

The subject of design deals with the requirement of a space which cater to different arts in its various forms. This thesis is on a design space which allows every aspect of an artist to evolve and provides a proper channel for making it available to the clientele.

The subject of Art centers has the nostalgia which connects the art to its followers. The spaces so built call in the feelings which have been forbidden in fast changing times. The units dedicated to the forms of art, create an environment which gives you time and space to think about the aspects much ignored or taken lightly or even much glorified. Centers truly committed to art, are a boon to the artist as well as for the spectators as both of them get a chance to be completely absorbed in the surroundings without paying much ado to the world outside.



2.

LITERATURE STUDY

The requirements of a space can only be formulated on the basis of study of the similar spaces or the study of user behavior and psychology derived from one-on-one interaction. Literature study involves learning of various aspects required to build an aesthetically pleasing and functional space for the artist and the visitors.

Art centre being a cryptic subject involved various studies.

- † Spatial distribution derived out of the observations, case studies and books referred.
- † Space planning on the basis of proximity of functions and comfort of the user.
- † Anthropometric measurements extracted from the case studies and self observation.
- † Specification and services required.
- † Psychological requirements of user.

STUDIES INVOLVED:

- a. Anthropometry & ergonomics
- b. Study of Light.
- c. Color psychology.
- d. Plans of Auditoriums & galleries.

STANDARDS : involve the set benchmarks, which define the

~ Human Scale,

~ Anthropometrics and Ergonomics,

~ Basic requirements and sizes of furniture.

HUMAN SCALE:

Human scale is related to proportion, and deals with relative sizes of things. It refers to the feeling of bigness something gives us.

MUSEUM/ GALLERY::

It is usually observed that human scale in Art museum is kept considerably high (1). The spaces are so designed that the visitors are completely absorbed in the Art and the surroundings forgetting about themselves.

HEIGHT OF CEILING : at least 15 feet.

STUDIO/ WORKSPACE::

The scale is kept quite nominal and usual in the working studios (2). The spaces in studios are Artists' friendly, it's the domain where Artist evolves and sustains. Hence the studio is required to be comfortable, where he feels secure to experiment.

HEIGHT OF CEILING: usually kept at 12 feet, rest designer's discretion.

AUCTION SPACE::

It is usually observed that human scale in Art Auction space is kept considerably high. The spaces are so designed that the visitors are completely absorbed in the Art and the surroundings forgetting about themselves. The object at auction plays the main role in deciding the scale for the space. If it is the huge sculpture the space would be considerably higher.

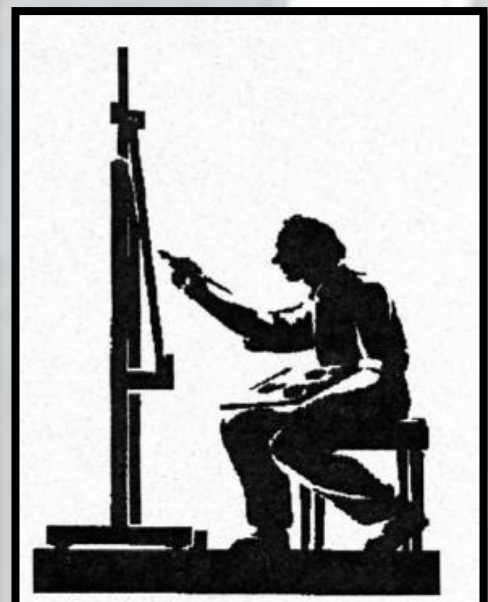
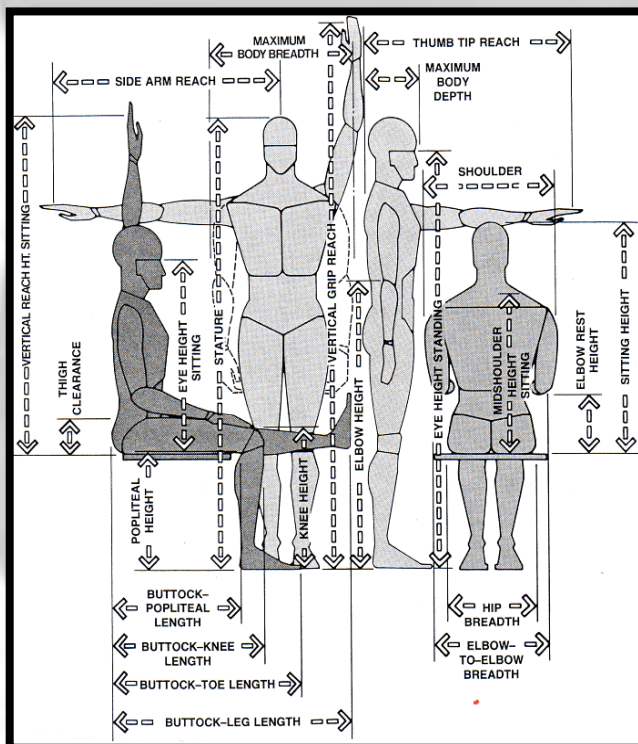
HEIGHT OF CEILING: at least 20 feet. Rest depends upon the designer's discretion.

A. ANTHROPOMETRY - The interior spaces of a building are designed as places for human movement, activity and repose. There should be, therefore, a fit between the form and dimension.

Required anthropometric data: Standing & Sitting

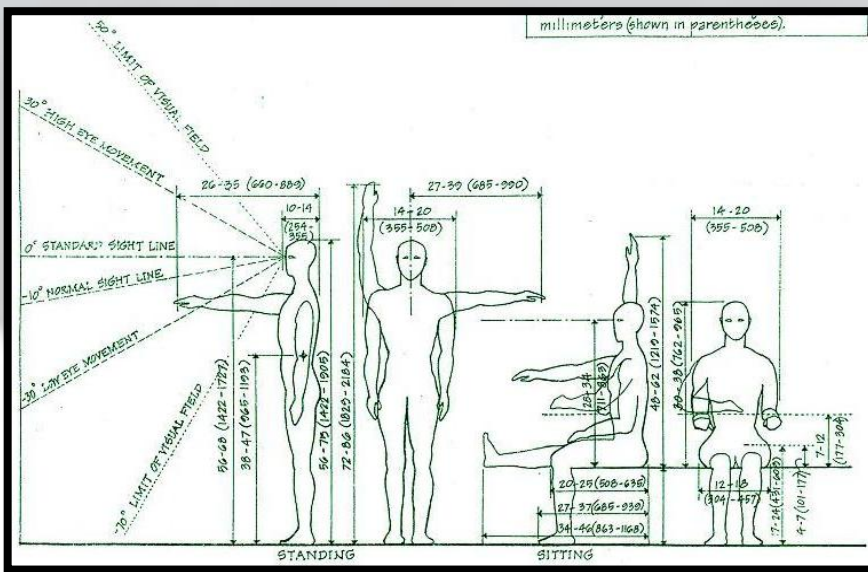
Measurements	Male [“]	Female [“]
1. Forward reach	26	25
2. Elbow height	44	41
3. Shoulder height	60	55
4. Eye height	68	63
5. Stature	73	67
6. Over-head reach	84	78

Table 1: Human measurements – standing



Measurements	Male [“]	Female [“]
ς Forward reach	26	25
ς Elbow height[abv seat]	12	10
ς Mid-shoulder height	26	22
ς Mid-eye height	32	28
ς Elbow width	36	32

Table 2: Human measurements – sitting.



Painter scale measurements.:

1. Outstretch to reach canvas from a valid distance.
2. Sitting on a donkey bench and reaching the easel.
3. Overhead reach for storage
4. Knuckle height for low storage and low height easel.
5. Elbow measurements sitting and standing
6. Eye heights and angles.

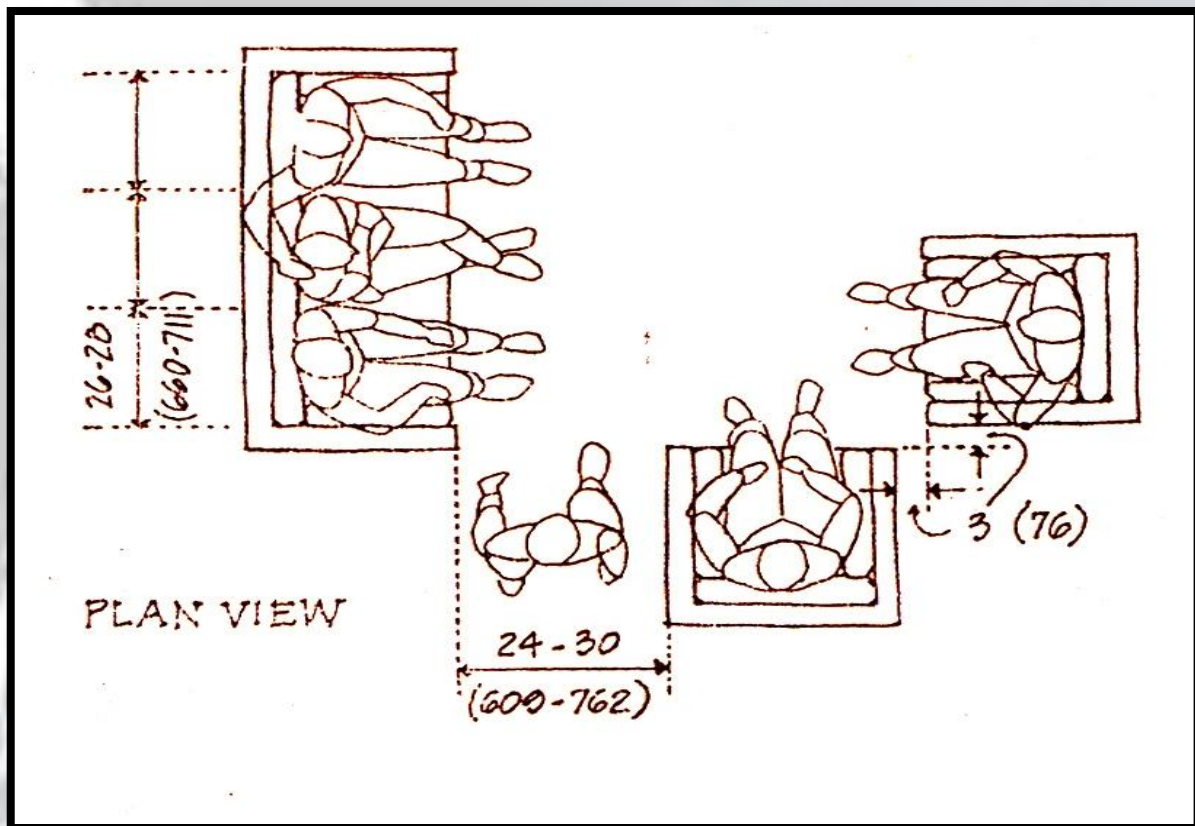
POTTER SCALE MEASUREMENTS::

1. Outstretch reach for wheel.
2. Kneeling measurements for wheel and stocking the object.
3. Clear circulation for twist movement on all the sides.
4. Eye level sitting and standing, kneeling i.e., 18" - 24".
5. Over head reach for storage.

Photographer scale measurements:: All the mentioned measurements

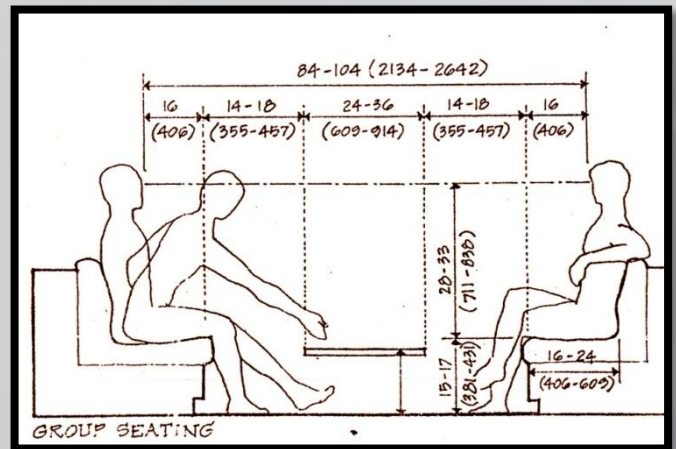
Gallery and auction space follow the public distance and are generally concerned with the various eye-levels, vision lights, clear movement and circulation of objects and people.

For public seating:: refer the drawings.



