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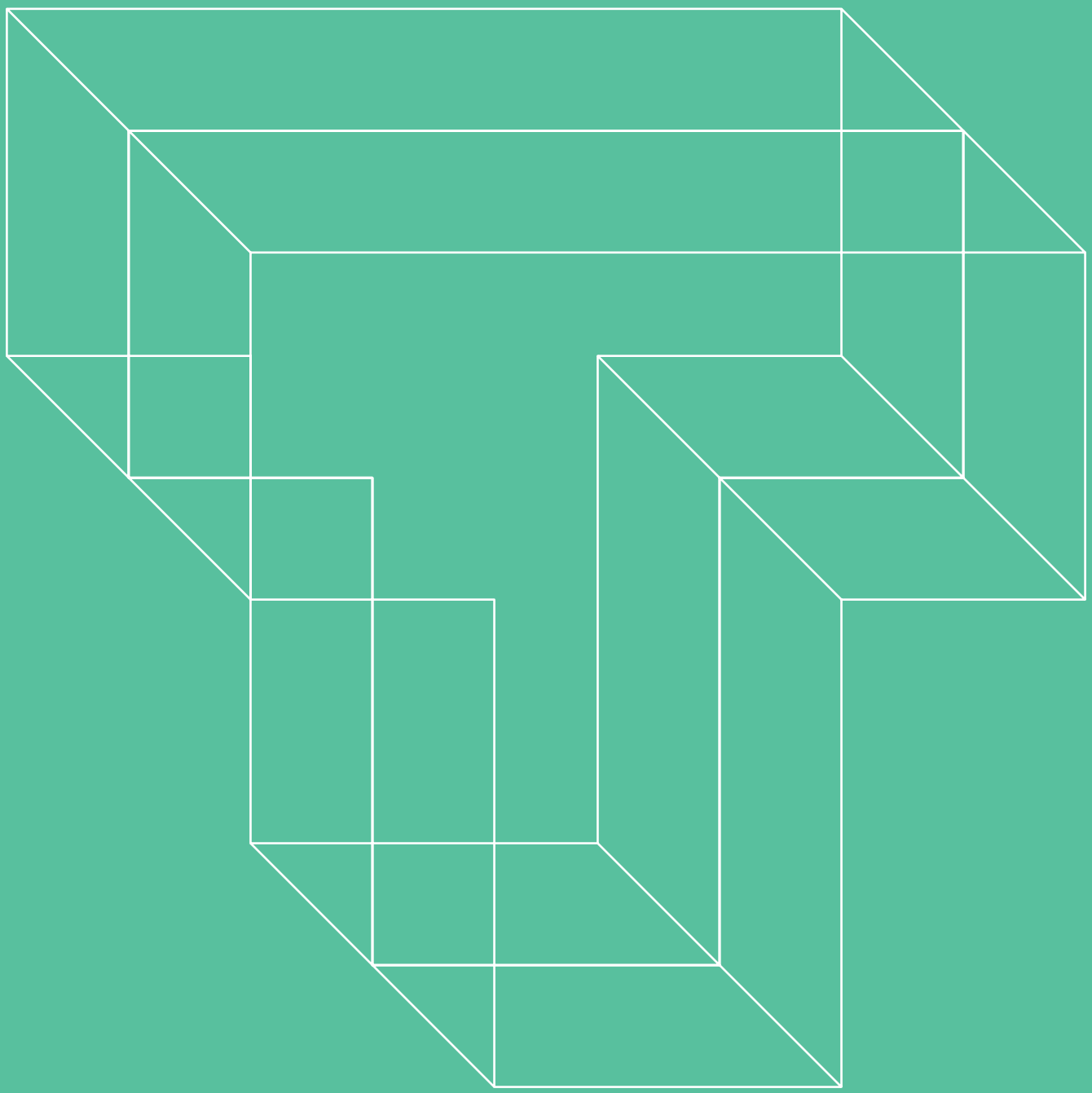

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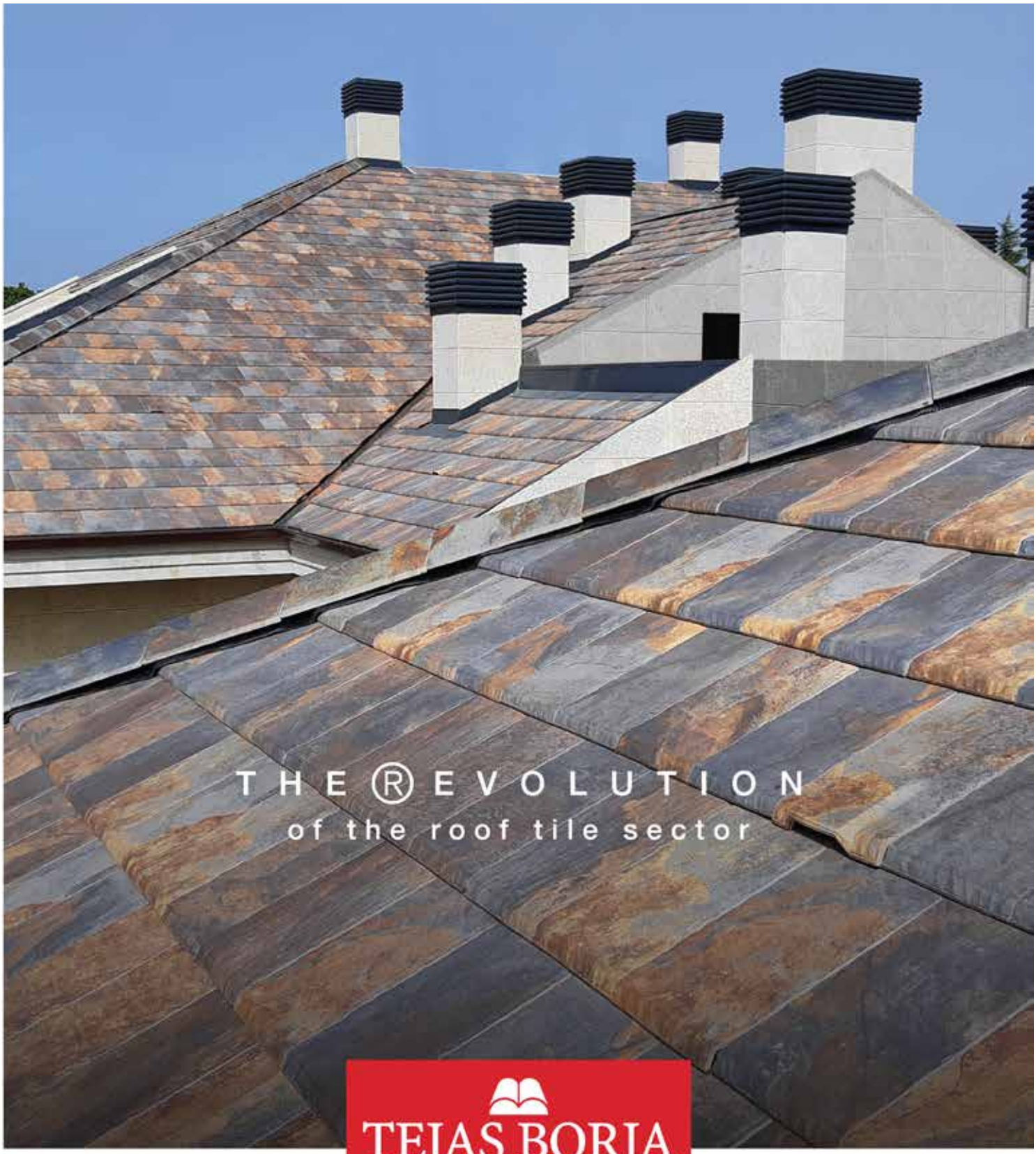

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EDITOR'S NOTE

Whenever technology reaches its real fulfilment it transcends into architecture.
Ludwig Mies Van Der Rohe.

Technology refers to methods, systems and devices which are the result of scientific knowledge being used for practical purposes.

We are living in a world of fast-changing technologies- be it the special software that we use to create our design, CAD programs, be it the use of new technologies in the construction activities, or be it the use of technologically advanced materials and products for construction.

Technology can improve building efficiency and durability. Technology affects the way that architects design buildings and the way that clients experience the design process.

The theme for this issue of JIIA is Technology. Ar. Mukul Goyal has elaborated on the theme.

Ar. Durganand Balsavar is in *Dialogue* with Ar. Steven Holl.

Ar. Debjit Adhikari, talks about his cross-country bike journey in the *Travelogue* column.

The Young Architects Festival (YAF) at Ranchi on 22 and 23 October was an event well-conceived and efficiently organised by Jharkhand Chapter and was among the best events by IIA. This edition of the Journal covers the event in detail.

Our feature *In Memoriam,* presents legendary Architect Piloo Mody, who was instrumental in bringing the Architects Act into force.

We continue with our other regular columns. It was reported that an Architect from Karad, Maharashtra, was manhandled by one of his clients. We express our anguish and concern on such inhuman behaviour and condemn the incident. The Architects' community unitedly stood with the Architect and expressed solidarity . We cover the nationwide protest by the IIA Members across the country in the newsletter.

We welcome your contributions to the various columns and the design features for the upcoming issues and hope you will join hands to make your Journal richer.

Architecture must have something that appeals to the human heart, erection work is expressed in our time as a union of technology and humanity.
Kenzo Tange.

Ar. Lalichan Zacharias
Editor

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PRESIDENT'S MESSAGE

Dear Members,

Greetings!

The growth of Technology both in design software, construction methodology and materials has been significant and architects have been adapting to the evolving needs to a great extent, but we have to be judicious in our approach to safeguard the environment.

