of uses. So, stress should be given to avoid single fixed use of a space.

Ultimately contributing for and better responsive environment.

A careful intelligent designer can fully exploit robustness under normal cost.

In a context of buildings robustness is of two types

- (1) Large scale robustness. It can be achieved by changing large part of a building or whole building itself into a number of uses. For example, one building can have office, of a carpet exporter, his residence, a small school of language, and a hostel for distressed gentleman.
- (2) Small scale robustness
It is the ability of particular place within the building to be used in wide range of ways. For example, a single room can be used for sitting, resting, playing piano, sleeping, dressing etc.

VISUAL APPROPRIATENESS

Visual appropriateness implies to the variety of visual experiences that a person gets from legibility, variety, and robustness of a place.

- ◆ The form and façade of various buildings in a place should not be monotonous, but should provide variety of visual experiences.
- ◆ The visual form should reflect the type or use of the building when seen from any particular point, that is hospital should look like a hospital, A house should look like a house and factory should look like a factory etc.
- ◆ Visual appropriateness can best be achieved by considering the fact that an ordinary person looks to a building.

RICHNESS

Here, the authors try to explain both visual and non-visual experiences that a person goes through when he visits to a particular place. (15)

They have written about selection of materials, construction techniques and the places where these principles can be applied. Another stresses move on various senses, which provide richness, rather than visual. These senses are:

- ◆ Sense of motion
- ◆ Sense of smell
- ◆ Sense of hearing
- ◆ Sense of touch

Visual richness

(1) A visual richness is immediately important, since it provides variety of visual experiences to observer, such as contrast in materials, light and shade, form and texture etc.

- ◆ The number of elements that an observer is viewed at particular movement is also important.
- ◆ If there are very few elements in his observation, he may feel moving.
- ◆ Since the visual experiences lack in variety or number & if there are many elements in his vision and these elements are symmetrically placed, they will be observed as a single element by his eye.

a rich elevation is one in which observer is able to see five or more elements in a particular glance from any particular point.

Other factor like viewing distance, the time of viewing a particular surface also important

Non-visual Richness

(i) Sense of hearing

For floor finishes can be designed to make variety of sound under foot.

The value of internal spaces can be designed to produce different reberveration times.

(ii) Sense of Touch

This can be achieved by using variety of floor, texture, hard-stone inside the building, material for handle for door and windows.

(iii) Sense of Smell

A Jaismin tree or "Rat Ki Rani" tree in the backyard of the house can attract a person, entering from the front door by means sense of its smell.

(iv) Sense of motion

By providing variety of moving sensation for example – moving sensation vary while climbing a staircase, moving in a lift etc.

PERSONALISATION

The places where people live and work should be personalised that is these places should wear the stamp of taste and values of these people.

Personalization is given importance since the ways of changing buildings, external appearance are quite cheap to each user tries to dress his building differently.

In personalisation happens inside users space and also across its boundary.

Private Personalisation

Personalisation is the internal surfaces, elements, furniture, floor etc. within his space.

Public Personalisation

Some personalisation communicates across his private boundary affecting the public realm. This happens mostly at physical gap in the boundary.

i.e. the thresholds and planter on windows etc.

2.5.2 SCALE

Scale in architecture is a quality that relates buildings to our human abilities of comprehension and keeps the component part in the same context.

Scale is that relation between the dimensions of the parts and the whole of any portion of our environment, which gives us sensations of bigness or smallness, complexity or simplicity, unity or disorder, as we pass through or stay in it. There are various sources of scale, the human form, animal forms, structural elements inanimatic objects such as plants and rocks, the elements of the site itself, ground forms, water forms etc.

The quality of scale in buildings, constructions and trees is one of the most potent tools in the art of juxtaposition, and reference has already been made to it in the case of recession. Scale is not size; it is the inherent claim to size that the construction makes to the eye. For example a big building does have a big scale and a small building a small scale.

It is said that the human eye has a normal field of vision of about 60° and that when we gaze at an object, this field of vision is reduced to only 10° .

According to 19th century German Architect H. Martens, the human eye, looking straight ahead, has two third field of vision above the eye level plane, with the visual angle above the eye level plane being at about 40° . If the part of the sky area is to be brought into the field of view, one can see a building as a whole at an

angle of 27° when $D/H = 2$ (D – distance from the building to the observer and H – is the height of the building).

2.5.3 TEXTURE

The relation between distance and texture is an important aspect of how the building materials appear at certain distances. It helps the Architect to choose the materials best suited to be seen from certain distance and goes a long way towards improving the quality of space.

THE PRIMARY AND SECONDARY ORDER IN TEXTURE

When we consider texture of a wall surface made of precast concrete blocks cast with granite aggregates close observation reveals the aesthetic quality of this special texture, this texture is of primary order. As we move away from the wall, the granite bits are no longer perceivable, but the joints of the precast concrete blocks become a texture of the secondary order. The hierarchy of primary and secondary texture may be deliberately designed so that exterior surface change in their aesthetic composition in relation to distance from which they are viewed.

2.5.4 PLANNING OF EXTERIOR SPACE

Exterior spaces may be roughly divided into two basic kinds of areas:

- (i) For human beings and
- (ii) For automobiles

In order to prevent automobiles from coming into area for human beings, raised on one or two steps are much more effective than providing any traffic signs. Provisions of depressed portion and low walls or railing is also produced desired result as more effective, within the area demarcated by such steps, low walls, depressed portions, there can be created a visually continuous space in which

people can enjoy the unobstructed view of surrounding areas of space. To create space in which people can move freely in any direction, is the very basic step in the planning of exterior space. In such spaces for the exclusive use of human beings, man may engage in variety of activities.

This space broadly divided into two kinds;

- (i) Space for movement and
- (ii) Space for non movement

For example of type one spaces are may be:

1. going to a particular destination,
2. Strolling,
3. Playing games or sports,
4. group or mass activities, such as parades and
5. Other such activities.

And for example of type (ii) space, for relaxing, looking at the scenery, reading, waiting for friends, chatting, eating, courting, singing, discussion, speech making, various type of activity, ceremonies and rituals, drinking and eating, picnic, drinking fountains and public facilities such as lavatories, telephone booth etc. other such activities.

For getting elective use of non-movement space must be equipped with benches, shade trees, lighting facilities, landscaping, and other such amenities. For various activities such as singing and discussions, it is desirable that space must be equipped with different levels with side at rear wall enclosures.

On the other hand, the movement space should be flat, spacious and without having any obstacles, in any case movement space functions better without any of the devices, but in non-movement are activity performance depend on devices. In designing exterior space, identification of the projected uses is an important key to determining the size of the exterior space, the texture of pavement, the form of the walls, and height of the floors.

In the exterior space in which sense of direction plays an important role, it is desirable to place a powerfully engaging object at the end of the central axis. Without such an object quality of space deteriorates towards the end of the axis, the space becomes diffused, and forcefulness is lost

If there is some object at the end of the axis that will attract people's attention, then interim space becomes more forceful.

About 1000 feet is the tolerable distance that a man as a pedestrian can walk with ease and pleasure about 1,500 feet is a distance a man can walk but for which he would probably prefer to use some form of vehicular transportation. If the weather is inclement, distances exceeding 1,500 feet are beyond the architectural scale in ordinary sense of term. It is observed and estimated that the area that a man can feel to be his own territory lies within a circle 1,500 feet in diameter. In any case, the maximum distance at which a human being can perceive another human being will be about 4000 feet. Exterior space exceeding one mile in length is considered too large as a townscape unless it is provided with vehicular transportation.

In enclosure the eye reacts to the fact of being completely surrounded. This spatial order will be created by giving some degree of enclosed feeling to each of the component area of the exterior space. Therefore, it is quite necessary to pay attention to the shape, quality, and location of surrounding mass or walls.

Generally, a grid iron pattern of streets create openings at the corners of exterior space, thus it reduced the effect of a planed feeling of enclosure. It is possible, however, to enhance a sense of enclosure by bridging the gaps by arcade or doorways or narrow down the punctuation's.

2.5.5 PROPORTION

Proportion is entirely a matter of relation. It is not the actual size but the relative size of one part to another that is of so much importance.

There are varied divisions and subdivisions in size which, when used with and in true relation to each other, please the eye much in the same way as, in music, certain divisions of sound in combination charm the ear.

In the selection of the scale to be adopted the purpose and position of the building has to be taken into account. A large scale may be necessary for an important building, or one that is designed to be of a monumental character or to be viewed at a distance, and then each part, every molding even must be proportionately large. But a large scale is quite out of place in buildings of a small or unimportant nature.

It is a fact that the human figure is the standard by which the eye consciously or unconsciously measures every thing. For example a statue standing in front of building entrance that enables us to form a correct idea of the height of the doorway. There is always a danger of a loss of impressiveness where there are no contrasting figures and objects of normal size in juxtaposition¹².

2.5.6 COLOUR

A change in texture of the material may be used to separate parts of a building for the purposes of proportional division. A complete change of the material itself, and consequently of colour, it is a more powerful factor in the hand of the architect.

A change of texture produces a difference of tint on the surface, a change of material means generally a stronger contrast still. But a complete change of colour

may often be most effectively employed in architecture, not only for the purpose of division, but as a relief to the eye.

Red, white, or black, used singly over a large surface or area, produce an impression of deadly monotony.

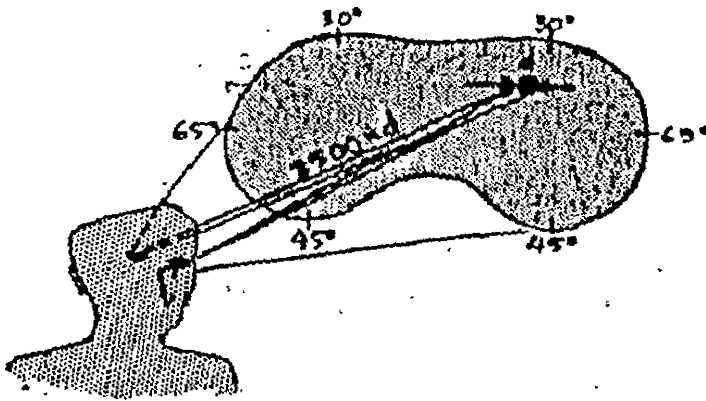
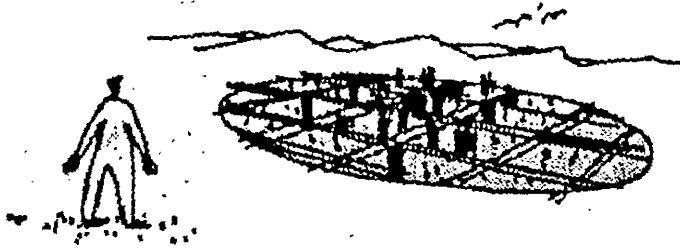
The white-plastered cottage nestling among green trees is a most charming effect, but a long range of white buildings unalleviated by colour is quite another matter¹².

2.5.7 SCALE AND HUMAN VISION¹⁴

Our two eyes have a general field of view and a detailed field of view, first sees general shapes and 2nd, details of objects. The general field of view has an irregular conical shape, measuring about 30° up , 45° down and 65° to each side. The shape of our faces establishes these limits. Our detailed field of vision is a very narrow cone within this large cone. It measures a very minute angle, approximately equal to a thumbnail held at arm's length. Because our eyes have overlapping cones of view horizontally, we can "see around" vertical placed in our view. There are certain limitations associated with the human vision these are:


1. We can see an object that is farther from us than about 3,500 times its size.
2. We can see people upto 4,000 feet
3. We can discern body gesture upto 450 feet


Scale in urban design is a quality that relates cities to our human abilities of comprehension and keeps the component parts in the same context.



Our general and detailed fields of vision.

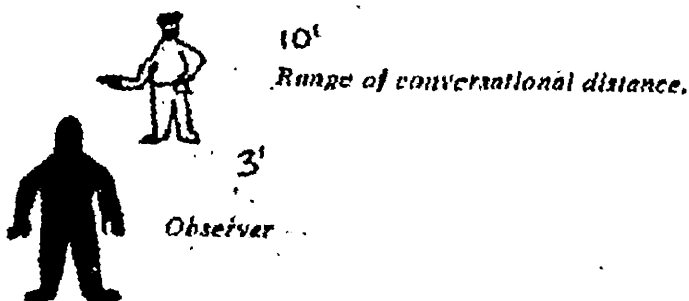
Maximum distance for seeing people.  4000'

Maximum distance for discerning action.  450'

Maximum distance for recognizing a face.  80'

 40'

Maximum distance for discerning facial expression.



SCALE OF HUMAN VISION

4. Maximum distance for recognizing a face is 80 feet
5. Maximum distance for discerning facial expression is 40 feet
6. The range of conversational distance is upto 10 feet (maximum 8 feet is normal conversational distance while a person at 3 feet distance is supposed to be in a close relationship)

The intimate spaces of a city are usually not greater than 80 feet across; the urban space is not greater than 450 feet. In monumental vistas greater than 4,000 feet human beings cease to play a part.

Our normal field of view, in a space, determines the degree of enclosure, which is largely determined by the relation of viewing distance, to building height, its impact, is as follows:

1. When a façade height equals the distance, we stand from a building; the cornice is at a 45° angle from the line of our horizontal sight. In such a situation we feel well enclosed since the building is considerably high than the upper limit of our field of forward view.
2. When a façade height is half than the viewing distance, it coincides with the 30° upper limit of our normal view. This is the lower limit, for creating a feeling of enclosure
3. When façade height equals one third, our distance from the building, we see the top at about an 18° angle, in such a situation, we used to perceive the prominent objects, beyond the space itself.
4. When façade height is one-fourth our distance, away from the building, we see the cornice at 14° angle, and at this angle there is a total loss of the feeling of to be enclosed.

2.5.8 SCALE & CIRCULATION

Urban scale is also determined by the means we employ for moving around in our offices as well as the way we move between them across the country. All types of transportation system can help to determine the movement or circulation scale of the city i.e. the extent of the city which is readily accessible to use. But here is one very basic and ancient mode of transport which is too often disregarded, it still remains one of the best systems and one of the essential determinants of urban scale – our own legs. As we walk around, we are completely free to stop, turn around, go faster or slower, go to the left or right, or change our pace – in short, to enjoy the greatest freedom of choice and of degree of contact with the people and places we are passing by. Every mechanical device for moving has limitations on such contact. Foot travel has the least. Mechanical devices can extend the scale of accessibility, but the maximum contact with a place, so essential to every human settlement, is achieved by walking.

The major limitations on walking scale are distance and speed, most people in performing their routine tasks are willing to walk only about a half mile, and walking speed averages only about 2½ miles an hour. This scale determines the size of major groupings or hubs in a city. The central shopping areas are only as extensive as this walking scale allows although they may also function as linked centres.

Disneyland land and farmers market in Los Angeles large airport terminals and sub urban shopping centres – all are subject to this basic fact of urban scale.

2.5.9 ELEMENTS OF ARCHITECTURE

COLUMN AND PIERS

Centuries of architectural culture have created an inexhaustible variety of forms of columns and piers. In Greek architecture epochs were named after their orders. Time and again the proportioning and decoration of a column or pier served as an indication and characterisation of a certain architectural style. A column has a relationship with the ground and has to carry a load, this alone should have been sufficient enough to bestow higher considerations on these two properties.

DOORS AND WINDOWS

We are used to a door having the form of an upright rectangle. The most popular sizes lies in the proportions 1:2 to 1:3. Beyond this the meaning of a door can vary according to its purpose. A low door for instance, which gives access to the parlor of an old farm house, clearly communicates that the private area is to be penetrated into.

Window basically used as the source of light is of great importance. Window is also important to find out what quality of light is appropriate for a space. The square, the triangle and the circle are the basic geometrical forms for the window.

FACADES

The facade is still the most essential architectural element capable of communicating the function and significance of a building.

The facade never only fulfils the natural requirements determined by the organisation of the rooms behind. It talks about the cultural situation at the time when the building was built, it reveals criteria of order and ordering and gives an account of the possibilities and ingenuity of ornamentation and decoration.

A facade also tells us about the inhabitants of a building, gives them a collective identity as a community and ultimately is the representation of the latter in public.

The root of the word "facade" stems from the Latin "façies" which is synonymous with the word the face and "appearance". Therefore, if we take about the face of a building, the façade, we mean above all the front facing the street.

An important aspect of structuring the façade is to make a distinction between the horizontal and the vertical elements each of which can in themselves create an adequate general effect.

ENTRANCES AND PORTALS

On the way from the street into a building one passes through different graduations of what can be called "the public. The position of the entrance and the architectonic significance it is given demonstrate the role and function of the building.

The portal marks the transition from this public exterior to the private interior. It is an element of self representation for the inhabitants. The route from the portal to the vertical means of access forms and individual space or series of spaces.

ARCADES

The arcade is a collective Urban elements. For its construction, it is very necessary not only to gain the agreement of the neighbor in the particular street affected, but also to gain the permission and even the instruction of the building authorities. Once the arcade is build it becomes an individual urban element which is largely understood to be independent from the building behind. The reason why these are so few arcades built today is probably due to a lack of common sense when it comes to the determination of common urban element.

The arcade is determined by his ambivalence of application, but it is also interpreted in many different ways. It can fulfil semi public functions by being projected in front of a building whereby the user is neither outside nor inside the building. But the space of the arcade is also capable of assuming an independent public role.

BALCONIES AND PROJECTED WINDOWS

Similar to arcades, balconies and projected windows are to be seen as spatial units. They are in any case genuine enlargements of the apartment or building providing a sense of stepping out of the building out of the façade although still being in the private realm. In addition to that, these elements allow for a better view of urban life.

ROOF FORM

Nowadays apparently comes across various type of roof. We should not engage ourselves in clichés, but rather look at the variety of possibilities and meanings that this important part of the building has bearing in mind that it is a building's termination towards the sky.

The meanings which language attaches to roofs are very instructive. For instance, if we reflect on the term "roof landscape", it rises from the buildings like a skin and overtopped by the higher silhouettes or public buildings, this artificial thing becomes a second plane between sky and earth.

BUILDING CORNERS

The corner of a building is one of the most important zones and is mainly concerned with the mediation of two facades. The corner as particular part of the building has not received the necessary acknowledgement and treatment.

STAIRCASES

Outside staircase form part of exterior space. They are human structure of landscape. They also act as markers in natural and urban environments and communicate their public use. Outside staircase also create their own space, become points of encounter, meeting place, or simply point form which beautiful views can be enjoyed.

TOWERS AND MONUMENTS

Building is always about the occupation of a place. Architecture about setting marks. In the free country side we come across, a tower. It direct our way. Light house chimneys, steeples, city gates, defense tower etc, belong to the archetypal symbols of uprightness. Tower symbolise the existence of human achievement, the triumph over earthly matters. Without doubt every tower has a monumental character as it rises above the environment.

Monuments always were, and still are, cult objects which have meaning and value for a community. Because of their symbolism, they express a common will or confession. Monument do not need to be towers or high-rise buildings.

CHAPTER - 3

GENERAL PROFILE OF CITY, GWALIOR

GENERAL PROFILE OF CITY, GWALIOR

3.1 INTRODUCTION

Gwalior city is the third largest city of M.P. situated in the rich Chambal agro-region. It was the capital of former State of Scindhias.

Gwalior comprises of three distinct settlements, namely old Gwalior situated on the north of the foot hill. Lashkar is in South of old Gwalior and third settlement called Morar Cantonment in the East. Lashkar was developed by Scindhias as an administrative centre, while Morar was developed during the British regime as a cantonment.

3.2 HISTORICAL BACKGROUND

The early settlement being the capital of the state belonging to 6th century A.D. witnessed checkered history.

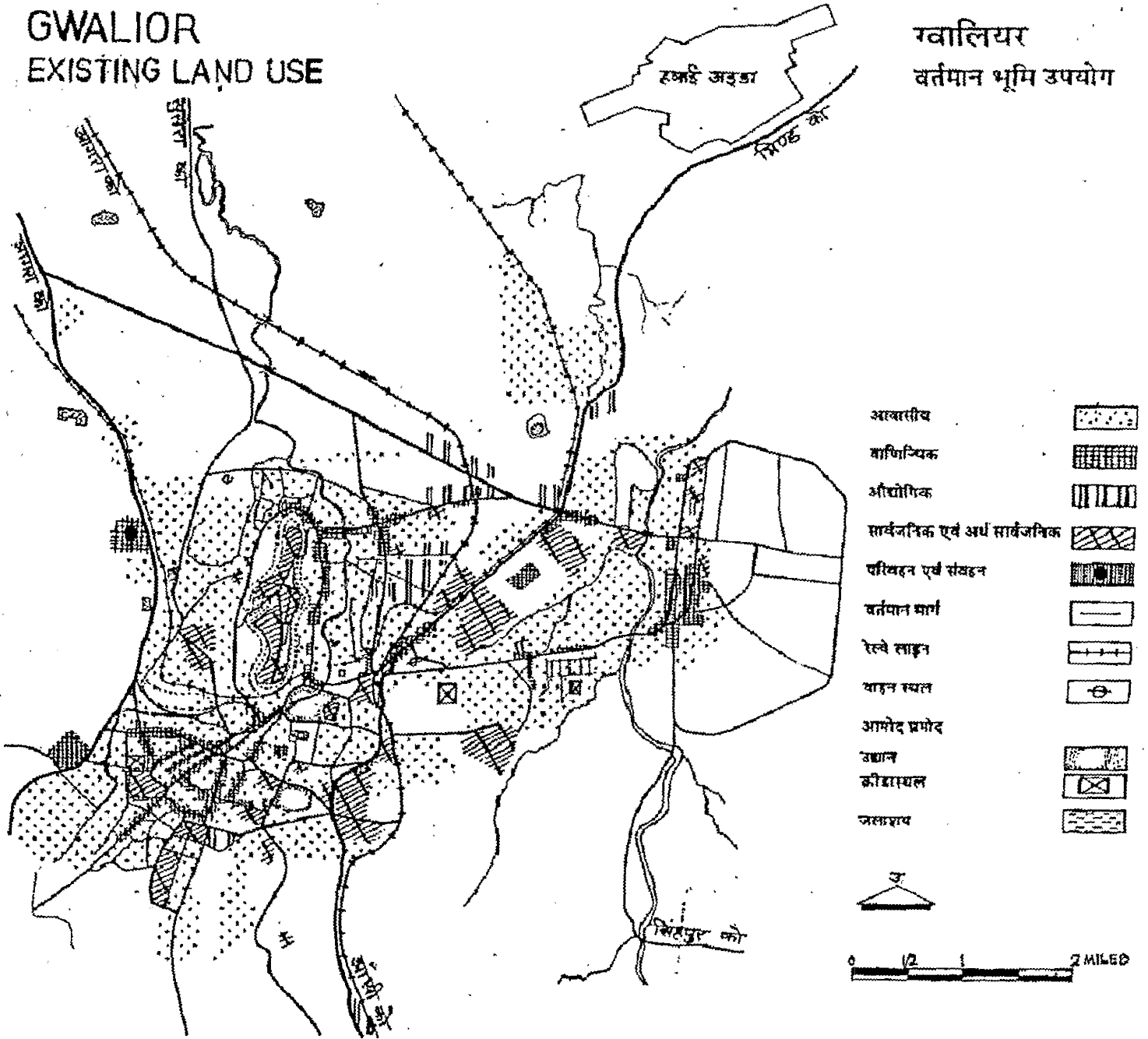
The city derived its name from the historic fort hill called Gopa Parbat. Gopagir of Gopadri. With the change of rulers therefore often after feudal wars, the town passed through many hands, right from Kachhawaha to Scindhias . City had the privilege of being the capital of Madhya Bharat the east while state formed after independence.













During Mughal regime the city gained its fame in the music world when 16 out of 36 famous musicians of Akbar Darbar belonged to Gwalior.

It was only during Scindhias regime that foundations of a new town away from the old Gwalior were laid when Maharaja Daulat Rao Scindhia shifted his capital

**GWALIOR
EXISTING LAND USE**

**ग्वालियर
वर्तमान भूमि उपयोग**



- आवासीय 
- वाणिज्यिक 
- औद्योगिक 
- सार्वजनिक एवं अर्ध सार्वजनिक 
- परिवहन एवं संवहन 
- वर्तमान मार्ग 
- रेल्वे लाइन 
- वाहन स्थल 
- आमोद प्रमोद 
- उद्यान 
- क्रीडास्थल 
- जलाशय 



• PLAN OF CITY
GWALIOR

from Ujjain and set up a camp in this town. He later located Maharaj Bada Palace known as Gorkhi, in the area known as Lashkar.

The British, in their set pattern developed cantonment away from the town in Morar and neglected the development of old town. The development in the three different periods gave a distinct physical shape to the city with three different townships of Gwalior, Lashkar and Morar. The open left in between the township was later on filled up by in an uncoordinated manner and mixed development mostly after independence.

The post independence period witnessed growth of the city as one of the principal educational centre of the state.

Beside above, many new colonies came into existence, developed by private and government agencies.

3.3 REGIONAL IMPORTANCE

Gwalior is the largest city of "Gwalior Agro Region". The region consists of five districts – Gwalior, Bhind, Morena, Datia and Shivpuri. The city enjoyed the status of flourishing centre for trade and commerce and since then it is continuously growing to function as a Regional City. In the Industry, it is famous for cloth, leather goods, agriculture mela and Tansen Samaroh from very significant regional activity occurring in the city.

Apart from this city also functions as important administrative centre, Gwalior is thus playing a vital role in the economy of the region and occupies a place of regional city both at the State and National level.

G10323.



3.4 LOCATION

Gwalior, the Capital of former state of Seindias and the premier city of Madhya Pradesh, still continues to maintain its status as one of the important regional city of the state and the country.

Its cardinal points are latitude $26^{\circ}-12^{\circ}$ and longitude $76^{\circ}-18E$. Altitude of the city is 212 meters above mean sea level (at Railway Station).

3.5 CLIMATE

Climate of the area effects very intimately to every aspect of common activity and in turn the city's life and its functioning. Gwalior is so remote from the ameliorating influence of the sea, that the winds loose much of their cooling and warming influence during summer and winter respectively before they reach Gwalior. Climate of Gwalior is therefore extreme type. The reason could be due to the land morphology around the city's habitated area. The hills on its three sides located in the region of wind direction which prevents easy flow of wind in the city. The exposed rocks become hot during the day and emit heat during the night, rendering the living most uncomfortable.