SEATING ARRANGEMENT

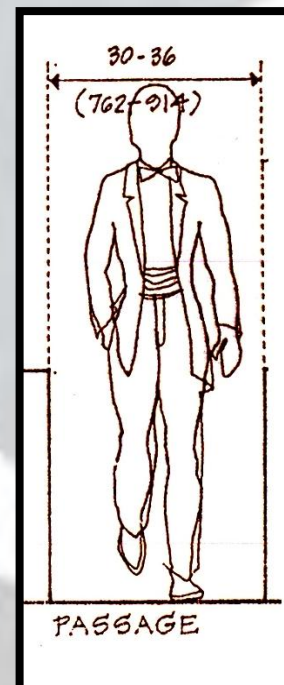
Nomenclature	measurements
Ht. Of centre table	17"-18"
Width of seat	18"- 24"
Seat edge to table edge	18"-20"
Mid eye level height	33"



PASSAGE CLEARANCE

Nomenclature	measurement
Passage width	90"-102"

The passage should be so wide that it allows traffic to move without rubbing the shoulder with each other. It must have easy connecting and have a width allowing at least three passers to move comfortably.



B. STUDY OF LIGHT

Lighting is one of the most critical factors in the way a space should work and function. From the welcome porch to the every task defined by light, we rely unthinkingly on lighting for efficiency, safety & security in every sphere of life. The quality of light, whether it is natural or artificial, has a critical impact on mood and atmosphere. It can lift our spirits or depress us, excite us or soothe us, intimidate or alarm us or make us feel safe and secure. As human beings, we are exceptionally light sensitive creatures. Sight is a dominate sense, and through it we can pick up the minute details and variations.

Relationship between color and light: – Different wavelengths, and thus different frequencies, of light are perceived by the human eye as colors. The visible light spectrum ranges from 400nm to 700nm, with 400nm being perceived as violet and 700nm being perceived as red light. The energy of the light dictates its color.

PLAY OF LIGHT ::

- a. Play of natural light.
- b. Play of light and shadow.
- c. Play of light source. – concealed exposed juxtaposed
- d. Enhancing finishes.
- e. Creating sculptural effects

COLOUR RENDERING:: Colour rendering effects the way the light effects the colour of an object it illuminates. The effect of light on colour is dependent on the spectral wavelength of the light source. Cool fluorescent light, for example has a colour temperature that close approximates day light, but when we view its spectral pattern it is immediately apparent that it has spectral peak of green and orange, which can distort the appearance of colours.

FEATURES OF LIGHT ::

Daylight :: day light is 'full spectrum' light - in other words, it is a pure white light, a blend of all the colours in the spectrum combined in equal parts.

Incandescent :: incandescent light has no unacceptable spikes in its spectral pattern, which makes it good for colour rendering. However it is biased on orange and red, i.e. the warm tones of the spectrum.

Halogen :: halogen lights have a spectral wavelength that is much more evenly balanced across the spectrum than incandescent. It makes colour more clear n defined.

Fluorescent :: fluorescent light has spikes in the green yellow part of the spectrum, so can distort the appearance of the colours and the objects.

<u>MATERIALS</u>	<u>LIGHT ABSORPTION</u>	<u>REFLECTIONS</u>
<u>LIGHT COLORED SURFACES:</u> White painted bricks White plaster :: Pale marble ::	30% of the visible light 30% of the visible light 30% of the visible light	60% of light hitting 65% of light hitting 75% of light hitting
Dark surface finishes ::	85 - 90 % of visible light	10 - 15% of light hitting
Black surface ::	90 - 95% of visible light	5% of light hitting

Rate of light absorption and reflection in various materials and colours

STANDARD MAINTAINED ILLUMINANCE -

Walkways	50 lux
Corridors	100 lux
Workshops/studios	300 - 350 lux
Drawing/design spaces	750 lux

ART GALLERY: Art lighting is a complex subject. The scope of natural or artificial lighting is of important approach. Direct sunlight should not fall on any collection item and UV radiation must be effectively eliminated from all light reaching a collection item:: at a higher energy and of the spectrum light is very effective in initiating the chemical change in vulnerable materials. The maximum light dosage recommended for different categories of collection is presented below::

TYPES OF COLLECTION	DOSAGE [KILOLUX – H]	NOTES
Objects especially sensitive to light; e.g., Textile, costumes, water colours tapestry, prints, drawings, manuscripts, miniatures, paintings in plaster, wallpapers, gauche, dyed leather.	200	Usually possible to be achieved by artificial lighting.
Oil and tempera paintings, undyed leather, horn, bone and ivory, oriental lacquer.	650	If daylight component is used great reduction of UV is necessary.
Objects insensitive to light, e.g., metal, stone, glass, ceramics, jewellery, enamel, and objects in which colour change is not of high importance.	950	Higher dosage is possible.

Lighting design requires consideration of the amount of functional light provided, the energy consumed, as well as the aesthetic impact supplied by the lighting system. Important factors to consider when designing office lighting are the placement of fixtures, the color of the light, reflection, glare and shadows. Lighting can make a room seem smaller or larger, calming or agitating; it is important to consider the effects of each lighting decision since it will have an immediate and tangible effect on the environment.

- Lighting design and fixture specification is very important in the studio environment.
- Lighting specification not only relates to providing the proper amount and kind of light for the various jobs in the studio, but lighting will also affect colour usage and success of the colour schemes in the enclosure.
- Lighting levels are based on the amount of light needed to perform different tasks.
- Gallery can have two or three different sources of lighting, depending on the size of the space and overall design goals.

- **AMBIENT LIGHTING** is lighting designed to provide a uniform level of illumination throughout an area exclusive of any provision for special task requirements. In indirect ambient lighting fixtures, light is bounced off the ceiling from the fixtures that are floor standing, placed on top of shelves, or suspended from the ceiling rather than directed down from the ceiling.
- **TASK LIGHTING** is the light delivered to the specific area of work from a closely placed source. Lighting fixtures such as a desk lamp and a drafting lamp at the drafting table are selected to provide specific light to a work area. Task lighting is of particular importance where indirect ambient lighting fixtures are used, since indirect ambient fixtures are generally planned to provide a lower general light level than is needed for office work.
- **ACCENT LIGHTING** like wall washers, soffits, spot lights, and other kinds of accent lightings is not used by all office facilities. However these sources will provide design interest to the interior. The designer must calculate accent lights into the overall light levels since these fixtures will contribute to the general lighting level.

THE BEST SOLUTION FOR GLARE AND REFLECTIONS ON THE SCREEN::

- Ceiling suspended recessed lights,
- Indirect lighting, either down-lighting or up-lighter.
- The underside of the lamps should be the same color as the ceiling.
- Wall mounted sconces may also be appropriate in certain instances.

Because some tasks and workers require more light than others, it is best to keep the overall light level low and allow workers to supplement it with individually controlled task lights.

NATURAL LIGHTING

Modern offices are not only making use of natural light through windows, but are designing spaces with skylights. Natural light not only improves the mood of workers in an office, but is more inexpensive. Placing skylights and windows can reduce the number of fixtures that must be on during the daytime, dramatically reducing energy bills and maintenance costs such as replacement light bulbs, and preserving natural resources.

CUSTOM WORKSPACE LIGHTING

While some general lighting is still needed for walkways and hallways, the trend in office lighting is to design around specific workspaces. So instead of evenly spaced generic fixtures on every few feet of ceiling, well-spaced fixtures can provide ambient lighting while bright lights are customized to individual work areas. Lighting throughout the workspace is no longer uniform, but fits the individual needs of the tasks being performed and even of the workers. Some of the ways to place individual lights are to use can light fixtures, spotlights and lamps in various workspaces. Lamps are especially useful for work areas that are frequently reconfigured since they can be easily moved. In addition, custom lighting can save money since workers only turn on what they need at a given time.

LIGHTING CONTROLS

In an effort to control energy usage and costs, many workplaces are using timers or sensors to control when lights are used. Rather than relying on employees to manually turn lights on or off, timers can automatically shut systems down at timed intervals. Some offices use motion sensors to turn lights on so that only areas with people actively working stay lit and unused areas stay dim. These are especially useful in areas like conference rooms which commonly stay empty, but lit. Good lighting has been shown to improve workplace efficiency and worker morale, so lighting design can enhance more than just the aesthetics of the office.

DESIGN CRITERIA

Once the designer understands what limitations the building puts on the design, he/she will need to consider what recommended task luminance to use for each task area. The effects of the décor and surface reflectance in each area will then need to be taken into account. Unless these are defined in a brief, the designer should confirm to the client the lighting levels being used for the design and any assumptions being made about surface reflectance or maintenance cycles.

LIGHTING AN ART WORK:

Paintings are common in fine homes as well as office space. This is not surprising when we consider that painting has been with in one form or fashion for at least 40,000 years. Light in paintings themselves determines the tone of the work by creating the illusion of three dimensional spaces with the interplay of light and shadows. Lighting for paintings should not cast shadows, however, but rather must discover and magnify the luminosity of the scene and animate the action between objects and characters. This method of lighting paintings is as old as Lascaux, where firelight was used to make the seemingly crude stick figures of hunters and animals suddenly spring to life with the illusion of three dimensional substance and physical movement.

To create this sense of vivid life and realism, art lighting for paintings must be sourced from special types of fixtures and controlled in such a manner that enhances the work without damaging the piece or limiting the aesthetic.

Only filtered light can be used for safely lighting paintings.

Oils and canvases are sensitive materials and will deteriorate if exposed to UV light. Infrared light is not as damaging as ultraviolet light, but it nonetheless produces large quantities of heat that will dry out paint and crack the canvas. Because sunlight contains both UV and IR radiation, it must never be used to light paintings, because it will quickly destroy them in a short period of time. Sunlight is also way too intense to light a painting because it overpowers the combination of shadows and light in the painting and flattens the perspective of the image.

It is therefore necessary to use a filtered artificial lighting source that strips the light beam of IR and UV radiation.

Use of a light source with a high color rendering index (CRI), gives better results.

While artificial light is much safer than sunlight to use as lighting for paintings, sunlight's ability to render color is unmatched because sunlight is a perfect blend of all natural colors of the spectrum. Nevertheless, it is simply out of the question as a light source for residential art design, so we have to find an artificial, close approximation to sunlight to effectively illuminate art without damaging its integrity or quality in the process.

To date, the best source of this type is a halogen bulb. These bulbs produce an intense, white light that renders color at levels near that of sunlight. Halogen bulbs are found in recessed ceiling fixtures that shine light down on artwork. They are also housed inside modern art lighting projectors, which also install in the ceiling.

When used in lighting paintings, recessed lights have to be filtered. All art lighting projectors, because they are intended only for art lighting, are manufactured with filters in them.

- ς Lighting for paintings must be adjustable and dimmable.
- ς Paintings must be lit from the correct angle of incidence to avoid spill light shining past the boundaries of the frame and to avoid glare than can reflect off the canvas back into the eye.
- ς Picture lights are difficult to adjust like this and are generally not recommended for home or office decoration. Also, they can burn very hot at times and are extremely difficult to filter, making them unsafe as well.
- ς Recessed lighting and projector lighting are much better sources to use because they allow the decorator to change the direction of the light at will. Some recessed fixtures can be adjusted in this manner more easily than others, so it is important to make certain before purchasing them if the models being ordered were made specifically for lighting paintings.
- ς Projectors offer even more adjustability because they hang suspended from the ceiling and can be positioned anywhere along a three-dimensional access. Some projectors are easier to adjust than others. It is best to talk to a picture lighting specialist here at ILD to find the model best suited to a particular home, office, or museum application.
- ς Lighting simple prints or photographs is something most people can do with retail picture lights. Lighting a painting as art is something completely different. It takes commercial grade equipment that can only be obtained by a design firm from the manufacture. It also takes knowledge of art and design to truly create a masterpiece of lighting.

C. COLOR PSYCHOLOGY -

Color is a 'COLOR'...the word means more than just its dictionary meaning...a word symbolic of action, peace, harmony, tranquility, passion, spirituality and what not...!! Color in many forms reflects the 'Life' in life...!!

A Color is more than just a Shade or Tint of a Hue...it reflects its impression...in the way We think, We perceive and We react. This aspect becomes extremely vital in manipulating the environment as per the required frame of mind or specifications. The colors have their play which reflects the psychology of the occupant.

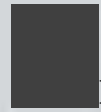
CLASSIFICATION OF COLORS ON THE BASIS OF TONE



WARM colors such as Red, yellow, orange appear to be approaching to the occupant. These colors are intense and create a welcoming environment. Asian countries believe warmer tones to be very auspicious and inviting. The cultures of these countries are highly affected by these colors.

Cool colors such as blue, green, and tints and shades of these appear to be receding. These colors have calming effect on the psychology of occupant. As far as interiors are concerned these colors find their use in meditation halls, hospitals etc.

DESCRIPTION:



Black is the color of authority and power. It is stylish and timeless. Black also implies submission. Priests wear black to signify submission to God. Black in interiors makes space appear reducing or smaller.