With rapid strides in technology and its influence on the built environment, it has become necessary for all of us to keep abreast of the ever-evolving developments. It is imperative to pursue continuous education programmes at all levels to sensitize and educate ourselves for a better understanding and delivery of services.

Now that the situation has returned to almost-normal, with an impetus to construction and infrastructure, the need for increasing the infrastructure in architects' offices is a possibility. Members are requested to make use of the IIA CAD software as it is very affordable, apart from being integrated in the auto DCR of different states.

The recent rains in the south have been creating unprecedented, unmanageable conditions, inundation, loss of property and lives. It is a wake-up call for all citizens and authorities to safeguard, maintain and improve the existing water bodies which have the least attention paid to them. Creating newer harvesting and storage infrastructure and better management strategies will result in mitigating the problem apart from saving the precious resource.

The Chapter and Centre Chairpersons are requested to organize programmes to understand and suggest ways and means to alleviate this recurring incidence and bring it to the notice of the authorities as a Public awareness exercise.

It is good to see that as a prelude to the IIAPL to be hosted by the Kolhapur Centre of the Maharashtra Chapter, they have organised a MAHAPL in which various teams from Maharashtra participated. IIA Tamilnadu Chapter is organising an IIATNPL in the month of December hosted by IIA Madurai Centre.

We are all looking forward to the IIA National Awards Final Jury and Award Presentation, scheduled for 19 - 20 December, hosted by IIA Goa Chapter.

The online membership application process is on and members are requested to propagate and invite non-member architects to be part of the Institute.

The IIA Telangana Chapter is organising and hosting the IIA NATCON 2021 on 11 – 13 February at Hyderabad. The organising team headed by the Chairman Ar. Udaya Shankar Doni and Ar. Sridhar Gopisetti as Convenors are passionately working to deliver a memorable Convention. Let us all be there.

Best wishes

Ar. C. R. Raju
President, IIA

Ar. C.R. Raju
President, IIA

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Vice-President, IIA

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TECHNOLOGY - WHAT'S NEXT ?

Every year architects graduate with the knowledge base of their teachers and the internet.

Precisely two teachers : in which one continues for a lifetime. Thirty years ago, there was no internet so the knowledge base was generally uniform throughout India, for many years, before the onslaught of computers. I belonged to the Star Trek generation of the seventies when technology was still in our dreams and with awestruck eyes, we saw Captain Kirk use his 'mobile phone' and disappear through the 'transporter.' The former technology is now a reality !!

Technology advancement in architecture is now here to stay, and every year we look forward to what next is going to revolutionize the way we practice. There is a great divide between old and young practices where the older practices are learning from the younger generation, while the young practices are creating new avenues, which can be seen through social media platforms.

Computers were a shock to me and I resisted it till I eventually couldn't (hence the word 'onslaught' above). But today with highly versatile softwares, visualization of projects in real time never ceases to amaze me. With virtual reality headsets becoming a unique gadget in architects' offices with mobile attachments, the client can virtually walk through your designs and give his approvals. Also with the transfer of computer technology into 'construction printing machines', you can now directly print buildings on the ground. Although the technology is still expensive and a few years away, it has started governing many aspects of Architectural design. Keeping it simple.

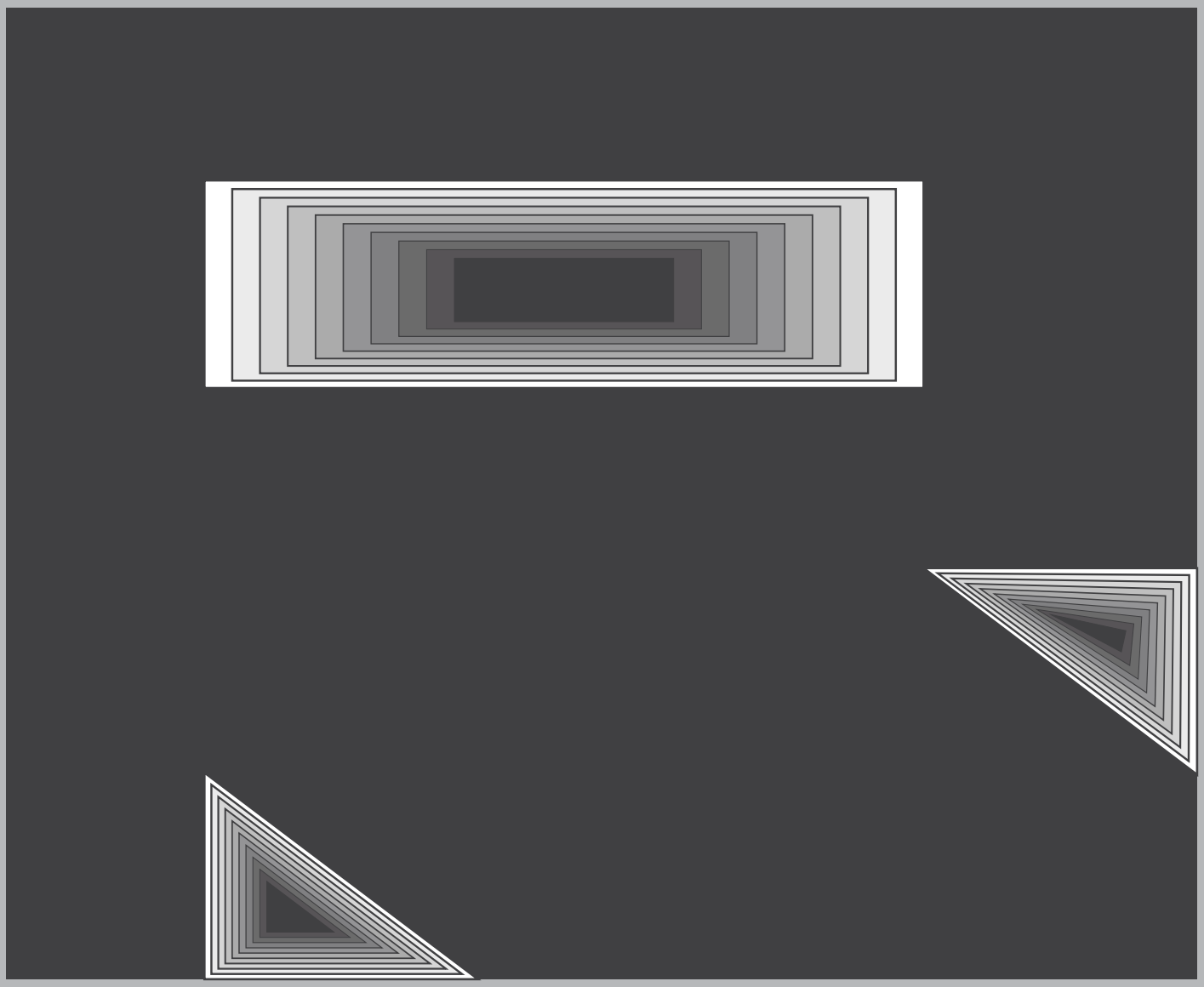
One day a client asked me to use the building information modelling (BIM) software for his project and that sent me through the roof. I have been resisting this, just the way I resisted computers, but now, was facing a no escape situation. The BIM softwares are super-expensive and requires special training for the staff, and it gave me the blues when I looked back at my wooden pencil and drafting table.

Complexity of architecture with equally complex services and structures tied together in tight time schedules has pushed architects to rethink their strategy as primary consultants for anything and everything in the construction activity. Software like BIM / 3D models allow everyone involved in the construction process to understand and make shared decisions . . . in fact these technologies allow mistakes to be pinpointed before they can actually occur. A simple 3D picture helps the site engineer to identify mistakes in the structural drawings - such is the distance we have covered !

Coming back to the new generation of Architects graduating every year- to be honest - technology has created a more competitive world for them. But it has also created more opportunities. All senior offices can and should benefit from the technical knowledge base they bring, and at the same time guide them with years of experience to follow the design sensibilities developed without technology.

It is fine to be ignorant (like me), but it's fun to peep into the future once in a while. So go ahead and challenge yourself with the technological advancements in architecture and write to us about it. We would love to hear about your experiences!

Ar. Mukul Goyal



RESEARCH

GIS for Governance in Town Planning and Land Management
Ar. Aman Gupta, Ar. Shubham Jaiswal, Ar. Mohammed Arif

•

Interpretations of Organic Architecture since the Twentieth Century
Devansi Sachade, Ar. Amol Holey

•

STUDENT WORK
Water Harvesting Design Strategies for Residences in Kerala
Amritha Suresh, Prof. Karthik Mohan