3.5.1 TEMPERATURE

The minimum temperature ranges between $1.3^{\circ}C$ to $2.3^{\circ}C$ in December, while maximum temperature $45^{\circ}C$ to $47^{\circ}C$ during June-July. The city recorded lowest temperature $0^{\circ}C$ on December 25, 1945 and 1990 and highest temperature $48.3^{\circ}C$ on May 30, 1947. Thus city's extreme climate conditions call for some efforts to improve the micro climatic conditions in the city.

3.5.2 RAINFALL

Rainfall in the area is as low as $\frac{1}{2}$ the average rainfall in western Madhya Bharat Region. Rainfall data reveal that 92% of the year's rainfall is received during monsoon season (June to September).

3.5.3 WIND DIRECTION

Mainly the wind direction is north-west with wind flowing between west and north, during the year. But during the past monsoon and winter season wind is weak and blows generally from north to north-west direction. Wind speed is highest in the month of June and lowest in the month of December.

3.6 TOPOGRAPHY

Gwalior is located in a rock basin corresponding to Vindhyan hills in the west and Bijawar hills in the south-east. These hills portions have given aesthetic frame to the city's urban forms. When we see further in details we see Gwalior is situated between two natural divisions, namely the plain in north east and the hilly country in south-east. The plains extended from the Chambal river in extreme north. the city lies in a horse-shoe shaped valley surrounded on the three sides by low hills of Vindhyan ranges.

CHAPTER - 4

**STUDY AT MAHARAJ BADA, GWALIOR
AND ANALYSIS**

STUDY AT MAHARAJ BADA, GWALIOR AND ANALYSIS

4.1 INTRODUCTION

Jiyaji Chowk in Maharaj Bada, is identified as an Urban space with the establishment of the Gorkhi complex. This space started molding its shape. The Maharaj Bada was conceived as the city level civic square in which almost all those activities are there which are important for the city level.

The most important thing for Maharaj Bada is that it is famous for the space, enclosure which is formed by the built form, and not the individual building. It is one of the finest example of city civic square, known for its civic design and building of architectural elegance. The statue of Maharaja Jiyaji which forms the centre is surrounded by a public garden, adorned by flowers and shrubs. The wide road running round this garden is enriched by fine buildings, including the town hall, the post office, the office of the municipal corporation, library building, the Victoria Market, the Govt. Press and State Bank of India building. The grouping of such institutions around this square makes it the busiest part of the city and gives an imposing picture of Gwalior's prosperity. It is observed the open spaces in between the buildings, and road space have been enclosed by the shopping activities.

4.2 GROWTH OF BADA

After the establishment of the Gorkhi Complex various other buildings came into the place and formed the enclosure. Almost all the buildings are architecturally important. These buildings are of city level functions like the Municipal office, District

level offices, Town hall, General post office, Library, Govt. Press, Bank etc. Besides all this, commerce has also grown which made this place very active. The change in use of Gorkhi Complex from residential to Govt. offices acted as the generator for development. Banks, post office, Govt. press were developed followed by the commerce.

4.3 ROLE OF BADA AND PRESENT STATUS

At present the Maharaj Bada is acting as the Nerve Centre of various activities in the central area. When we look at the central area, this Maharaj Bada becomes the focus.

- ◆ The main function of the Bada is civic function at the city level and even at the regional level. This is evident from the variety of building which function in the area like library building, administrative office, Govt. press, Town hall, G.P.O., Municipal Corporation building etc.
- ◆ Another function which is very dominating is the commercial activity which has made this area very successful. In fact, commerce has adversely affected the space also. All the main commercial spine are converging into the area making it very important square.
- ◆ Business offices are also functioning in this area, like bank, are also doing very good business. On the other hand the offices at the district level are also functioning in the Gorkhi complex making it important for the district level.
- ◆ The another thing which is functioning in this area is the religious activities. The religious activity is seen with the presence of temples and dargah in the area. These temples are quite active in the morning and evening.

- ◆ Maharaj Bada is acting as lung space also at the city level. This area has got the maximum open space in the Lashkar area. These open spaces are also used by the residential people, which are in and around the Bada. Some of these spaces have been encroached by the other activities like commerce and unauthorized encroachment.
- ◆ Two school are also present in the area which are housed in a palace building itself.

4.4 STUDY OF AREA

4.4.1 LOCATION

The Maharaja Bada civic space located in the South-East Settlement of Gwalior town known as Lashkar, forms most important city level civic activity centre.

4.4.2 MAJOR LINKAGES AND APPROACH

Maharaj Bada Central Civic space very well linked to the city by number of roads which infact starts from this space and discharged into the city. These major roads are Sarafa Bazar Road, Daulatganj Road, Kampoo Road and Janakganj Road.

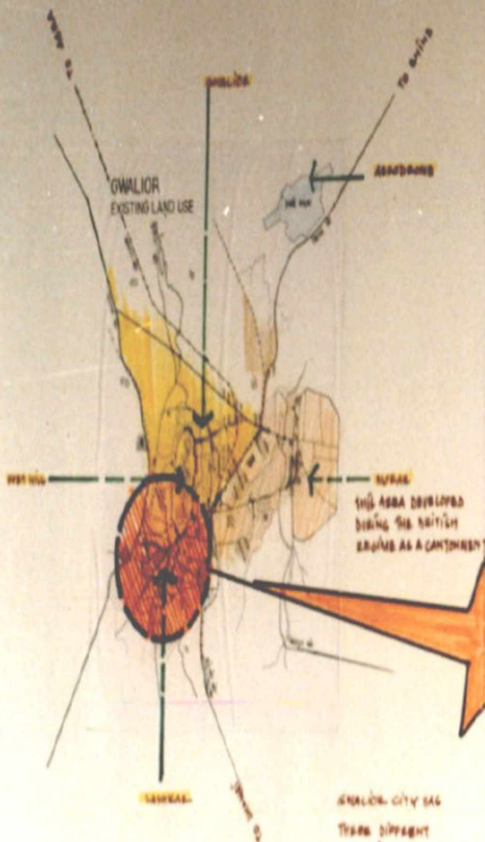
Space is very well approachable from all surrounding areas by different major and minor streets/roads.

People approach the Maharaj Bada area form different directions these approaches can be categorized in four categories.

Primary approach, these are the major and wider roads.

Secondary approach, these are the less wider roads with less vehicles,

LOCATION OF STUDY AREA



Gwalior City

Gwalior City has three different territories, Lashkar in North, Maharaj Bada in South & Moharaj Bada in East.

PLAN OF CENTRAL AREA



Gwalior, the capital of Punjab, some of which and the present city of Madhya Pradesh, still continues to maintain its status as one of the important historical, original city of state & the country.

Lashkar is one of the old residential/commercial area of Gwalior. Even after its typical architectural character, it is situated on the side of the city.

Maharaj Bada is central civic square situated in the center area of Gwalior city.

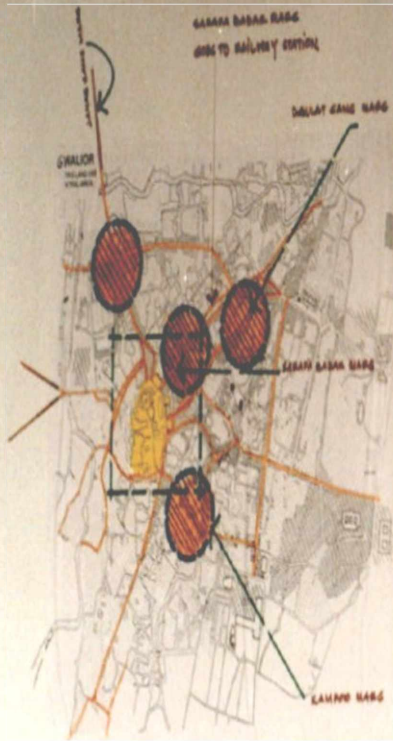
Maharaj Bada area has variety of building like library building, administrative building, city hall, town hall, G.R.O., State Bank, Municipal Corporation building etc.

LOCATION PLAN

ARCHITECTURAL CHARACTER OF CIVIC SPACES, WITH SPECIAL REFERENCE TO MAHARAJ BADA, GWALIOR

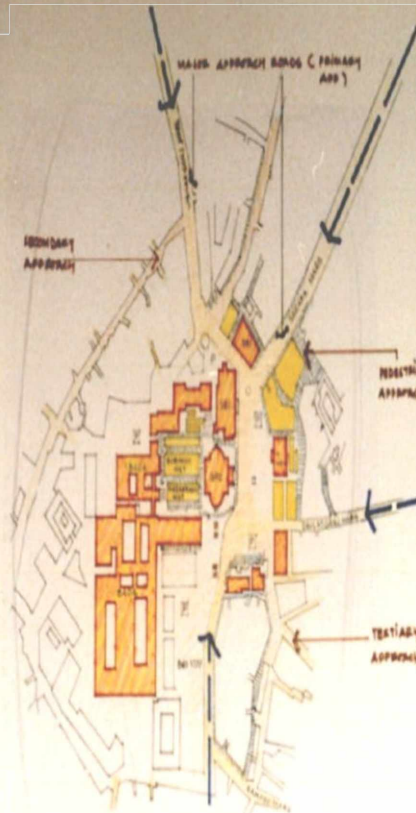
ARVIND KUMAR
M Arch II year

MAJOR LINKAGES



CENTRAL CIVIC SQUARE VERY WELL LINKED TO THE CITY BY NUMBER OF ROADS WHICH IN FACT STARTS FROM THIS SPACE & DISCHARGED INTO CITY. THESE MAJOR BROADS ARE SARARA BADA BADE, DOLAT GANG BADE, KARNPOO BADE & JAHAR GANG BADE.

APPROACH TO MAHARAJ BADA



SPACE IS VERY WELL APPROACHABLE FROM ALL SURROUNDING AREAS BY DIFFERENT MAJOR AND MINOR STREETS / BROADS.

PEOPLE APPROACH THE BADA AREA FROM DIFFERENT DIRECTIONS THESE APPROACHES CAN BE CATEGORIZED IN FOUR CATEGORIES.

- PRIMARY APPROACH. THESE ARE THE MAJOR AND WIDER BROADS.
- SECONDARY APPROACH. THESE ARE THE 100 FT WIDE BROADS WITH LESS VEHICLES.
- TERTIARY APPROACH. THESE ARE THE NARROWEST STREET THROUGH STREETS, CONNECTED WITH THE SECONDARY APPROACH BROADS.
- PEDESTRIAN. THESE ARE THE NARROWEST STREET THROUGH WHICH VEHICLES CAN NOT PASS, PEDESTRIAN MOVEMENT POSSIBLE.
- MAHARAJ BADA AREA VERY WELL APPROACHABLE BY VARIETY OF BROADS / STREETS WHICH PROVIDES MAXIMUM CHOICE TO PEOPLE.

LINKAGES APPROACH

ARCHITECTURAL CHARACTER OF CIVIC SPACES, WITH SPECIAL REFERENCE TO MAHARAJ BADA, GWALIOR

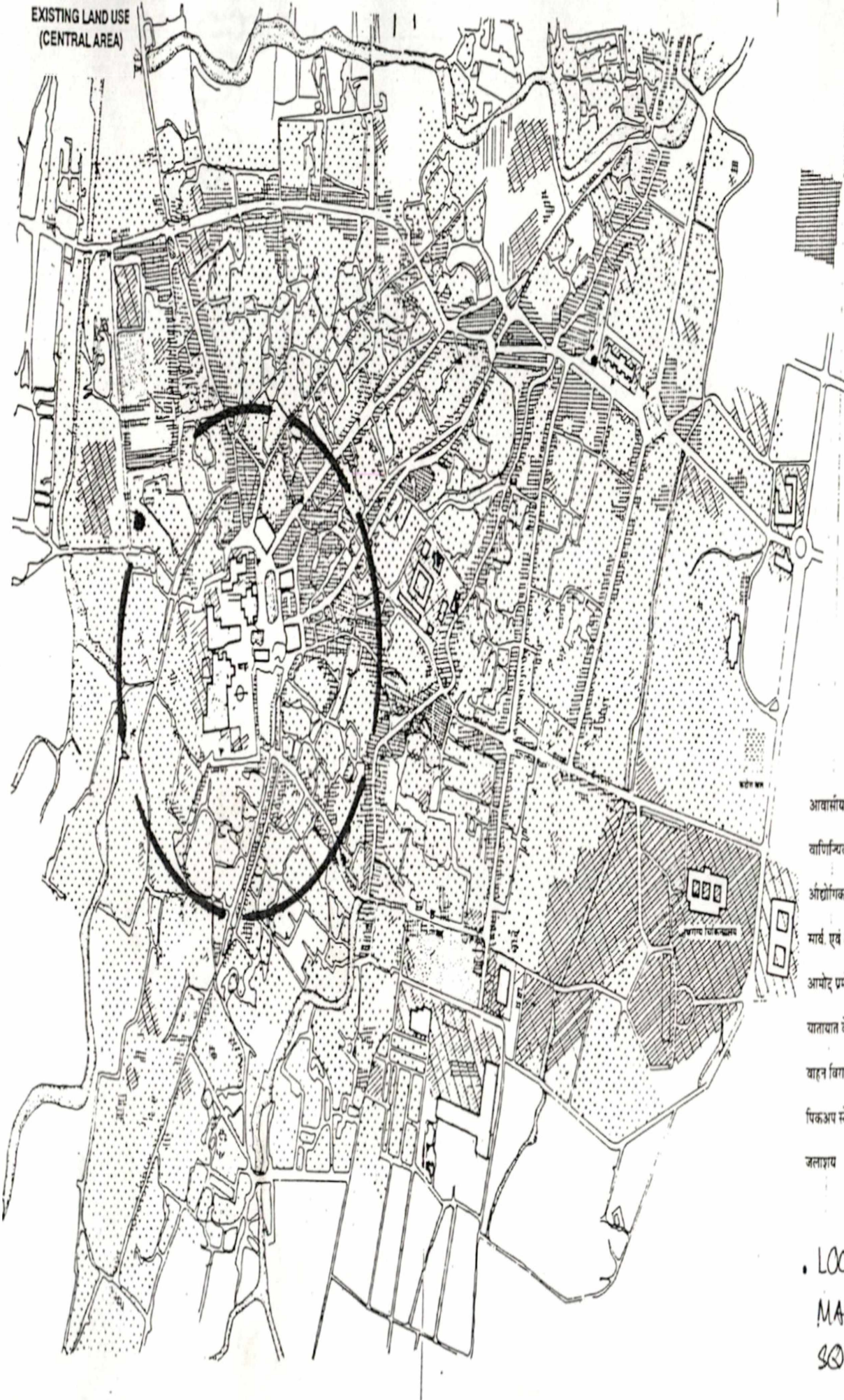
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GWALIOR

EXISTING LAND USE
(CENTRAL AREA)

ग्वालियर

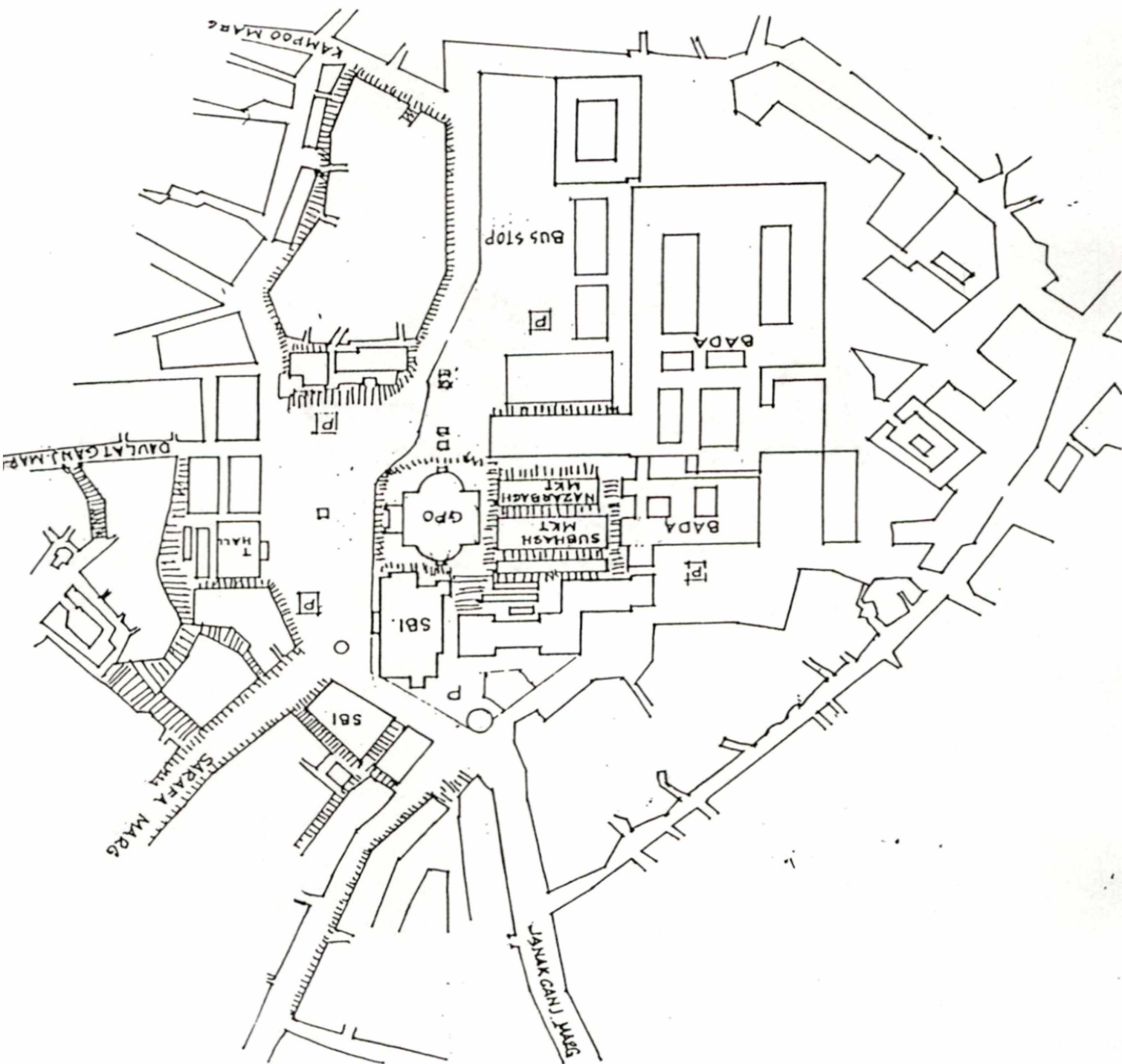
वर्तमान भूमि उपयोग
(मध्य क्षेत्र)



- | | | |
|--------------------------|--|----------------------|
| आवासाय | | RESIDENTIAL |
| वाणिज्यिक | | COMMERCIAL |
| औद्योगिक | | INDUSTRIAL |
| सार्व. एवं अर्द्ध सार्व. | | PUBLIC & SEMI PUBLIC |
| आनन्द प्रसाद | | RECREATIONAL |
| यातायात केंद्र | | TERMINAL CENTRE |
| वाहन विराम स्थल | | PARKING |
| पिकअप स्टेशन | | PICK UP STATIONS |
| जलाशय | | WATER BODIES |

• LOCATION OF
MAHARAJ BADA
SQUARE

PLAN OF MAHARAJ BADA
COURSE



Tertiary approach, these are the narrowest streets, connected with the secondary approach roads.

Pedestrian approach, these are the narrowest street through which vehicles can not pass, pedestrian movement possible.

Maharaj Bada area very well approachable by variety fo roads/streets which provide maximum choices to people.

4.4.3 LAND USES AROUND CENTRAL CIVIC SQUARE

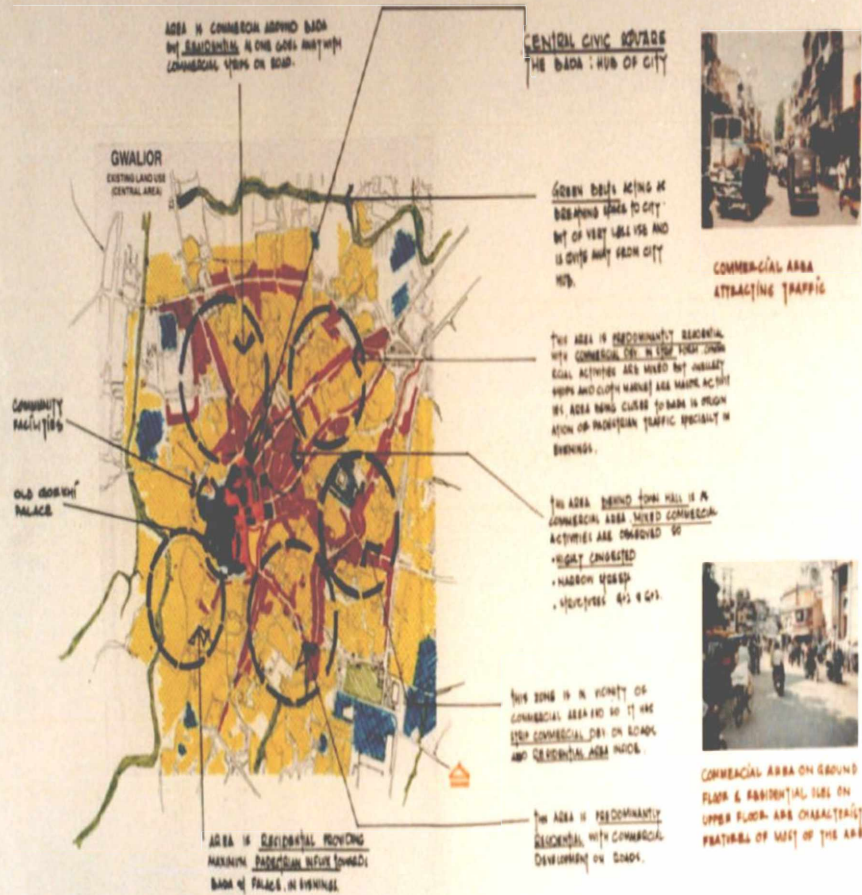
Behined the Maharaj Bada square the merchants had their dwellings. The mixed land use kept the area alive for longer duration of the day and extended activities to the late evening. There was close link between the area of living, business circulation and social cum religious gatherings and interaction among these were easy and frequent. The land use mainly commercial at the ground floor and residential on the upper floor. Although the main building are of civic nature.

4.4.4 CIRCULATION PATTERN

Maharaj Bada area acting as a city level civic square attract maximum traffic inflow. But there is no traffic system which can segregate the pedestrian and vehicular traffic. Inter mixing of pedestrian, slow moving, and fast moving traffic are major problem in easy circulation of traffic.

Informal commercial activities functioning on road space are major hindrance in circulation system. Entry of buses in pedestrian movement dominated space creating traffic hazards.

LANDUSES AROUND CENTRAL CIVIC SQUARE



COMMERCIAL AREA ATTRACTING TRAFFIC



COMMERCIAL AREA ON GROUND FLOOR & RESIDENTIAL USE ON UPPER FLOOR ARE CHARACTERISTIC FEATURES OF MOST OF THE AREA

ANALYSIS & INFERENCES

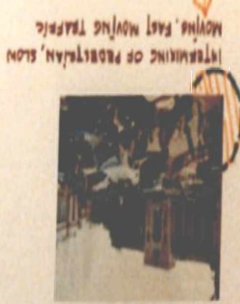
1. CENTRAL CIVIC SQUARE, A CITY HUB IS SURROUNDED BY THICKLY POPULATED OLD AREAS MOSTLY RESIDENTIAL BUT HAVING HIGH COMMERCIAL DEVELOPMENT.
2. SOME AREAS ARE TOTALLY COMMERCIAL AND ATTRACT TRAFFIC SPECIALLY ON NORTH-EASTERN SIDE AND THESE SPACES LACK GREEN & OPEN AREAS. THESE AREAS ARE HAVING NARROW STREETS & TYPICAL MARRAN CHARACTER.
3. PALACE FORMS THE BACK DOOR OF BADA. THIS IS AN ANCIENT MONUMENT WHICH REQUIRES CONSERVATION, BUT NON-ADAPTIVE USES ARE BEING PERFORMED LIKE COLLECTORATE, JPM OFFICES WHICH CREATE NON-CONFORMANCE TO THE MONUMENT FABRIC.
4. RECREATION AND GREEN BELT ARE OF NO USE TO THE CITY HUB THAT ARE OVER DISTANT IN NARROW.
5. ONLY OPENING SPACE AVAILABLE IN CENTRAL GREEN ISLAND IN BACK REGION BUT IT IS HEAVILY EFFICIENT BY HIGH VOLUME OF MOVING TRAFFIC.
6. NO THICKLY POPULATED DEVELOPMENT AREAS AND OLD BUILDINGS WITH A THICK FACADE OF BUILDINGS BEHIND THE BACK DOOR OF THE CENTRAL SQUARES.
7. SPACE FOR COMMUNITY FACILITIES HAS BEEN FOUND ON SOUTHWEST OF PALACE.

ARCHITECTURAL CHARACTER OF CIVIC SPACES, WITH SPECIAL REFERENCE TO MAHARAJ BADA, GWALIOR

ARVIND KUMAR
M Arch 8 year

ANALYSIS OF CIRCULATION PATTERN

- There is no traffic system which can segregate the pedestrian and vehicular traffic.
- Informal commercial activities are major problem in early circulation of traffic.
- Informal commercial activities are major hinder in circulation system.
- Entry of bus in pedestrian douglas was creating traffic hazard.



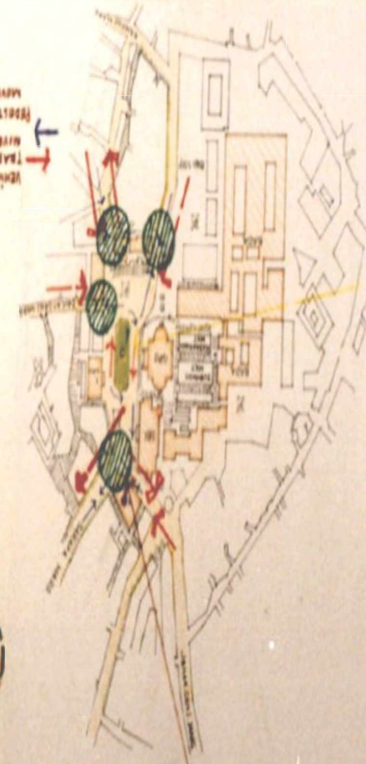
Informal, fast moving traffic, slow moving, fast moving traffic.