BLACK is the absence of light and therefore, of colour. It represents power, sexuality, sophistication, formality, elegance, wealth, mystery, fear, evil, anonymity, unhappiness, depth, style, evil, sadness, remorse, anger, underground, good technical colour, mourning and death.




White symbolizes innocence and purity. White reflects light and is considered a summer color. White is light, neutral, and goes with everything. However, white shows dirt and is therefore more difficult to keep clean than other colors. WHITE is what we see when all colors come together in perfect balance.

It represents reverence, purity, simplicity, cleanliness, peace, humility, precision, innocence, youth, birth, winter, snow, good, sterility, and marriage.




Red is most emotionally intense colour. It is also the colour of love. Since it is an extreme colour, red clothing might not help people in negotiations or confrontations. In decorating, red is usually used as an accent. Decorators say that red furniture should be perfect since it will attract attention. Red is the colour that we pay the most attention to. It is the warmest and most energy colour in the spectrum. We associate red with love, valentines, danger, desire, speed, strength, violence, anger, emergency exit signs, stop signs and blood.


Red can evoke a fight-or-flight response, raise blood pressure and make the heart beat faster.




The colour of the sky and the ocean, blue is one of the most popular colours. Peaceful, tranquil blue causes the body to produce calming chemicals, so it is often used in bedrooms. Blue can also be cold and depressing. Fashion consultants recommend wearing blue to job interviews because it symbolizes loyalty. People are more productive in blue rooms. **BLUE** represents peace, tranquility, calm, stability, harmony, unity, trust, truth, confidence, conservatism, security, cleanliness, order, loyalty, sky, water, cold, technology, and depression. Blue can "slow the pulse rate, lower body temperature, and reduce appetite." Blue is considered a business colour because it reflects reliability.



Currently the most popular color, green symbolizes nature. It is the easiest color on the eye and can improve vision. It is a calming, refreshing color. People waiting to appear on TV sit in "green rooms" to relax. Hospitals often use green because it relaxes patients. Brides in the middle Ages wore green to symbolize fertility. Dark green is masculine, conservative, and implies wealth. *It*, one of most-often cited favourite colours. It represents nature, environment, health, good luck, renewal, youth, vigour, spring, generosity, fertility, jealousy, inexperience, envy, misfortune.



Cheerful sunny yellow is an attention getter. While it is considered an optimistic colour, people lose their tempers more often in yellow rooms, and babies will cry more. It is the most difficult colour for the eye to take in, so it can be overpowering if overused. Yellow enhances concentration, hence its use for legal pads. It also speeds metabolism.



The color of royalty, purple connotes luxury, wealth, and sophistication. It is also feminine and romantic. However, because it is rare in nature, purple can appear Artificial. **PURPLE** represents royalty, spirituality, nobility, ceremony, mystery, transformation, wisdom, enlightenment, cruelty, arrogance, and mourning. Purple is considered an exotic colour.

Purple dye was made from the mucous gland of a snail. It required thousands of snails to yield 1 gram of dye causing it to be a colour only nobles could afford. Today purple is a trendy colour targeting creative types.



Solid, reliable brown is the colour of earth and is abundant in nature. Light brown implies genuineness while dark brown is similar to wood or leather. Brown can also be sad and wistful. Men are more apt to say brown is one of their favourite colours.

ART GALLERIES generally see neutral colors as the background need to be subtle for accentuation of the art. The white back walls with little hints of colors create interest. The colors used in Gallery are whites with touches of Grey (silver) and black.

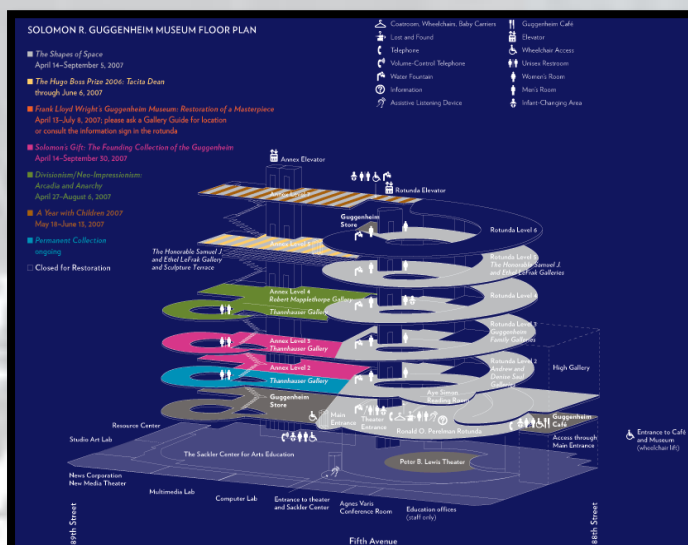
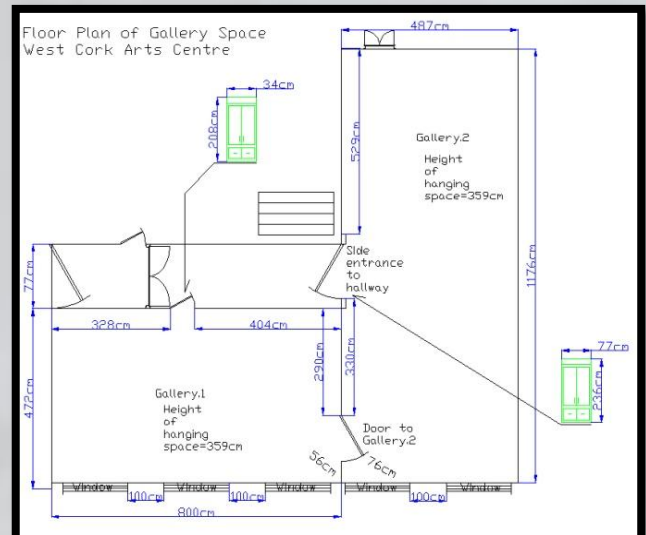
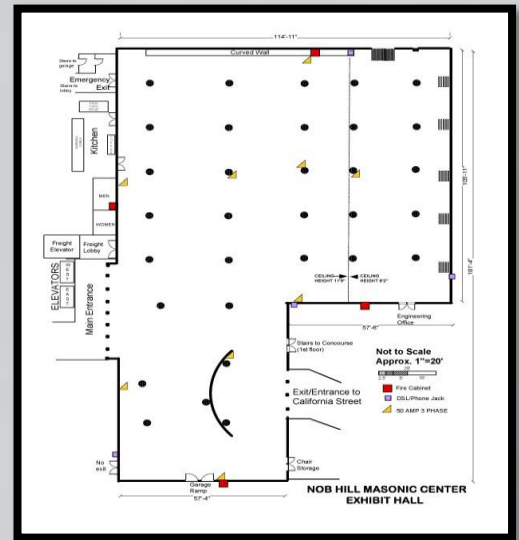
LOUNGE can see a variety, or a mix of colors as it is a space with mixed minds. People from every walk come and sit and chat, but what they talk about is art, so the main accent is supposed to be artistic.

STUDIOS in this design are based on theme –BUDDHA , so the colors in play are basic neutrals with accent of browns and gold.

D. PLANS OF AUDITORIUMS AND GALLERIES

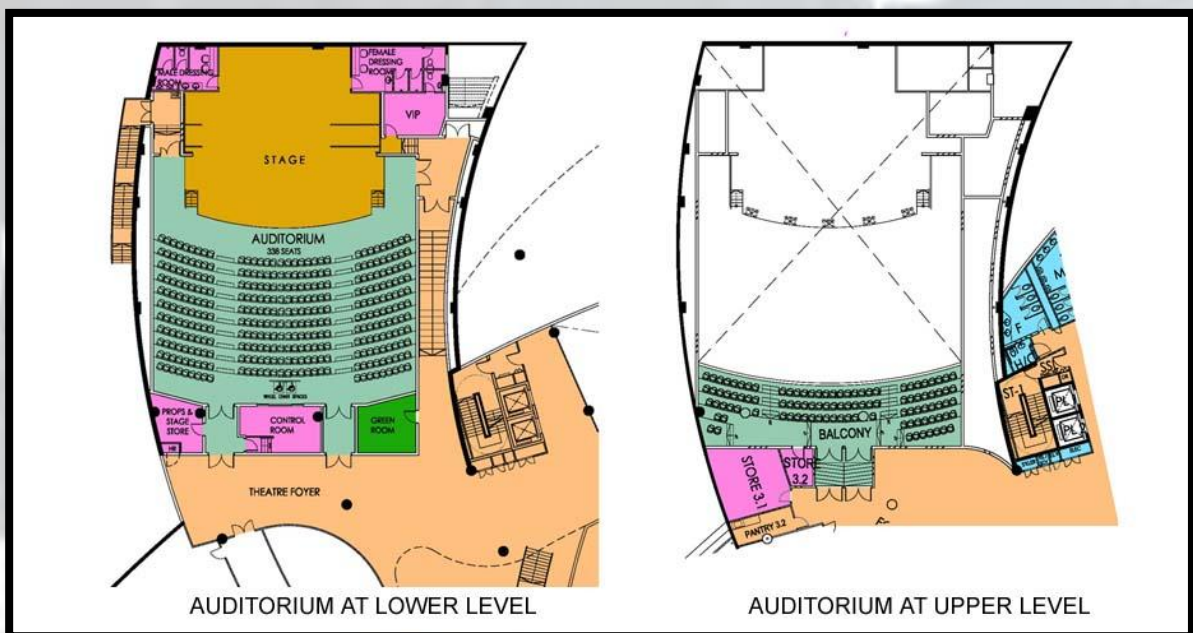
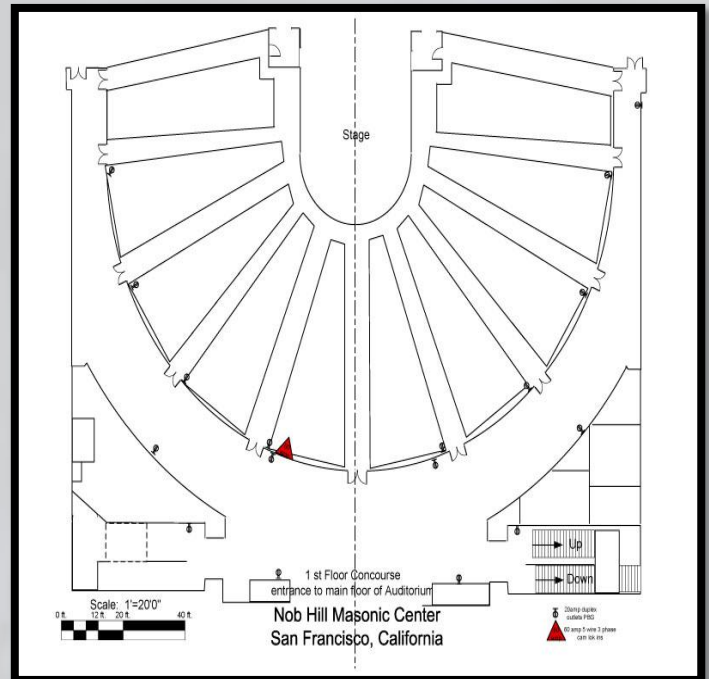
GALLERIES: The galleries are usually observed to be straight with a little deviation towards curves or circular forms. The reason is very clear, as the curvature of a circular form doesn't allow the display to be hung properly and in the accordance of line of sight. But then there is Frank Lloyd Wright who gave Solomon R. Guggenheim to the world. A free form running one space into another. The focus is paid to the

display more than the background or the structure. For that, the background is kept minimal in terms of colour and ornamentation. The lights are supposed not to cause glare, yet focus on the right areas and create appropriate interest.



AUDITORIUMS:

The seating is planned as in any auditorium. The only factor which is kept in mind is that the circulation space is sufficient. Second factor is that the stage must be visible from all the seats in the hall. Third, the acoustics must be proper so that even the last person in the room is able to hear.



3.

CASE STUDY

Case study form an integral part of design analysis. The case studies form the background for any design problem. For the design problem of art centre I did case studies of:

1. Jawahar Kala Kendra, Jaipur
2. Global Art Village, New- Delhi

Findings from the study:

Spatial distribution derived out of the observations, case studies and books referred.

Space planning on the basis of proximity of functions and comfort of the user.

Anthropometric measurements extracted from the case studies.