GIS FOR GOVERNANCE IN TOWN PLANNING AND LAND MANAGEMENT

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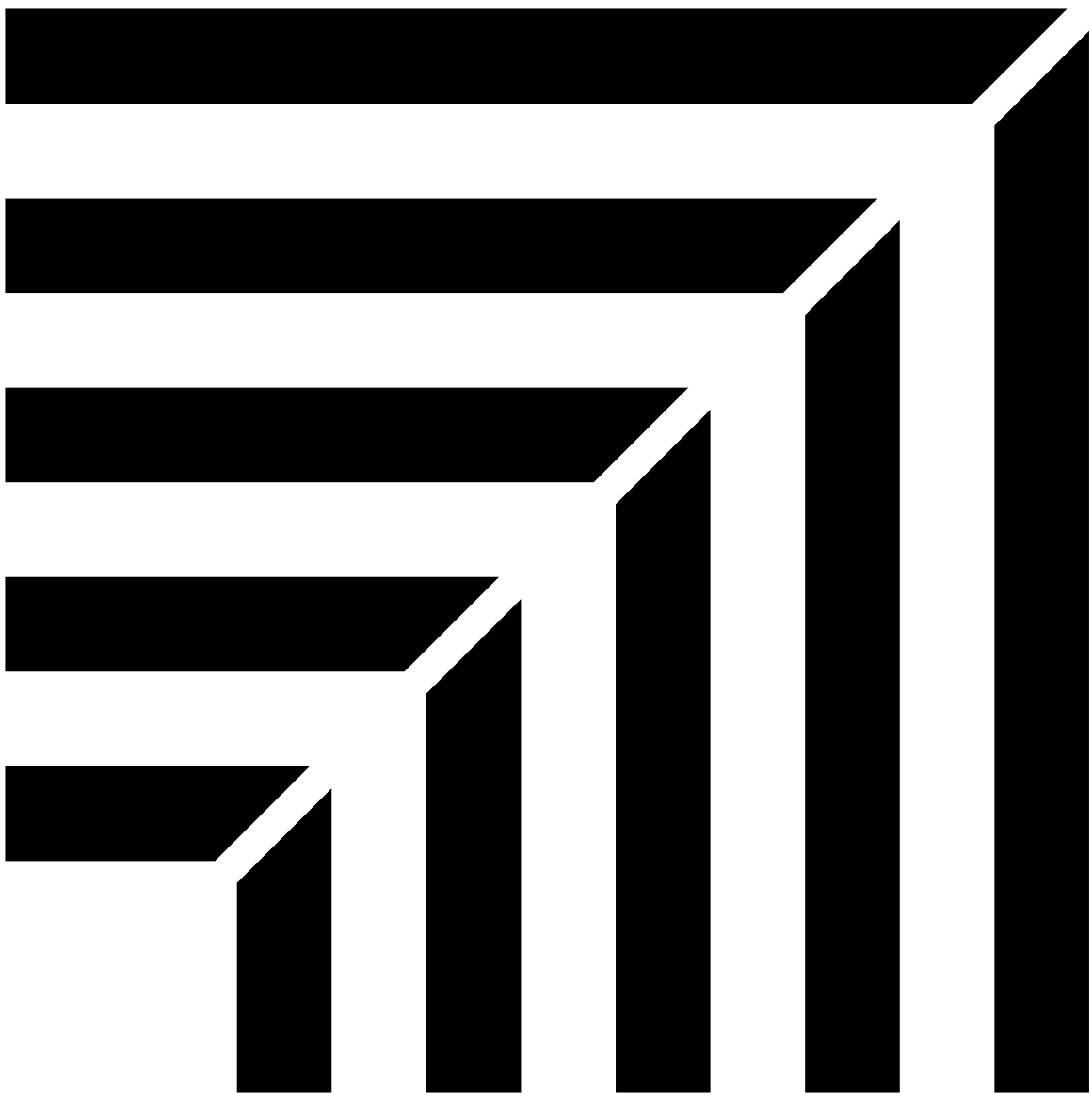

ABSTRACT

For an adequately planned urbanization of a city like Gandhinagar, it is essential to identify potential sites for affordable housing, commercial hubs, and recreational centres based on some specific urban development criteria. These criteria have been decided based on neighborhood concepts in urban planning. We measure each criterion according to its importance, and then a certain weight of each criterion is created. Geographic Information System (GIS) and Multi-Criteria Decision Analysis (MCDA) are the standard techniques used for site suitability analysis at a macro level. For this purpose, toposheets and satellite data have been used to generate different thematic layers in ArcGIS software. GIS technology plays a vital role in the micro-level analysis or spatial planning of sectors such as Gandhinagar Municipality. A semi-automated system to perform spatial land management and a built-up area calculator have been developed by utilizing the Python script incorporated in ArcGIS. The built-up area calculator will help in identifying unauthorized construction. This research can assist the policy-makers, planning officials, bring transparency across different stakeholder groups to better understand the land parcels catering to the ongoing developmental need and future urban growth.

Keywords: *GIS, Site suitability analysis, Town planning, Multi-criteria decision making, Land use*

INTRODUCTION

GIS has decent potential for regional or district planning and resource management in India. GIS has become a crucial tool for the environment, services, development planning, and governance (Singh, 2005, p. 223). Town planning is the planning and controlling of the construction, growth, and development of a town or an urban area. It involves a planned preparation to ensure the management of future needs. This is a dynamic process that changes according to local policies, development proposals, and needs. Had there been no planning, it would create uneven and chaotic development leading to contrasting urban scenarios, mixed land-use leading to the growth of industries in between the residential zones, congested transportation networks leading to traffic overflowing more than expected. Managing the use of land resources and their development (in both urban and rural settings) is referred to as land management. Land management is necessary for promoting inclusive cities and effective cities. An inclusive city needs to guarantee equal rights and participation of all, including the most marginalized section of the society, that is, value all people, their needs, and contribution equally. Land management and town planning both are inseparable and hence both of them need to work collectively to ensure sustainable, long-term, resilient urban social and economic growth.

AIM AND OBJECTIVES

This research paper aims to perform a geospatial analysis for finding possible sites for development in urbanization and designing and developing an automated system or set of tools for spatial land management of Gandhinagar Municipality.

OBJECTIVES

The objectives for this study are as follows:

1. To conduct macro-level (city-level) land management for siting land uses such as affordable housing, commercial, and recreational facilities using multiple-criteria decision-making geospatial technology.
2. To prepare an automatic set of tools for optimal physical infrastructure planning of sectors at the micro-level:
   A. To develop a dynamic system to align the roads and polygons for allocating appropriate land use.
   B. To assess and assign a land use as per the 'sector plan' using spatial analysis methods.
3. To develop a 'built-up area' calculator on the basis of zonal floor space index as input for built-up permission.

LITERATURE REVIEW

• Geospatial Analysis - It is the collection, visualization, and processing of images, GPS, historical data, and satellite photography clearly described according to geographical coordinates or indirectly regarding a street address, postal codes, etc. (TechTarget Contributor, 2014). Geospatial tools or technology can be remote sensing, GIS, GPS. Two primary forms of geospatial data are vectors (points, lines, and polygons) to represent spatial features such as cadastral, roads, streams, and cities, and raster data which shows spatial features by use of cells or dots or pixels. Other examples of geospatial data are attributes (vector), point clouds, satellite imagery (raster). The GIS data analysis mainly includes queries on proximity analysis, overlaying operations, measurement techniques, surfaces models analysis, and network analysis. Before beginning any kind of analysis, we must determine the problem or question and then define an objective. Before any conclusion about the data or making a decision, we should consider the process; also ask questions in relation to the model and data, and then prepare a step-wise procedure for monitoring the process and outlining the final objective and goal.

• Model builder and its benefits - Model builder is an application we use for creating, editing, and managing models. The model represented by a diagram is a workflow sequence that links a number of geo-processing tools together and provides the tool's output as input from one tool to another. The model builder helps us create our own tools for using it in python scripting and other models. We can run a model step-by-step, up to the desired step, or run the entire model as per our requirement.

• GIS-MCDA - Multiple-criteria decision analysis or multiple-criteria decision making is a group of techniques that help decision-makers formally structure multi-aspect decisions along with the evaluation of alternatives. It is being used with GIS to analyze spatial problems. GIS-MCDA has applications in transportation scheduling, allocating location to various sectors, routing of vehicles, site selection, scenario evaluation, and land suitability (Ryan & Nimick, 2019).

• In his paper, GIS-based Site Suitability Analysis: A Case Study for a Professional College in Dehradun, Mukhopadhaya (2016) identified the possible sites appropriate for a college through the use of GIS and

multi-criteria evaluation techniques. Toposheets and IKONOS satellite data of high resolution have been used to generate the thematic layers needed for site suitability analysis. Five criteria such as proximity of roads, population data, existing land use, and geological information, are considered in this research. The model created is useful for decision-makers and planners in the growth of urbanization in Dehradun and to find a proper location of a professional institute and contribute to the region's sustainable development. The raster data maps are used, as the vector data are cumbersome and processed using the ArcGIS raster calculator. The main goal is to situate the institute where a large number of students can reach and also lies in proximity to other similar institutes in the region. To carry out the site suitability analysis, an intensive field survey is carried out to create the data, along with mapping the whole region with a high-resolution satellite image, which is also the limitation of site suitability analysis.

• In Remote Sensing and GIS A Tool for Urban Studies-Amenity Patterns in Hyderabad, India, Ali (2004) has mainly discussed the amenity patterns and other facilities available in the city of Hyderabad and identifies the city's zones with inadequate amenities and emergency services. Amenities are the basics that impact the urban growth of a city. A road network map is also generated and analyzed for the proper development of facilities in such places where they are lacking. The distribution and reallocation of police stations and appropriate allocation of fire brigade stations are taken up. For already located services in the city, IKONOS data with the ground survey is conducted and accomplished. The base map is generated using the toposheet, and then municipal wards boundary, police stations, fire brigade stations information are overlaid within the GIS framework to know the gaps. The availability and use of satellite data from IRS-1D are relevant for municipal planning and making necessary and proper decisions for the whole development process.

Works by various experts and the literature review above establish GIS as a set of tools for urban studies and determining the potential sites. In this research paper, we have carried out a new investigation for the implementation of physical infrastructure planning of sectors at the micro-level through GIS along with the macro-level land management of the study area.

STUDY AREA

Gandhinagar Municipal Corporation (GMC) is our study area, as shown in figure 1. GMC is the urban local civic body responsible for the administration of Gandhinagar. GMC is a special purpose vehicle (SPV) for the people of Gandhinagar, providing the accurate latest information and an info-city, and also provides the best civic services to the residents' homes. Gandhinagar is located 23 km north of Ahmedabad, planned in the 1960s by Prakash M. Apte and H.K. Mewada. This city has 30 sectors developed on the neighborhood concept. The streets' alignment is at 30 degrees north-west and 60 degrees north-east, so the direct glare from the morning and evening sun doesn't disturb people while driving. Following the Development Plan 2024 (Figure 6), zoning is done for the commercial zone in the GMC area in various sectors. Also, different zones are given for residential uses with different FSI in the GMC area. A zone for institutional use is shown in the plan as the city plans to emerge as a 'knowledge hub.'