Slow moving traffic.

Steady animals on the road creates obstruction in circulation system.

There are the certain points where better, well planned by the traffic due to narrow road width.



CIRCULATION



The road around central green area shows the circulation to bypass the road.



Informal of slow moving & fast moving traffic.



Informal commercial activities.



Fast moving traffic.

Informal commercial activities are major hinder in circulation system.

ARCHITECTURAL CHARACTER OF CIVIC SPACES, WITH SPECIAL REFERENCE TO MAHARAJ BADA, GWALIOR

ABHINO KUMAR
M Arch II year

4.4.5 PARKING AREAS

Intense human concentration has meant enormous increase in all type of vehicles in the Maharaj Bada area. But there is no proper space available for parking. Road space being used for parking which has reduced the traffic mobility. Space is also not adequate in the area so number of vehicles are parked in undesirable location which creates the traffic congestion. There is no proper control on segregation of parking which leads to mixed parking.

Proper parking space is most essential to avoid unauthorized parking.

4.4.6 ACTIVITY PATTERN

At present the Bada is acting as a nerve centre of various activities in central area. The area has got very interesting activity pattern, which changes with the time so in the morning the area is quite active due to the morning activities like religions activities, morning walk, eating places, and in evening the lots of informal sectors comes in front of the shops.

This area has got the maximum open space in the Lashkar area, this open space used for the political and social activities. Besides these activities area offer very dominating commercial activity.

4.5 ARCHIECTURAL CHARACTER

4.5.1 BUILT- UP AND OPEN SPACES

Comparatively the built form is less in this area, than the surrounding area which are more of the residential area. Building in this area are comparatively higher than the surrounding area which shows the importance of the area.

STUDY OF PARKING SPACES IN BADA



UNORGANIZED CAR PARKING SPACE PROVIDES IN CIVIC ACTIVITY AREA CREATES PROBLEM IN VISUING CIVIC ACTIVITIES



UNAUTHORIZED PARKING CREATES INCONVENIENCE TO PEDESTRIAN AND TRAFFIC ACCIDENT



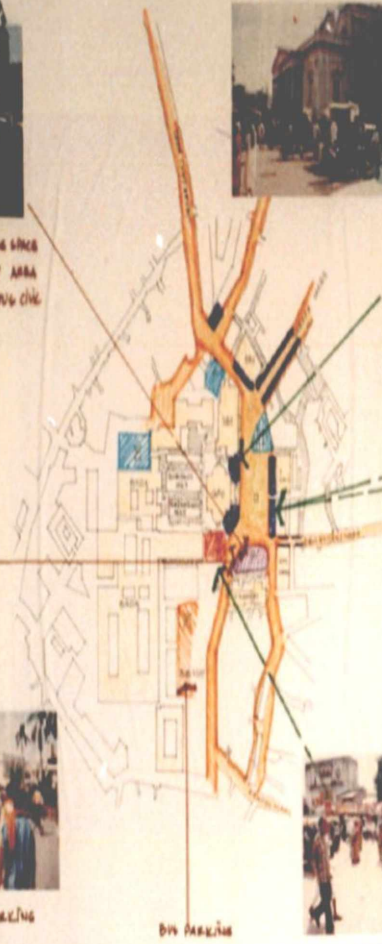
UNDESIRABLE PARKING SPACE



PARKING SPACE IN FRONT OF BUILDING TRYING TO CREATE AN UNHEALTHY BUILDING



UNAUTHORIZED PARKING NEAR G.P.O.



TANGA STAND

- UNAUTHORIZED PARKING
- PROVISION OF PARKING
- MIXED PARKING
- CAR PARKING
- TONGA/TAXI PARK
- BUS PARKING

- NO PROPER SPACE AVAILABLE THE PARKING ROAD LANE BEING USED FOR PARKING WHICH HAS REDUCED THE TRAFFIC MOBILITY
 - PARKING SPACE NOT ADEQUATE IN THE SPACE SO NO OF VEHICLES PARKED IN UNDESIRABLE LOCATIONS WHICH CREATES TRAFFIC CONGESTION.
 - NO PROPER CONTROL ON LOCATION OF PARKING WHICH LEADS TO MIXED PARKING.
 - PROPER PARKING SPACE IS VERY ESSENTIAL TO AVOID UNAUTHORIZED PARKING.
- Study & Analysis.
PARKING SPACE

ARCHITECTURAL CHARACTER OF CIVIC SPACES, WITH SPECIAL REFERENCE TO MAHARAJ BADA, GWALIOR

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M.Arch. 1996

ACTIVITY PATTERN



SPACE USED FOR RELIGIOUS/PUBLIC ACTIVITIES



THIS IS ONLY GREEN SPACE IN THE LAKSHMI SADA AREA USED FOR RECREATIONAL ACTIVITIES



STATE BANK OF INDIA BUILDING



BADA SQUARE PROVIDES IMPORTANT ACTIVITY SPACE FOR LOW INCOME GROUP MEMBERS, IN RESEARCHING MOVING FOR SEARCHING DAILY WORK.



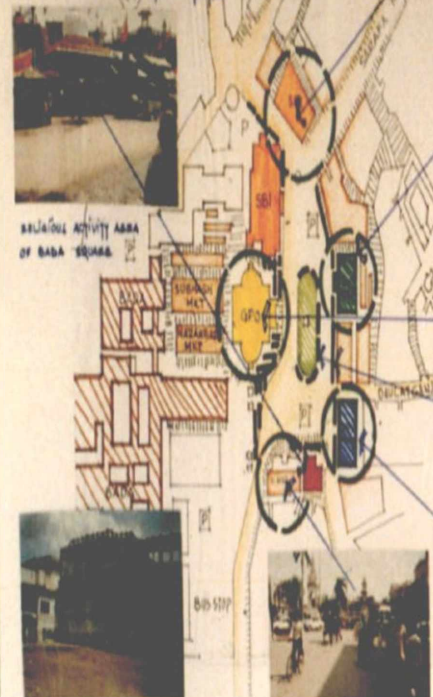
TOWN HALL BUILDING MAJOR CIVIC BUILDING



GPO BUILDING



INTERNAL ACTIVITY IN THE AREA COMMERCIAL



GOWDHI AREA OTHER EDUCATIONAL ACTIVITY SPACE

VICTORIA MARKET IS A PLACE OF FORMAL COMMERCIAL ACTIVITY

ARCHITECTURAL CHARACTER OF CIVIC SPACES, WITH SPECIAL REFERENCE TO MAHARAJ BADA, GWALIOR

ANALYSIS OF ACTIVITY PATTERN & INFERENCES

1. AT PRESENT THE BADA IS ACTIVE AS A MAJOR CENTER OF URBAN ACTIVITIES IN CENTRAL ABBA.
2. MAJOR ACTIVITIES OFFER BY BADA IS CIVIC ACTIVITIES AT THE CITY LEVEL. THIS EVIDENT FROM THE VARIETY OF BUILDINGS WHICH FUNCTIONING IN THE ABBA LIKE LIBRARY BUILDING, ADMINISTRATIVE BUILDINGS, GOVT OFFICE, ETC., MUNICIPAL HALL, TOWN HALL, BUILDING ETC.
3. THE ANOTHER ACTIVITY WHICH IS VERY DOMINANT IS THE COMMERCIAL ACTIVITY. ALL THE MAIN COMMERCIAL SPACES ARE CONVERGING IN TO THIS ABBA MAKING IT VERY IMPORTANT SQUARE.
4. BUSINESS OFFICES ARE ALSO FUNCTIONING IN THIS ABBA LIKE BANK IN OTHER HAND THE OFFICE AT THE STREET LEVEL ARE ALSO FUNCTIONING INTO THE STREET CAMPUS.
5. ANOTHER MAJOR ACTIVITY OFFER BY THE AREA IS RELIGIOUS ACTIVITIES. THESE RELIGIOUS AREA LIKE TANKER, SARKAR ACTIVE IN THE MORNINGS AND EVENING.
6. THIS ABBA HAS GOT THE MAXIMUM OPEN SPACE IN THE LAKSHMI SADA. THIS OPEN SPACE USED FOR THE RECREATIONAL & SOCIAL ACTIVITIES.
7. THE ANOTHER DOMINANT ACTIVITY IS INFORMAL COMMERCIAL ACTIVITY.
8. BADA SQUARE PROVIDE ACTIVITY SPACE FOR LOW INCOME GROUP MEMBERS IN RESEARCHING FOR SEARCHING DAILY WORK.
9. ANOTHER ACTIVITY OFFER BY THE ABBA IS EDUCATIONAL ACTIVITY.

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M Arch II year

BUILT FORM AND OPEN SPACES

MAHARAJ BADA CIVIC SQUARE



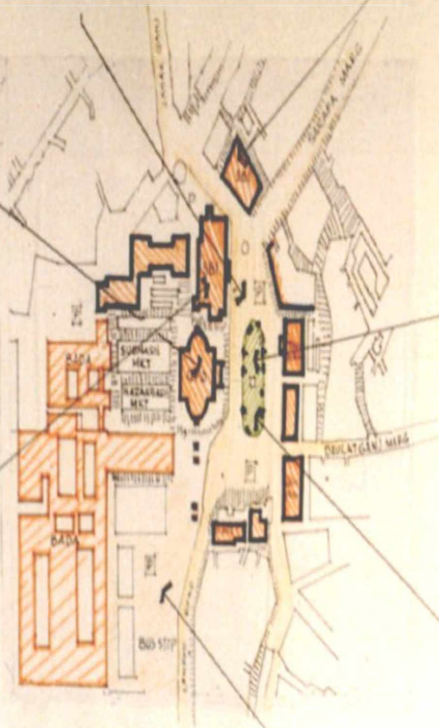
COLONNAD OF THE BUILT FORM IN MAHARAJ BADA SQUARE



BUILT FORM IN BADA SQUARE ALONG THE OPEN GREEN



ANOTHER BUILT FORM IN BADA SQUARE



VIEW OF THE LANDSCAPED OPEN SPACE IN BADA SQUARE



BEST GREEN OPEN SPACE WHICH IS MORE SUCCESSFUL IN BADA SQUARE

OPEN SPACE USED AS BUS STOP

1. COMPARATIVELY THE BUILT FORM IS LESS IN THIS AREA, THAN THE SURROUNDING AREAS WHICH ARE MORE OF THE RESIDENTIAL AREAS.

2. BUILDINGS IN THIS AREA AREA COMPARATIVELY HIGHER, THAN THE SURROUNDING AREAS, WHICH SHOW THE IMPORTANCE OF THE AREA.

3. BUILDINGS ARE RICH IN CHARACTER AND RICH IN DETAILS, THE MATERIAL IS ALSO VERY IMPRESSIVE SHOWING THE IMPORTANCE OF THE AREA.

4. NO. OF BUILDINGS ARE LESS BUT THE SIZE ARE THEY ARE BIGGER THAN THE SURROUNDING AREAS.

5. SOME OF THE STREETS LIKE NANI GANJ, DEHLAY GANJ ARE NARROW IN COMPARISON WITH THE BUILT FORM.

6. OPEN SPACES ARE PROVIDED IN BADA AREA BUT ONLY BADA SQUARE IS THE MOST SUCCESSFUL. OTHER OPEN SPACES ARE NOT ACTIVE.

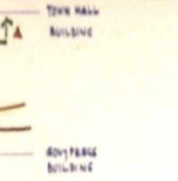
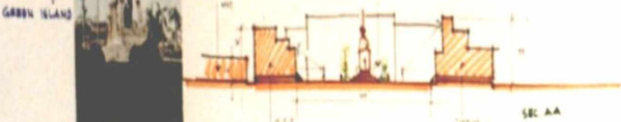
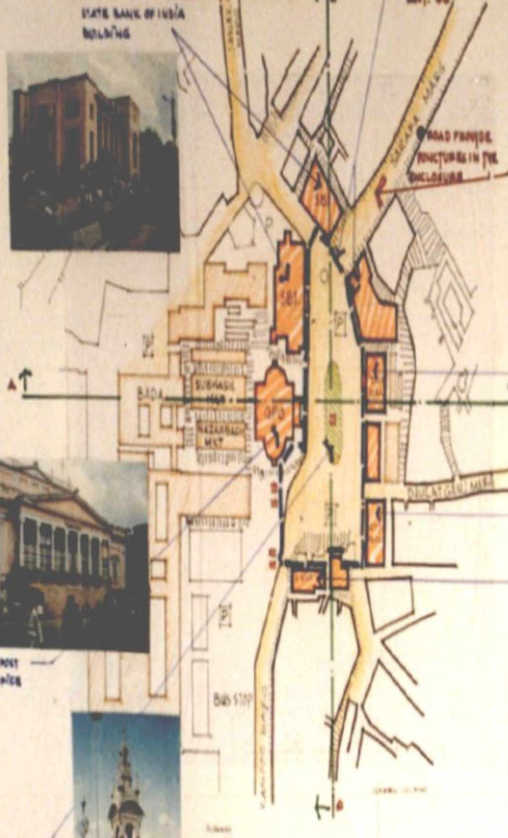
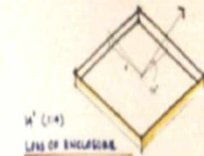
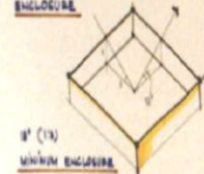
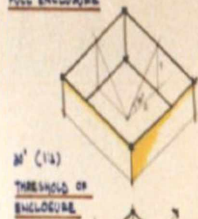
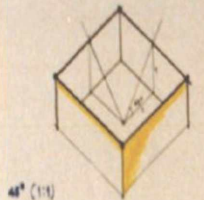
study & Analysis

ARCHITECTURAL CHARACTER OF CIVIC SPACES, WITH SPECIAL REFERENCE TO MAHARAJ BADA, GWALIOR

ARVIND KUMAR
M Arch 3 year

QUALITY OF ENCLOSURE

FUNDAMENTAL SUGGESTED BY PAUL D. SPURRIER



ANALYSIS & INFERENCE

IF THE CENTRAL CIVIC SQUARE IS TO BE EVALUATED ON THE BASIS OF FUNDAMENTAL PROVIDED BY P.D. SPURRIER IN THE BOOK OF 'URBAN DESIGN' THE ARCHITECTURE OF TOWN AND CITIES.

1. THE SQUARE PRESENTS MINIMUM ENCLOSURE BUT CERTAINLY THERE IS STRONG FEEL OF ENCLOSURE WHEN ONE IS MOVING ON ROAD.

2. MINIMUM ENCLOSURE IS FELT WHILE STANDING IN THE CENTRAL GREEN ISLAND.

3. SINCE THE SQUARE IS OF OVAL SHAPE THE ENCLOSURE IS DRASTICALLY REDUCED ON NORTH/SOUTH SIDE.

4. VISUALLY THE MENDMENTS OF VARIOUS ARCHITECTURAL STYLES FROM THE EDGE OF ENCLOSURE IN WHICH COLONIAL & TYPICAL HINDU PALATIAL BUILDINGS ARE PROMINANT.

5. AT CERTAIN STRATEGIC POINTS WHERE ENCLOSURE ARE PUNCTURED BY NICE ROADS LIKE SARAFI BAZAR MARG, CAMPA MARG ETC.

ARCHITECTURAL CHARACTER OF CIVIC SPACES, WITH SPECIAL REFERENCE TO MAHARAJ BADA, GWALIOR

ARVIND KUMAR
M Arch II year

Building are rich in character and rich in details. The material is also very impressive showing the importance of the area. Number of building are less but the size wise they are bigger than the surrounding areas.

Some of the streets like Madhavganj, and Daulatganj are narrow in comparison with the built form.

Open spaces are provided in Bada area but only Bada square is the most successful. Other open spaces are not active.

4.5.2 QUALITY OF ENCLOSURE

The square present minimum enclosure. But certainly these is strong feel of enclosure, when one is moving on road. Minimum enclosure is felt while standing in the central green island.

Since the square is of oval shape the enclosure is drastically reduced on North/South side. Visually the monuments of various architectural styles form the edge of enclosure in which colonial and typical Hindu palatial style buildings are prominent.

At certain strategic points these enclosure are punctured by wide roads like Sarafa bazar and Kampo road etc.

4.5.3 STUDY OF FAÇADE, TEXTURE AND SKYLINE

As per sheet number

4.5.4 STUDY OF COLOUR

Most of the buildings are coloured in pale cream so cream is the dominating colour of the square. White has been given a specific significance because this colour has been used at very strategic points like column, slab horizontal strip, top

FACADE

FACADE OF VARIOUS CONTEMPORARY BUILDINGS OF GWALIOR



BUILDING ENTRANCE CAPTURED BY A SHARP IN SQUARE TYPE

VICTORIA MARKET: AN HISTORICAL MONUMENT WITH HIGH BLANDMENTS
 • BUILDINGS WITH SMALL DOME & CANOPY
 • FACADES WITH FIVE COUPS AND HEAVY CURVE ON TOP, CHALKY EXPANDED MOUNTAIN



REST HOUSE BUILDING WITH SPECIAL CIRCULAR ARCHITECTURE FACADE IS A BEAUTIFUL COMBINATION OF HORIZONTAL AND VERTICAL LINES, WITHOUT A ENTRANCE PORCH ARE CROWNED BY PROMINENT ENTANCE ARE FACED AND NATIVE ONE IS BAYING NALIVE



381 BUILDING, BUILT IN BRICK AND STONE IS AN IMPRESSIVE BUILDING WITH THE VERTICAL LINE EMPHASIS THE COMPOSITION
 • ENTRANCE IS HIGHLIGHTED BY SOME ARCHED DOORWAYS



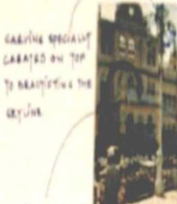
381 BUILDING, TYPICAL COLONIAL ARCHITECTURE

ARCHITECTURE: MASSIVE ROUND COLUMN WITH PLAIN FACADE AND HORIZONTAL EXPANSION WITH SIMPLE DESIGN OF PARADEY, IT GIVES BECOMING A SPECIAL HORIZONTAL LINE BECAUSE OF ITS GEOMETRIC FORM BUT WITH VERTICAL LINES OF COLUMN

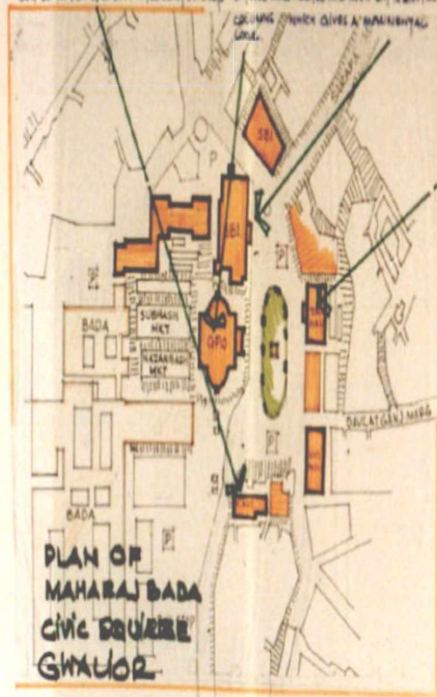


GOVT. HOUSE BUILDING: TYPICAL OF GOWALIOR

BUILT IN THE 19TH CENTURY AND SPREADS OVER PORTION IN BRICK & PLASTER. MONUMENT HAS DOTTED ARCH OPENINGS. CORNER HAS SMALL NICHES WITH CANOPY AND A SHAW OVER IT. IT'S SYMMETRICAL BLDG WITH BEAUTIFUL TRENCHED EDGES



CENTRAL ELEMENT IN PARADEY MAKES IT A UNIQUE FEATURE



TOWN HALL: ONE OF THE PROMINENT MONUMENT OF GOWALIOR. IT IS A SYMMETRICAL AND BALANCED STRUCTURE WITH POINTED ARCH OPENINGS. HORIZONTAL LINE BUILT UP TREAT ARE CREATING A HORIZONTAL LINE. REPEATIVE DEFORMATION AND GIVES A STRONG LINE TO OVER ALL COMPOSITION. INTERESTING SKYLINE OF TWO DOMES IN LINE AND A SEMICIRCULAR ELEMENT IN THE CENTRE. BUILDING HAS SIX AWAYERS ON GROUND FLOOR AND 8 AWAYERS ARE SUPPORTED BY ROUND COLUMN.
 • PAIR OF CORN COLUMN GIVE IN HARMONY WITH OVER ALL CHARACTER OF SQUARE

TOWN HALL

FACADE STUDY

1. BASICALLY THE TYPES OF BUILDING ARE DETERMINING THE SQUARE

• BUILDING WITH CLASSICAL STYLE
 • BUILDING WITH TYPICAL GOWALIOR STYLE HAVING ELEMENTS OF HINDU TEMPLE AND ELEMENTS OF ISLAMIC ARCHITECTURE.

2. PAIR OF CORN COLUMN BEING THE SIGNIFYING COLUMN

3. ORIGINAL BUILDINGS ARE HEAVY PLANNED AND COMPOSITION OF HORIZONTAL AND VERTICAL LINES. THICK ROUND COLUMN BEING THE CHARACTERISTIC FEATURE OF THE MONUMENTS.

4. MOST FORM ARE IMBUE WITH LIBERATED PLUM

5. BUILDING BORN IN DETAILS ARE TOWN HALL. GOVT. HOUSE BUILDING VICTORIA MARKET BUILDING HAVING ELEMENTS OF HINDU, ISLAMIC ARCHITECTURE: DOME, CHATRA, CARVED BALUSTAD, JALIBED, ARCHED OPENING

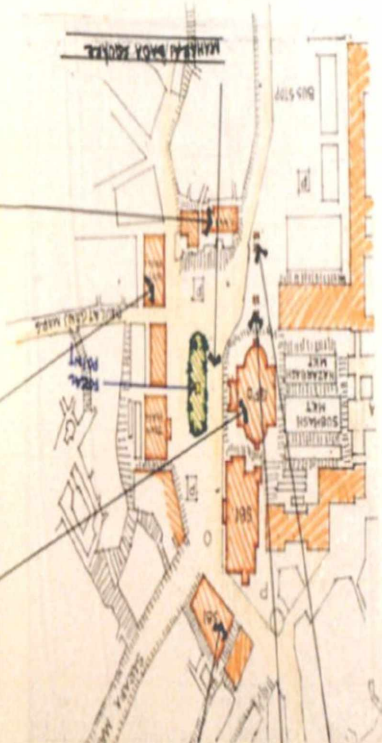
6. SQUARE TREATMENT WITH THE ARCHITECTURAL FEATURES

DETAILS OF THE BUILDING
 • DIFFERENT TEXTURES OF THE SQUARE BY THE BUILDINGS HAS BEEN PRESERVED BUT LANDSCAPE IS UNIMPROVED

7. SKYLINE NOT COMPLETELY CHANGING OR LITTLE BROADENMENT THE SKYLINE IS CHANGING WITH CERTAIN POINT - THE TOWN HALL VICTORIA MARKET GOVT. HOUSE

ARVIND KUMAR
 March 8 year

ARCHITECTURAL CHARACTER OF CIVIL SPACES, WITH SPECIAL REFERENCE TO MAHARAJ BADA, GWALIOR



Older market, formal commercial buildings made of yellow sand stone



Columns, large windows, porch is functioning as a vertical element in white with pale cream with horizontal grooves in the domes colored



Room built from yellow sandstone or cream (pale) painted with white color in architectural elements



Columns and side horizontal lines
Columns: pale yellow with white
Old buildings having
Green complex ceiling, floor
Climbing



Colors of buildings around Bada market in white, yellow and these are painted in other white, brown & red etc.



Columns are painted white
This part is for the
of yellow sand stone with
got from building made



Columns with these buildings
stone to maintain harmony in
level made of yellow sand



1. Most of the buildings are colored in pale cream
to create a dominating
color of the square.
2. White has been given a special
significance because this color
has been used at very high level
level like columns etc. vertical
lines to maintain harmony in
columns with these buildings
3. Yellow sand stone has been given
first used when color the wall
with white. Pale cream color
from white the color is also
given with the color of the
surrounding buildings with
part of white marble.
But in some new construction
work the color is not given
color painting.

REFERENCES

feature of buildings. Yellow sand stone has been extensively used which gives the harmony with the pale cream colour.

Focal point the statue of Jiyaji Rao Scindhiya is also goes with the colour of the surrounding buildings and is made of white marble. But some new construction, no care for the over all colour scheme practiced.

1.5.5 STUDY OF LANDSCAPING AND FOCAL POINTS

In Marahaj Bada square has very less greenery. Only green space is the central island and the hard surface of the road is more. The statue of Jiyaji Rao Scindhiya form the focal point and act as the landmark of the area. Only designed island for the name of landscaping in the square. Dressed bushes, shrubs, Green cover, sculpture fountain, statue, lighting fixture etc. are integral part of landscape scheme.

1.5.6 VARIOUS EXTERIOR DETAILS

In the Maharaj Bad square the number of details or element used in the space which form the character of the square. Lighting post, railing tree form, concrete bench, letter box, colourful Umbrella, traffic signs, traffic diverter, fountains, statue, sign boards gateway flooring pattern etc. Some details like sign boards painted in very bright colour gives negative impact on over all character of the square. The original space for sign board is missing and lack of sign control has ruined the monumentality and grandeur of the structure.