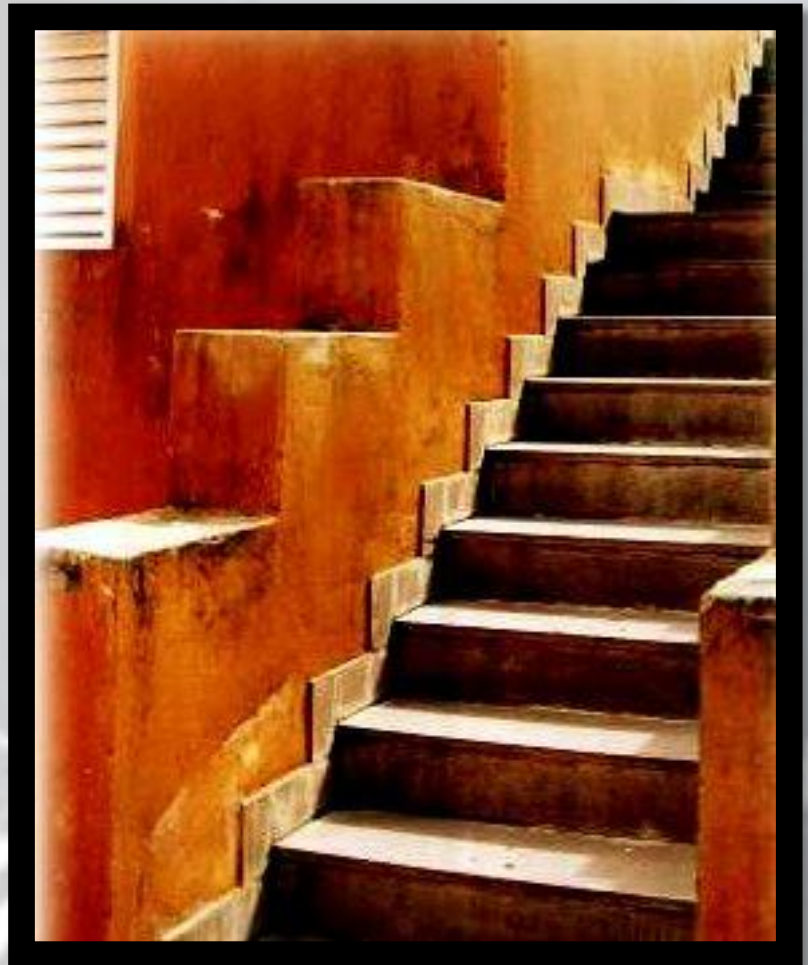
Specification and services required.

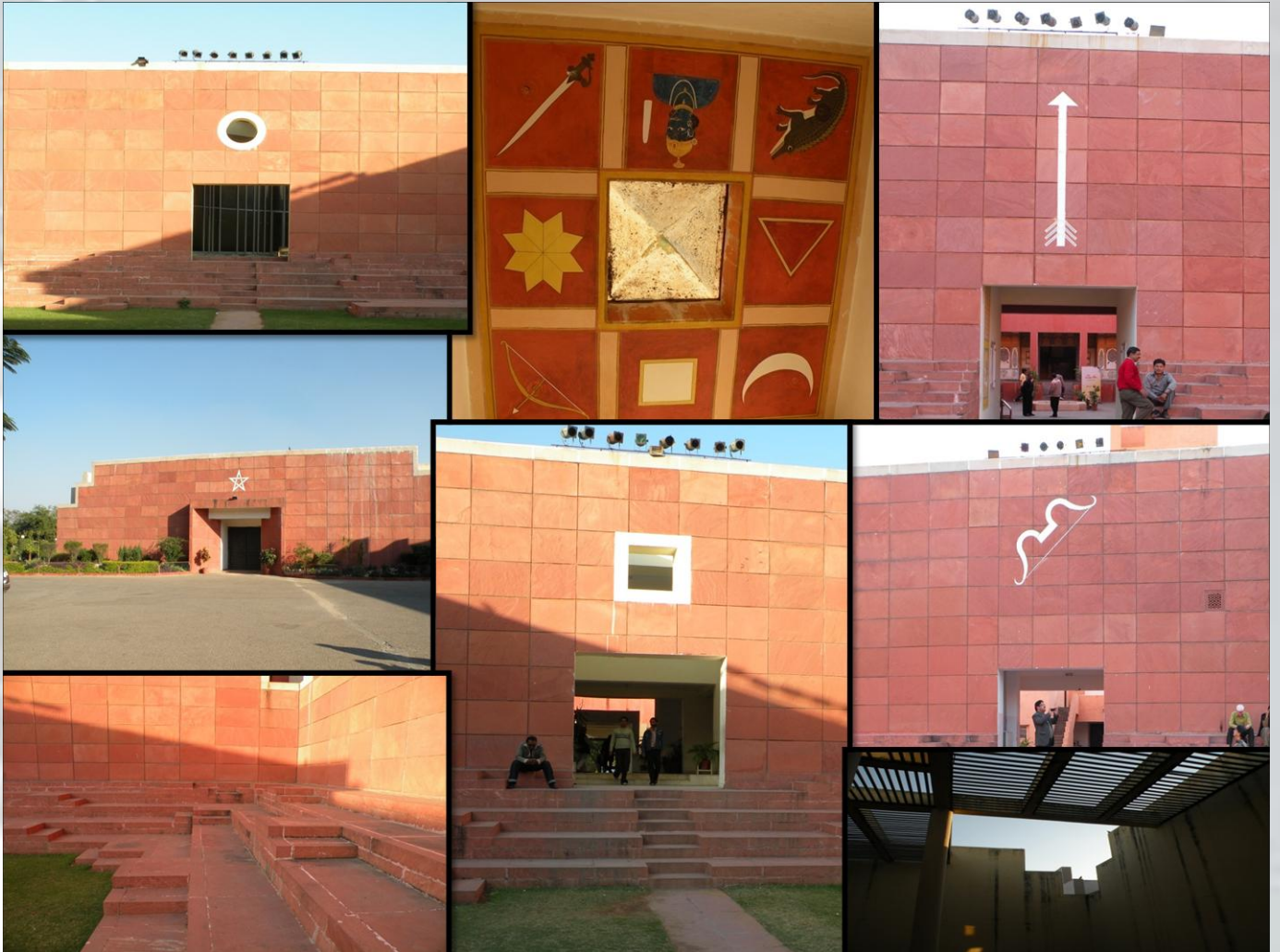
Psychological requirements of user.

CASE STUDY - I

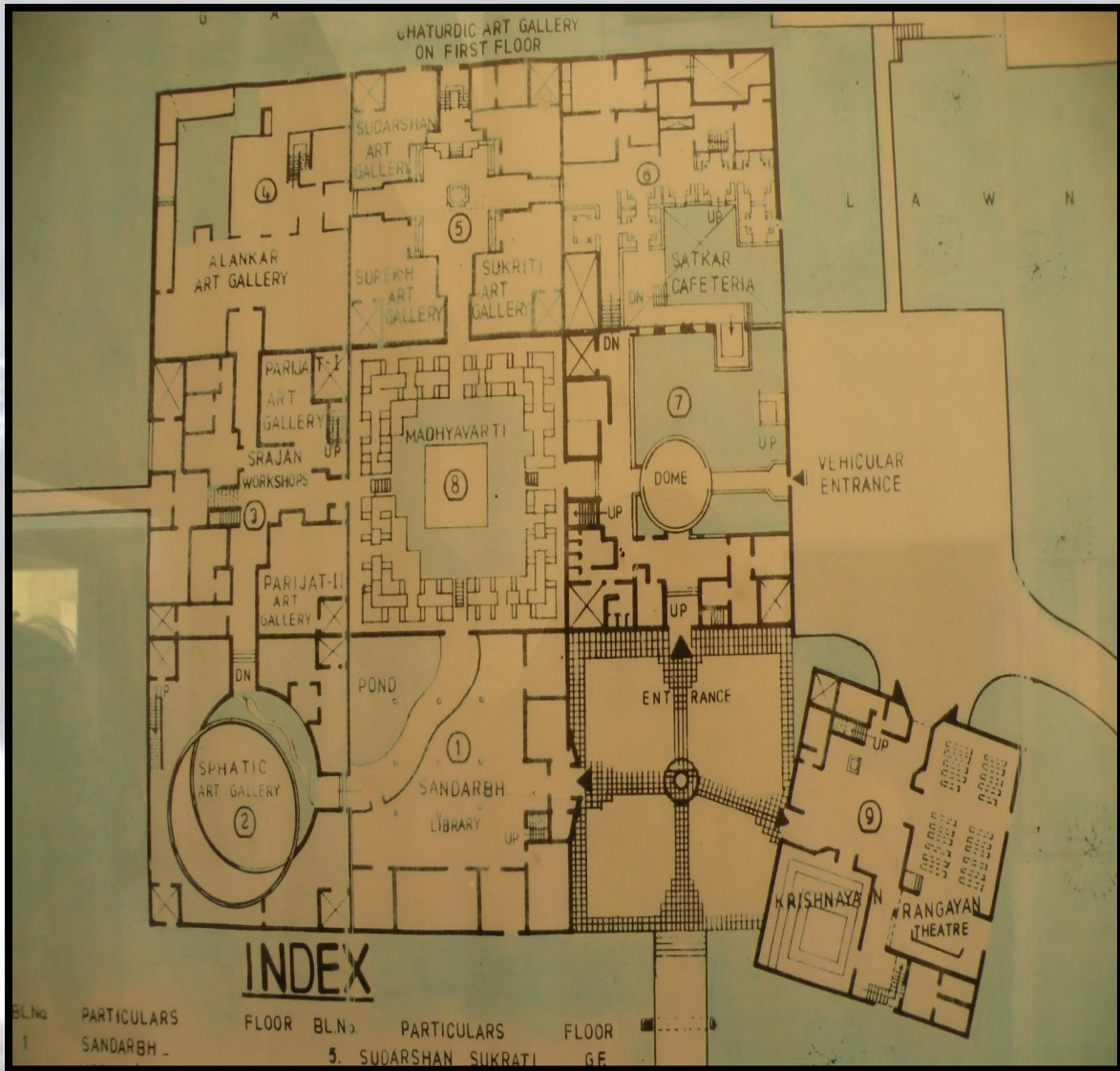
JAWAHAR KALA KENDRA

When Jawahar Kala Kendra was inaugurated on 8 April, 1993, it symbolized the fulfilment of a dream and the beginning of another. The new multi arts centre was perceived as the hub of arts and artistic activities and as a centre for the conjunction of the classical and the folk traditions which would in the years to come cater both to continuity and innovation.





KALA KENDRA



PLAN OF THE CENTER

- The space has complete geometric planning.
- Theme for the center is Nine planets and Hindu mythology.
- The center deals with multiple activities, involving artist and viewer's interaction with art.

THE ENTRANCE

Low heights structure- designed to give a fair idea of space to expect.





The entrance lead to foyer, which is accentuated with neatly painted dome-taking about the movement planets and the path.



SANDHARBH - LIBRARY



- The art center is supported with a huge library, which have something for the people of every background.
- The circulation is open, and huge walking space is left in between various stations.
- The design and treatment is simple, emphasizing more on the function.
- Flooring : Kota Stone
- Wall Finish: Paint
- Ceiling : Elaborate lighting plan.



- Huge fenestration- bringing maximum natural light, to every corner of the space.
- A Lost sculpture kept in between.
- Workstations kept along the periphery of the window.