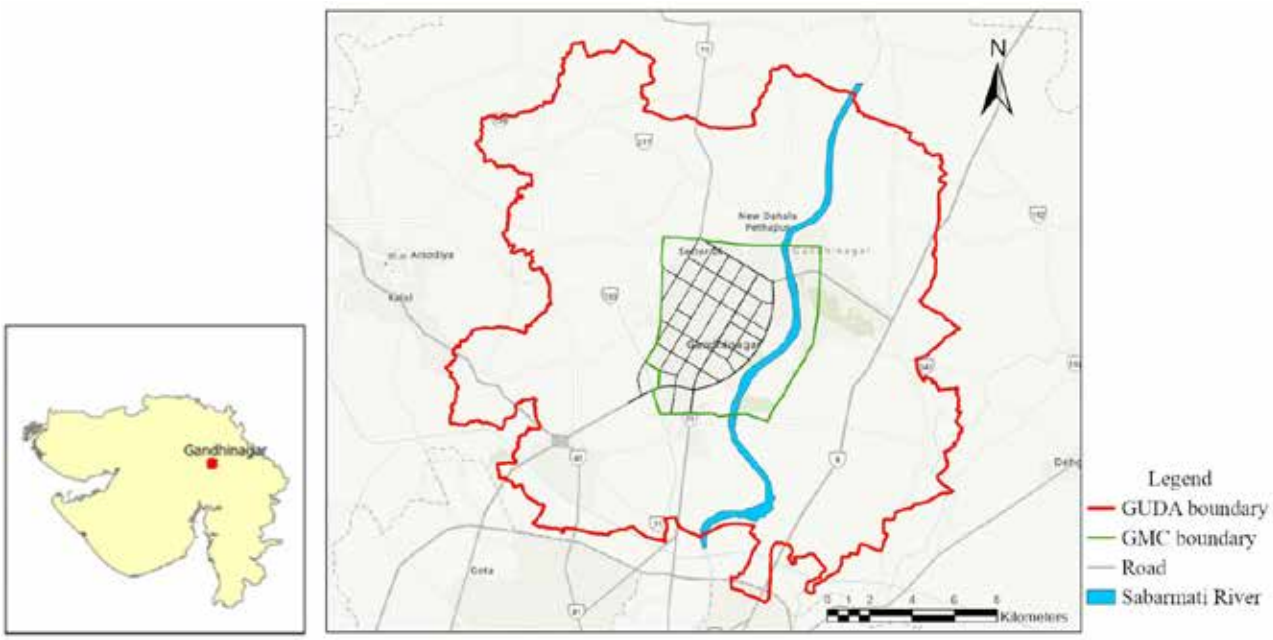

Figure 1: Study area
(Source: Author, GUDA Data)

MATERIALS AND METHODOLOGY

The data sources are Gandhinagar Urban Development Authority (GUDA), GMC, Census of India, City Development Plan, Survey of India toposheets (SOI), etc. The main tool used in GIS analysis is ArcGIS, a desktop platform for GIS applications supporting viewing, analysis, and geospatial data creation. It supports vector and raster data. We can download various plugins to facilitate different tasks from ArcGIS respiratory into the application. The data collected, created, generated for suitability analysis of the site in ArcGIS are of municipal boundary, sector boundary and sector map, development plan 2024, the footprint of buildings, land use map, plot details / cadastral map, road centre line, landmarks, and amenities.

The data collection and integration using satellite data, google earth pro, and data collected from other sources like GUDA, GMC, etc., is done. The obtained spatial and non-spatial data are incorporated and examined using the ArcGIS tool environment. We used ArcGIS for post-processing analysis and composing the final maps for data presentation. Through model builder, we created our own tools, which we used in python scripting and other models. The research methodology is shown in Figure 2. The analytical framework followed for siting suitable locations (macro-level analysis) is shown in figure 3.

The criteria considered for suitability of affordable housing, commercial centre, and recreational space are on the basis of the neighborhood concept of urban planning. The main factors affecting site suitability are the metro and the emergence of a knowledge hub in Gandhinagar. Metro is connected to major land use, which will increase the ridership. 10,000 of 40,000 buildings come under a 500 m buffer zone of the metro line, increasing the FSI. This will lead to an increase in the population, leading to a rise in demand for land. The metro route and other features are shown in the map below. Also, the building footprints can be seen around the metro line (Figure 4).

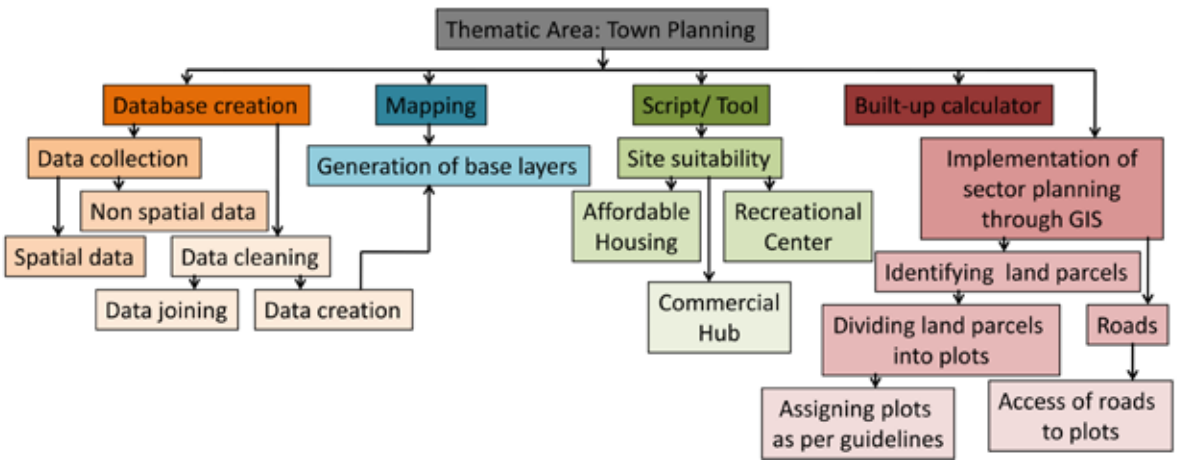

Figure 2: Research methodology
(Source: Authors)

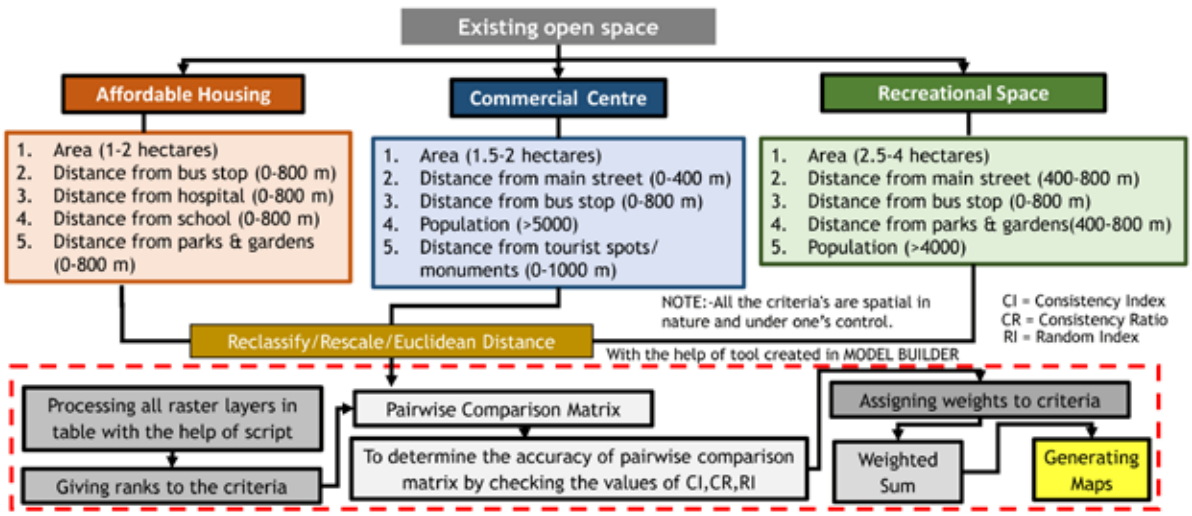

Figure 3: Analytical framework for macro-level analysis
(Source: Author)

Figure 4: Metro route and other features
(Source: Authors, based on GUDA data)

Figure 5: Site suitability map: Affordable housing
(Source: Authors' analysis)