4.5.7 ARCHITECTURAL ELEMENTS

LANDSCAPING



GREEN GRASS COVER IS A BUFFER TO THE SQUARE VISUALLY AND FROM THE THERMAL HEAT OF SUN



VIEW OF THE GREEN ISLAND WITH PALM TREES AND DESIGNER BUILDING



WALLS AND ARCHES GIVING A SMOOTH LOOK TO THE HARD ELEMENTS



HARD FINISH IN CONCRETE/STONE INCREASES THE TEMPERATURE WHILE GIVING A HARD LOOK TO



BLINDING SUNSHINE CAUSE THE HEAT CLIMATE OF PARK



ONLY ORGANIZED GREEN ISLAND IN THE SQUARE



DESIGNED NATURE SHAPED SCULPTURE STATUE ARE INTEGRAL PART OF LANDSCAPE SCHEME

TOTALLY HARD SURFACE GROUND COVER WITH SOME BENCH SURFACE IN METAL CONCRETE COLOR GIVES A HARD FEELING

- 1. NO PROPER LANDSCAPE HAS BEEN CONSIDERED.
- VERY LESS GREENERY ONLY GREEN SPACE IS THE CENTRAL ISLAND
- ISLAND HAVE BEEN DESIGNED AS FORMAL PARK AND IT IS UNAPPROACHABLE.
- CONCRETE BENCHES HAVE BEEN INSTALLED TO SHIELD THE GREEN BAY OF THE ISLAND
- ONLY ISLAND FOR THE NAME OF LANDSCAPING IS THERE.
- NO TREES ON THE SIDE OF ROAD EXCEPT VERY FEW
- LACK OF WATER BODIES
- DESIGNED BENCHES ORNATE SCULPTURE FOUNTAIN STATUE LIGHTING FIXTURE ETC ARE INTEGRAL PART OF LANDSCAPE SCHEME

Study & Analysis

ARCHITECTURAL CHARACTER OF CIVIC SPACES, WITH SPECIAL REFERENCE TO MAHARAJ BADA, GWALIOR

ARVIND KUMAR
M.Arch. 3 year

DETAILS



COLORFUL UMBRELLA



LETTER BOX



TREE FORM

BALUSTRADE & RAILINGS



CONCRETE BENCH ALONG THE GREEN AREA



CONCRETE BENCH IN LANDSCAPE AREA



TRAFFIC CONTROL BOOTH



STREET LIGHTING POST



FOUNTAIN OUTSTRETCH & CONCRETE BENCH



SIGN BOARDS & UMBRELLAS



INDIAN TRAFFIC SIGNS



TREE FORM IN LANDSCAPE AREA



FOUNTAIN WITH STATUE & SCULPTURE FOUNTAIN



LIGHTING POST IN CENTRAL GREEN AREA



GATEWAY



TRAFFIC SIGNAGE



Details

THESE ARE THE NUMBERS OF DETAILS WHICH FORM THE CHARACTER OF THE BADA AREA.

- LIGHTING POST
- RAILINGS
- TREE FORM
- CONCRETE BENCH
- LETTER BOX
- COLORFUL UMBRELLA
- TRAFFIC SIGNS
- TRAFFIC SIGNALS
- FOUNTAIN
- STATUE
- SIGN BOARDS
- TRAFFIC CONTROL BOOTH
- GATEWAY
- FLOORING PATTERNS
- ETC.

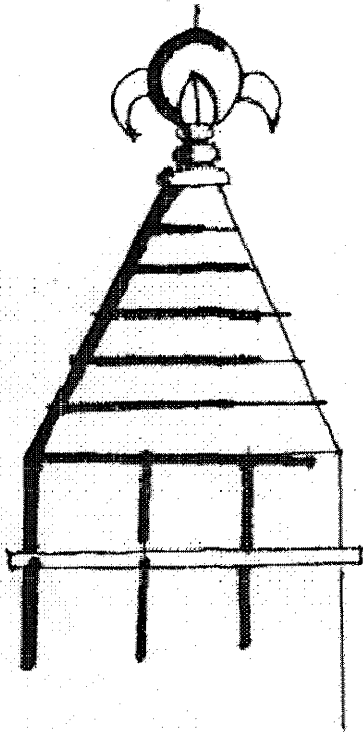
SOME DETAILS LIKE SIGN BOARDS, GATEWAY, FOUNTAIN, STATUE, LIGHTING POST, TRAFFIC SIGNALS, ETC. GIVE NEGATIVE IMPACT ON THE OVERALL CHARACTER OF THE SQUARE.



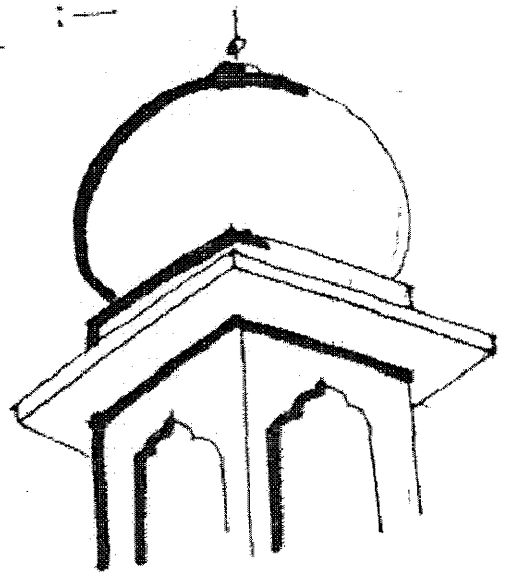
THE POSITIVE SPACE FORMS LIKE UMBRELLA, TREE FORM, CONCRETE BENCH, FOUNTAIN, STATUE, LIGHTING POST, TRAFFIC SIGNALS, ETC. GIVE POSITIVE IMPACT ON THE OVERALL CHARACTER OF THE SQUARE.

ARCHITECTURAL CHARACTER OF CIVIC SPACES, WITH SPECIAL REFERENCE TO MAHARAJ BADA, GWALIOR

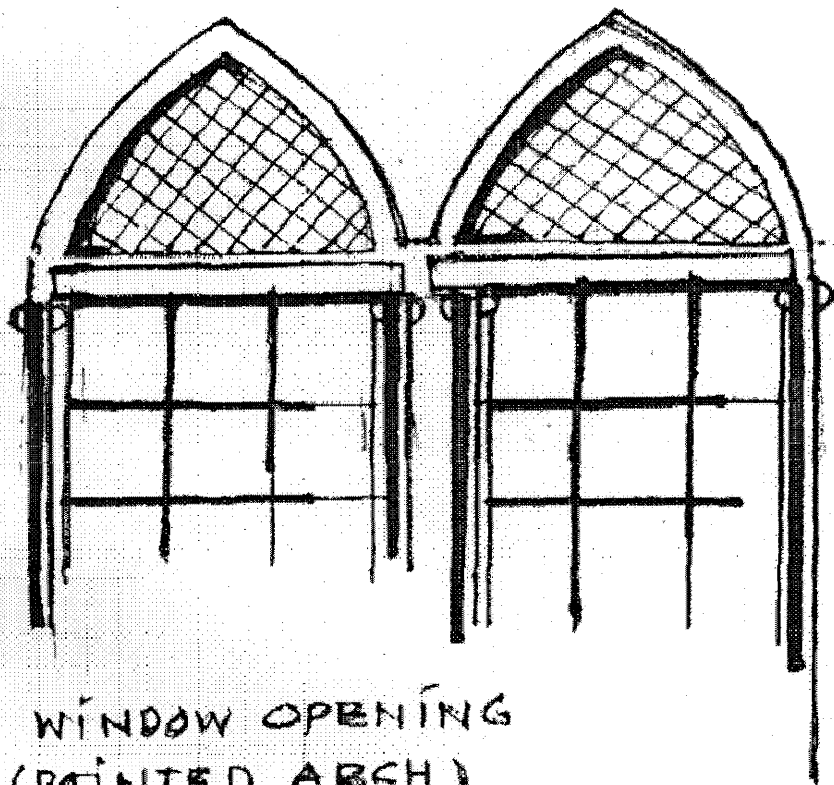
ANVITI KUMAR
M.Arch. 2018



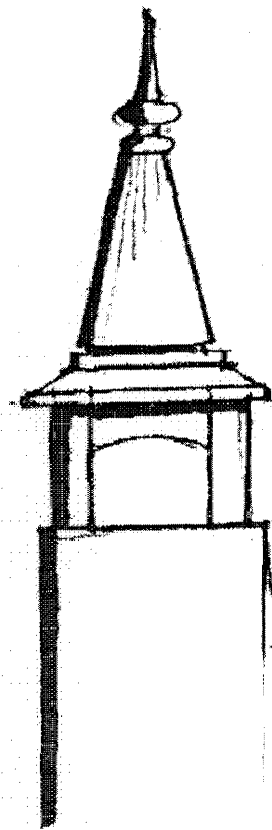
MINARATE



MINARATE

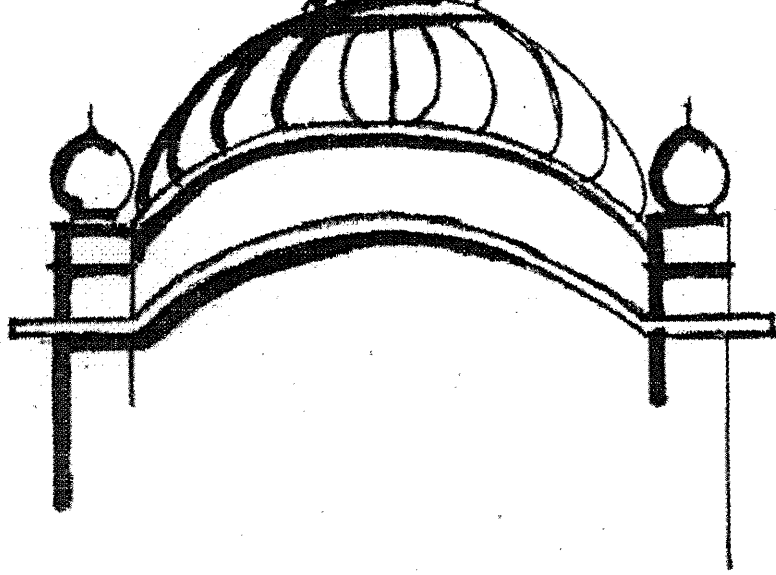


WINDOW OPENING (POINTED ARCH)

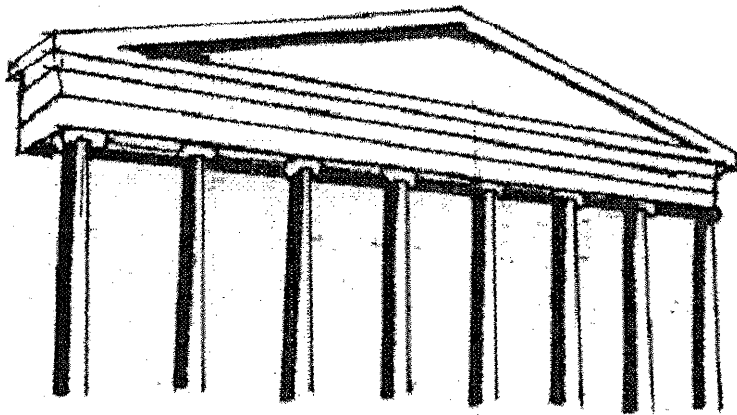


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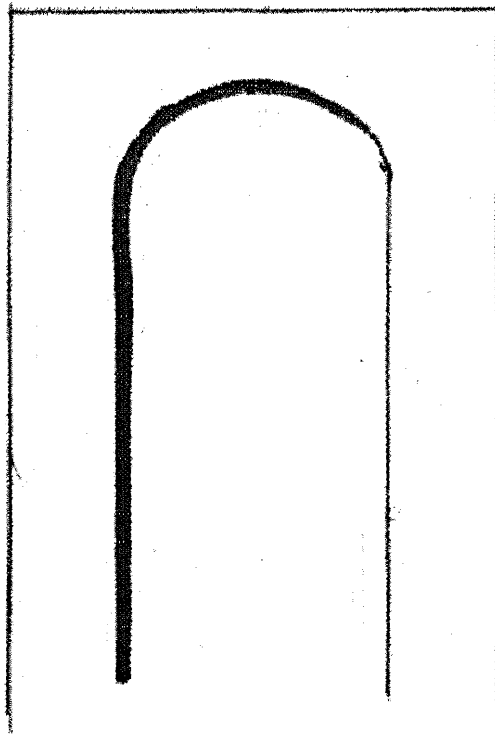
- MAHARAJ BADA SQUARE
- ARCHITECTURAL ELEMENTS



ENTRANCE
GATE



ENTRANCE

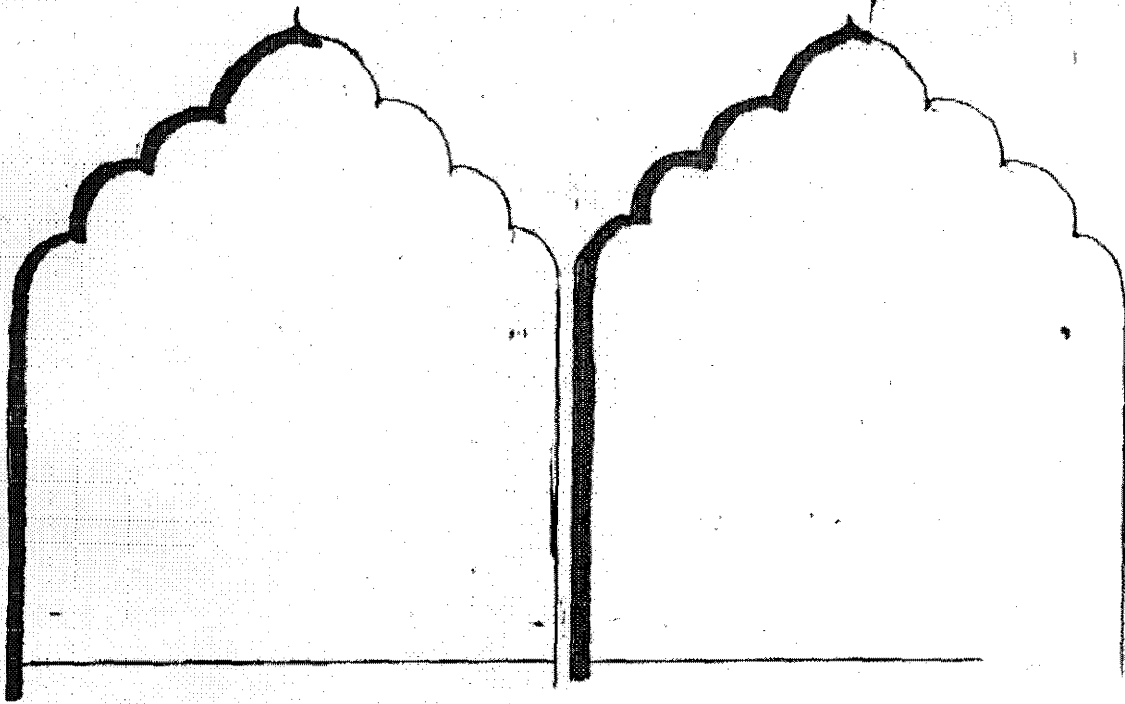
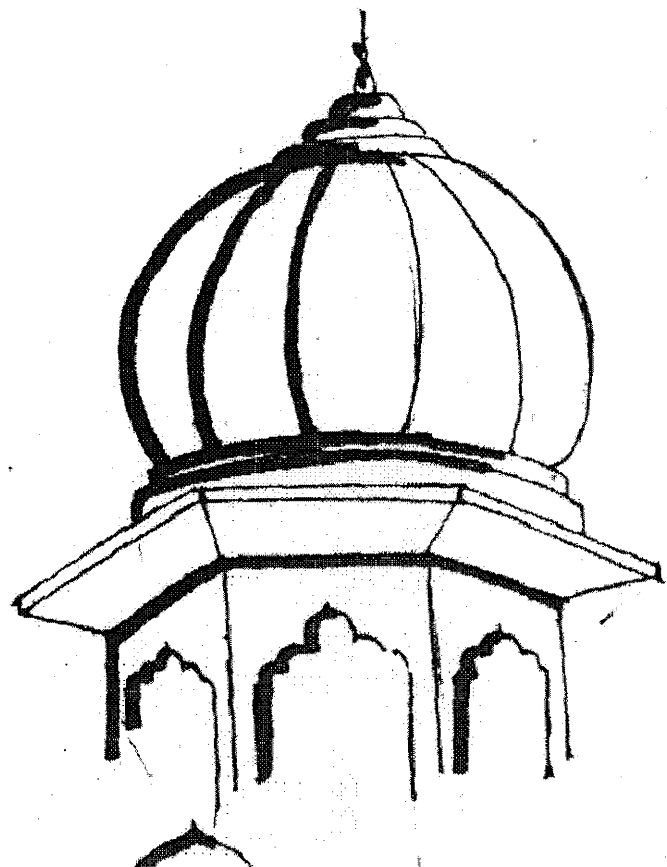


ENTRANCE
ARCH

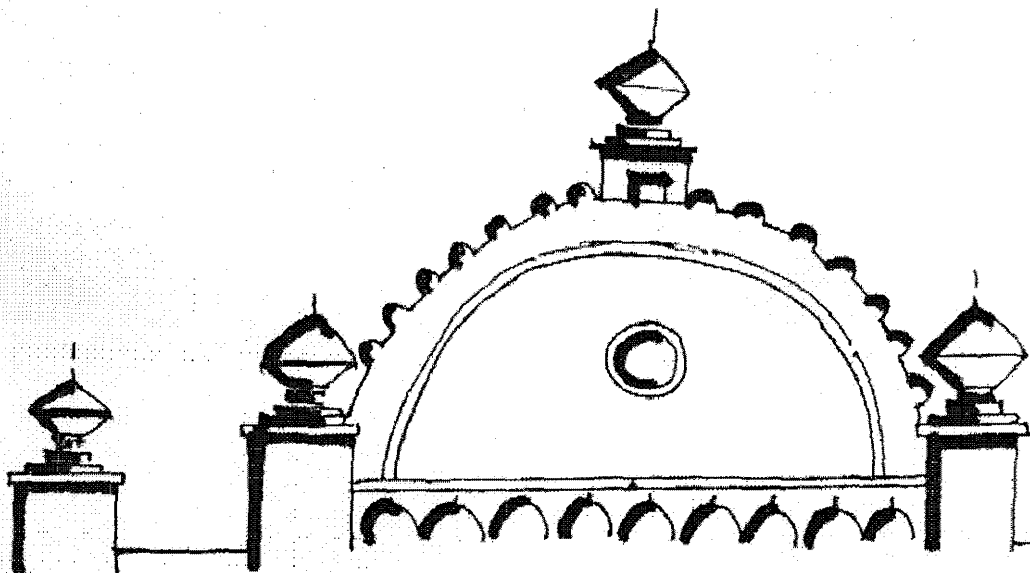
MAHARAJ BADA
QUARE
ARCHITECTURAL

- MAHARAJ DADA
SQUARE
- ARCHITECTURAL
ELEMENTS

MINARATE



CUSP
ARCH
OPENING



TOP
FEATURE

4.6 INFERENCES FROM CASE STUDY

- Maharaj Bada Civic Square area acts as a city level centre for the civic functions which are very well established.
- The area is historically important and has got buildings of architectural elegance.
- Commercial activity in the area is making the space more active and viable.
- The main elevations are east and west facing, either of these provide shade under which the activities are much more . , .
- The area has got the religious and political activities also.
- The space is very well connected to the city by number of roads which intersect starts from this space and diverge into the city. These roads are Sarafa Bazar, Daulat Ganj, Kampoo, & Janak Ganj Roads.
- Informal commercial activities on road space is major problem in the area and stray animal also create hindrance in circulation system.
- The land use around the Maharaj Bada Square is mainly commercial at the ground floor and residential on the upper floors, which generate the major inflow of traffic in the square.
- Area has got the very interesting activity pattern which changes with the time so the morning the area is quite active due to the morning activities, like religious activities, morning walk, eating places and in evening the lot of informal sectors comes in front of the shops. Buildings with different uses have been placed in such a manner that the area never becomes dead.
- While entering into the square from any of the roads the focus always there. The effort has been made that these streets are culminating at focal point.

- Particular elements are used to enhance the aesthetic quality of the area. The statue of Jiwaji Rao Scindhiya forms the focal point and acts as the land mark of the area.
- No proper space available for organized parking of various types of vehicles, road space being used for parking which has reduced the traffic mobility and create traffic congestion.
- No proper control on segregation of parking which leads to mixed parking
- Proper parking space as the requirement is most essential to avoid unauthorized parking.
- Basically two types of buildings are dominating the square:
 - Building with colonial style and
 - Typical Gwalior style, having element of Hindu temple and element of Islamic architecture

Colonial buildings are mostly plastered and composition of horizontal and vertical lines with round columns.
- Buildings rich in details are town-hall, Govt. press, Victoria Market, Gorkhi Palace having elements of Hindu, Islamic architecture in which
 - Domes
 - Chattries
 - Minarets
 - Carved parapet
 - Jallies
 - arched openings, etc.
- There is no proper control on advertising panels, sign boards, and hoarding which are shattering the grandeur of the structures.

- Surface treatment of buildings with rich architectural features. Yellow sand stone texture of the buildings is dominating in the square
- Skyline is continuously changing after certain heights. The skyline is changed with certain focal points, i.e. town hall, Victoria market, government press building etc.
- For achieving the good quality of physical enclosure, the placement of building in such a way, the height of the building and observing distance should be maintained around 1:1 to 1:3 or angle 45° to 18°.
- Building in the area comparatively higher and bigger than the surrounding area, which shows the importance of the area.
- Most of the building made of yellow sand stone and other are painted in pale cream colour which shows the cream is the dominating colour of the square.
- Palm trees dressed bushes, shrubs, grass cover, sculpture, fountains, statue, lighting fixtures etc. are the integral part of the landscape treatment in the square.
- Various details are used in the space which form the character of the Bada area.

The prominent details are:

- Lighting fixture, Railing, Tree forms,
- Concrete benches, Letter box. Coloured umbrella,
- Traffic signs, Traffic diverter, Fountain,
- Statue, Sign boards, Gateway, Flooring pattern, Hoarding etc.

(Ref 1 SHEET)

CHAPTER - 5

**STUDY AT SARAFI BAZAR ROAD AND
ANALYSIS**

CASE STUDY AT SARAFI BAZAR ROAD AND ANALYSIS

5.1 EVOLUTION

The historical development of Maharaj Bada indicate that the present Sarafa bazar road some time back was developed as residential area near Maharaj Bada complex and the development of Maharaj Bada area as hub of the city generate the high volume of traffic and it will be turn into major circulation route for the city. Due to development of commercial activity in the area. The road converted into a specialized marked street which presently known as Sarafa Bazar road and famous for silver and gold trade and other trade like cloth and miscellaneous trade also developed along this street. Commercial offices of private agencies are also functioning in the area.

5.2 STUDY OF AREA

5.2.1 LOCATION

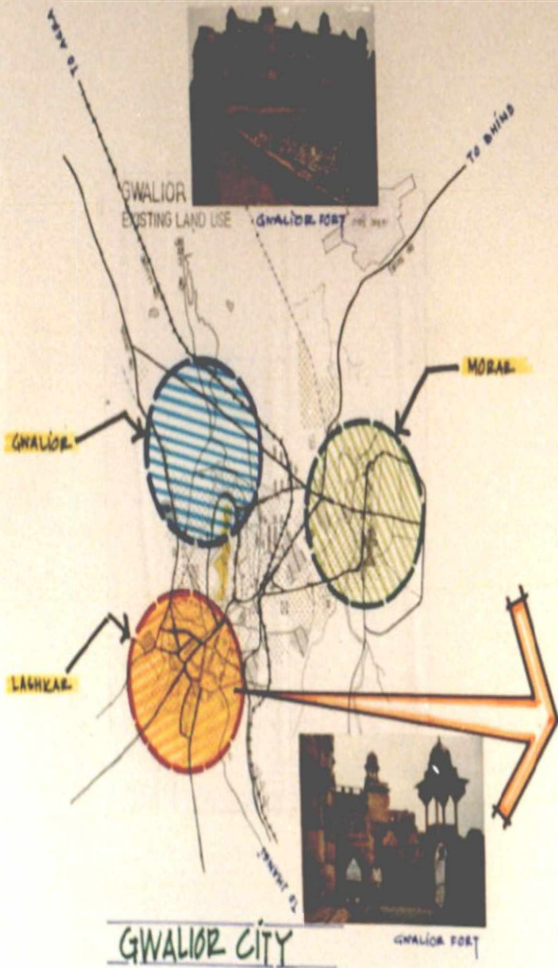
Sarafa Bazar Road functioning within the city core close to Maharaj Bada city square and known as lashkar area.

5.2.2 MAJOR LINKAGES AND APPROACH

Sarafa Bazar road very well and connected with the city by number of roads and Maharaj Bada civic square provide the major inflow of traffic in sarafa bazar road.

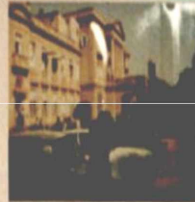
This road very well approachable form and surrounding areas by different major and minor roads/streets.

LOCATION PLAN OF STUDY AREAS



ARCHITECTURAL CHARACTER OF CIVIC SPACES, WITH SPECIAL REFERENCE TO MAHARAJ BADA, GWALIOR

LANDMARK BUILDING HIGH COURT ROAD



SARAPA BAZAR ROAD

CENTRAL AREA, LASHKAR

Study & Analysis

BOTH THE STUDY AREA, SARAPA BAZAR ROAD AND HIGH COURT ROAD ARE SITUATED IN THE CENTRAL OR LASHKAR AREA IN GWALIOR CITY.

SARAPA BAZAR ROAD

- FUNCTIONING WITHIN THE CITY CORE CLOSE TO MAHARAJ BADA CITY SQUARE.
- SARAPA BAZAR ROAD HAS SPECIALIZED MARKET OF SILVER, GOLD & CLOTH.
- SARAPA BAZAR ROAD IS A MAJOR CIRCULATION ROAD FOR THE TRAFFIC IN CENTRAL AREA OF GWALIOR CITY.
- IT ALSO HAS BUSINESS OFFICES, EDUCATIONAL INSTITUTIONS, & TEMPLES ETC.

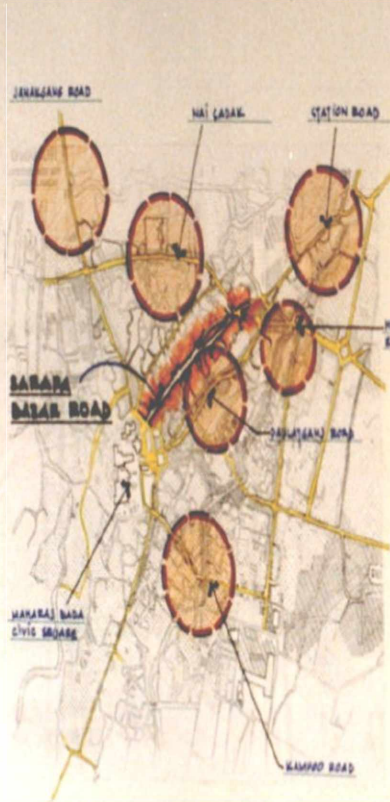
HIGH COURT ROAD

- HIGH COURT ROAD SITUATED IN THE AREA KNOWN AS JATENDRA GANG SQUARE IN LASHKAR AREA OF GWALIOR CITY.
- IT IS A IMPORTANT CIVIC STREET OFFER VARIOUS ACTIVITY SPACES LIKE GOVT INSTITUTIONS BUSINESS OFFICES, MARKETS, RELIGIOUS PLACES, EDUCATIONAL INSTITUTIONS ETC.
- IT HAS SPECIALIZED MARKET OF BOOKS AND STATIONERY.
- THIS STREET ALSO CONNECTED WITH OTHER MAJOR MARKET STREETS LIKE DAL BAZAR, LOHITA BAZAR AND JAI BHADRANG ROAD.