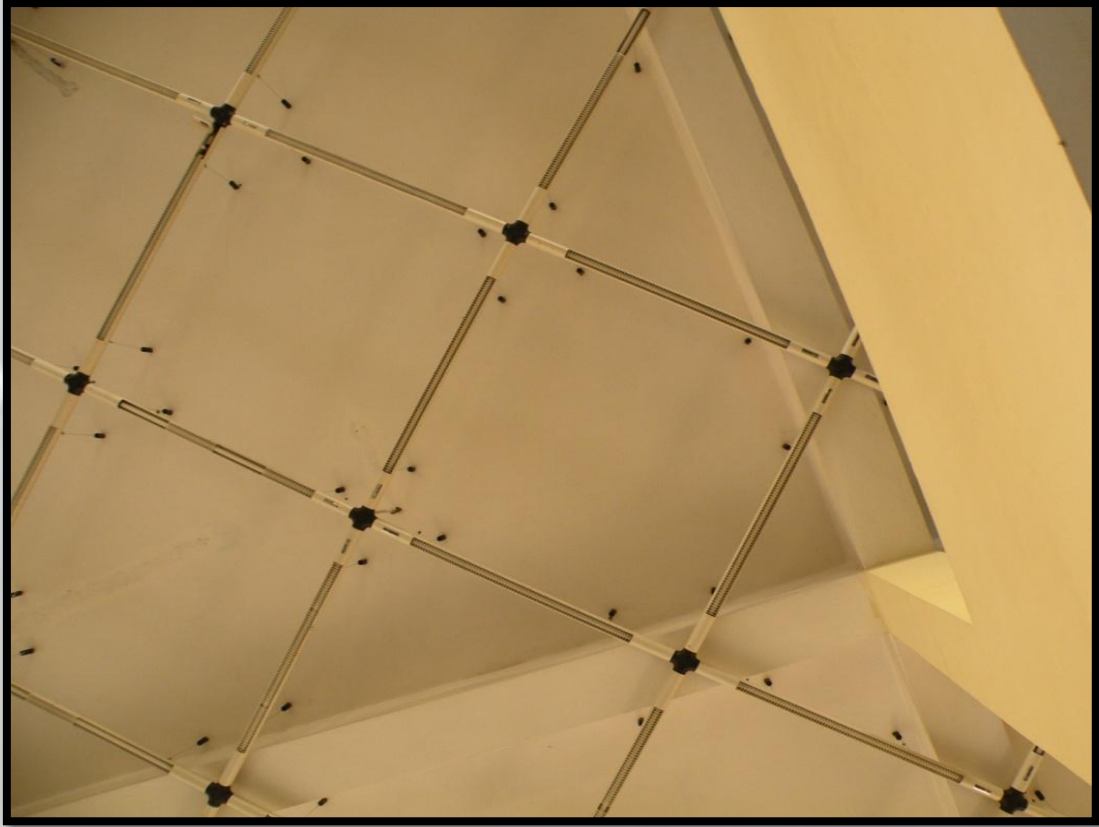
THE OFFICE AREA

- The long table, kept for 6-8 people to work
- Laminated table top and the facing, in contrasting colors





The space planning is so done, that no function feels obstructed, yet the openness leads to the feeling of being lost sometime.



- The ceiling is elaborately done in exposed florescent light tubes.
- The tubes are hung by the means of steel wires and are connected to one another forming rhombus.
- The connection is formed by plastic caps and runners.

THE AMPHITHEATRE



The open amphitheatre has been the spectator of various activities, including performances of dances, and the exhibition of sculptures and paintings.

SRAJAN - STUDIOS

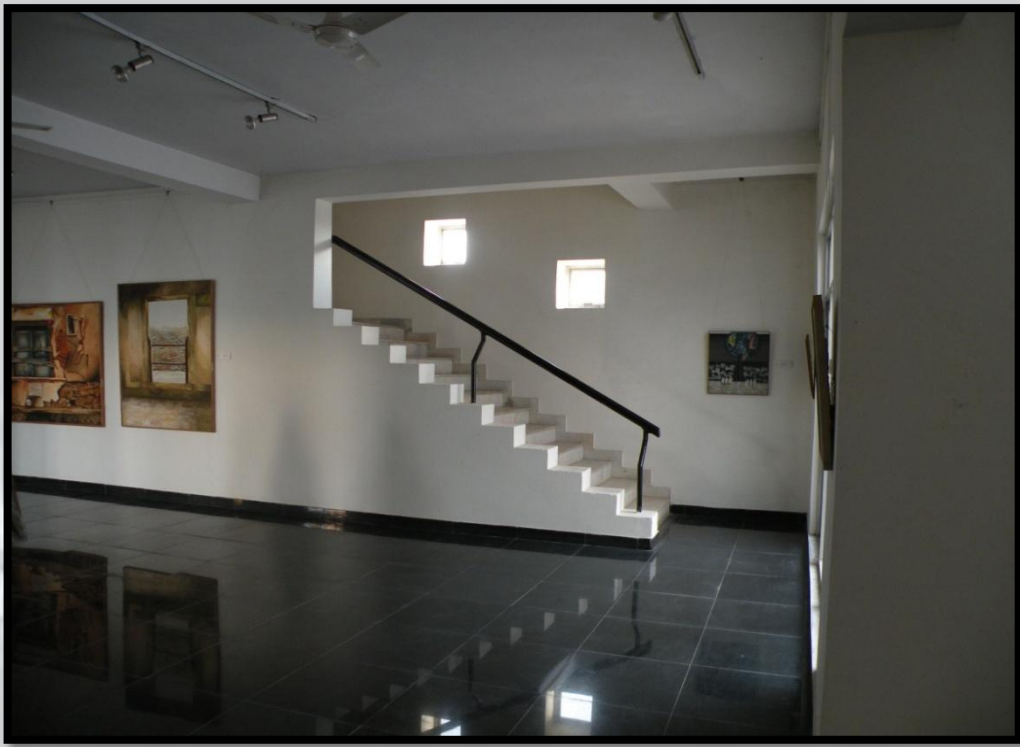


- The block is done in red/ deep orange color, giving an instant feel of activeness.
- The small windows bring uninterrupted concentration and open courtyard symbolizes free travel of energies.
- The flooring is in red sandstone burnt to give black look and more dexterity due to traffic of people and equipments.

STUDIOS AND GALLERY

- All the spaces are well directed and signage is provided around every corner.
- The small perforations in the wall bring in the light and ushering air.
- The flooring is made up of red sandstone, the toughness is ensured by firing the sandstone.
- The walls are painted with plastered mixed with pigment and earth. The treatment is done every 6 months to ensure the good finish. The thick plaster keeps the interiors cool.





KEY ELEMENTS:

- Small fenestrations with fixed glass
- Wrought iron railing – sleek and plain
- Low railing – 4” high
- Black granite flooring high polished
- Curved walls have curvature more than 3’, enough to display small canvas.
- Flaws:
- Reflection caused on high polished flooring
- Black & white causes contrast taking away the attention.

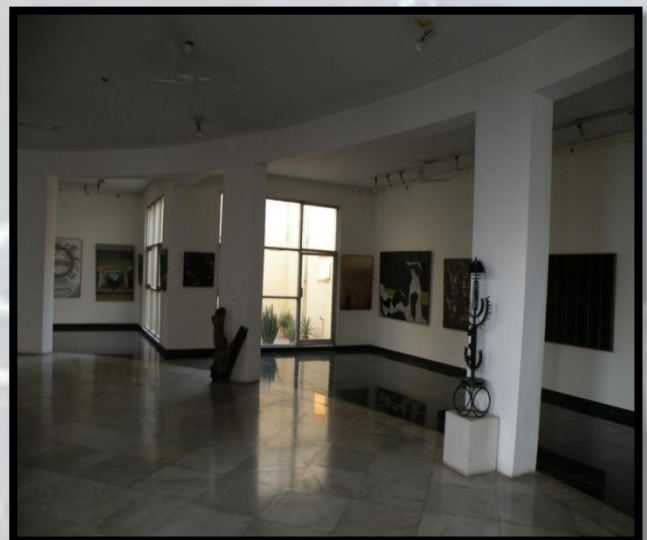


Reflection caused on high polished flooring.

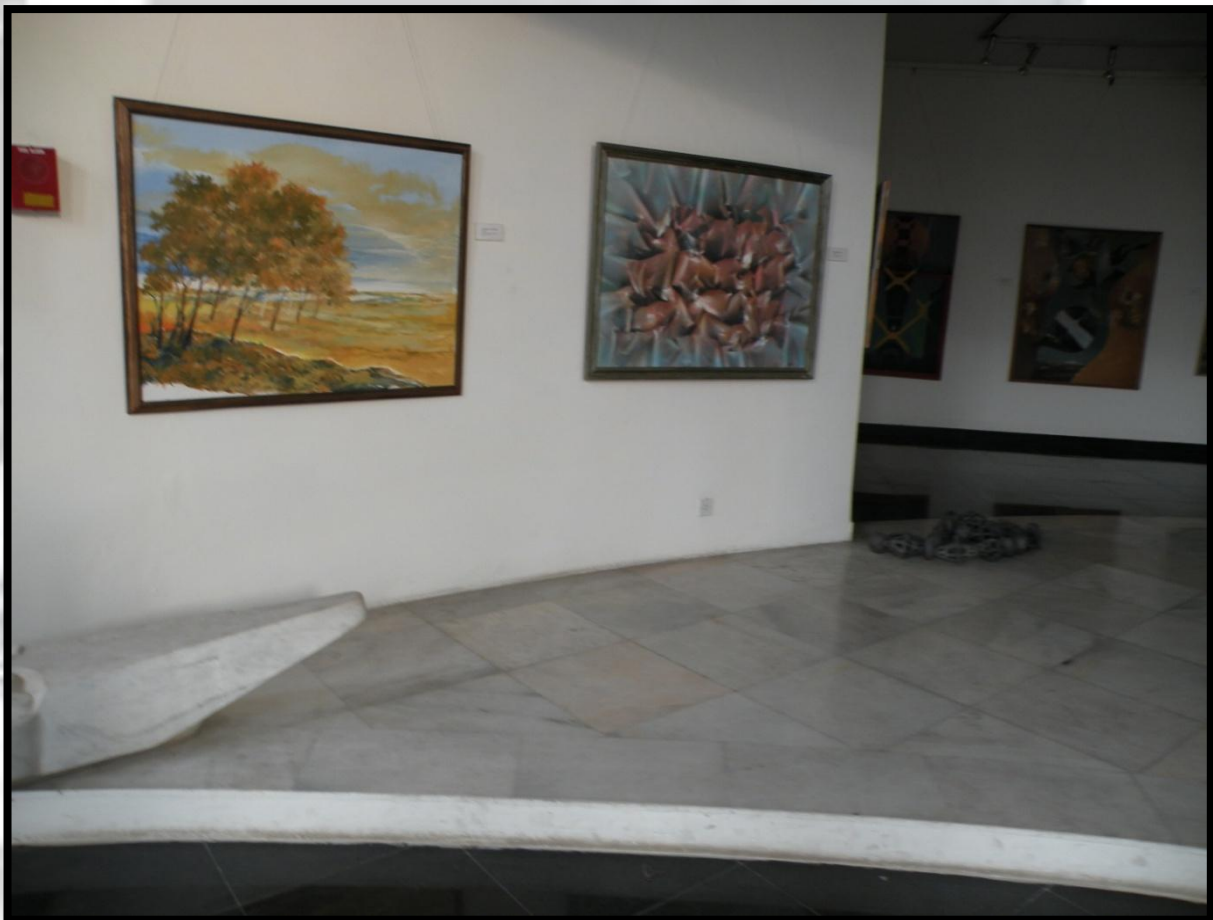
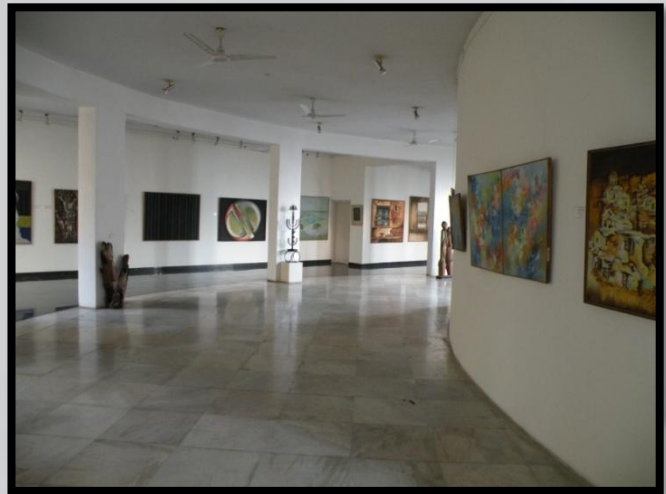
- Inefficient lighting system
- Podiums in board – $\frac{3}{4}$ " thick and painted
- Iron sheet clad pillar causing high reflection



- The display of paintings is by the means of clips fixed close to the ceiling.
- The track lights form focus though they are never tracked.
- The sculptures are displayed on the stone pieces and are left to be taken care of by natural light.
- the fenestrations are huge, cooling the space, bringing in enormous light but at the same time they shift the focus from art.