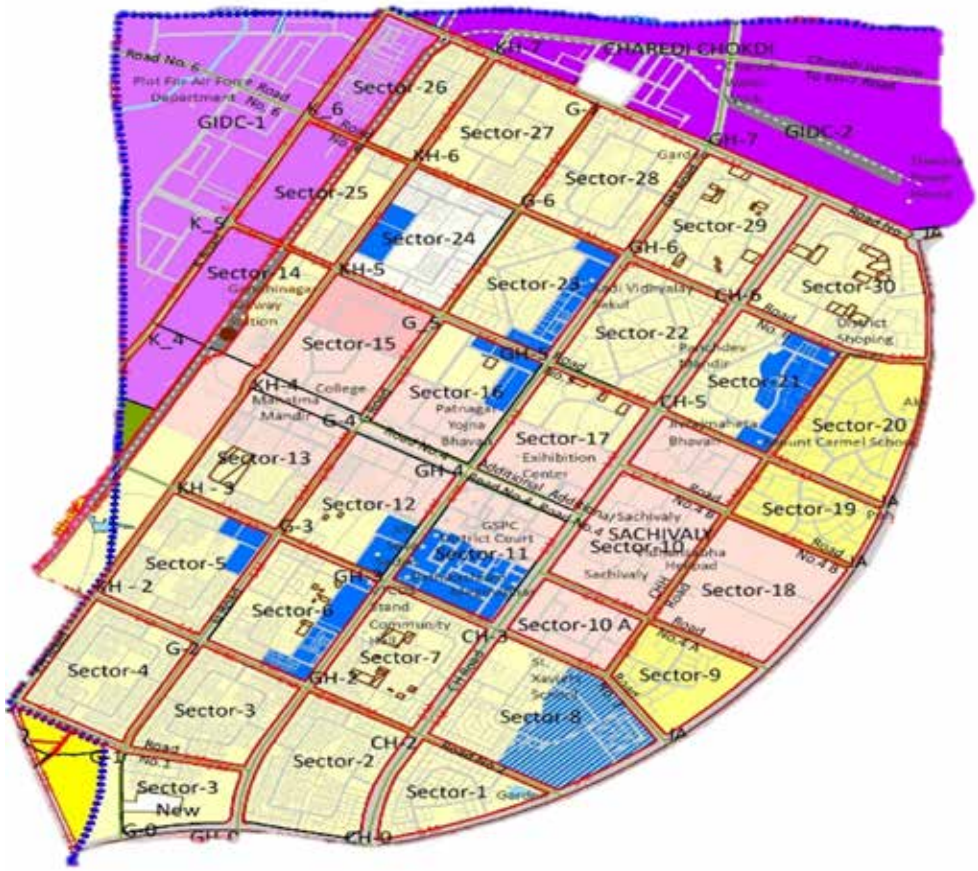

Figure 6: Development Plan 2024
(Source: Author, Based on GUDA, GMC data)

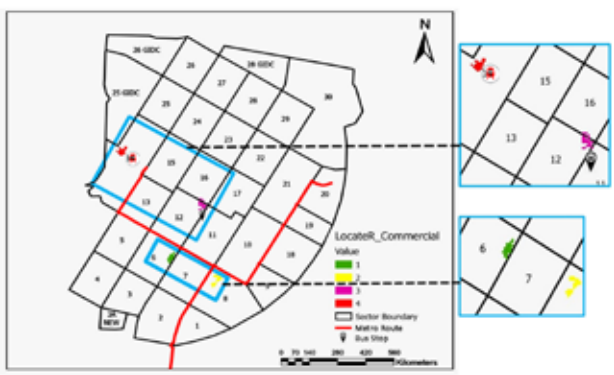

Figure 7: Site suitability map: Commercial hub
(Source: Authors' analysis)

Figure 8: Site suitability map: Recreational centre
(Source: Authors' analysis)

Figure 9: Example 1
(Source: Authors)

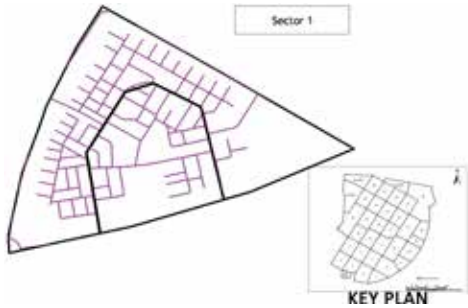

Figure 10: Example 2
(Source: Authors)

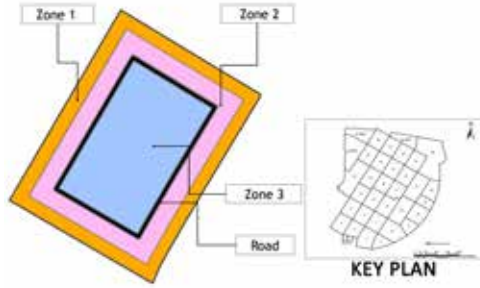

Figure 11: Zoning of Sector 4
(Source: Authors)

SPATIAL PLANNING OF SECTORS USING GIS TECHNOLOGY (MICRO-LEVEL ANALYSIS)

Making a semi-automated system using Python script for sector development is to help GMC for the future growth of the city according to the development plan. The system for sector development is made by taking the reference of land use and the pattern of few other sectors to maintain the uniformity of the city. The most significant parts for the planning of a sector are:

1. Road Alignment
(i) Assigning different distances (ii) Assigning different lengths (iii) Assigning different angles (iv) Shape of the road [U-shaped, horizontal, vertical, T-junction]

2. Zoning
(i) Size of the zone [equal or varied in size] (ii) Shape of the zone (Rectangle, Square)

3. Plots
(i) Join plots (ii) Cut plots [equal parts/unequal parts]

4. Allocation of land use on the designed sector
i) Residential (ii) Commercial (iii) Amenities (iv) Recreational centres (v) Religious

A Python script has been written for built-up area calculation using plot area and floor surface index (FSI). The calculator for the built-up area is used as a key and input for building utilization permission.

RESULTS AND ANALYSIS

A. Macro-level analysis

1. Affordable housing
The optimal land parcel identified goes with the Residential Affordable Housing (RAH) zone proposed in Development Plan 2024 (Figure 6).

Optimal land parcels / sites are identified on open plots in sector 7 of Gandhinagar (Figure 5). The proximity of schools, hospitals, parks and gardens, commercial stores, etc., should be as low as possible for developing affordable housing. The four most suitable sites are identified through locating a region that fulfils all the criteria for affordable housing development.

2. Commercial hub
A suitable location for a commercial is near the metro route. The main bus-stop (pathik ashram) is located in Sector no. 11, and it is easily accessible as a suitable location is coming near it. Also, another suitable location for a commercial hub is identified in Sector no. 14, near Gandhinagar railway station (Figure 7).

3. Recreational centre
The three most suitable sites are identified through locating the region that fulfils all the criteria required for a recreational centre. One of the sites is located near existing gardens and parks which can be redeveloped, and a larger recreational centre can be built. The other two sites are near metro routes (Figure 8).

B. Micro-level analysis

In the micro-level analysis, we perform spatial planning of a sector using GIS technology.

1. Script for road alignment
i) Importing the libraries and setting up the workspace
ii) Assigning the inputs from the user to the variables
iii) Creating points at equal distances, splitting the line at the points and adding the geometric attributes to the table, such as- start, end and mid coordinates of the line and its bearing.
iv) Conditions for checking the user input for the bearing.
v) If the user does not give the input, it will create the lines perpendicular to the reference line, or else it will take the bearing given as the input by the user.
vi) Adding the fields and attributes to the table for length as given in the input and generating the new line feature according to the inputs provided.

In Example 1 (Figure 9), it will take the reference line given in the input, divide the line at the given distance, and generate the parallel lines of the specified length at the given bearing.

In Example 2 (Figure 10), first, the reference line will be taken. By changing the parameters such as bearing and length, the entire U-shaped road in Sector 1 can be aligned with the help of the tool.

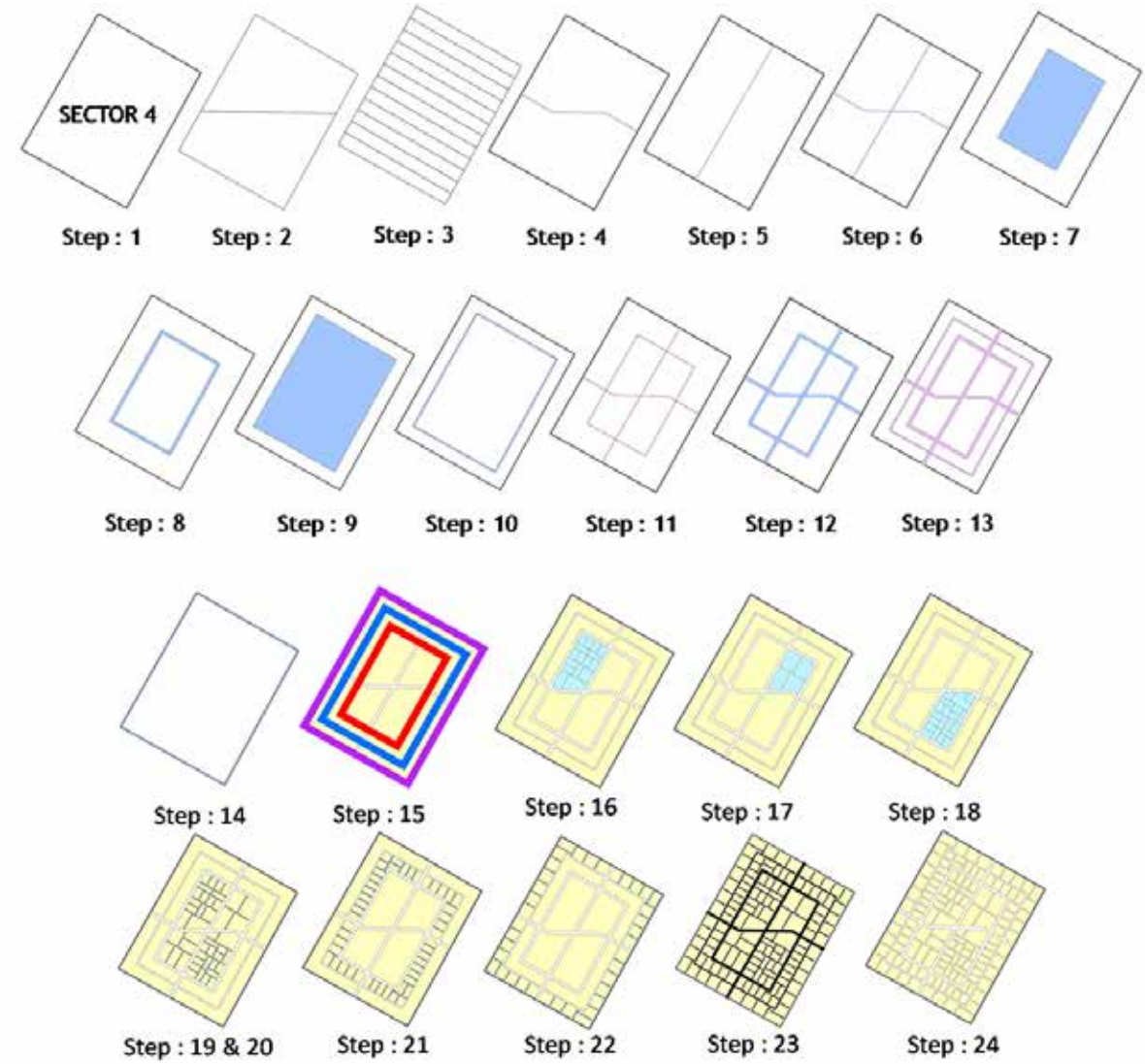

Figure 12: Steps for road alignment and zoning
(Source: Authors)