- LASHKAR IS ONE OF THE OLD RESIDENT COMMERCIAL AREA OF GWALIOR CITY KNOWN FOR ITS TYPICAL ARCHITECTURAL CHARACTER. IT IS SITUATED ON S-W SIDE OF THE CITY.

ARVIND KUMAR
M Arch II year

MAJOR LINKAGES

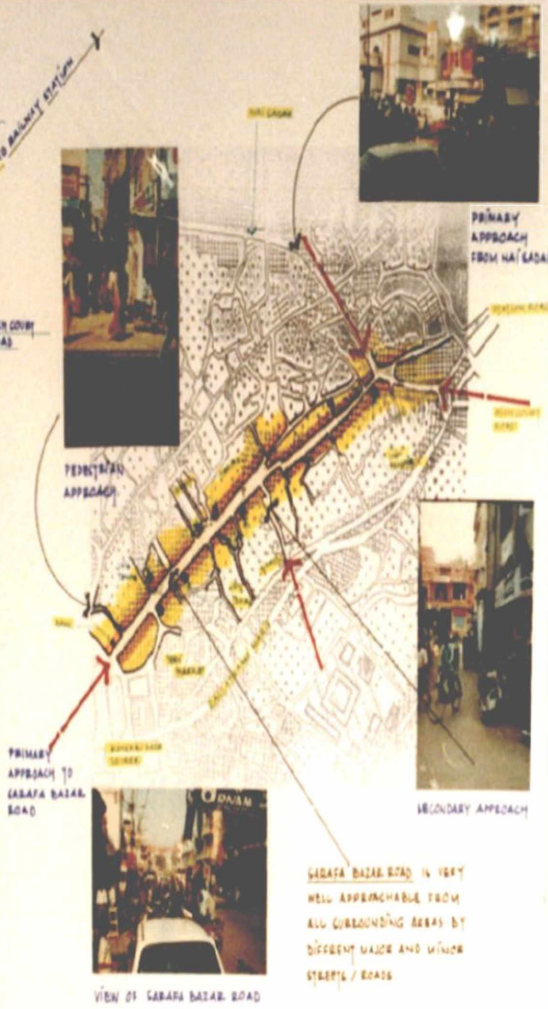


SARAFI BAZAR ROAD VERY WELL CONNECTED WITH THE CITY BY NO. OF MAJOR ROADS. THESE ROADS ARE, HIGH COURT ROAD, NAI GADAK, STATION ROAD, KAMPHA ROAD, DAULATGANJ ROAD AND JANKAGANJ ROAD.

MAHARAJ BADA CIVIC SQUARE PROVIDE THE MAJOR INFLOW OF TRAFFIC IN SARAFI BAZAR ROAD AND ACTED AS A MAJOR CONNECTING NODE FOR VARIOUS ROADS.

ARCHITECTURAL CHARACTER OF CIVIC SPACES, WITH SPECIAL REFERENCE TO MAHARAJ BADA, GWALIOR

APPROACH TO SARAFI BAZAR ROAD



- SARAFI BAZAR ROAD VERY WELL CONNECTED WITH THE CITY BY NUMBER OF ROADS.
- SARAFI BAZAR ROAD POSITIONED WITHIN THE CITY CORE, AND VERY WELL LINKED TO MAHARAJ BADA CIVIC SQUARE.
- MAHARAJ BADA CIVIC SQUARE PROVIDE THE MAJOR INFLOW OF TRAFFIC IN SARAFI BAZAR ROAD.



PRIMARY APPROACH FROM NAI GADAK

- SARAFI BAZAR ROAD IS VERY WELL APPROACHABLE FROM ALL SURROUNDING AREAS BY DIFF. MAJOR AND MINOR STREETS/ROADS.

PEOPLE APPROACH THE STREET FROM DIFFERENT DIRECTIONS THESE APPROACHES CAN BE CATEGORIZED IN THREE CATEGORIES.

- PRIMARY APPROACH: THESE ARE THE WIDE AND WIDER ROAD WITH MIXED VEHICLES.
- SECONDARY APPROACH: THESE ARE THE LESS WIDER ROAD WITH LESS VEHICLES.
- PEDESTRIAN APPROACH: THESE ARE THE NARROWEST STREETS THROUGH WHICH VEHICLES CAN NOT PASS ONLY PEDESTRIAN MOVEMENT POSSIBLE.

Study & Analysis

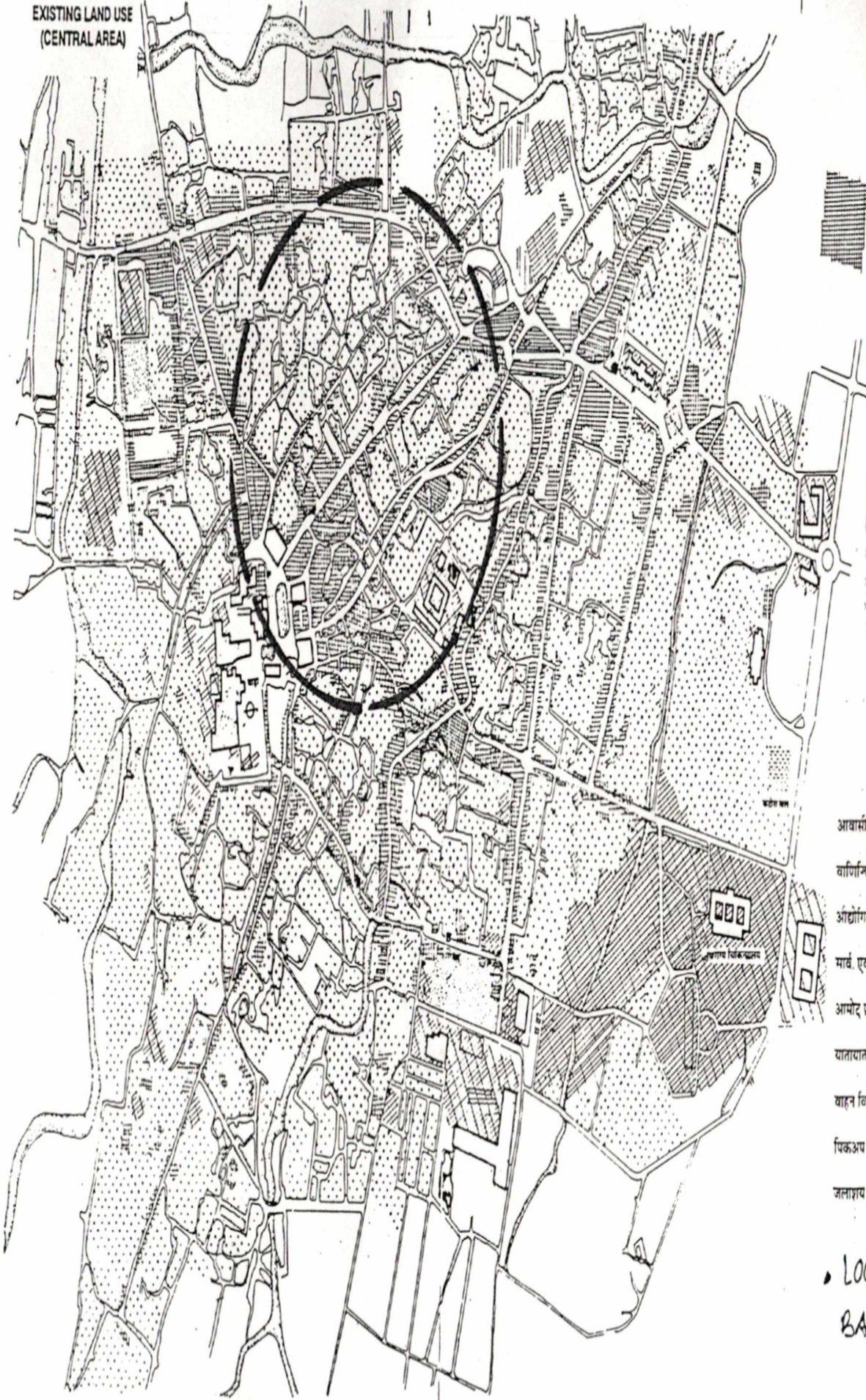
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GWALIOR

EXISTING LAND USE
(CENTRAL AREA)

ग्वालियर

वर्तमान भूमि उपयोग
(मध्य क्षेत्र)



- आवासीय  RESIDENTIAL
- वाणिज्यिक  COMMERCIAL
- औद्योगिक  INDUSTRIAL
- सार्व. एवं अर्ध-सार्व.  PUBLIC & SEMI PUBLIC
- आयुर्व प्रमोद  RECREATIONAL
- यातायात केंद्र  TERMINAL CENTRE
- वाहन विराम स्थल  PARKING
- पिकअप स्टेशन  PICK UP STATIONS
- जलाशय  WATER BODIES

• LOCATION OF SARARA
BAZAR ROAD

5.2.3 LAND USE

Sarafa Bazar road connected with the central civic square and surrounded by thickly populated old area mostly residentially but having strip commercial development along the streets this shows mixed land use in the area.

5.2.4 CIRCULATION PATTERN

As per sheet of circulation pattern

5.2.5 PARKING AREA

The analysis of parking condition, the space available at provided parking site reveals that most of the area hardly have space for organized parking of the actual requirement (sheet number →).

5.2.6 ACTIVITY PATTERN

Street at present acting as a specialized market and commercial activity area. Street having influence of central area activities due to closeness with Maharaj Bada central civic square. Therefore street serving social and religious activity area like temple active in evening and morning.

Business officer are also functioning in the area of street like bank, private offices and hotels, etc. Educational activity also offer by the street. Unwanted informal commercial activity is another dominating activity of street, few govt. institution are also functioning along the street.

CIRCULATION PATTERN



INFORMAL REPAIR SHOPS FUNCTIONING ON ROAD AND FOOTPATH



INFORMAL SHOPPING ACTIVITY FUNCTIONING ON ROAD SPACE, MAJOR OBSTRUCTION IN CIRCULATION SYSTEM



UNORGANIZED AND UNCONTROLLED PARKING OF VEHICLES ON ROAD SPACE IS MAJOR OBSTRUCTION IN CIRCULATION SYSTEM. THIS HAS REDUCED TRAFFIC SPEED AND ROAD EFFICIENCY.



UNCONTROLLED ENTRY OF SLOW-MOVING VEHICLES



STRAY ANIMALS PARKING ON ROAD CREATES OBSTACLES IN CIRCULATION SYSTEM.



THESE ARE THE CERTAIN POINTS WHERE BOTTLENECKS CAUSE TRAFFIC JAMS AND ACCIDENTS. MAJOR REASONS FOR BOTTLENECKS ARE:
 • ENCROACHMENT OF ROAD SPACE, FOOTPATH, AND JUNCTION IN PARKING, FUNCTIONING INFORMAL SHOPPING ACTIVITY ONROAD AND STRAY ANIMALS

SARAFI BAZAR ROAD



VEHICULAR TRAFFIC MOVEMENT

ARCHITECTURAL CHARACTER OF CIVIC SPACES, WITH SPECIAL REFERENCE TO MAHARAJ BADA, GWALIOR

ARVIND KUMAR
 M Arch 8 year

Study & Analysis

- INTERMIXING OF PEDESTRIAN, SLOW-MOVING AND FAST-MOVING TRAFFIC ADVERSELY AFFECTING FREE TRAFFIC CIRCULATION AND LEADING TO SERIOUS TRAFFIC AND CIRCULATION PROBLEMS.
- THERE IS NO EFFICIENT TRAFFIC SYSTEM WHICH CAN COORDINATE THE PEDESTRIAN AND VEHICULAR TRAFFIC.
- INFORMAL SHOPPING ACTIVITY FUNCTIONING ON ROAD SPACE LEADING TO MAJOR OBSTRUCTION IN CIRCULATION SYSTEM.
- ENTRY OF FAST-MOVING AND MINI BUSES IN PEDESTRIAN DOMINATED STREET CAUSE TRAFFIC JAMS AND ACCIDENTS.
- INFORMAL ACTIVITIES ON ROAD SPACE ARE MAJOR HINDER IN EASY CIRCULATION SYSTEM.
- UNORGANIZED AND UNCONTROLLED PARKING OF VEHICLES PROVIDED ON ROAD SPACE IS MAJOR OBSTRUCTION IN CIRCULATION SYSTEM THIS HAS REDUCED TRAFFIC SPEED AND ROAD EFFICIENCY.
- ENCROACHMENT OF ROAD SPACE, FOOTPATH AND JUNCTION IN PARKING, UNCONTROLLED TRAFFIC JAMS AND BOTTLENECKS.



STUDY OF PARKING SPACE IN SARAFI BAZAR ROAD



PARKING SPACE IN FRONT OF SHOPS CREATE PROBLEM IN PEDESTRIAN MOVEMENT AND TRYING TO CREATE AN UNHEALTHY ENVIRONMENT



PEDESTRIAN MOVEMENT SPACE ENCRUCHED BY UNAUTHORIZED VEHICLE PARKING AND NO SEGREGATION OF VEHICLES PARKING



PARKING PROVIDED AT THE JUNCTION CAUSE TRAFFIC JAMS AND THE BOTTLENECK WHICH CAUSE ACCIDENTS.



UNORGANIZED PARKING PROVIDED ON ROAD SPACE OBSTRUCTS FREE FLOW OF TRAFFIC AND REDUCES EFFICIENCY OF THE ROAD.

VIEW OF DEPTH IN PARKING SHOWS UNORGANIZED PARKING SYSTEM



PEDESTRIAN MOVEMENT SPACE UTILIZED IN VEHICLES PARKING SHOWS UNCONTROLLED AND LESS PARKING SPACE IN MARKET STREET



PLAN OF SARAFI BAZAR ROAD

HALF WIDTH OF ROAD SPACE UTILIZED FOR PARKING OF CARS, SCOOTERS AND CYCLES WHICH HAS REDUCED THE TRAFFIC MOBILITY AND ROAD WIDTH

Study & Analysis

- THE ANALYSIS OF THE PARKING CONSTATING THE SPACE AVAILABLE AT PROVIDED PARKING SITE REVEALS THAT MOST OF THE AREA HARDLY HAVE SPACE FOR ORGANIZED PARKING OF THE ACTUAL REQUIREMENT.
- PARKING FOR SLOW MOVING VEHICLE IS ALMOST ABSENT EXCEPT IN MAHARAJ BADA AREA.
- THE PARKING NEED WILL FURTHER GROW WITH VEHICLES AND INCREASING TRAFFIC TO THIS MARKET STREET
- NO PROPER CONTROL ON SEGREGATION OF PARKING WHICH LEADS TO MIXED PARKING.
- PEDESTRIAN MOVEMENT SPACE UTILIZED IN PARKING SHOWS UNCONTROLLED AND LESS PARKING SPACE IN MARKET STREET
- UNORGANIZED PARKING PROVIDED ON ROAD SPACE OBSTRUCTS FREE FLOW OF TRAFFIC AND REDUCE EFFICIENCY OF THE ROAD
- NO PROPER SPACE AVAILABLE ANY FROM THE ACTUAL REQUIRED BUT SPACE OF THE ROAD IS BROADENED BEING USED FOR PARKING WHICH HAS REDUCED THE TRAFFIC MOBILITY AND CAUSE TRAFFIC JAMS AND THE BOTTLENECK

- MIXED PARKING
- UNAUTHORIZED PARKING

ARCHITECTURAL CHARACTER OF CIVIC SPACES, WITH SPECIAL REFERENCE TO MAHARAJ BADA, GWALIOR

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M Arch II year

5.3 ARCHECTURAL CHARACTER

5.3.1 BUILT- UP AND OPEN SPACES

Comparatively the built form is more in the street, than the surrounding areas which are of residential area. Buildings in this area are comparatively higher than the surrounding area. Which shows the importance of the street. Buildings are rich in character and rich in details. The material is also very impressive showing the importance of the area.

Number of building are more but the size wise they are smaller than the surrounding area. Like Maharaj Bada square. This street is wider in comparison with the built form. Open spaces is not available along the street road area utilized in parking shows the less open space along the street.

5.3.2 QUALITY OF ENCLOSURE AND COLOUR

Street width vary from 40' to 60' which present full enclosure, it shows good quality of physical enclosure. Visually the street having very narrow punctures which are closed with doorways, provide continuous and intact edge of enclosure. Threshold enclosure is felt while standing in the junction of three street.

Most of the buildings are made of yellow sand stone and maintain the original sand stone (yellow) colour, which gives the harmonious effect. White colour has been used in old and new constructed buildings. Overall colour treatment of the street buildings shows, there is no specific colour scheme has been conceived for the street.

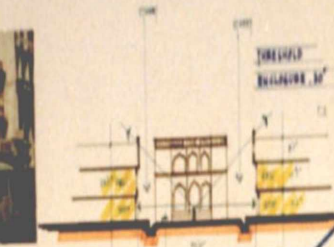
5.3.3 STUDY OF FAÇADE, TEXTURE AND SKY LINE

As per sheet Number

QUALITY OF ENCLOSURE & COLOUR



RESIDENTIAL AND COMMERCIAL BUILDINGS MADE OF YELLOW SAND STONE, BUT PAINTED WITH WHITE. SOME RECENTLY CONSTRUCTED BUILDINGS ARE ALSO PAINTED WITH WHITE.

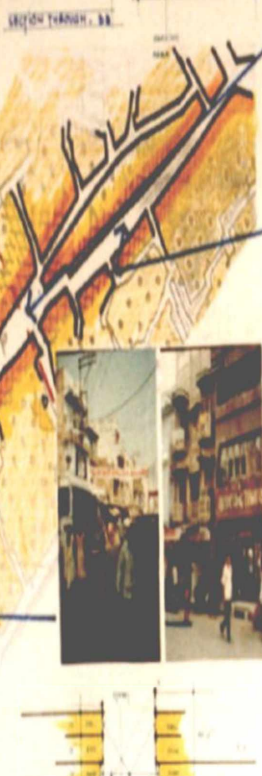


ENCLOSURE:

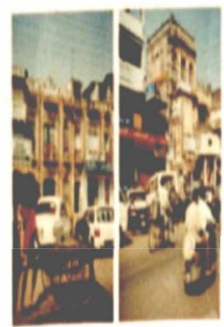
- STREET WIDTH VARY FROM 40' TO 45' WHICH PRESENT FULL ENCLOSURE. IT SHOWS GOOD QUALITY OF PHYSICAL ENCLOSURE.
- USUALLY THE STREET HAVING VERY NARROW PUNCTURES WHICH ARE COVERED WITH DOORWAYS PROVIDE CONTINUOUS AND INTACT EDGE OF ENCLOSURE.
- THRESHOLD ENCLOSURE IS FEEL WHILE STANDING IN THE JUNCTION OF THREE STREET.



YELLOW SAND STONE MADE BUILDINGS (MAHARAJ BADA).



RICHLY CARVED BUILDING MADE OF YELLOW SAND STONE, MAINTAINING IN ORIGINAL STONE COLOUR. FEW BUILDINGS ARE TREATED WITH DIFFERENT COLOUR STONE, LIKE BEIGE OR CREAM YELLOW ETC.



COLOUR:

- MOST OF THE BUILDINGS ARE MADE OF YELLOW SAND STONE AND MAINTAIN IN ORIGINAL SAND STONE COLOUR.
- YELLOW SAND STONE EXTENSIVELY USES WHICH GIVE THE HARMONIOUS EFFECT.
- WHITE COLOUR HAS BEEN USED IN OLD BUILDINGS AND IN RECENTLY CONSTRUCTED BUILDINGS.
- FEW BUILDINGS ARE TREATED WITH DIFFERENT COLOUR STONE (LIKE BEIGE OR CREAM YELLOW ETC.).
- COLOR TREATMENT OF THE STREET BUILDINGS SHOWS THERE IS NO SPECIAL COLOR SCHEME HAS BEEN DEVELOPED FOR THE STREET.

SARAFI BAZAR ROAD



ARCHITECTURAL CHARACTER OF CIVIC SPACES, WITH SPECIAL REFERENCE TO MAHARAJ BADA, GWALIOR

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M Arch Year 1

Study & Analysis

ARCHITECTURAL CHARACTER OF CIVIC SPACES, WITH SPECIAL REFERENCE TO MAHARAJ BADA, GWALIOR

AYYING KUMAR
With the

SARAPA BAZAR
ROAD



Architectural element
like window and door
are highlighted in the
map to show the
variety of facade.

The character is changed
in the change into the
old treatment, there is
no change in facade
treatment and only
has the form of the
architectural element

The original facade for
ward is visible and
on the corner has
been removed and
the new treatment
seen in the facade.

There is no corner in
ward and facade
is changed the
form of the
corner

One of the new
ward the street
the overall look
of the street

Architectural character
of the area. The
corner of the
area is also
seen in the
facade.

Study & Analysis

Facade:

- Backward the facade is
seen on the street
- Building with facade
is highlighted in the
map to show the
variety of facade.
- Architectural element
like window and door
are highlighted in the
map to show the
variety of facade.
- The character is changed
in the change into the
old treatment, there is
no change in facade
treatment and only
has the form of the
architectural element
- The original facade for
ward is visible and
on the corner has
been removed and
the new treatment
seen in the facade.
- There is no corner in
ward and facade
is changed the
form of the
corner
- One of the new
ward the street
the overall look
of the street
- Architectural character
of the area. The
corner of the
area is also
seen in the
facade.

- Entrance with cups arches
 - Domes, minarates in religious buildings
 - Sand stone extensively used in the street buildings,
- Street present full and threshold enclosure which shows the good quality of physical enclosure.
 - Yellow sand stone used in most of the buildings and maintain in original colour, few are treated in white, which shows the mixed kind of colour scheme on the street.
 - There is no landscaping has been done in the area, which generating very dry kind of environment.

CHAPTER
STUDY AT HIGH COURT ROAD
ANALYSIS

STUDY AT HIGH COURT ROAD AND ANALYSIS**6.1 STUDY OF AREA****6.1.1 LOCATION**

High court road situated in the area known as Jayendraganj square in Lashkar area of Gwalior city. It is a important civic street offer various activity space like Govt. institution, business offices, market, religions places, and educational institution etc. This street also connected with other major market street like Dal Bazar, Lohiya Bazar and jayendraganj road etc.

6.1.2 MAJOR LINKAGES AND APPROACH

Highcourt road very well connected with the city by number of roads. These roads functioning within the city core and very well linked to maharaj bada civic square and various markets and railway station. Maharaj Bada civic square and jayendraganj square provide major inflow of traffic in high court road.

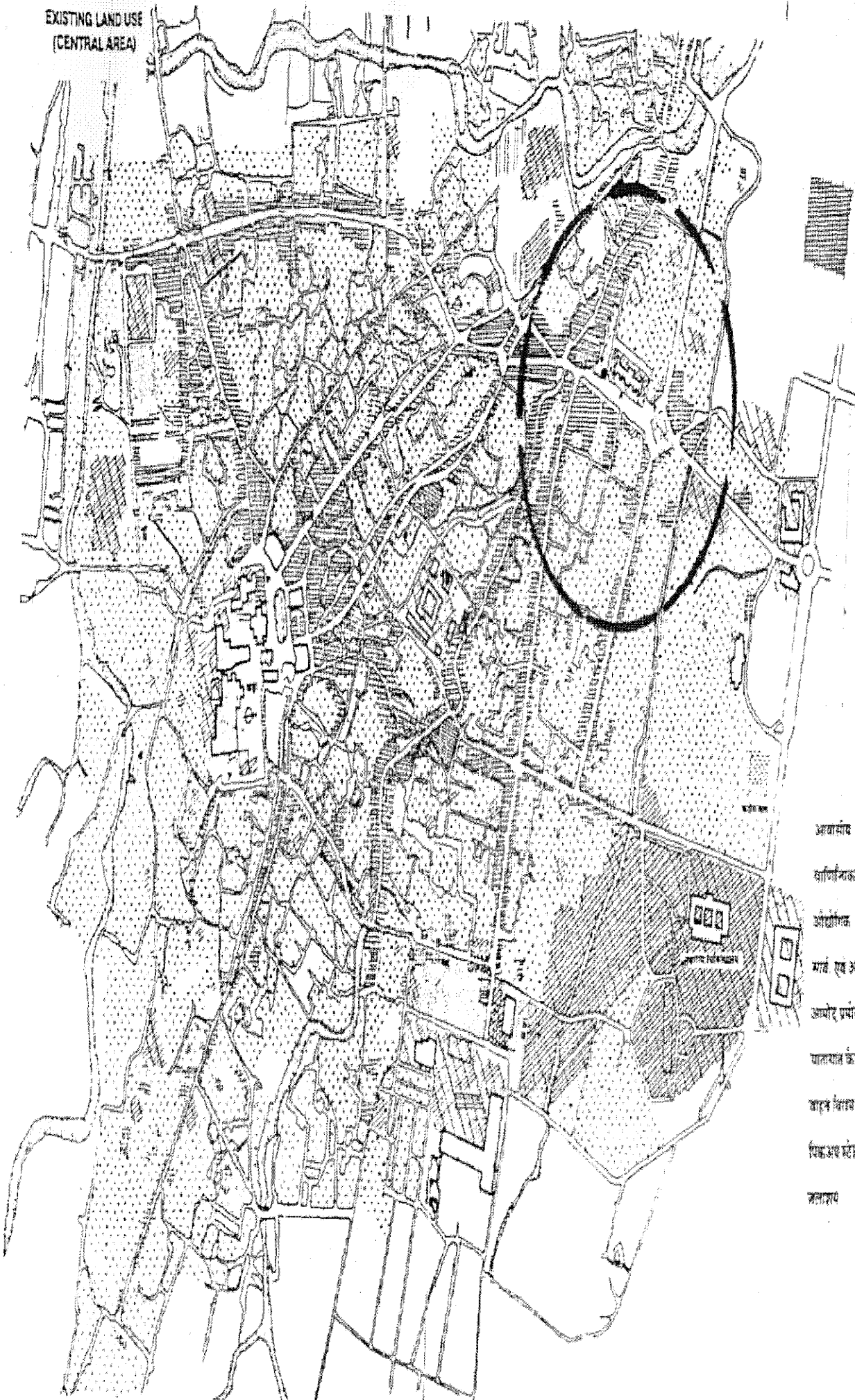
High court road very well approach able form all surrounding residential areas by different major and minor roads/streets. These approaches can be categories in three categories first is primary approach. 2nd is secondary approach and third is pedestrian approach.