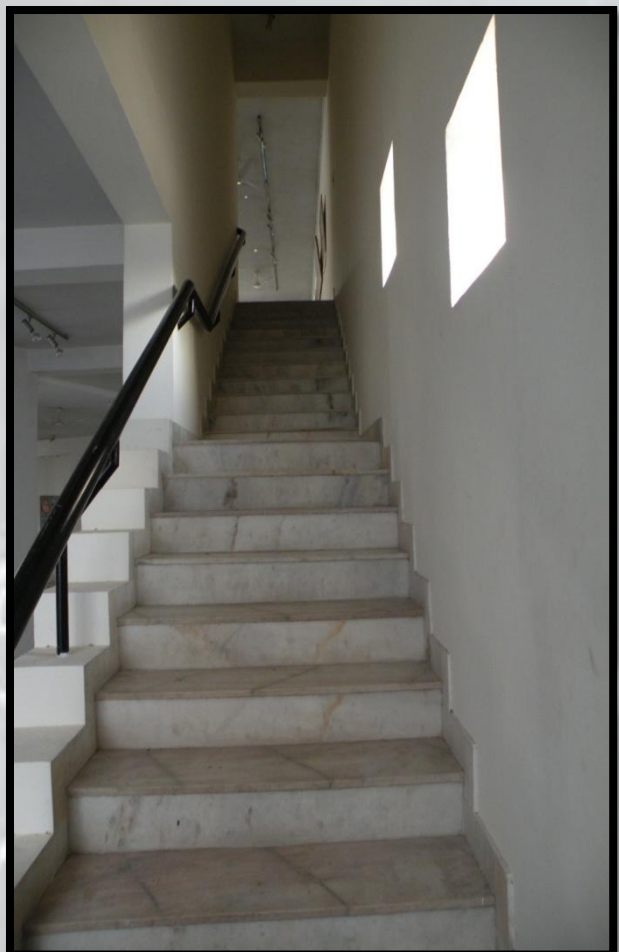


- The gallery is divided in two levels, the second level is 6 inches down.
- the curvature is beautifully used to create a sense of continuity, unleashing the new areas.
- The white tone is – Rajnagar White [Marble]





- The flight of continuous stairs you a level up, with a clear height of 15’.
- The ground floor has double height [30’] in the area which is 6 inches down.
- The next level have exclusive paintings done by artists much resorted.



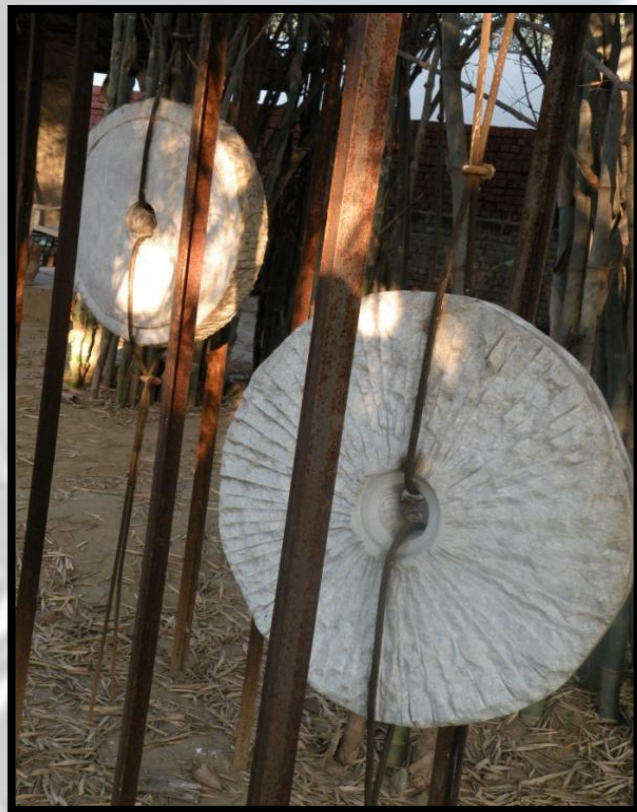
CASE STUDY – II

GLOBAL ART VILLAGE



PROJECT DETAILS:

- The art village is situated in Ghitorni, New-Delhi on the tropical drive.
- The spread of the space is 2400 sq. ft.
- The landscaping plays an important role in every aspect of this design.
- The materials used are local and eco-friendly causing no harm to the environment.
- Plan of the space is not available and the permission for taking measurements was not granted.





- The open air Studio with cane and bamboo roofing is a great example of art coming alive.
- This studio is situated in the centre of the residential art village.
- The routine works are displayed in the complex itself



- The flooring of the studio is done in terrazzo and jaisalmer yellow.
- The hung lights create focus as well as seems to be a part of the whole.
- The arrangement of wheels is linear cutting down all the complexities.



- Detail of roof structure. The roof is done in bamboo and then strengthened with thatch, though very neatly.
- The service of electricity runs thru the hollow bamboo poles.



- The Pottery wheel is standing type thus the movement of the user is easy and so is the working.
- The diameter of plate is 1' sufficient for small things and learners.

- Strong wooden table for the artists to work.
- Display of work is done on the podiums made up of the M.D.F boards.



- The routine work of artists is kept on the iron shelves kept in the studio area itself.
- The shelves are open from all sides so issues of light are solved without any complexity.





- The work tops are made up of stone which is 3" thick. The stone chosen is a sand stone which stands a lot of wear and tear and can be re-polished to gain the new look. The stone can withstand a lot of heat, pressure and weight.



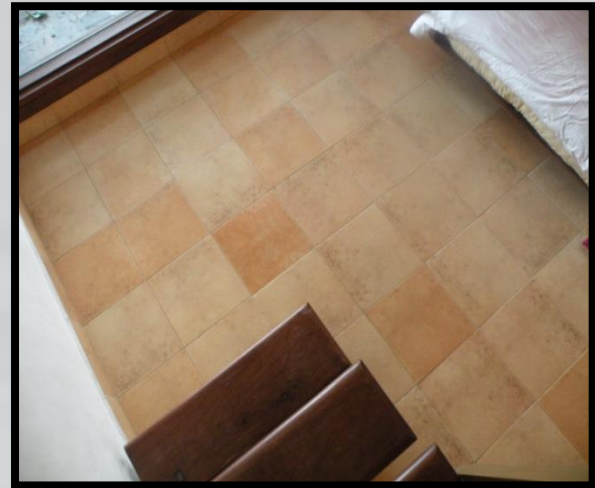
- The exterior displays. And the art done in the groove with landscaping.



- The residential complex of the village. It serves for the artists who choose to live in the retreat and work.



- The door design, thatch work on the horizontal projection over window.



- The duplex have all the facilities required to give a comfortable living to its habitats.
- The roof structure is same as in the studio, though the treatment for waterproofing is strict.
- The flooring is of baked clay tiles and for walls they are unadorned and white.
- The railing is beautifully done in wrought iron and steps are designed in wood on the cast iron frame.

4. SPATIAL REQUIREMENTS

POTTERY STUDIO: The pottery is an art which require skilled precision and concentration. The execution is completely dependent on the diligence and accuracy of the artist, as clay being so fragile asks for a lot of focus in all the stages of shaping it. The environment is required to be comfortable yet active. Monotony and dullness in the work studio will lead to loss of concentration and inefficiency.

Pottery is made by forming a clay body into objects of a required shape and heating them to high temperatures in a kiln to induce reactions that lead to permanent changes, including increasing their strength and hardening and setting their shape. There are wide regional variations in the properties of clays used by potters and this often helps to produce wares that are unique in character to a locality. It is common for clays and other minerals to be mixed to produce clay bodies suited to specific purposes.

S.no	Nomenclature	Area[sq. ft]
i.	Wheel	40
ii.	Workspace and Shelving [immediate storage]	50
iii.	Glaze room	75
iv.	Mixing room [clay]	75
v.	Work studio [Drawing / Sketching]	60
vi.	Dedicated Kiln room	150
vii.	Firing place [interior]	100
viii.	Outdoor concrete pad	100
ix.	Big mixer	100
x.	Rollers	25
xi.	Spray booths	40
xii.	Waste carts	10
xii.	Storage – easy and handy	100 cu ft.
xiv.	Lounge	50

Total area required: 900 sq ft.



PAINTING STUDIO: This art involves a lot of sketching and scribbling work, which means a lot more of space and room for its graphical alterations as well.

Painting in art, is the practice of applying paint to a surface (support base) such as, e.g. wall, paper, canvas, wood, glass, lacquer, or concrete. In calligraphy it is used to present text. "Painting" means also the use of this arts activity in combination with drawing, composition or abstraction and other aesthetic means in order to manifest the expressive and conceptual intention of the practitioner. *Painting is a mode of expression, and the forms are as numerous as there are practitioners of the craft.*

S.no	Nomenclature	Area [Sq. ft.]
i.	Drawing area	150
ii.	Canvas area	30
iii.	Small storage for stationery	6
iv.	Large storage for canvas	50 cu. ft.
v.	Individual studio space	225
vi.	Book and image archive	40
vii.	Library[seating for one]	40
viii.	Cleaning and solvent	30
ix.	Discussion room[user one]	30
x.	Showcase/display area	30
xi.	Lounge/rest room	100

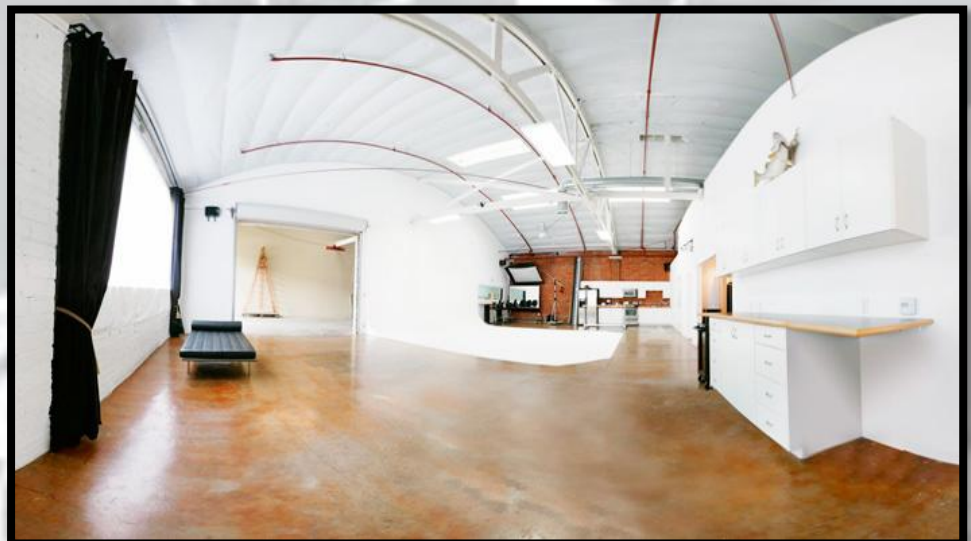
Total area per user – 700 sq ft.



PHOTOGRAPHY STUDIO: Photography is the process, activity and Art of creating still or moving pictures by recording radiation on a sensitive medium, such as a film, or an electronic sensor. Light patterns reflected or emitted from objects activate a sensitive chemical or electronic sensor during a timed exposure, usually through a photographic lens in a device known as a camera that also stores the resulting information chemically or electronically.

S.no	Nomenclature	Area	Notes
i.	Massive studio	200	
ii.	Alternate and varied storage	100	Lights and fixtures
iii.	Developing room	75	No fenestrations
iv.	Dark room for rolls and negatives	50	No fenestrations
v.	Digital manipulation studio	100	Supported with computers
vi.	Workspace/ discussions	60	
vii.	Display	30	2D form display, more linear
viii.	Lounge	50	

Total area per user :: 700 sq ft.



EXHIBITION SPACE: The gallery space of any Art museum is so designed that every visitor can get absorbed into the space without keeping any prejudices in his mind. Be it the walk – through of Louvre museum, Paris or the display hall of Nelson fine Arts centre, Tempe.: the galleries are always kept minimal and simple. They are adorned with the Art pieces and Art creates the statement for the zone. *‘Simple the structure would be, greater would be the scope for Art to create an impact’*. Though history has seen some distinctions, yet as a norm the structural finishes and embellishments are always kept simple.

Total Designated area: 5000 sq. ft.