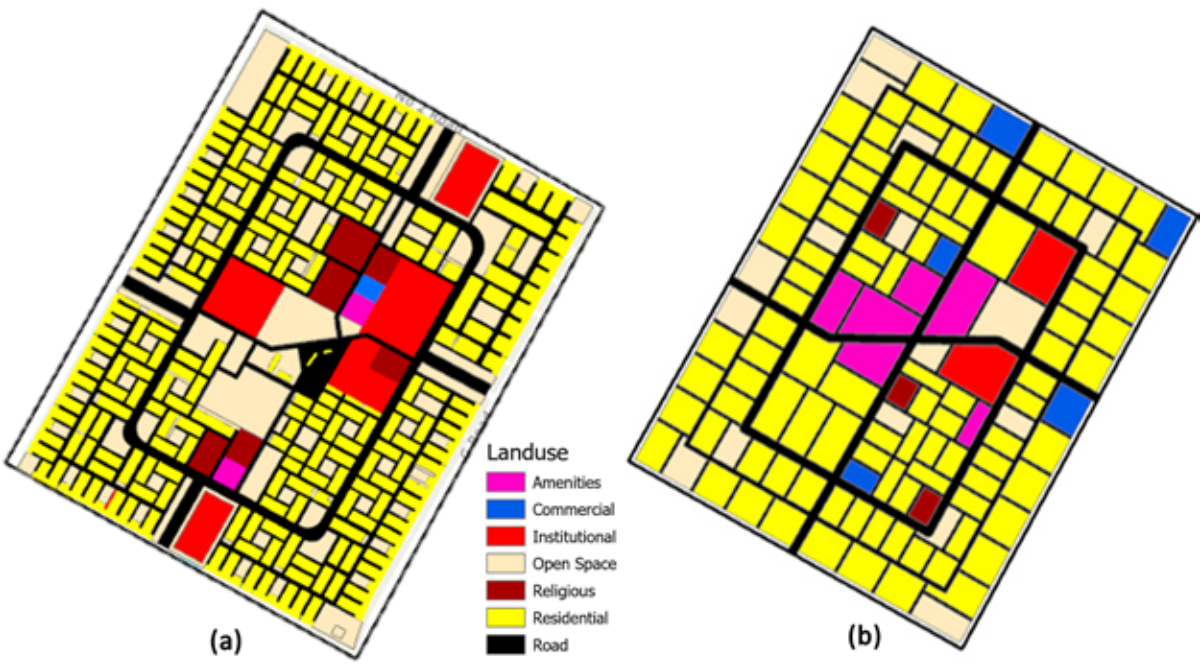

Figure 13: (a) Existing land use map (b) Obtained land use map
(Source: Authors)

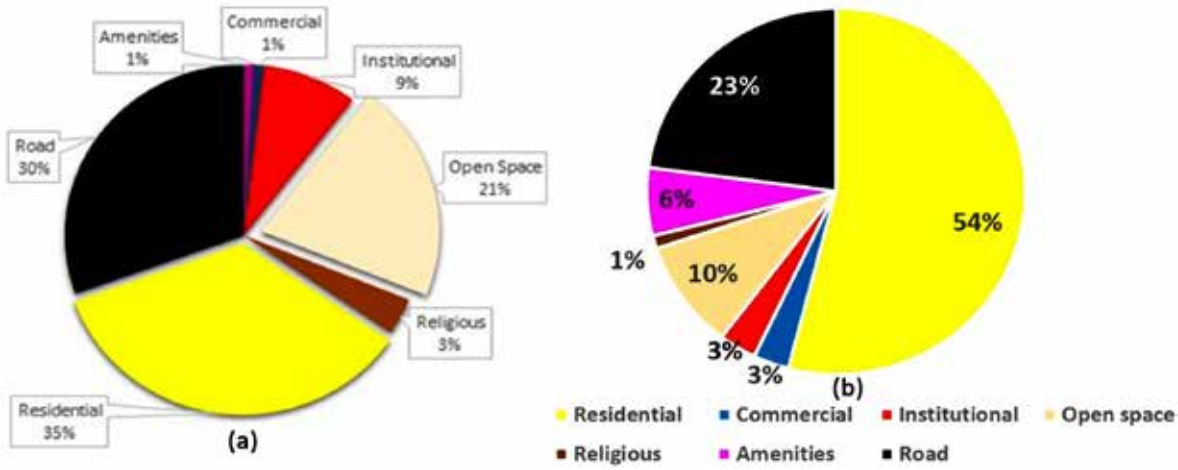

Figure 14: (a) Existing land use percentage (b) Obtained land use percentage
(Source: Authors)

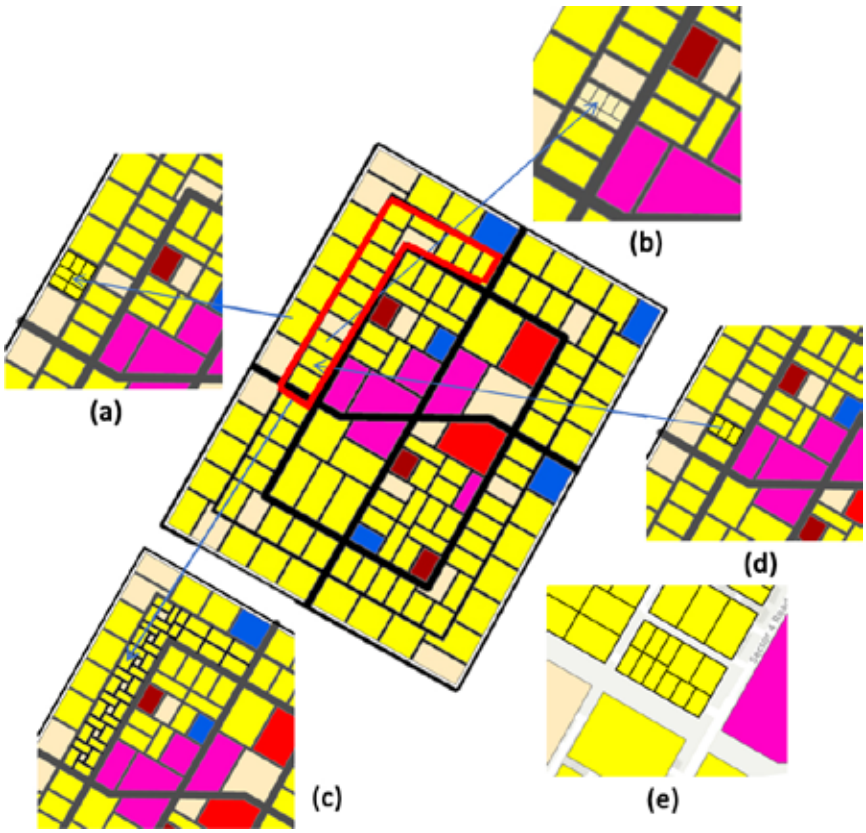

Figure 15: Replica of Sector 4 with open space in between the residential
(Source: Authors)

2. Script for zoning

As observed in the land use of Sector 4 (Figure 13a), a certain pattern at the periphery of the sector boundary for the road and building alignment is covered by the residential building, shown in yellow. In the next zone, a different pattern for the residential building can be seen. After that, there is the ring road shown in black, and the next is the internal zone where various amenities are provided at the centre of the sector. So by giving the required width of the zones and road will create the polygon for the respective zone, as shown in Figure 11.

3. Steps for road alignment and zoning

The steps for road alignment and zoning are shown in Figure 12.

1. Sector boundary data is used to make a replica of Sector number 4.
2. For making a slanted road, the sector is divided into two parts at an angle of 1° to the horizontal.
3. For the horizontal road, the sector is divided into 12 parts at an angle of 30° and converted from polygons to a polyline.
4. With the aid of SQL query, horizontal and slant roads are taken, and finally, both are merged to form the desired road.
5. For vertical roads, the sector is divided into two parts at an angle of 300° and converted to a polyline.
6. Finally, all the polylines are merged to get vertical, slant, and horizontal roads.
7. To make the concentric square road, a negative

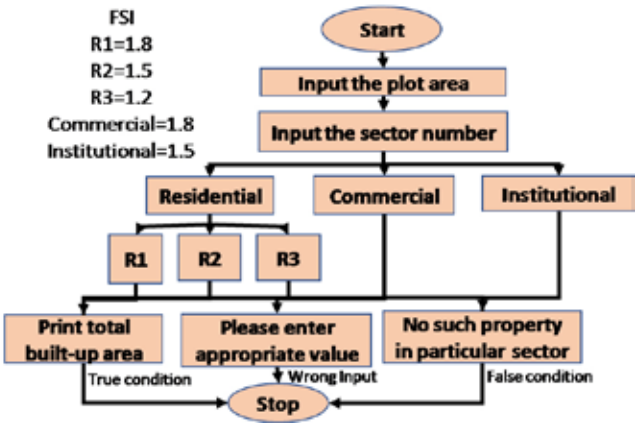

Figure 16: Algorithm for assessment through built-up area calculator *(Source: Authors)*

buffer of 180 m is taken from the sector boundary.