GWALIOR

EXISTING LAND USE
(CENTRAL AREA)

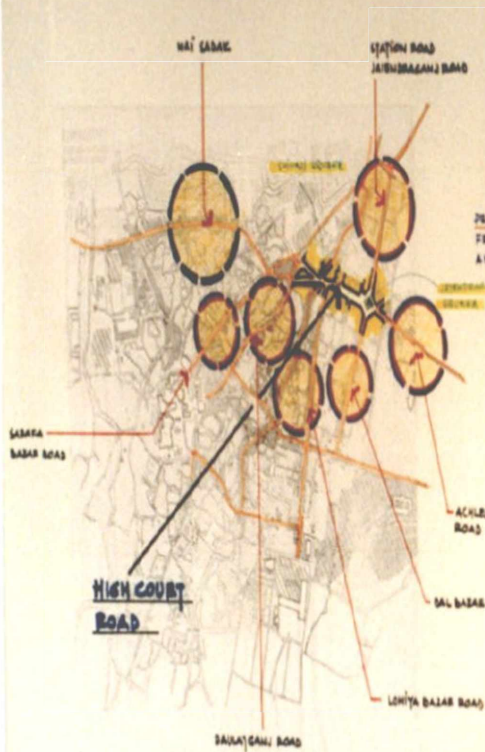
ग्वालियर

वर्तमान भूमि उपयोग
(मध्य क्षेत्र)



- | | | |
|------------------------------|---|----------------------|
| आवासीय |  | RESIDENTIAL |
| वाणिज्यिक |  | COMMERCIAL |
| औद्योगिक |  | INDUSTRIAL |
| सार्वजनिक एवं अर्ध-सार्वजनिक |  | PUBLIC & SEMI-PUBLIC |
| अभ्युत्थन प्रसार |  | RECREATIONAL |
| यातायात केंद्र |  | TERMINAL CENTRE |
| जाह्निक विरासत स्थल |  | PARKING |
| पिकअप स्टेशन |  | PICK UP STATIONS |
| जलाशय |  | WATER BODIES |

MAJOR LINKAGES



HIGH COURT ROAD VERY WELL CONNECTED WITH THE CITY BY NO. OF MAJOR ROADS. THESE ROADS ARE, SABARA BAZAR ROAD, DALUATSANI ROAD, LOHIYA BAZAR ROAD, ACHLESWAR ROAD AND STATION ROAD. JAYENDRASANI AND SHIVAJI SQUARE PROVIDE MAJOR INFLOW OF TRAFFIC IN HIGH COURT ROAD AND ACTING AS A MAJOR CONNECTING NODE FOR VARIOUS ROADS.

ARCHITECTURAL CHARACTER OF CIVIC SPACES, WITH SPECIAL REFERENCE TO MAHARAJ BADA, GWALIOR

APPROACH TO HIGH COURT ROAD



PRIMARY APPROACH FROM MAHARAJ BADA

HIGH COURT ROAD IS VERY WELL APPROACHABLE FROM ALL SURROUNDING AREAS BY DIFFERENT MAJOR AND MINOR ROADS / STREETS

SECONDARY APPROACH TO HIGH COURT FROM LOHIYA BAZAR ROAD

Study & Analysis

- HIGH COURT ROAD VERY WELL CONNECTED WITH THE CITY BY NUMBER OF ROADS.
- HIGH COURT ROAD FUNCTIONING WITHIN THE CITY CORE AND VERY WELL LINKED TO MAHARAJ BADA CIVIC SQUARE AND VARIOUS MARKET STREET AND STATION.
- MAHARAJ BADA CIVIC SQUARE AND JAYENDRASANI SQUARE PROVIDE MAJOR INFLOW OF TRAFFIC IN HIGH COURT ROAD.

HIGH COURT ROAD :

- THIS ROAD VERY WELL APP. REACHABLE FROM ALL SIDE. SURROUNDING RESIDENTIAL AREAS BY DIFFERENT MAJOR AND MINOR ROADS / STREETS.
- PEOPLE APPROACH THE STREET FROM DIFFERENT DIRECTIONS THESE APPROACHES CAN BE CATEGORISED IN THREE CAT. SERIES.
 - PRIMARY APPROACH THESE ARE THE MAJOR AND WIDER ROAD LIKE STATION ROAD, SABARA ROAD WITH MIXED USE BUILDINGS.
 - SECONDARY APPROACH THESE ARE THE LESS WIDER ROAD WITH LESS BUILDINGS.
 - RESIDENTIAL APPROACH THESE ARE THE NEIGHBOURHOOD STREETS THROUGH WHICH PEOPLE CAN NOT PASS TO THE CITY CENTRAL AREA WITHOUT USING THE

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M.Arch II year

6.1.3 LAND USE

Most of the surrounding area of this street is residential areas, with strip commercial development along the street, shows the mixed land use in the high court area.

6.1.4 CIRCULATION PATTERN

High court road is a another major civic square in the central area of city Gwallior. Unorganized and uncontrolled parking of vehicles provided on roads space is major problem in circulation system, this has reduced traffic speed and road efficiency. Informal commercial activity an road space is another major hindrance in easy circulation system.

There is no efficient traffic system which can segregate the pedestrian and vehicular traffic. Intermixing of traffic cause traffic jams and bottlenecks. Entry of stray animal on the street create major obstruction in circulation system.

6.1.5 PARKING AREAS

As per sheet number

6.1.6 ACTIVITY PATTERN

As per sheet number

Study & Analysis

• **ENCOURAGEMENT OF ROAD TRAFFIC**
IN READING CROSS TRAFFIC JAMS
AND BOTTLENECKS

• **UNCONGESTED AND UNCONGESTED**
ROADS OF VARIOUS PHASES

• **REASONABLE IN CIRCULATION** ST
ON ROAD TRAFFIC IS MADE TO

• **PROVIDE** THE BEST OF ROAD TRAFFIC
AND ROAD TRAFFIC

• **UNIFORM** CONVERSION ACT
AND OTHER MAJOR KINDS IN

• **FAST** CIRCULATION SYSTEM
THERE IS NO BOTTLENECK

• **THE** SYSTEM WHICH CAN BE
BEARS THE PROBLEM AND

• **UNIFORM** TRAFFIC

• **ENTER** MIXING OF TRAFFIC
CROSSING AND NOT MIXING

• **FREE** TRAFFIC CIRCULATION AND
TRAFFIC POTENTIALITY

• **LEADS** TO REDUCE TRAFFIC
AND CIRCULATION PROBLEMS

• **ENTER** MIXING OF TRAFFIC
AND TRAFFIC TO BECOME TRAFFIC

• **ENTER** OF TRAFFIC SIGNALS
AND CIRCULATION IN CROSS

• **ENTER** OF TRAFFIC SIGNALS
AND CIRCULATION

• **ENTER** OF TRAFFIC SIGNALS
AND CIRCULATION

• **ENTER** OF TRAFFIC SIGNALS
AND CIRCULATION

• **ENTER** OF TRAFFIC SIGNALS
AND CIRCULATION

• **ENTER** OF TRAFFIC SIGNALS
AND CIRCULATION

• **ENTER** OF TRAFFIC SIGNALS
AND CIRCULATION

• **ENTER** OF TRAFFIC SIGNALS
AND CIRCULATION



• **UNCONGESTED** TRAFFIC OF
TRAFFIC SIGNALS ON CROSS
TRAFFIC IN CROSS TRAFFIC
THIS HAS REDUCED TRAFFIC
VEHICLES IN CROSS TRAFFIC
VEHICLES IN CROSS TRAFFIC
TRAFFIC AND CROSS TRAFFIC
TRAFFIC AND CROSS TRAFFIC



• **MIXING** OF TRAFFIC
AND CIRCULATION PROBLEMS
AND TRAFFIC TO BECOME TRAFFIC
AND TRAFFIC TO BECOME TRAFFIC
AND TRAFFIC TO BECOME TRAFFIC
AND TRAFFIC TO BECOME TRAFFIC



• **ENTER** OF TRAFFIC SIGNALS
AND CIRCULATION

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March 8 year

CIRCULATION PATTERN

• **UNCONGESTED** TRAFFIC
AND TRAFFIC TO BECOME TRAFFIC
AND TRAFFIC TO BECOME TRAFFIC
AND TRAFFIC TO BECOME TRAFFIC
AND TRAFFIC TO BECOME TRAFFIC



• **UNCONGESTED** TRAFFIC
AND TRAFFIC TO BECOME TRAFFIC
AND TRAFFIC TO BECOME TRAFFIC
AND TRAFFIC TO BECOME TRAFFIC
AND TRAFFIC TO BECOME TRAFFIC



• **UNCONGESTED** TRAFFIC
AND TRAFFIC TO BECOME TRAFFIC
AND TRAFFIC TO BECOME TRAFFIC
AND TRAFFIC TO BECOME TRAFFIC
AND TRAFFIC TO BECOME TRAFFIC



• **MIXING** OF TRAFFIC
AND CIRCULATION PROBLEMS
AND TRAFFIC TO BECOME TRAFFIC
AND TRAFFIC TO BECOME TRAFFIC
AND TRAFFIC TO BECOME TRAFFIC
AND TRAFFIC TO BECOME TRAFFIC



• **UNCONGESTED** TRAFFIC
AND TRAFFIC TO BECOME TRAFFIC
AND TRAFFIC TO BECOME TRAFFIC
AND TRAFFIC TO BECOME TRAFFIC
AND TRAFFIC TO BECOME TRAFFIC

STUDY OF PARKING SPACE IN HIGH COURT ROAD AREA



AREA DEMARCATED BY THE AUTHORITY, INTERVENTION OF SHOPS AND ALONG THE MAJOR TRAFFIC CIRCULATION ROUTE, CREATE PROBLEMS IN PEDESTRIAN MOVEMENT.



PARKING PROVIDED IN FRONT OF SHOPS, CREATE PROBLEM IN PEDESTRIAN MOVEMENT.



THERE IS NO PARKING SPACE AVAILABLE FOR SLOW MOVING VEHICLES, PARKED IN UNSUITABLE LOCATION.



MOST OF THE VEHICLES ARE PARKED IN HIGH COURT BUILDING PREMISES, ENVELOPING THE LANDSCAPE AREA OF THE PREMISES, SHOWS INSUFFICIENT SPACE FOR PARKING OF THE ACTUAL REQUIREMENT.



UNCONTROLLED VEHICLE PARKING ALONG THE MAJOR CIRCULATION ROUTE, TRAFFIC ON HIGH COURT ROAD.



UNCONTROLLED PARKING IN HIGH COURT BUILDING AREA CREATE OVERCROWDING IN DAY TIME WHEN INTERNAL COMM. ACTIVITIES ARE ACTIVE.



UNCONTROLLED MIXED VEHICLES PARKING NEAR PUMP HOUSE, SHOWS THE ENCROACHMENT ON OPEN SPACE IN PARKING.



PARKING AREA IS DEMARCATED ON ROAD SPACE SHOWS THE NON AVAILABILITY OF PARKING SPACE.

ARCHITECTURAL CHARACTER OF CIVIC SPACES, WITH SPECIAL REFERENCE TO MAHARAJ BADA, GWALIOR

Study & Analysis

- THE ANALYSIS OF THE PARKING CONDITIONS, THE SPACE AVAILABLE AT PROVIDED PARKING SPACES, REVEALS THAT MOST OF THE AREAS HARDLY HAVE SPACE FOR UNCONTROLLED PARKING OF THE ACTUAL REQUIREMENT.
- NO PROPER SEPARATION OF PARKING LEADS TO MIXED PARKING.
- PEDESTRIAN MOVEMENT SPACE ALONG THE STREET UTILIZED IN PARKING, SHOWS UNCONTROLLED AND LESS PARKING SPACE IN THE HIGH COURT AREA.
- PARKING FOR SLOW MOVING VEHICLE IS ALMOST ABSENT, SO THAT VEHICLES PARKED IN UNSUITABLE LOCATIONS.
- UNCONTROLLED PARKING PROVIDED ON ROAD SPACE OBSTRUCTS FREE FLOW OF TRAFFIC AND REDUCES EFFICIENCY OF THE ROAD.
- NO PROPER SPACE AVAILABLE AWAY FROM THE ACTUAL MOVEMENT SPACE OF THE ROAD SO ROAD WIDTH BEING USED FOR PARKING WHICH HAS REDUCED THE TRAFFIC MOBILITY AND CAUSE TRAFFIC JAM AND SLOW DOWN VEHICLES.

BLUE HATCHED PARKING
 RED HATCHED PARKING

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 M Arch II year

ACTIVITY PATTERN



INFORMAL COMMERCIAL ACTIVITY SPACE ALONG THE STREET NEAR THE HIGH COURT BUILDING



THE ROYAL DEPT. HIGH COURT BUILDING IS GIVING THE PEOPLE AND SERVICE MAHA KIRAN ACTIVITY AREA



STREET FRONT SPECIALIZED, FORMAL COMMERCIAL ACTIVITY SPACE OVER BUSES AND STATIONARY



SCATTERED BUSINESS OFFICES FUNCTIONING IN THE AREA LIKE BANK, PRIVATE OFFICES, HOTELS ETC. CREATE BISTERSHIP OF THE VISITORS



STREET AND OPEN EDUCATIONAL ACTIVITY SPACE
A GOVT. MUSIC ECONOMY BUILDING ALONG THE STREET



ANOTHER RELIGIOUS ACTIVITY SPACE IN THE AREA ACTIVE IN MORNING AND EVENING HOURS



GREEN SPACE AROUND ROYAL DEPTS. USED AS A RECREATIONAL CENTER



ASBA OPEN AREA USED AS ACTIVITY SPACE

ARCHITECTURAL CHARACTER OF CIVIC SPACES, WITH SPECIAL REFERENCE TO MAHARAJ BADA, GWALIOR

Study & Analysis

- STREET SERVING MAJOR CIVIC AND RELIGIOUS ACTIVITIES OF THE CITY. RELIGIOUS SPACES ARE ACTIVE IN EVENING AND MORNING AND CIVIC ACTIVITY AREA LIKE HIGH COURT ACTIVE IN DAY TIME.
- SCATTERED BUSINESS OFFICES FUNCTIONING IN THIS AREA LIKE BANK, PRIVATE OFFICES, HOTELS ETC. CREATE INTEREST OF THE VISITORS.
- THIS AREA HAS GOT THE MAXIMUM OPEN SPACE IN LAHAR AREA ALONG THE STREET. THIS OPEN SPACE USED AS A LANDSCAPE AREA.
- THE ANOTHER DOMINANT ACTIVITY IS FORMAL COMMERCIAL ACTIVITY. THIS STREET IS KNOWN FOR SPECIALIZED MARKET STALLS OR BUSES AND STATIONARY.
- UNCONTROLLED INFORMAL COMMERCIAL ACTIVITY IS ANOTHER DOMINANT ACTIVITY OF STREET WHICH ARE MAKING A BAD ENVIRONMENT.
- IN ALL THESE BUILDINGS & SMALL RESIDENTIAL DOMESTIC, THE CIVIC ACTIVITIES ALL CAN BE SEEN WHICH INDICATE THE LEVEL OF UNCONTROLLED GROWTH.

- EDUCATIONAL BUILDING
- HOTEL
- MUSEUM
- TEMPLE
- INFORMAL COMMERCIAL ACTIVITY AREA
- GREEN SPACE
- PARK
- COMMERCIAL ACTIVITY AREA
- RESIDENTIAL AREA

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6.2 ARCHITECTURAL CHARACTER

6.2.1 BUILT- UP AND OPEN SPACES

Comparatively the built form is less in this area, than the surrounding areas which are more of the residential area. Building in this area are comparatively higher than the surrounding areas which shows the importance of the area. Few buildings including high court building is rich in character and rich in details. The material is also very impressive showing the importance of the area.

Number of buildings are less the size wise few building are bigger than the surrounding areas. Open spaces are provided in high court building area only, high court building open space is most successful, other spaces are not active.

6.2.2 QUALITY OF ENCLOSURE AND COLUMN

As per sheet number

6.2.3 STUDY OF FACADE , TEXTURE AND SKY LINE

As per sheet number

6.2.4 STUDY OF LANDSCAPING AND FOCAL POINT

As per sheet number

6.2.5 VARIOUS EXTERIOR DETAILS

In the high court road, or Jayendraganj square, the number of exterior element or details are used which form the character of the area. Sculpture, traffic sign, various other signs, statue, fountain, lighting fixture, sign boards, railing gateway concrete benches, traffic diverted etc. The original space for various sign boards is missing and shows lack of sign control in the area.

6.2.6 ARCHITECTURAL ELEMENTS

QUALITY OF ENCLOSURE & COLOUR



Study & Analysis

ENCLOSURE :

- STREET WITH VARY FORM OF TOWN WHICH PRESENTS BUILT AND UNBUILT, WITH ENCLOSURE, BUT CERTAINLY STREET PRESENT A STRONG FEEL OF ENCLOSURE WHEN ONE IS MOVING ON ROAD
- TYPICALLY THE HIGH COURT BUILDING AND OTHER RESIDENTIAL / COMMERCIAL BUILDINGS FORM THE BONES OF ENCLOSURE.
- AT THE JAYNAGAR GUNJ, QUALITY OF ENCLOSURE MAINTAIN BUT WIDE ROAD ARE BREAKING THE ENCLOSURE. THREE BUNDLES ARE DAL BAZAR, JAYNAGAR AND ACHARYA ROAD
- USE OF UPPER FLOOR OF THE OFFICE AREA AS AN ALTERNATIVE LAND USE IS CONSIDERABLY BENEFICIAL FOR PENETRATING THE ENCLOSURE

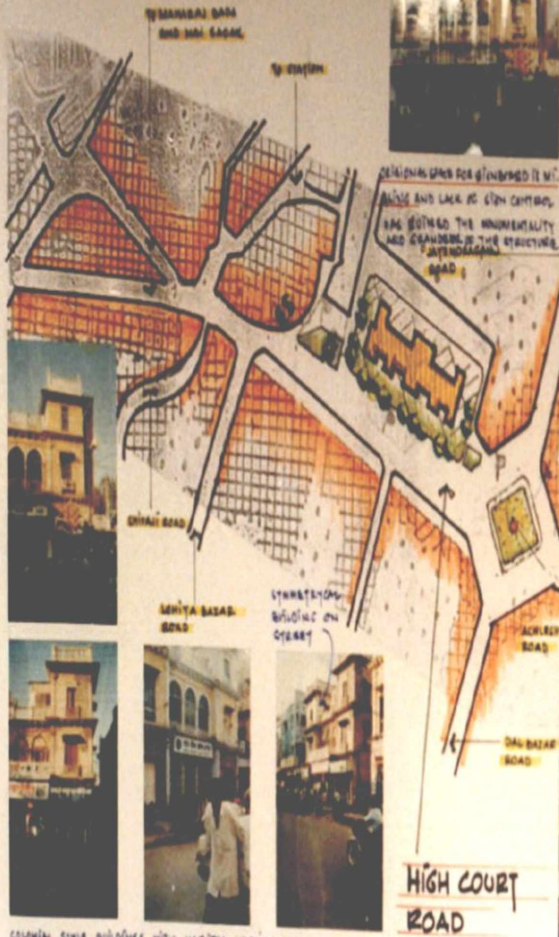
COLOUR :

- MOST OF THE BUILDINGS AND STALLS ARE PAINTED IN CREAM COLOR, WHICH ARE VERY SIMILAR TO THE STREET LIGHTS
- RESIDENTIAL AND COMMERCIAL BUILDINGS OF THE STREET ARE PAINTED IN DIFFERENT COLOURS FROM THE PENETRATED SIDE OF ENCLOSURE
- CONCRETE AND BRICK BUILDINGS OF THE STREET PAINTED IN DIFFERENT COLOUR FROM THE PENETRATED SIDE OF ENCLOSURE

ARCHITECTURAL CHARACTER OF CIVIC SPACES, WITH SPECIAL REFERENCE TO MAHARAJ BADA, GWALIOR

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M Arch 8 year

FACADE



TO GET CONTACT, THE CHARACTER IS CHANGE DUE TO THE CHANGE INTO THE FACADE TREATMENT. THERE IS NO CONTINUITY IN FACADE TREATMENT AND WHICH HALVES THE TOTAL EFFECT OF THE EDGES.



DOMINATING HIERARCHY BUILDINGS WITH TYPICAL COLONIAL ARCH FACADE ARE BEAUTIFUL COMPOSITION OF HORIZONTAL & VERTICAL LINES. THESE WINDOWS IS SIMPLY RECTANGULAR OPENINGS. MAIN ENTRANCE IS CROWNED BY TRIUMPHANT AND HAVING MAINIE CORNICE WHICH GIVES THE MONUMENTAL LOOK.



MARJAL STYLE BUILDINGS WITH RICH ARCHITECTURAL ELEMENTS LIKE CARVED BALCONY WITH SMALL SPANDIL & CENTRAL FRONTAL PROJECTION. JHARKHAN SUPPORTED IN MARJAL ST.

COLONIAL STYLE BUILDINGS WITH VARIOUS ARCHITECTURAL ELEMENTS LIKE CARVED BALCONY WITH ARCHED CORNICES, CARVED BALCONY ETC. HORIZONTAL AND VERTICAL PROJECTION USED TO CREATE SYMMETRY IN BUILDING FACADE AND STRENGTH THE HORIZONTALITY AND VERTICALITY IN BUILDING FACADE.

ARCHITECTURAL CHARACTER OF CIVIC SPACES, WITH SPECIAL REFERENCE TO MAHARAJ BADA, GWALIOR

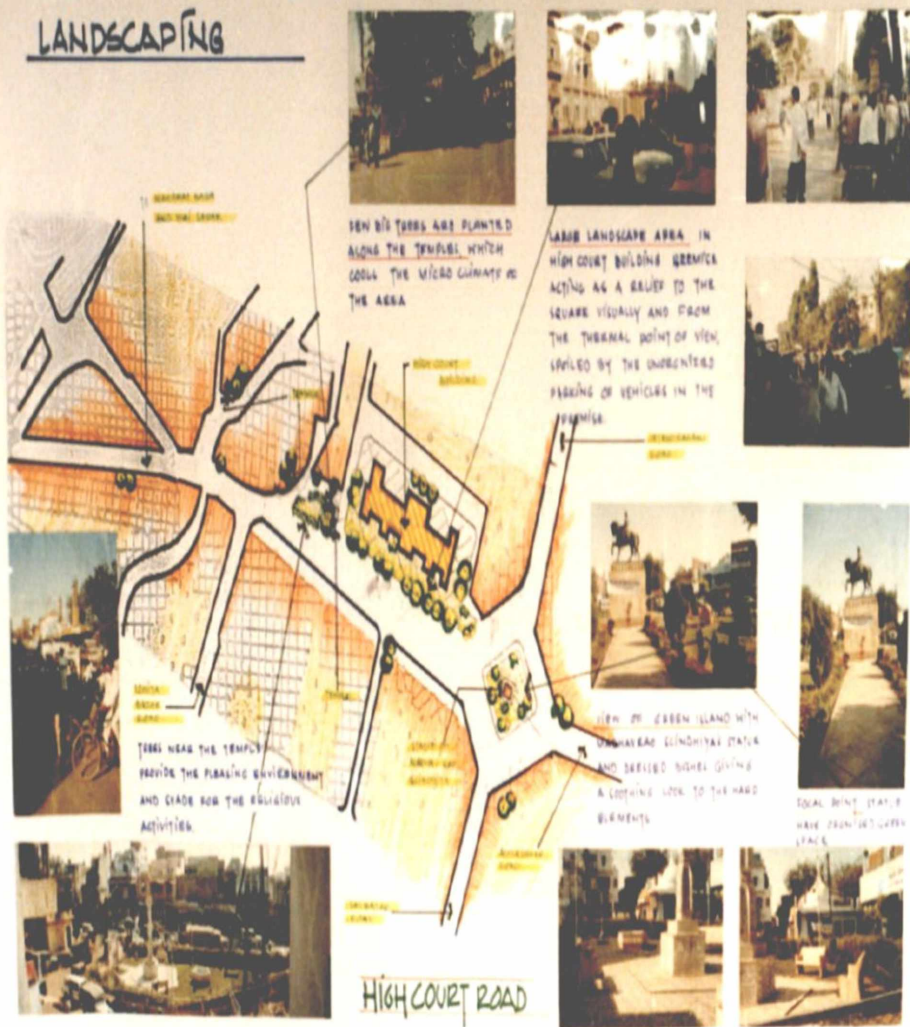
Study & Analysis

FACADE

- BASICALLY TWO TYPES OF BUILDINGS ARE PROMINENT ON THE STREET.
- BUILDINGS WITH HINDU PALACIAL STYLE BUILDINGS.
- BUILDINGS WITH COLONIAL STYLE BUILDINGS.
- YELLOW SAND STONE AND WHITE ARE THE DOMINATING COLOR OF THE STREET BUILDINGS.
- HINDU PALACIAL STYLE BUILDINGS ARE USUALLY MADE OF YELLOW SAND STONE AND COMPOSITION IS
 - CARVED PARAPET WALL WITH SMALL SPANDIL & CENTRAL FRONTS
 - BALCONY WITH CARVED BALCONY
 - JHARKHAN SUPPORTED IN BRACKETS
 - ENTRANCE SHAPED BY THE CARVED SEMICIRCULAR ARCH
- THE REGIONAL SPACE FOR CIVIC BOARD IS MISSING AND LACK OF OPEN SPACE CENTRAL AND GIVING THE NEIGHBORHOOD OF THE CITY.
- LINES OF THE FACADE BUILDINGS ARE SIMPLY RECTANGULAR OPENINGS.
- **Textbook:** ARCHITECTURE OF INDIA
- **Reference:** ARCHITECTURE OF INDIA