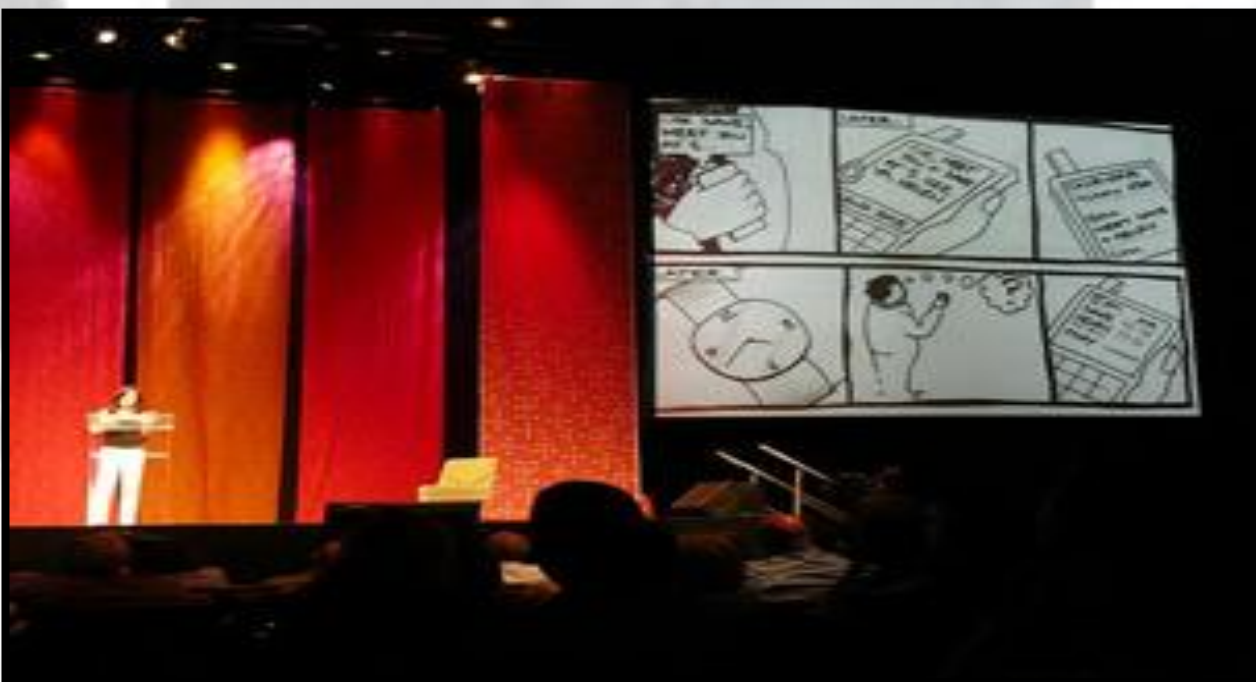
AUCTION SPACE: An auction is a process of buying and selling goods or services by offering them up for bid, taking bids, and then selling the item to the winning bidder. In economic theory, an auction may refer to any mechanism or set of trading rules for exchange.

Auction is a formal setup usually conducted with the interested clients being invited in the centre. Auctions happen to be one of the most practiced activities in the field of art. The subjects who hold the eye of the spectator, costs an amount and is a deal of challenge.

S.no	Nomenclature	Area [sq. ft.]
i.	Reception and counter	50
ii.	Intermediate seating	30
iii.	Storage for artifacts, data, documents.	100

Total area per user: 150 sq. ft.

Total covered area as expected: 8000-10,000sq.ft.



The space is broadly structured in four parts:.

A] Reception or welcome foyer. While doing the case studies I observed studios had very informal reception areas. The work was undertaken majorly by the people of other divisions. The treatments on walls and floors were very basic. They from nowhere reflected the feel of an Art centre. The plain and loomed spaces were more dreading than lively.

Suggestions were made that the entrances must proclaim the work going on behind the walls, but no progressive steps were suggestive.

Art centre is an ever evolving and utterly interesting space, thus the entrances must reflect that. Interesting signage can be put up, nice visuals explaining the activities going on in the centre. Contemporary or seating plans suggesting the environment or period of design can be put up.

B] Gallery and display. The galleries happen to be the one of the most evolved element in such a space. In all the case studies the galleries were most emphasised upon. The lighting plans and planning is done keeping the angle of focus and line of vision in mind.

Galleries can be made more interesting by bringing the exteriors into the interiors. More and more bringing in of the foliage will make the space breathe in nature. Making a juxtaposed amalgamation of arts even in display will make the space look more attractive. The vertical and horizontal elevation and depression leads to exclusivity and interest if levels.

C] Auction Area. The auction areas are the communication zones. Here the art is the medium via which a customer puts a price for the artist's imagination. The auction halls are more or less like formal auditorium halls.

Suggestively the spaces for auction must have separate chat rooms. Technology equipped rooms which allow the presentations to be done, and a space where the two parties can converse.

Auction halls can also be brought into the exteriors by fixing the podium on an elevation and setting the stage for bidding.

D] Studios and work areas. Case studies showed up a bad face. The learning studios were the leaders among sufferers. The furniture, workstations and storage facilities were badly managed. A lot of work is required to be done.

Painting studio::

- † The painting studios must be equipped with specialised furniture.
- † Independent washing and solvent rooms must be provided between two studios.
- † Provision for seating and standing must be made with equal ease and the relaxing zone must be provided to all the arts.

Pottery studios::

- † Must have controlled but huge supply of direct supply next to the wheel and clay storage.
- † The clay storage must be easily feasible even while kneeling and sitting on the floor.
- † The kiln areas must be moisture free and temperature controlling should be possible.
- † Least fenestrations must be put in the firing areas.

Auction halls::

- † Should be more interactive and visitor friendly.

Galleries::

- † Should have more focus on ambient lights and must have intermediate sitting zones.

User Requirements: After studying about art spaces we are clear about following aspects: who is the user of the space? In this case there are two users; both the Artist and the visitor. The Artist has his needs specified which are needed to be taken care of and visitors have their wishes which are needed to be fulfilled. Hence the design needs to cater all the people involved.

The user requirements are concerned with:

- † Identifying the user,
- † Identifying the needs,

Territorial requirements :

- † Personal space,
- † Privacy,
- † Interaction space,
- † Access

User favored subjects: favorite colours, special interests, places.

Need for analyzing user requirements:

Misunderstood requirements and scope creep, which often cause additional cost or over dues.

Incomplete requirements (data) result in incomplete information about the space, thus hamper various aspects of designing.

Unstable requirements or new requirements being added during the development phase, thus user requirements at least set the basic things in place.

It clears the every possible ambiguity regarding the functionality and objectives of certain requirements.

Conflicting goals by different users (e.g., the painter may want one thing and the sculptor or the visitor requires another approach). Too many “nice-to-have’s” that wouldn’t actually be practical & functional.

Identifying the user.: The user of this space is either an artist working for his passion and living or the common man, walking in to relish the art and relax. Both the people have different space requirements.

Example.:. A painter will require comparatively lesser space than a potter or a sculpture artist. And a visitor will have different concerns than the artist working there.

Identifying the needs.: Artist needs a *Working* environment for that he requires proper *Comfort* and zoning of his concerned territories and a *cosy* lounge for relaxing. Whereas the clients of artists would require a *Warm* reception, a *Comfortable* seating, an equally *Relaxing* and *Semi-formal* lounge and an *Absorbing* Gallery.

Territorial requirements.: Everyone has a territorial definition of space. For an artist his work studio would be his Personal space, where he needs his privacy to be maintained, which has to be designed as per his wish, and which renders all his requirements of *Just a Perfect* environment complete.

The preferred territorial break down will be.:

Personal distance: 1'6" – 4'0" [person as well as circulation]

Social distance: 4'0" – 12'0" [for interaction and relaxing]

Public distance: 12'0" – 15'0" [for gallery and display]

Access: The access to studio is controlled by the artist whereas Galleries are open to visitors every time as scheduled.

Creating special interest zones, making a building user friendly and efficient are the basic keys for making an envelope more effective as per the working point of view. The *artist is the king* of his world. A minor change can make or break the temperament to work. Similarly the spaces for display must be eye catchy as nothing creates bigger impact than *visual sanctity*.

User psychology

User 1. – Artist: an Artist is the foremost user of an Art centre. He occupies the space with zeal to express his true self to the world. He needs ‘his space’ – which defines his working and psychology. For this, special care has to be taken. If an Artist is not satisfied and is unable to express his true colours, the aim of creating an Art centre won’t be successful. Space which influences an Artist to freely articulate his intentions and interventions actually conveys his expression.

Psychology :: A person living on his own terms, breaking rules, modifying society by thoughts and expression, adding his views to the prevalent norms and many a times being the protagonist of bringing the change, so is an Artist. They are very much specific of their requirements and always respond and grow in the healthy environment.

In an Art Studio Artists’ are given an environment which gives them scope and opportunity to grow and nurture Art. Hence it should cater to the very basic necessities and give them the luxury to indulge.

User 2. – Visitor: a visitor comes to an Art centre to watch the Art n synthesize in an environment, so unrealistically realistic that one can be completely absorbed. It’s a world created by one person and every person coming in carries his own perception thus making such a place a hub of ideas and ideologies.

Psychology :: a person walking in the main stream of life, waking up, performing his duties, churning out the responsibilities still keeping a soul alive, such a person is a common man. Art serves as a great retreat for people who actually want to live in and revive the creative section of their hearts. Exhibition and Art galleries serve the purpose of bringing Art to common people. Visitors come and adore Art, take them home and adorn their individual spaces with the piece of somebody else’s imagination. Thus Art should be presented to them in a way that they can relax and make the valid choice for them.

Services involved.

Make space easier to function and allowing utmost comfort required.

A] Lighting: What we see, we see it due to sight. If light is not there we have no use of sight. Natural light is the elementary source, we need in order to SEE...but for specific functions and tasks we require specialised treatments. From the ambient lights to exterior lights, track lights to task lights, every fixture serves its own function.

The lighting in work studios is required to be more tasks oriented.

Whereas the lights in galleries are kept on track and uniform, other than the focus lights

The lights in an auction hall are devised to be ambient rendering with creating focus on the object on call.

The light placement and planning will be more strategically done than a painting hall.

B] Acoustics: In interior design, we are concerned with the control of sound in interior spaces more specifically we want to preserve and enhance desired sounds and reduce or eliminate sounds which would interfere with our activities. The requirement for sound level, reverberation time, and resonance may vary with the nature of the activity and the types of sounds generated. A pottery hall need more specialised acoustical treatment as compared to the painting studio.

An auction hall needs specialised treatment for controlling sound and making auditor more audible.

C] Plumbing: there are two separate but parallel networks in a water system. One supplies water for human use and use by mechanical and fire protection systems. The other disposes off water borne waste material once the water has been used. Water is supplied under pressure from a water main, once used the

water along with any waste material is discharged from the building and carried to a sewer line by gravity.

Painting requires more water than a photography compound whereas a pottery studio will ask for large quantities of water.

D] HVAC: the primary objective of a heating system is to replace the heat lost within an interior space. The basic heating system consists of a Heat producing medium, equipment to convert the medium to heat, a means to deliver the heat to a space and finally a method for discharging the heat within the space.

While a heating system supplies heat an air conditioner is usually considered to be a means for supplying cool air. A true air conditioning system however provides all year climate control by bringing in outside air, cleaning, heating or cooling it, adding or removing humidity and delivering the conditioned air to the interior spaces of a building.

All the rooms need proper treatments for HVAC.

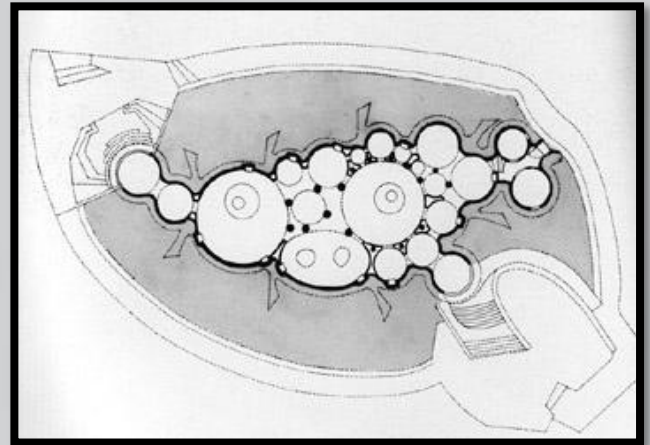
The treatment in pottery and sculpture rooms are more critical than any other rooms, as heat is generated via wheels and kilns.

These rooms have more traffic movement in the indoors and outdoors.

E] Security systems: the arts are much valued and thus need a great deal of conservation. Various methods are installed to conserve and protect art from any sort of threat.

HUSSAIN DOSHI GUFAPROJECT DETAILS:

Essentially an art gallery exhibiting paintings and sculptures of noted artist M.F.Hussain, the Hussain Doshi Gufa in Ahmedabad is located on a campus of the Centre for Environmental Planning and Technology, while becoming a metaphor, balancing the adjunct science and architecture education institutions. The structure is in the vicinity of the university area and is a symbol of cultural fest.