8. The buffer is converted into a polyline, and another buffer of 10 m on both sides is taken to get the width of 20 m major roads.
9. To make the internal square road, a negative buffer of 90 m is taken from the sector boundary.
10. The buffer is converted into a polyline, and another buffer of 5 m on both sides is taken to get the width of the 10 m road.
11. After that, all the roads of 20 m width are merged.
12. A buffer of 10 m is taken on both sides to get all 20 m width roads.
13. Finally, all the 20 m width roads and 10 m width roads are merged to get the road pattern.
14. A buffer of 10 m is taken so that developed zones and main roads do not overlap.
15. After that, the sector is divided and colour-coded into 3 zones : Zone 1 (red), Zone 2 (blue), Zone 3 (violet).
16. For access to internal plots, the zones are further divided:
    - Zone 1, part 1 is further divided.
    - Zone 1 is divided into 4 parts.
    - Zone 1, part 3 is divided into 20 parts.
17. The same procedure is done to divide zone 1 part 4 at an angle of 30º.
18. A buffer of 3.5 m is taken on both sides to get the road width of 7 m as the internal roads are of 7 m width.
19. A similar procedure is adapted for plotting roads in zone 2. The division of plots into 15 parts and 9 parts at an angle of 30º and 210º is done respectively. A buffer of 3.5 m is taken for plotting roads to get access to plots.
20. In the same way for zone 3, the plots are divided into 10 parts and 9 parts at an angle of 30º and 210º respectively. A buffer of 3.5 m is taken for plotting roads to provide access to plots.
21. All the roads (i.e., 20 m, 10 m, 7 m) are merged.
22. Finally, the roads are erased from the sector boundary to get each polygon, where all the polygons represent individual plots.

4. Comparison of existing land use of Sector 4 and the obtained land use of Sector 4

The criteria selected for land use of Sector no. 4 is based on the average taken for land use of other sectors. We see an increase in the residential percentage of the obtained land use (Figure 13b & 14b) because these residential plots can be further subdivided into smaller parts. Also, an openly accessible space lies in the middle of the residential plots in the existing land use of Sector 4 (Figure 13a & 14a).

5. Different types of plot division

Five different types of plot division are shown in Figure 15 (a, b, c, d, e). The plots can be divided into 7 equal parts. Also, the division of plots into equal areas is shown. Here the plots are divided into equal areas of 500 sq.m. Plots can also be divided into unequal areas, where the larger ones have an area of 500 sq.m while the smaller ones have an area of 250 sq m.

6. Outcome of sector-planning through GIS-based approach

The roads with different lengths, widths and shapes can be designed through script/ tool. Roads can be aligned to different angles as required. Plots can be designed with equal or varying sizes. Even differently shaped plots such as square, rectangle, L-shaped on one side, etc., can also be designed. The created tool helped develop a replica of Sector 4 of Gandhinagar. Other sectors can also be designed or redesigned, which shows the flexibility of this tool.

C. Analysis and evaluation through a calculator

The built-up area is the total construction area, including all the floors built. We input the built-up area obtained from the tool in the Building Use Permission Form (represented in Table 1). Building use permission is obtained from the Competent Authority, and it is also mandatory before occupancy or use is made of any building. If the competent authority grants the building use permission, it shall mean an acceptance that the building has complied with the sanctioned design requirements and follows the regulation.

1. Building use permission form

As mentioned, Table 1 below represents the building use permission form in which the final plot number and total built-up area are mentioned. The created tool can help the user verify the built-up area of a particular plot and check whether or not it can be upgraded to a higher FSI. Thus, from the built-up calculator, the user can identify the built-up area and further use that built-up area in the Building Use Permission.

2. Algorithm and Output

First, the user gives the input of the sector number where the plot is located. Then the plot area and the built use as specified in the script are given. Lastly, it gives the result for the built-up area of the particular plot (Figure 16), which we input for the building use permission.

CONCLUSION

Considering the GMC's Development Plan Report of 2024, the site suitability study will help GMC identify the land parcels according to their need. A semi-

Table 1: **Building use permission form** *(Source: Gandhinagar Data)*

TP Scheme **Sub-plot No.** **Site Address:** **Height of Building:**		**13** **24.85 m**	Final Plot No. Block / Tenement No.	**262**
Floor No.	Usage	Built up Area (sq.m)	Total nos. of Residential Units	Total nos. of Non-Residential Units
Ground	Parking	362.14	0	0
1st	Residential	362.14	3	0
2nd	Residential	362.14	3	0
3rd	Residential	362.14	3	0
4th	Residential	362.14	3	0
5th	Residential	362.14	3	0
6th	Residential	362.14	3	0
7th	Residential	362.14	3	0
Stair cabin	Stair cabin	44.59	0	0
Lift room	Lift	35.87	0	0
	Total	**2977.58**	**21**	**0**

automated tool for sector planning will help GMC for the future expansion of the city through the sector as per the development plan 2024. Urban land available for development is very less, and urban land for service provision is even lesser, and most of it is owned by a private organization. This is why it is vital to design a set of tools for land management that can meet current development needs and urban growth in the near future. The built-up area calculator will help GMC identify unauthorized construction and aid in building use permission.

SCOPE FOR FUTURE WORK

Considering the work done in the present study, the scope for future work can be that the semi-automatic tool can be made entirely automatic using a logical Python formula. The built-up calculator can also be linked to the property tax to find the defaulters.

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INTERPRETATIONS OF ORGANIC ARCHITECTURE SINCE THE TWENTIETH CENTURY

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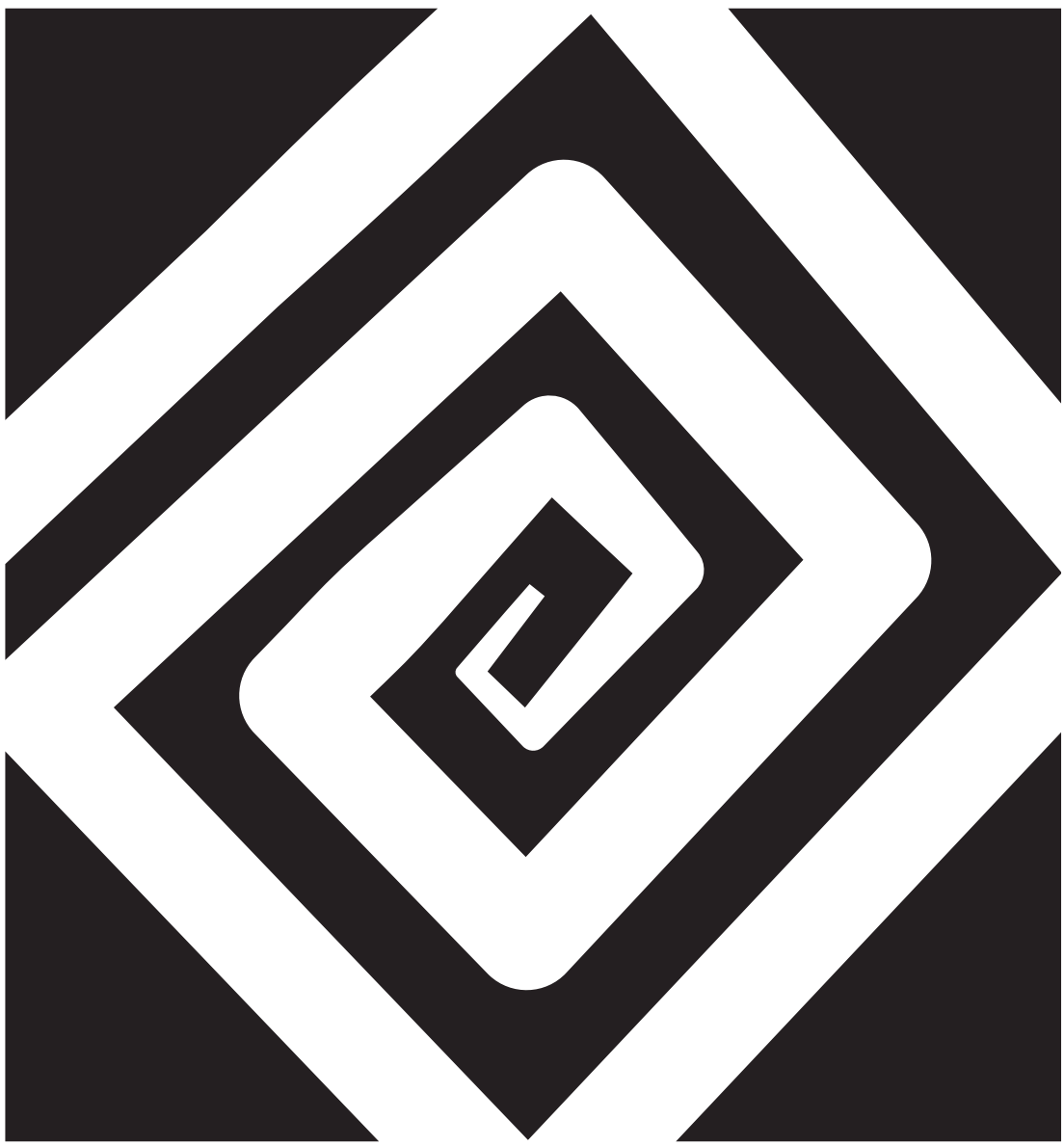


ABSTRACT

This study defines the essential elements of the concept of organic architecture. Definitions of organic architecture put down by architects of the twentieth century and its varied features materializing in the works of these architects have been studied to understand the origin and development of this term in the field of architecture.