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M.Arch II year

LANDSCAPING



HIGH COURT ROAD

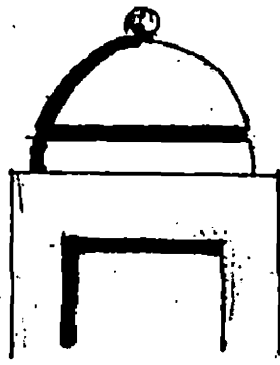
VIEW OF THE GREEN ISLAND WITH VARIOUS ELEMENT FROM ALONG THE STREET IS A BELIEF TO THE AREA VISUALLY AND THE THERMAL POINT OF VIEW

ARCHITECTURAL CHARACTER OF CIVIC SPACES, WITH SPECIAL REFERENCE TO MAHARAJ BADA, GWALIOR

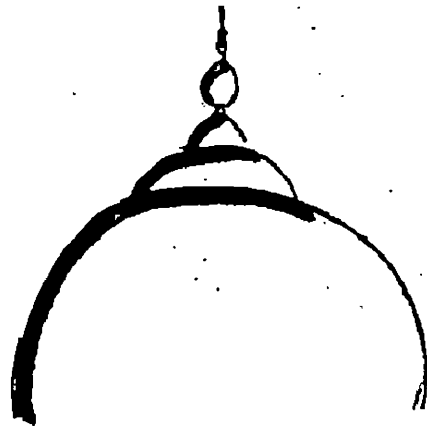
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Study & Analysis

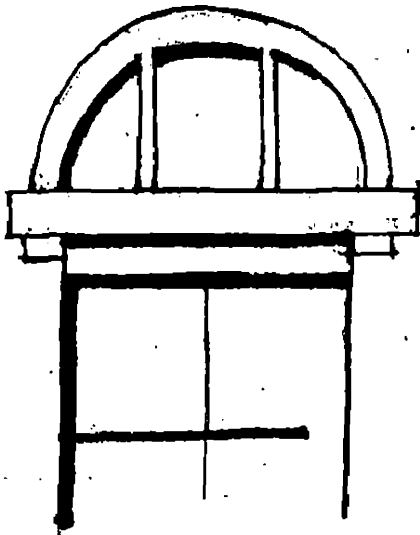
- TWO ISLANDS HAVE BEEN DESIGNED AS BORNAL PARK AND THE GREEN UNAPPROACHABLE
 - CONCRETE BENCHES HAVE BEEN INSTALLED TO ENJOY THE GREEN BAY OF THE ISLAND
 - ONLY THE ISLAND FOR THE NAME OF LANDSCAPING IS THERE
 - NO TREES ON THE SIDE OF ROAD BACKY LEAST FEN
 - FEN TREES ARE PLANTED ALONG THE TEMPLES WHICH COOL THE MICRO CLIMATE OF THE AREA
 - LARGE OPEN AREA NOT EARLY UTILIZED IN LANDSCAPING OF THE HIGH COURT BLDG
 - LACK OF WATER WORKS
 - DEEPLY BUSHES PLANTED IN THE SQUARES AND ALONG THE SIDE OF ROAD AND TAKE AWAY ITS BENEFIT IN LANDSCAPING
 - FOR THE BENCHES AND BENCHES ARE PLANTED ALONG THE SIDE OF ROAD
- LANDSCAPING**
- TREES NEAR THE TEMPLES PROVIDE THE PLEASING ENVIRONMENT AND SHADE FOR THE RELIGIOUS ACTIVITIES
 - VIEW OF GREEN ISLAND WITH UPADEVADEVA STATUE AND SHELLED SQUARE GIVING A LOOKING UPON TO THE HARD SURFACES
 - SPECIAL ZONE
 - DEEPLY BUSHES SHOULD PLANTED ALONG THE SIDE OF ROAD AND TAKE AWAY ITS BENEFIT IN LANDSCAPING SCHEME



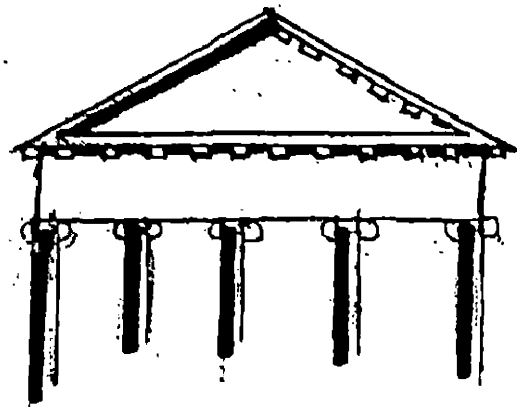
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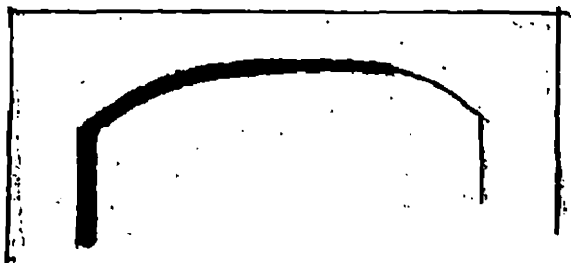
DOME
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DOOR OPENING



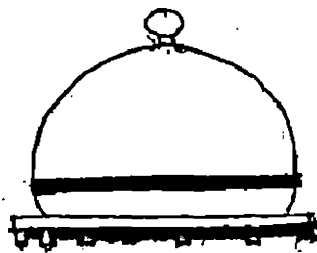
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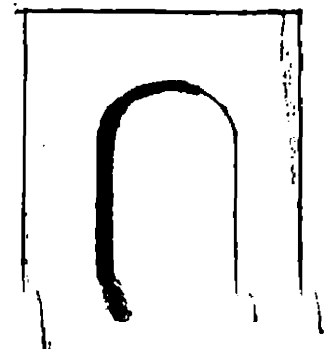
ENTRANCE ARCH

• HIGH COURT
ROAD

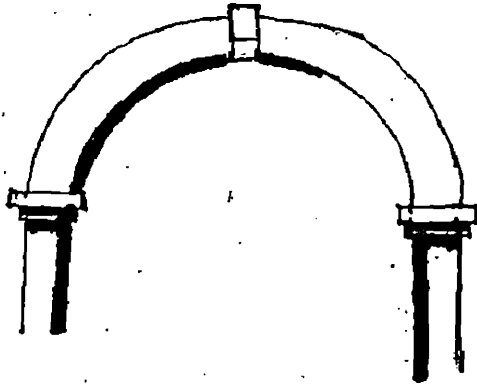
• ARCHITECTURAL
ELEMENTS



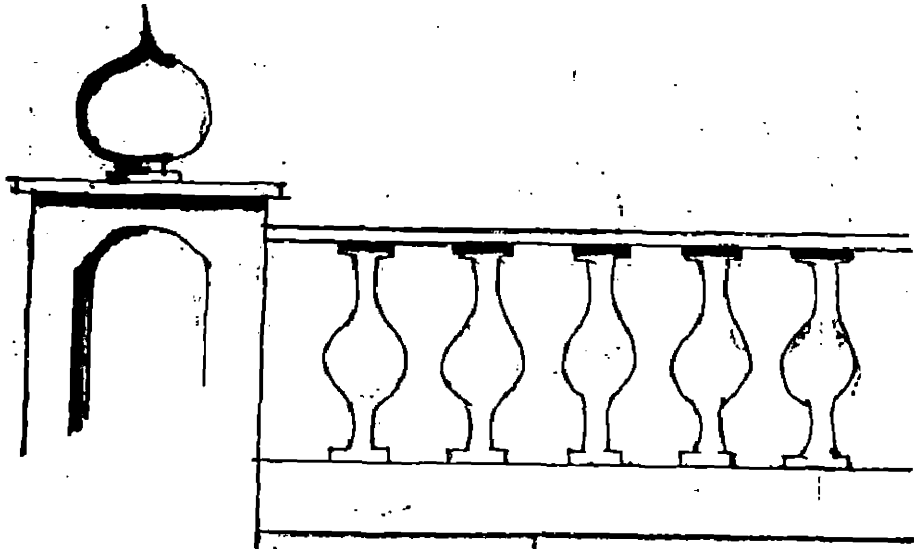
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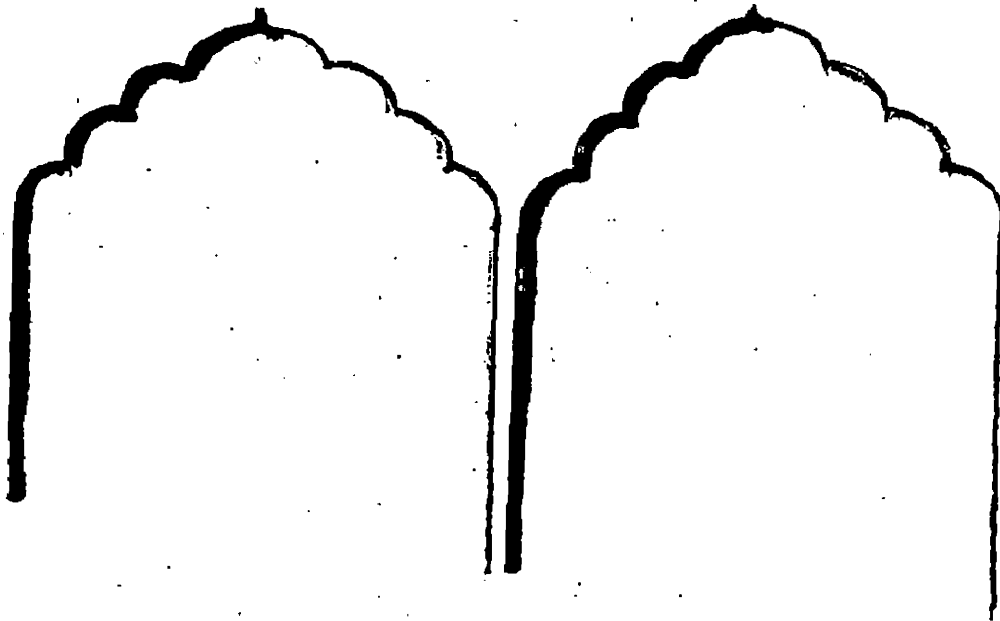
ARCH OPENING



WINDOW ARCH
OPENING



PARAPET
WALL



CUSP
ARCH
OPENING

- HIGH COURT
ROAD

- ARCHITECTURAL
ELEMENTS

6.3 INFERENCES FROM CASE STUDY

- Jayendragani square is another civic square in central area of city Gwalior, which provided space for various civic activities.
- Area is very well connected and approachable from all surrounding area by different major and minor roads as streets.
- Encroachment of road space in parking cause traffic jams and bottlenecks. Internal commercial activity is major obstruction in circulation systems.
- There is no efficient traffic system which can segregate the pedestrian and vehicular traffic.
- Entry of stray animal create major obstruction in circulation system. Inter mixing of pedestrian, slow moving and fast moving traffic adversely affecting traffic circulation and leading to serious traffic and circulation problems.
- No proper space available away from the actual movement space of the road so road width being used for parking which has reduced the traffic mobility and causes traffic jams and bottlenecks.
- No proper control on segregation of parking which leads to mixed parking.
- Parking for slow moving vehicles is almost absent. So that vehicles parked in undesirable locations.
- Unwanted informal commercial activity of another dominating activity of the square which is making a bad environment.
- Two types of building are dominant on the street .
 - Building with Hindu palatial style.
 - Building with colonial style.

- Hindu palacial style buildings are mostly made of yellow sand stone and composition of
 - Carved parapet wall with small domical and conical features.
 - Balcony with carved railings
 - Jharokash supported brackets.
 - Entrance emphasised by the carved semicircular arches.
- The space for signboards is mixing and lack of control on sign board, advertising panels, hoardings has ruined the monumentality of the structures.
- Yellow sand stone extensively used in buildings.
- Quality of enclosure is quite good, most of the square area shows the full and threshold enclosure or 1:1 and 1:3 height and distance ratio.
- Pale cream is the dominating colour of the square.
- Colour treatment of the square buildings shows, there is no specific colour scheme has been conceived for the square.
- Sufficient open space treated with Ashokan trees, sculpture, statue, fountain, dressed bushes, concrete benches, lighting fixtures, stone paving, grass covers as landscape area.

CHAPTER - 7

**COMPERATIVE STUDY OF VARIOUS
CIVIC SPACES OF GWALIOR**

COMPARATIVE STUDY OF VARIOUS CIVIC SPACES OF GWALIOR

7.1 COMPARATIVE STATEMENT OF ARCHITECTURAL CHARACTER OF CIVIC SPACES WITH RESPECT TO INDIVIDUAL MERITS

S. No.	Ground of judgement	Gwalior Maharaj Bada Square	Gwalior Sarafa Bazar road	Gwalior High Court Road	Remark
1.	Location	Central area and close to residential areas	Central area & close to residential area	Central area & close to residential area	Civic space shall be preferred near the residential area
2.	Scale of establishment (a) Linear (b) C.B.D.	- C.B.D.	Linear -	Linear -	Combination of square. & street linear should be preferred
3.	Land uses (a) Mixed (b) Single	Mixed use -	Mixed use -	Mixed use -	Mixed land use (shall be preferred)
4.	Traffic (a) Vehicular (b) Pedestrian	Heterogeneous	Vehicular & pedestrian	Heterogeneous	Systematic approach should be adopted to segregate the pedestrian & vehicular traffic
5.	Public amenities (a) Physical amenities - Toilet - Drinking water - Parking etc. (b) Social amenities - Bank - Post office - Telephone - Cinema - Temple etc.	Lack of physical amenities Sufficient social amenities available	Lack of physical amenities Insufficient amenities	Lack of physical amenities Insufficient amenities	Sufficient or as per Gwalior bye laws and norms physical & social amenities required for comprehensive development of civic areas

S. No.	Ground of judgement	Gwalior Maharaj Bada Square	Gwalior Sarafa Bazar road	Gwalior High Court Road	Remark
6.	Square & chowk, plaza or precinct or street	Civic square	Street market	Street market & civic square	Square provide sufficient open space for the various activities like social, political and religious activities etc.
7.	Arch Control a. Advertisement	No advertisement sign board and hoarding control	No advertisement sign board and hoarding control	No advertisement sign board and hoarding control	There should be a control on advertisement panel, sign board and hoarding.
8.	Scale of space	Streets scale is human but square scale is monumental	Human scale time dimension has changed the scale of street	Scale is monumental	Monumental scale of buildings generate the dominating character of the area & depict the importance of the area
9.	Surface of the buildings & road	The sand stone is the texture of the building surface, few buildings with cream plastered surface. Ground surface partly paved and partly paved with grass	Different texture of the surface of the building but sandstone texture is dominating in the street. Ground is totally paved without green patches	Sandstone is the texture of surfaces of the building with few buildings in different material texture. Ground surface partly paved and partly paved with grass and trees,	Sandstone extensively used in the building. Therefore, sandstone or imitations can be used in further development.
10.	Landscape treatment	Landscape treatment done with - palam trees -Designed lighting fixtures -Doob grass - shrubs -sculpture -fountains -Statue etc. -concrete -benches -chattries etc.	Lack of landscape treatment	Landscape treatment done with -Ashokan trees -cynodon dactylon grass -fountains -sculpture -statue -shrubs -designed lighting fixtures -concrete benches	Typical palm, Ashokan trees, designed lighting fixtures, chattries, dressed bushes, and cynodon dactylon grass shall be preferred for further use in landscape treatment
11.	Skyline and focal point	Skyline is continuously changing after a certain height the sky line is changed with certain focal point building, i.e. town hall, Govt. press building, Victoria market etc.	Skyline is changing, there is no focal point	Skyline is changing, there are focal points like high court building and museum building etc.	Skyline of exiting civic space shall be kept in backdrop while designing the skyline of new civic space.

S. No.	Ground of Judgement	Gwalior Maharaj Bada Square	Gwalior Sarafa Bazar road	Gwalior High Court Road	Remark
12.	Facade	<p>Architectural elements like</p> <ul style="list-style-type: none"> - columns, minar, minarates, domes and mouldings - Continuous fenestration employed to stress the horizontality and verticality in façade 	<p>Architectural element like projected balconies, with brackets, continuous parapet walls and mouldings used to stress the horizontality in structures</p>	<p>No continuous architectural element has been observed in the area which depict the any specific character of façade</p>	<p>Mixed kind of façade character is dominating with</p> <ul style="list-style-type: none"> -circular column -minars -minarates -arches -continuous fenestration -mouldings etc. design of above elements shall be inspired by the designing and detailing of existing one.
13.	Quality of physical enclosure	Square shows minimum and full enclosure	Street present full and threshold enclosure	Square shows the threshold enclosure and full enclosure along the street	For achieving the good quality of enclosure the height and distance ratio should be kept around 1:1 to 1:3
14.	Colour	Pale cream and yellow sandstone colour has been used in all buildings to maintain harmony	There is no specific colour has been used	Most of the buildings are treated in pale cream colour	Pale cream colour extensively used in civic buildings.
15.	Linkages and approach	Square very well linked with other part of the city and very well approachable	Street very well linked with city level civic square and received maximum inflow of traffic	Very well linked and approachable from all parts of the city	Location of the civic area should be designed on the basis of approachability and linkages
16.	Architectural elements	<ul style="list-style-type: none"> - domes -minar -minarates -decorative parapet -pointed arch -semicircular arches - chattries -circular columns - cusp arches - brackets -square columns -doorways etc. 	<ul style="list-style-type: none"> - cups arches -semi circular arches -Brackets -decorative parapet walls -minerates 	<ul style="list-style-type: none"> - Semicircular arches -Brackets -decorative parapet walls - minerates -circular columns etc. 	<ul style="list-style-type: none"> - chattries - domes -minars -minarates -decorative parapet wall - door ways -brackets -circular column -semicircular arches -cusp arches shall be preferred.

S. No.	Ground of judgement	Gwalior Maharaj Bada Square	Gwalior Sarafa Bazar road	Gwalior High Court Road	Remark
17.	Activity pattern	Area provide space various activities like civic religious activities, morning walk eating places informal commercial activity, social political and educational activities.	Street provide space for specialised commercial religious, educational and business activities	Square provide the space for religious civic, educational, and commercial activities	In civic spaces mixed kind of activities should be preferred in new development which are religious activity formal and informal commercial activities educational and business activities but these activity which are not compatible to these uses like industry shall not be allowed in civic space
18.	Built-up and open spaces	Comparatively built form less in this area, than the surrounding area which are more of the residential area. Building in the area are comparatively higher then the surrounding area.	Insufficient open space available for various activities. Building are higher then the surrounding area.	Insufficient open space available. Building then the higher then the surrounding area	Relation of open an built mass shall be as per the bylaws and zoning regulation so as to provide comfortable air, light, openness, ventilation, gathering space to the uses.

7.2 IDENTIFICATION OF PROBLEMS IN CIVIC AREAS

Central area activities of Gwalior revolves around civic square and roads leading to Maharaj Bada square at one end and Jayendraganj chowk at the other end which is known as "high court road". All the major roads leading to these two important city square have contained activities corresponding to the central area function. Most of the roads radiating from these two city square which were once residential can now be seen running with commercial activities. These roads have failed to provide appropriate space for the efficient functioning of various central activities because of uncontrolled use conversion around city centre. Numerous

problems have come to the central area out of which important ones are enumerated as under.

7.2.1 MAHARAJ BADA SQUARE

1. Eccentric location of city-centre in city , particularly in relation to other areas towns viz. Gwalior and morar.
2. Most of the activities functioning on the road cause serious problems of movement and accessibility.
3. Lack of adequate space for various activities.
4. Lack of space for parking of various type of vehicles, loading and unloading and storage facilities.
5. There is no traffic system which can segregate the pedestrian and vehicular traffic.
6. Intermixing of pedestrian, slow moving and fast moving traffic are major problem in easy circulation of traffic
7. Informal commercial activities are major hindrance in circulation system.
8. Entry of buses in pedestrian denominated space generating traffic hazards.
9. Encroachment of open spaces, foot paths and road space by gumtee shops, hawker, thela shops etc. cause traffic jams and bottlenecks.
10. Overcrowding and intermixing of activities causing functional problems.
11. Conversion of residential area and streets behind commercial area into commercial use leading severe problems of parking and congestion.

12. The city centre being the area of intensive activity demand additional parking site. As no proper space is available for parking, road space being used for parking which has reduced the traffic mobility considerably.
13. There is no clear demarcation in formal and informal commercial activities, areas.
14. There is no control on advertising sign, hoarding and other signboards which is shattering the character of the square.
15. Lack of public amenities in the area as par the requirement and building norms which create the new sense and inconvenience to the users.
16. There is no landscaping scheme has been conceived for the square.
17. No space provided for informal commercial activities like thela shops, gumti shops hawkers etc.
18. Lack of green and open space for the civic activities.
19. No provision of proper fire station in, Jayendraganj square or high court road, Maharaj Bada and Sarafa bazar road.

7.2.2 SARAF BAZAR ROAD AND JAYENDRAGANJ SQUARE OR HIGH COURT ROAD

1. Jayendragganj square another city square in central area requires or activity demands additional parking sites. As no proper space is available for parking road and other open space along the road being used for parking which has reduced the traffic mobility considerably. No proper space is available in high court area to accommodate the vehicle parking.

2. Central area of Gwalior centres around two important city square. These square are linked radially through system of roads having various central activities. Because of overlapping function of these roads, it is difficult to provide easy circulation within the central area.

Encroachment of open spaces, footpaths and road square by parking, gumtee shoos, hawkers, thela shops, create the problem in easy circulation of traffic. Uncontrolled parking system is the major hindrance in circulation system entry of stray animal in the area is the cause of major problem in circulation .

3. No proper public amenities are available in the area to provide convenience to public.
4. Lack of open spaces for informal commercial activities.
5. Overcrowding and intermixing of activities causing functional problems.
6. Conversion of residential area and streets behind commercial area into commercial use leading severe problem of parking and congestion.
7. Lack of adequate open space for various activities.
8. Most of the activities functioning on the road space coverings problem of movement and accessibility.
9. Lack of green spaces except few green patches.
10. Inadequacy of space for further growth of activities ancillary storage facilities and parking and functioning of activities.

11. Entry of fast moving vehicles in pedestrian dominated area causes serious problem for the pedestrian movement.
12. Lack of advertising panel and sign control.
13. A very high volume of extraneous traffic passes through the both street and adds to the congestion. Division of extraneous traffic requires urgent consideration.
14. The character is changing due to change into the facade treatment which shows, there is no provision of arcade and which has lost the total character of the building.
15. Lack of architectural control.
16. Lack of open and green spaces along the streets to accommodated the various activities.
17. No proper landscape scheme has been implemented along the streets except few patches treated as formal green space along the high court area.
18. Insufficient road width, not efficient to accommodate the all kinds of traffic mobility.
19. No proper segregation of pedestrian and traffic, creak movement.
20. Inter mixing of slow moving fast, moving and pedestrian traffic create traffic hazards.
21. Lack of resting places and landscape areas.
22. There is no colour scheme has been implemented in the street.

CHAPTER - 8

RECOMMENDATIONS AND PROPOSAL

RECOMMENDATIONS AND PROPOSAL

1. Location

Civic space should be placed near the residential area, as far as possible so as to provide easy access but the civic space should not disturb the privacy of the residences. Civic area being placed close to the residential area shall decrease the traffic load. There has to be buffer between residential area and civic space.

In respect of the city the civic area should occupy the centralized location. It should be accessible from all parts of the city, specially from railway station and bus stands, so that the goods can be easily transported.

2. Linkages & Approach

It is recommended that the location of the civic area should be designed on the basis of approachability and linkages from the surrounding areas.

3. Scale of Establishment

Keeping in mind taste of Gwalior people the civic space has to be designed in combination of street and square in such a way that the streets are originating from the central square, so that the people can enjoy both the traditional Indian bazars and the square at same time.

Square provide the large gathering space and street provide the intimate space for the people while moving.

4. Land Uses

A concept of mixed land use ^{is} seems appropriate for new upcoming civic spaces. But while providing mixed land use it is very important to allow compatible use only for example the industries should be avoided near civic

spaces and educational institutions and residential areas can be easily integrated with the commercial areas.

5. Traffic

A systematic approach has to be adopted to segregate the pedestrian and vehicular traffic, entry of the vehicles should be restricted at the certain points. There should be proper segregation of fast moving and slow moving traffic on the roads approaching the civic space.

Adequate parking space loading, unloading space has to be provided.

6. Public Amenities

Sufficient or as per Gwalior bye laws and norms physical and social amenities required for comprehensive development of civic areas should be provided.

7. Square

Chowk, square provide sufficient open space for the various activities like social, political and religious etc.

8. Architectural Control

Design of elevation, façade of buildings, lighting points, heights, material, skyline, sign board, hoarding, advertising panels should be controlled.

9. Surface Treatment

Yellow sand stone extensively used in the buildings, therefore, sandstone or its imitations can be used in new developing civic spaces.

10. Landscape

It is recommended that the typical palm, Ashokan trees, designed lighting fixtures, chattries, dressed bushes and doob grass shall be preferred for further use in landscape treatment.

11. Skyline

Skyline of existing civic spaces shall be kept in mind while designing the skyline of new civic spaces.

12. Façade

It is recommended that the variety in façade treatment should be achieved with use of predetermined various architectural elements of existing civic spaces of Gwalior.

Design of elements shall be inspired by the design and detailing of existing ones.

13. Quality of Enclosure

It is recommended that bye-laws should be reinforced to preserve traditional urban character of civic space. For a good enclosure for civic space a minimum 18° angle and max. 45° angle or height and distance ratio should be kept around 1:3 to 1:1.

14. Colour

It is recommended that the combination of pale cream and white colour shall dominate the complex.

15. Architectural elements

Following the list of various architectural elements which shall frequently be used in the new civic spaces.

- ◆ Chattries
- ◆ Domes
- ◆ Minarates
- ◆ Decorative parapet wall
- ◆ Doorways

- ◆ Jharokas
- ◆ Entrance gate
- ◆ Semi circular and cusp arches
- ◆ Arched window openings
- ◆ Circular columns etc.

16. Activity Pattern

It is suggested that the mixed kind of activities shall be preferred in new developing civic spaces. These activities are, formal and informal commercial, educational, business activities, religious and social activities.

17. Street Elements

Design of street element shall be inspired from the design of existing elements.