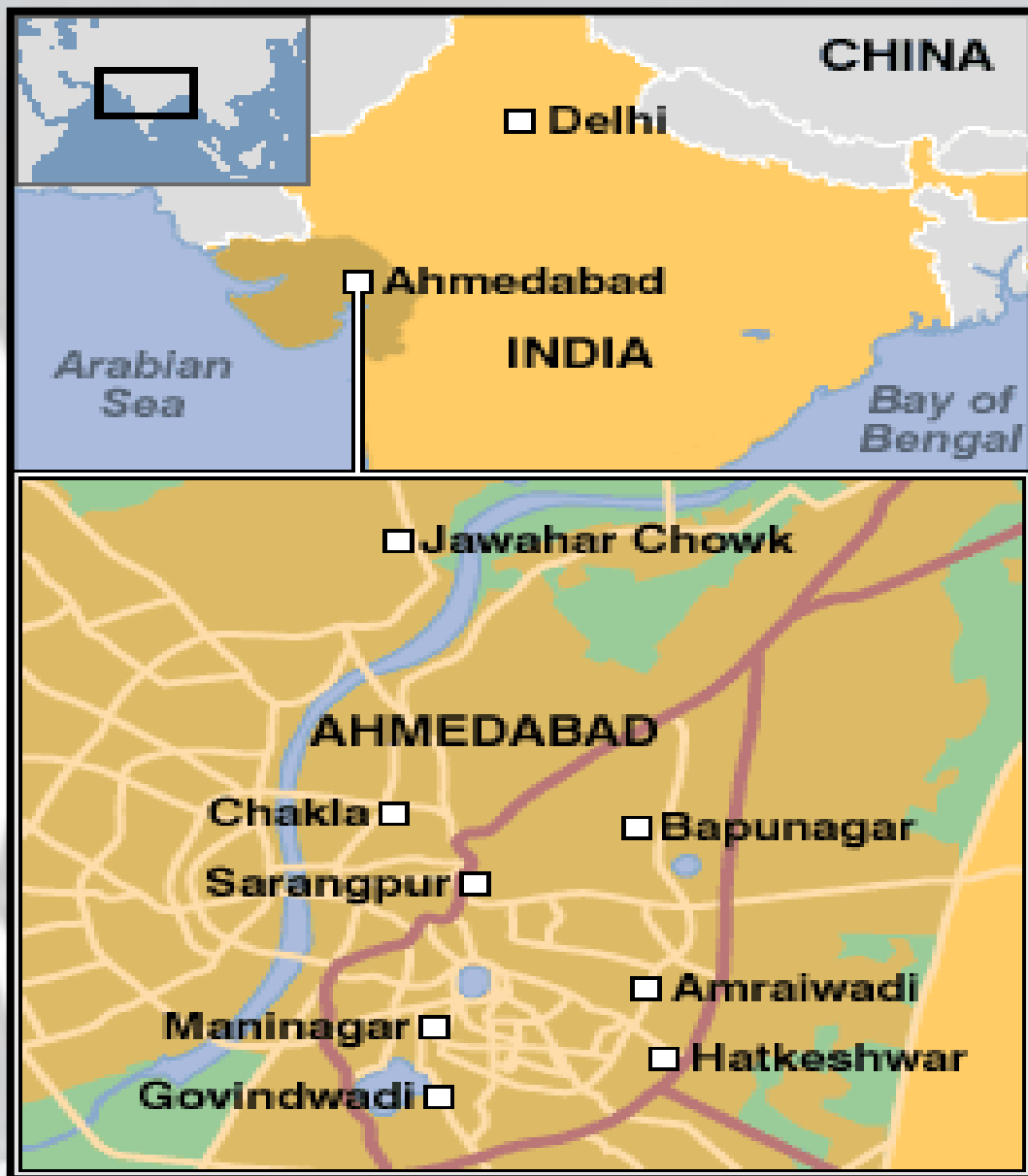
LOCATION	Ahmedabad, India
ARCHITECT	Balkrishna Vithaldas Doshi
CLIENT	Maqbul Fida Hussain
DATE	1993
CENTURY	20 th
BUILDING TYPE	Public/Cultural
BUILDING USAGE	Art Gallery
SITE AREA	1000m.sq. [10763sq.ft.]
BUILT-UP AREA	280m.sq. [3013sq.ft.]
PROJECT COST	1.8 million

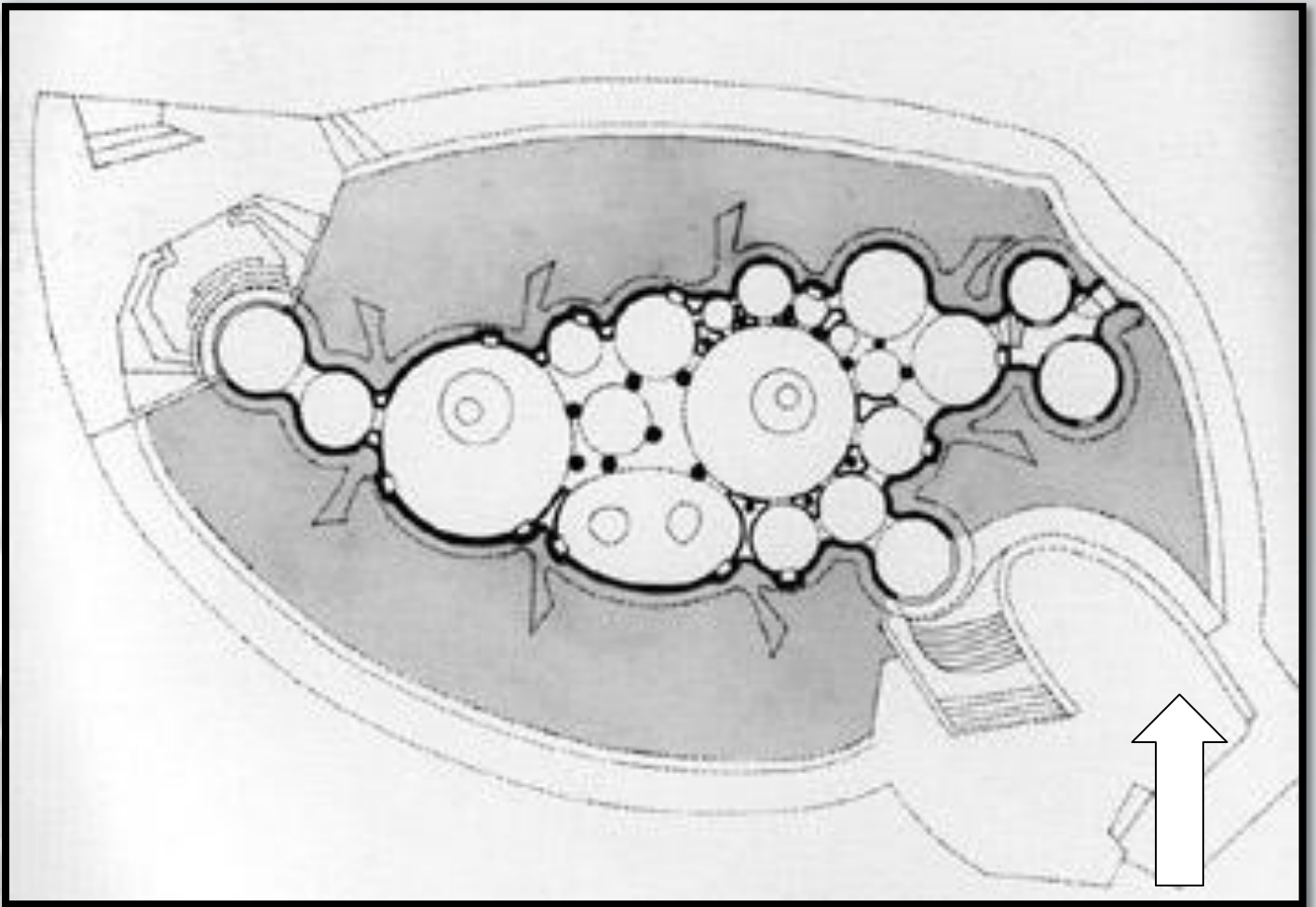
LOCATION DETAILS AND APPROACH: The Gufa lies within the vicinity of Centre for Environmental Planning and Technology, Ahmedabad, India. The Gufa can be reached by road by travelling on National Highway-8 or can be travelled by air landing on the Ahmedabad airport.

Location Co-ordinates: 23°2'10"N 72°32'58"E

Temperature: Max- 30 degree C (Avg.) Min- 15 Degree C (Avg.)

Rainfall: 92.3 cm.





Hussain Doshi Gufa is an underground art gallery located in Ahmedabad that depicts the works of the famous Indian painter named M.F.Hussain. It has been designed by the famous architect B. V. Doshi. Thus, the art gallery has been named after the two eminent personalities, Hussain and Doshi. The gallery is more popularly known as Amdavad ni Gufa. It has been given the name Gufa, as its structural design resembles a cave.

DESIGN CONCEPT: Sense of ablution, comfort conditions of the subterranean, painting abstractions reminiscent of Palaeolithic art, and visual reminders of Buddhist caves from Ajanta and Ellora, all influenced the form imagery of a cave for the proposed museum.

SPACE PLANNING: As a human intervention and interpretation of a natural form the basic plan organization evolves out of the familiar module of an intersecting circles and ellipse. The spaces formed within are however contiguous and amorphous through inclined planes of domes, curvilinear planes of walls, undulating floors and non rectilinear leaning columns. A footprint of 280m² nearly doubles its surface area for painting through convoluting planes. The shells, domes and skylight protrusion of various sizes and shapes float on a part buried space and eaves gutters extending over ground further accentuate this feeling and anchor the object to the ground. Projecting skylights and skin cut-out not only illuminate the spaces within but create mythic shafts and spots of light reminiscent of the galaxy and stars.



CONSTRUCTION TECHNIQUES & MATERIALS USED:

Structure has been constructed using simple hand tools and that too by unskilled workers. The art gallery has been built on the basis of computer aided designs.

The form of roof shells is guided by computer aided designs and the structure, built in Ferro-cement, is in the form of skeletal skin and wire mesh, sandwiched on each side by layers of cement. It has a 25mm thin shell structure, supported by retaining boundary walls and sloping internal organically shaped columns.

Buried spaces, earth mounds, raised volumes and china mosaic finish renders the architecture energy conscious, cutting down its energy intake, in an otherwise harsh hot dry climate. Material resources are further optimized through its shell like forms and Ferro-cement construction techniques.

A simply wire mesh and mortar lined floor in a form of natural sag of cloth, evolved through scaled model studies, eliminates the need of any kind of foundation, as the basic form is continuous and efficient in optimizing the stresses and its distribution. Similar economy of material is achieved through roof shells in a form guided by computer designs which resolve stresses to minimum, requiring only an inch thick Ferro-cement shell without any form work.

KEY ELEMENTS:

The gallery is under-ground, so the services are very peculiarly planned

The building has two ingress points- flight of steps walking down

Skylights are the major factors which create interest by the play of light and shadow.

INTERIOR FINISHES:

WALLS: Simple unadorned plastered surfaces to accentuate the art.

CEILING: The walls merge into the ceiling without any disturbance, thus no different treatment is provided to the ceilings.

FLOOR: A simply wires mesh and mortar lined floor in a form of natural sag of cloth.



LIMITATIONS: The site is very well manipulated and structured with undulating forms. The juxtaposition of various spheres is a unique aspect to this building, though it do carries its own limitations from the interior design point of view; they are as following:-

1. The structure is very bold. Other than being a favorable point, it is a negative element as well. The boldness makes a mar on the art displayed. The structure comes to more amazement than the art itself.
2. The refining of space as per the user requirement or in case of change of the user is very difficult; Like the hay wire going columns which otherwise form the structural component are very restricting in respect to change in the use of space.
3. The building is completely beneath the floor, which leaves all the burden of natural light to the skylights, which despite of increasing interest make the space look like a dungeon.
4. The services like Plumbing & sanitation, HVAC are not clear.
5. The element of Foliage is greatly missing. No interior landscape or open space makes it more dull.



7.

DESIGN CONCEPT

The designed art centre is based on the theme of amalgamation of the enlightened core with the possibilities of future. The theme is termed as 'BUDDHA goes FUTURISTIC'. The centre is basically divided in three main areas:

1. The Studios
2. The gallery and auction
3. The walkways

Thus all the areas are designed to interest the visitor and take him to the next level. The Studios are entirely based on Bodhic feel, as an artist during his strife and his calm is always leading towards enlightenment, whereas the visitors come in with a neutral mind to experience something which is larger than life. The gallery is proposed to be a space which is highly inspiring towards future. The blank walls with a little texture and high metallic sheen ensure one to be lost in the calm surroundings broken by the strangely placed huge tree inside the periphery of the walls. The transition from highly Bodhic to futuristic is marked by the galleries and walkways in between.

The landscaping is done in order to ensure that the soothing effect of nature is put in use to create the melody. The theme depicts the serenity and calmness required by an artist while working and ever evolving yet muted stated of viewers coming in. The theme is an eclectic mix of classes and genres just like the amalgamation of arts and various minds in one habitat.

The studios are proposed to have an eclectic mix of earthy elements and low human scale and the public spaces are proposed to have high ceilings, geometric forms and neat colors. The concept will come alive by means of colors, lacquered screens, lights and muted combinations of plants, water, sand and sky.