18. Focal Point

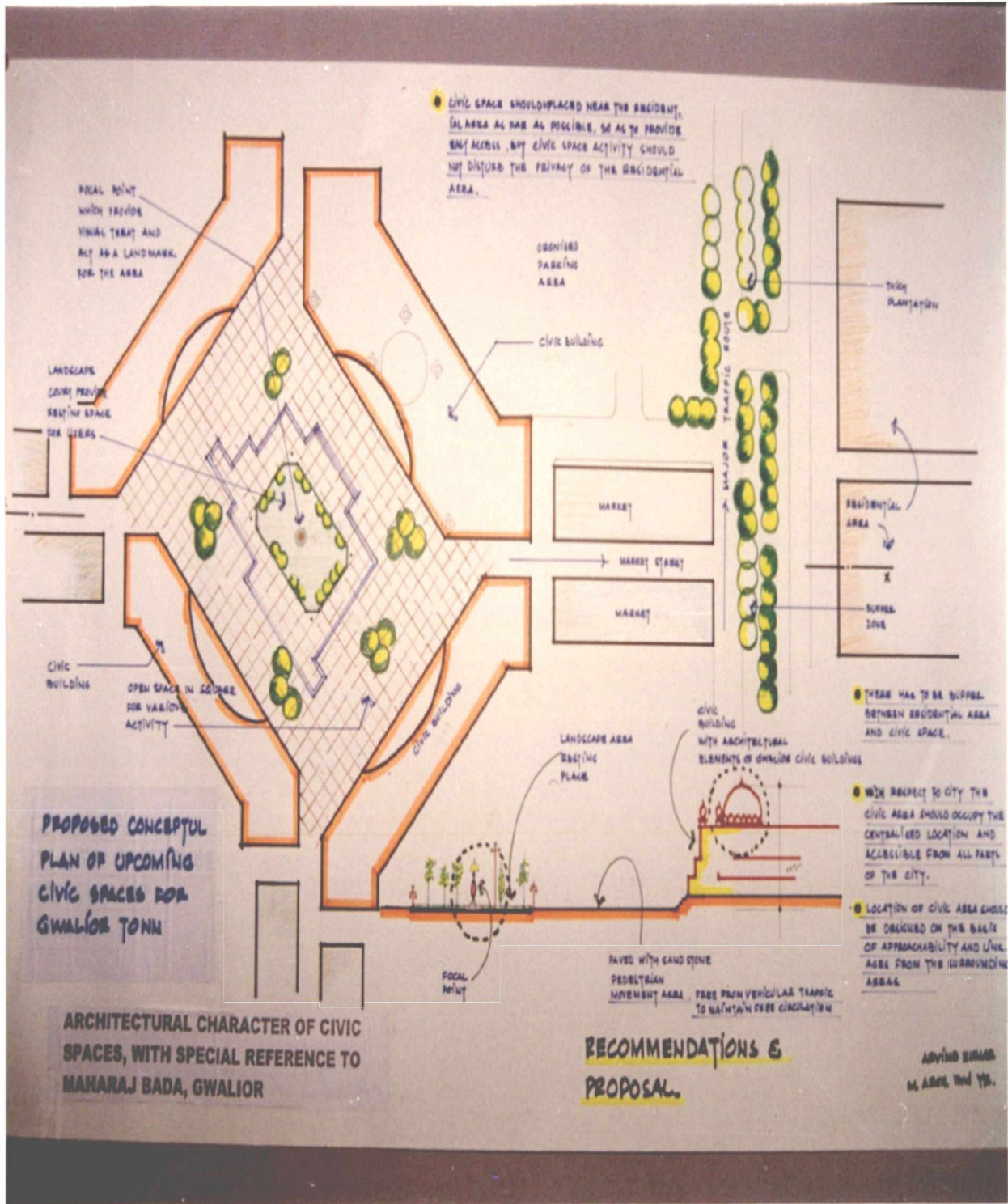
It is recommended that the new civic space shall have to focal point in form of the statue in the centre which is inspired from Maharaj Bada.

19. Built forms

Height of the civic building should be maintained higher than the surrounding areas for achieving the dominating character of the area and distinct image.

20. Design

It is recommended that a comprehensive urban design proposal should be prepared for the entire area. The unique qualities of existing civic spaces of Gwalior must be preserved in new developing civic spaces.



PROPOSED CONCEPTUAL PLAN OF UPCOMING CIVIC SPACES FOR GWALIOR TOWN

ARCHITECTURAL CHARACTER OF CIVIC SPACES, WITH SPECIAL REFERENCE TO MAHARAJ BADA, GWALIOR

RECOMMENDATIONS & PROPOSAL

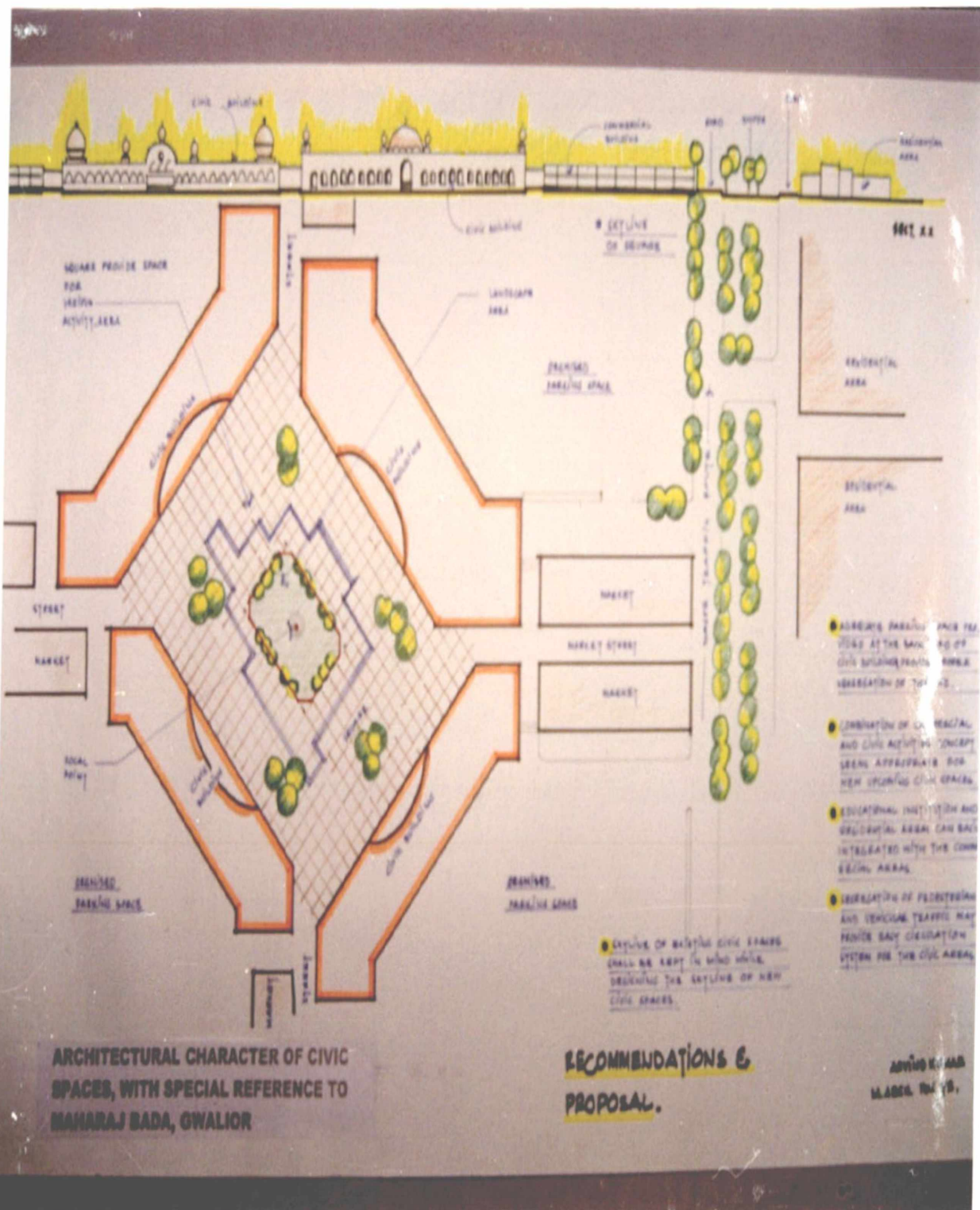
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● CIVIC SPACE SHOULD BE PLACED NEAR THE RESIDENTIAL AREA AS FAR AS POSSIBLE, SO AS TO PROVIDE EASY ACCESS, BUT CIVIC SPACE ACTIVITY SHOULD NOT DISTURB THE PRIVACY OF THE RESIDENTIAL AREA.

● THERE HAS TO BE BUFFER BETWEEN RESIDENTIAL AREA AND CIVIC SPACE.

● WITH RESPECT TO CITY THE CIVIC AREA SHOULD OCCUPY THE CENTRALISED LOCATION AND ACCESSIBLE FROM ALL PARTS OF THE CITY.

● LOCATION OF CIVIC AREA SHOULD BE DESIGNED ON THE BASIS OF APPROACHABILITY AND LINKAGE FROM THE SURROUNDING AREAS



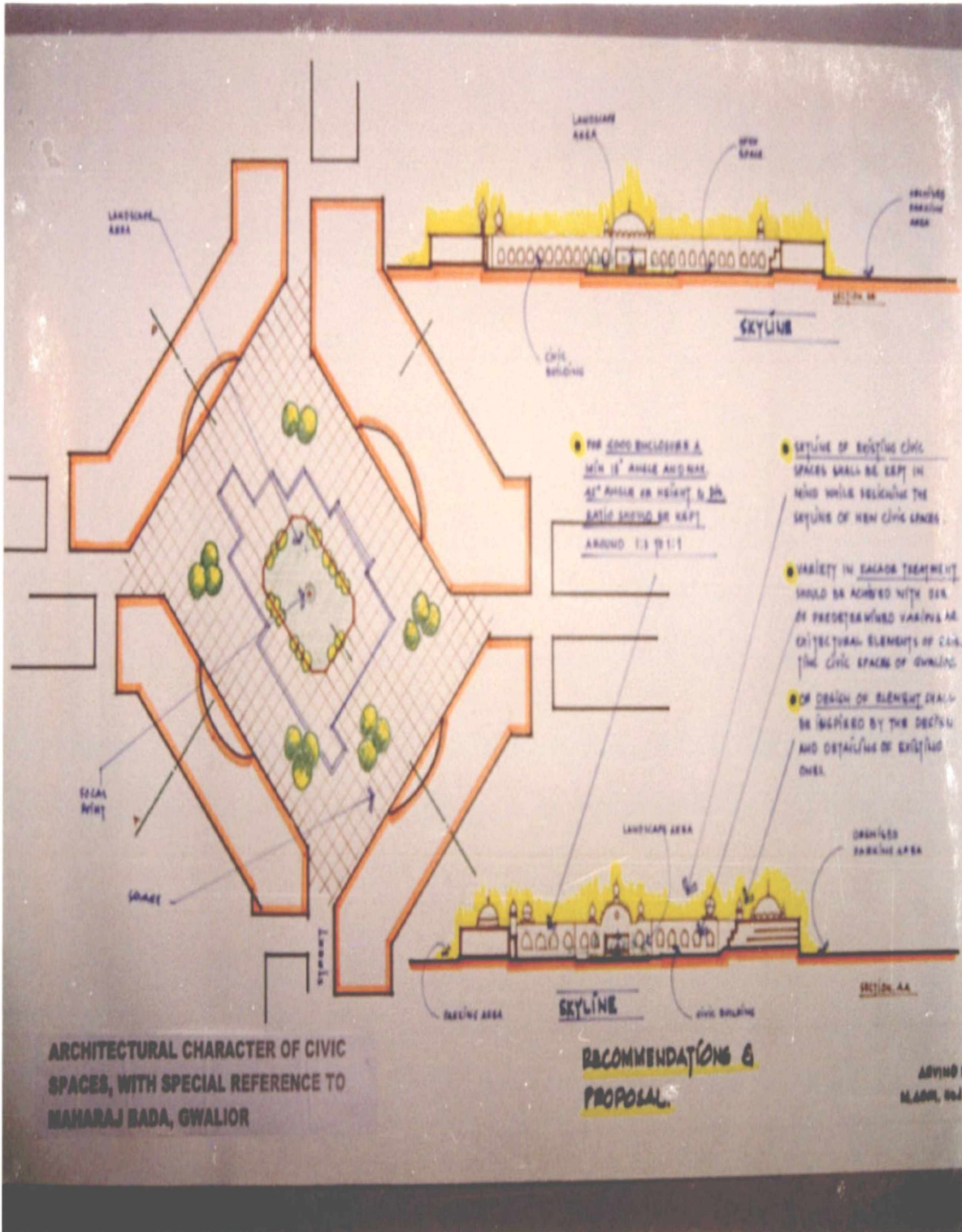
ARCHITECTURAL CHARACTER OF CIVIC SPACES, WITH SPECIAL REFERENCE TO MAHARAJ BADA, GWALIOR

RECOMMENDATIONS & PROPOSAL.

ADITYA KUMAR
M.Arch. III YEAR.

1. ALONGSIDE PARKING SPACES FEEL LACK OF VISUALITY AS WELL AS CIVIC SPACES PROVIDE SOME SEGREGATION OF TRAFFIC.
2. COMBINATION OF LANDSCAPE AND CIVIC ACTIVATION CONCEPT BECOMES APPROPRIATE FOR NEW OPENING CIVIC SPACES.
3. EDUCATIONAL INSTITUTION AND EDUCATIONAL AREAS CAN BE INTEGRATED WITH THE COMMERCIAL AREAS.
4. SEGREGATION OF PEDESTRIAN AND VEHICLE TRAFFIC MAY PROVIDE SAFE CIRCULATION SYSTEM FOR THE CIVIC AREAS.

EXISTING OF EXISTING CIVIC SPACES SHALL BE KEPT IN MIND WHILE DESIGNING THE SCHEME OF NEW CIVIC SPACES.



FOR GOOD ENCLOSURE A MIN 18' ANGLE AND MAX 45° ANGLE FOR HEIGHT TO JH RATIO SHOULD BE KEPT AROUND 1:1 TO 1:1

SKYLINE OF EXISTING CIVIC SPACES SHALL BE KEPT IN MIND WHILE DESIGNING THE SKYLINE OF NEW CIVIC SPACES.

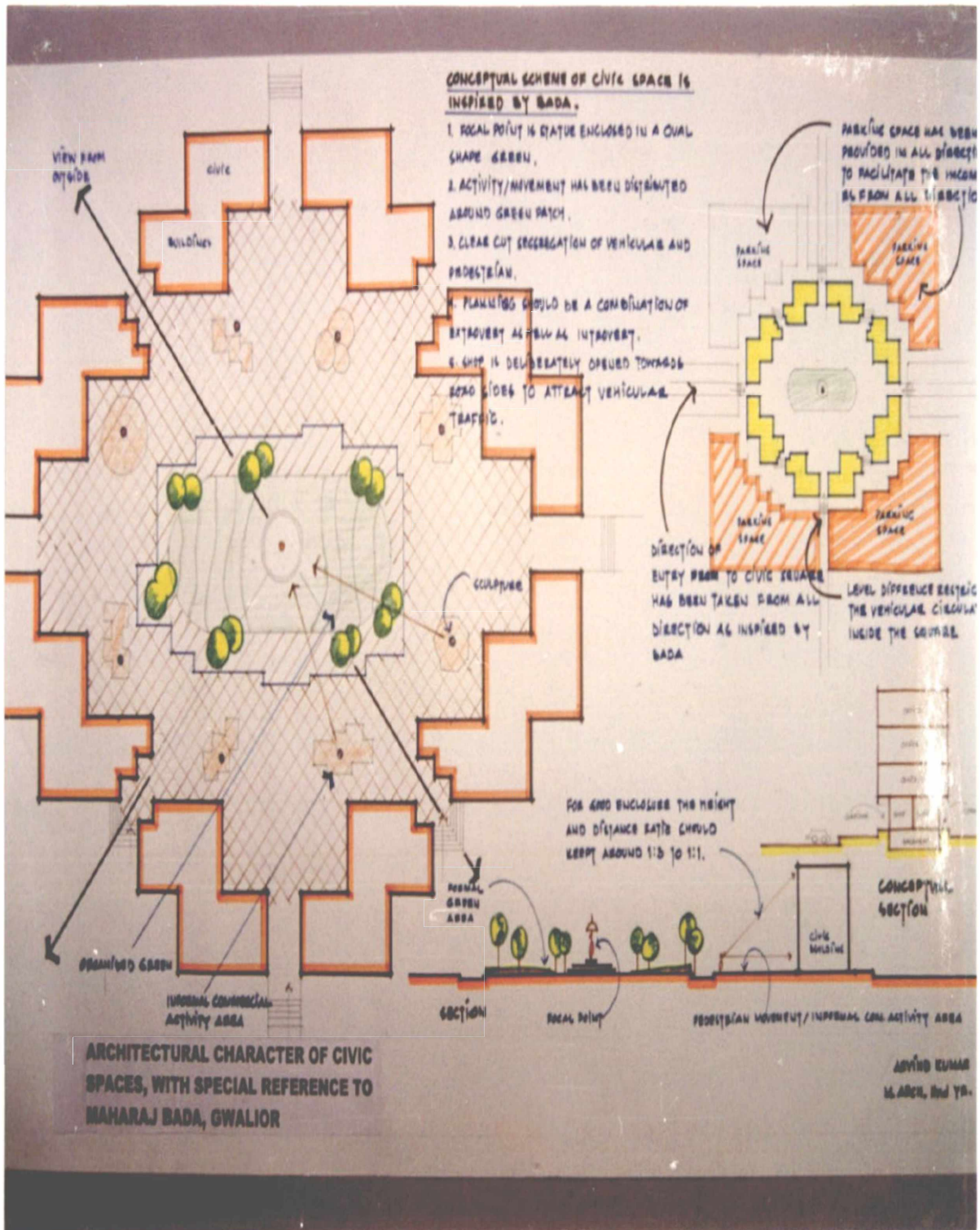
VARIETY IN FACADE TREATMENT SHOULD BE ACHIEVED WITH OR OF PREDETERMINED VARIOUS ARCHITECTURAL ELEMENTS OF CIVIC THE CIVIC SPACES OF Gwalior.

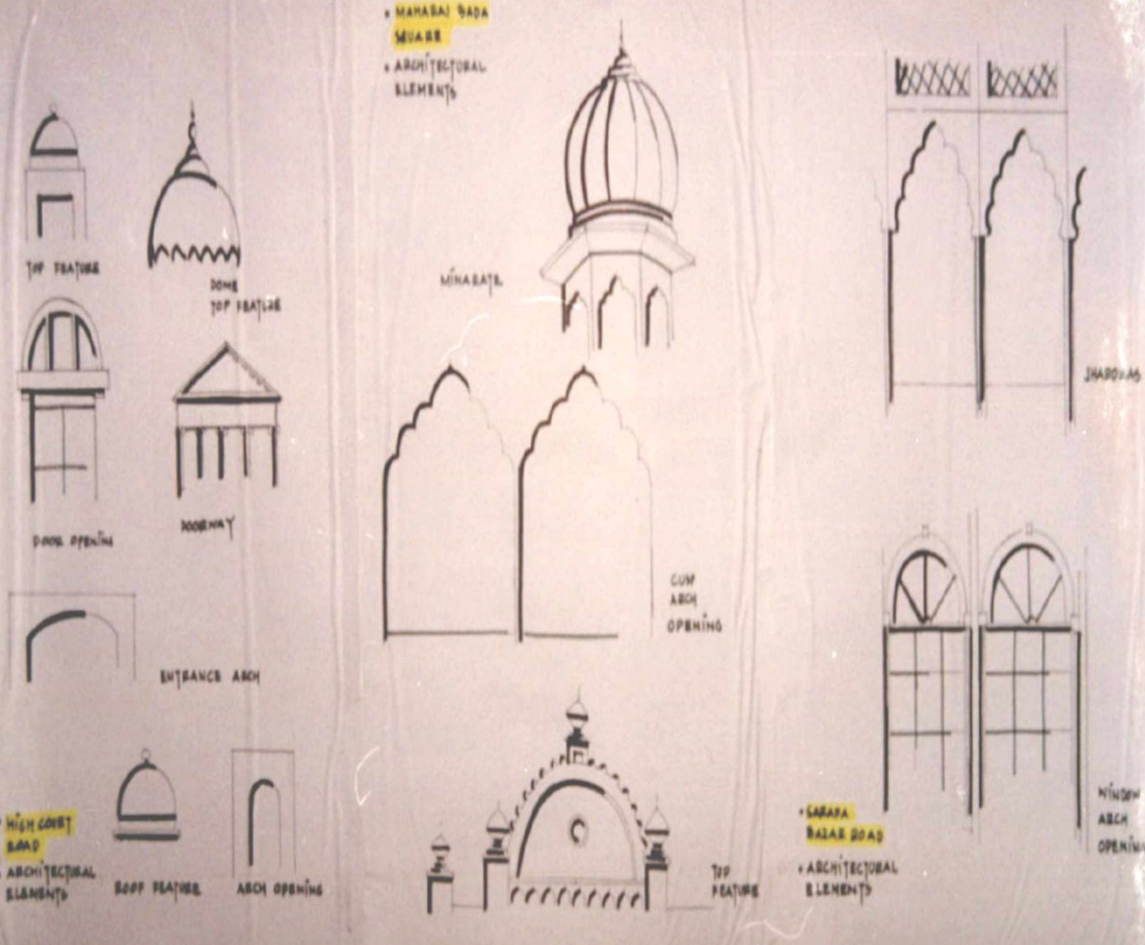
FORM DESIGN OF ELEMENT SHALL BE INSPIRED BY THE DESIGN AND DETAILING OF EXISTING OVER.

ARCHITECTURAL CHARACTER OF CIVIC SPACES, WITH SPECIAL REFERENCE TO MAHARAJ BADA, GWALIOR

RECOMMENDATIONS & PROPOSAL

ADVISED BY M.A.M.M. 004

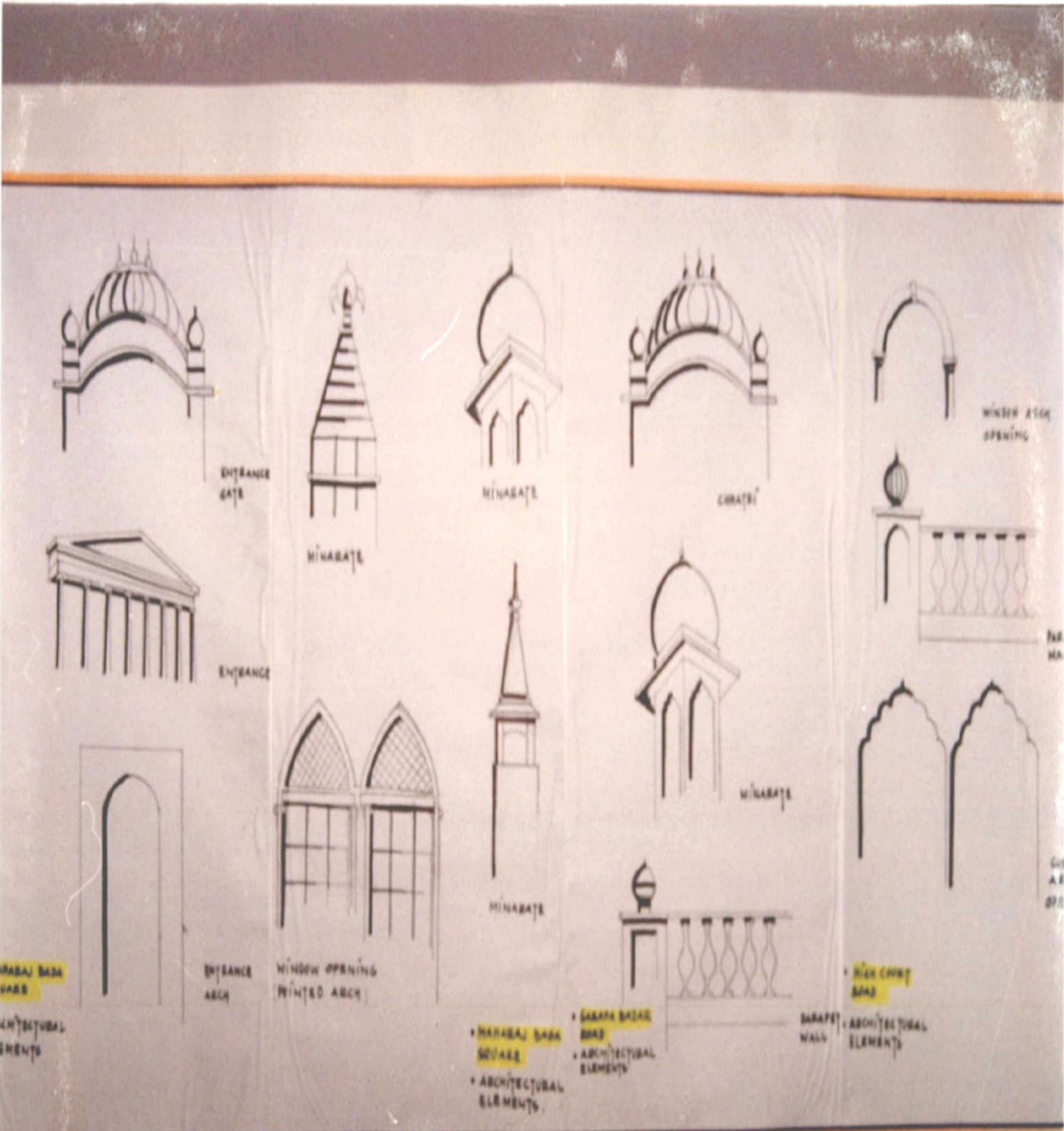




ARCHITECTURAL ELEMENTS

ARCHITECTURAL CHARACTER OF CIVIC SPACES, WITH SPECIAL REFERENCE TO MAHARAJ BADA, GWALIOR

ARCHITECTURAL ELEMENTS



BARAJ BADA BARS
ARCHITECTURAL ELEMENTS

ENTRANCE ARCH

WINDOW OPENING POINTED ARCH

• BARAJ BADA BARS
• ARCHITECTURAL ELEMENTS
• ARCHITECTURAL ELEMENTS

• BARAFAT WALL
• ARCHITECTURAL ELEMENTS

BARAFAT WALL
• ARCHITECTURAL ELEMENTS

'ARCHITECTURAL ELEMENTS'

ARCHITECTURAL CHARACTER OF CIVIC SPACES, WITH SPECIAL REFERENCE TO MAHARAJ BADA, GWALIOR

ARTIST'S NAME
M. ADAR RAJ YADU

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