The latter part of the paper deals with the varied implementation of organic architecture from pioneer architect Frank Lloyd Wright to Nari Gandhi, who was the first architect to practice this style in India. Works of Ar. Shirish Beri have also been studied. The regional, contextual and individual variations seen in the organic concept have been analysed and inferred accordingly.

The study concludes that a concept as vast as organic architecture cannot be fully defined. Frank Lloyd Wright first proposed the term organic architecture but the connotations varied amongst architects. Their structures were in contrast to each other but still could be classified under the same form of architecture. Two distinct variations, wherein a structure followed geometry and merged with the surroundings while the other followed free forms standing unique of their surroundings were observed. Nature was the sole source of inspiration but the elements that created the stimuli were variegated.

Keywords: *Nature, Organic design, Landscape, Organic traditions in architecture, Geometry, Frank Lloyd Wright, Louis Sullivan, Antoni Gaudi, John Utzon, Nari Gandhi, Shirish Beri*

INTRODUCTION

Organic architecture is the architecture of integral and structured forms, similar in its structure to forms of nature. Basically, architecture which holds its inspiration from nature can be termed as organic architecture. Organic architecture transpired as a certain trend on the apex of the nineteenth and twentieth centuries. Philosophical and theoretical expostulation for the requirement and potentiality to create organic forms in architecture took place.

Some elements of organic architecture have been identified in structures of architects before the twentieth century and many of these works have been concluded by few as examples of organic architecture. But the term was introduced only in the twentieth century which is considered as the era of organic architecture.

Organic architecture, an idea of the twentieth century, was of the need of developing a relationship with the natural environment accomplished by means of application of new technologies and materials. The concept of architectural organic form is based on the idea of this needful integration of an entity of any scale which is designed by an architect.

L.H. Sullivan, F.L. Wright, Antonio Gaudi and John Utzon are considered to be the pioneers of organic morphogenesis in contemporary architecture. Both ideological and technological factors highly influence the concept development.

Organic architecture was introduced much later in India, during the twentieth century in the second half by architect Nari Gandhi who had worked with Frank Lloyd Wright for a few years on his project, Taliesin West. Nari Gandhi developed his own style by integrating the principles stated by Wright and responding to the regional context. He went on to inspire generations of designers, a prominent one being his disciple, Shirish Beri, whose works have also been studied in this paper.

The objective of this paper is to define fundamental concepts of organic morphogenesis. The development of organic architecture in the twentieth century will be studied through understanding varied interpretations by architects Louis Sullivan, Frank Lloyd Wright, Antoni Gaudi and John Utzon. This will form the base for studying the origin of organic architecture in India. The second objective of this paper is to understand the beginning and evolution of organic architecture in India through the works of master architect Nari Gandhi and his disciple architect Shirish Beri.

METHODOLOGY

Philosophies of the architects will be studied and important principles and elements, unique to their architecture, will be identified and put down in the form of analytical diagrams and images. This will help understand the prominent trends in organic architecture during the twentieth century.

A comparative analysis presented in the form of a matrix is seen as the conclusion of the study. Structures of F.L. Wright, Nari Gandhi and Shirish Beri will be analysed and contrasted and inferences drawn.

HISTORY

1. Frank Lloyd Wright (1867 – 1959)

Frank Lloyd Wright coined the term organic architecture in 1908. It was an augmentation of the teachings of his mentor Louis Sullivan who stated, "form follows function" which later became the motto of modern architecture. But Wright changed this and he said that form and function are one and the same and go hand in hand.

Wright is considered the father of organic architecture who believed in the idea that from a central core a building must develop outwards towards nature without obeying the rigid geometric schemes of the parallelepiped volume. His structures, though showing a sense of geometry through his straight lines and horizontality, tend to merge with their surroundings. The entire mass of built and unbuilt space acts as one homogeneous entity respecting each other and evolving together. Wright's projects were oriented by axes and his materials derived by established context with its colours, features and even its history.

In 1957, a Testament, an autobiography by Frank Lloyd Wright, he set a group of principles that reflected his organic philosophy. In an essay entitled "The New Architecture: Principles" (Wright F. L., 1975) , F.L.W discussed the use of new materials like glass and steel to achieve more spatial architecture, the relation of human scale to buildings and landscape and the development of building's architectural character.

Wright built many buildings from elaborate churches to huge mansions. Some of the key elements identified in these structures which were unique to his style of architecture included immense use of glass to blend the outdoors with the indoors. He believed glass was like mirrors of nature found in rivers, ponds and lakes. Most of his houses show low pitched roofs with huge overhangs, a typical feature of his Prairie style of architecture. His design style was very minimalistic avoiding unnecessary ornamentation. He was known for using new materials, blending them with traditional natural materials to create spaces both functional and aesthetic. Wright was highly inspired from Japanese art and architecture; particularly its emphasis on harmony, spirituality and geometric simplicity.

Frank Lloyd Wright's Principles of Organic Architecture

The following are the principles laid down by FLW for organic architecture (Gutheim, 1975), (Wright F. L., 1969):

Building and site : The site should be enhanced by the built form and the building will partially derive its form from the nature of the site. This is achieved sometimes by similarity and sometimes by contrast. In natural settings, the building may open out to nature and in urban settings it may turn inwards.

Materials : Use only a few materials for indoors as well as outdoors. The materials used should retain their natural individuality in terms of colour, texture and strength.

Shelter : A building should have a sense of privacy and protection against any harmful influence from outside.

Space : The interior space defines exterior form. A space should flow into another and rooms should never be simple rectangles but should be broken up vertically and horizontally like alcoves: L-shapes, low ceilings and decks creating interest and surprise.

Proportion and Scale : Wright believed that a space should be designed keeping in mind human scale and comfort.
Nature : It is achieved by simple architectural masses that reflect the clutter-free spaces within.

Grammar : All elements of the building, from the smallest detail to the entire mass should speak the same language and style.

Ornament : When used, should be a part of the material and not an application.

Human Values : Every indoor and outdoor space should be designed keeping in mind human use and comfort.
Mechanical Systems and furnishings : Furniture should be built-in; sculpture and paintings should become elements of the total design.

Simplicity : This is best understood by what F.L. Wright said:

"The highest form of simplicity is not simple in the sense that the infant intelligence is simple—nor, for that matter, the side of a barn. Simplicity in art is a synthetic positive quality in which we may see evidence of mind, breadth of scheme, wealth of detail and withal a sense of completeness found in a tree or flower." (Wright F. L., 1969) (OAD Archives, 2013)

Falling Waters, one of Wright's most celebrated projects, was designed on the same principles: simple geometrical forms have been used to develop plans (refer figs.1. i & ii.). Open floor plan promotes multi-utilization of space. The house has been designed in such a way that it opens out to the waterfall and the jungle beyond. Designed as an entity of nature, protruding from the hill, interior and exterior spaces flow into each other (refer fig.1.iii). Horizontality, a feature of Wright's buildings can be identified through cuboidal massing and elevational bands (refer fig 1.iv).

"So here I stand before you preaching organic architecture: declaring organic architecture to be the modern ideal and the teaching so much needed if we are to see the whole of life, and to now serve the whole of life, holding no 'traditions' essential to the great TRADITION. Nor cherishing any preconceived form fixing upon us either past, present or future–but instead, exalting the simple laws of common sense—or of super-sense if you prefer—determining form by way of the nature of materials…"
An Organic Architecture". (Saint, 2017) (Wright F. L., 1954) (OAD Archives, 2013)

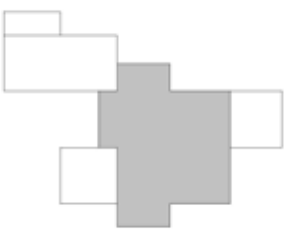


Fig. 1.i

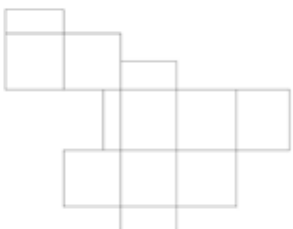


Fig. 1.ii

Fig. 2.i

Fig. 2.ii

Fig. 2.iii

Fig. 1.iii

Fig. 1.iv

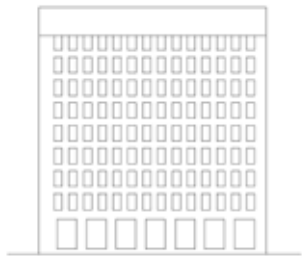


Fig. 2.iv

Fig. 2.v

***2. Louis Sullivan** (1856 – 1924)*

Though organic architecture was a term coined by Ar. F.L. Wright, the philosophy grew from the ideas of his mentor Louis Sullivan. He was amongst the first to use the term 'organic'. According to him, a building should respond to its own particular environment, just as a plant would grow "naturally, logically and poetically out of all its conditions". (Wroblewski, 2008)

He closely studied and understood the term 'nature' and concluded that "Form follows function". This principle became the motto of modernist architecture and also became the basis of Sullivan's architectural designs. Louis Sullivan strongly believed that a building's essential nature could only be expressed through facade composition and organic ornamentation. He felt that ornamentation endows a building with life and individuality. In his famous structure, Wainright State Office Building, simple symmetric elevations have been derived using rectangular windows (refer fig. 2.iv) with motifs and ornamentation depicting elements of nature between them and on the building capital (refer fig. 2.v). Form derivation and zoning was derived using simple geometric shapes which facilitated the function of the building (refer fig. 2.i & ii). Maximum use of natural resources available like light and ventilation have been used by maximum utilization of external façades (refer fig. 2.iii). Louis Sullivan believed that the exterior of a tall office building should reflect its interior functions. New architecture demanded new traditions, as he stated in his most famous essay:

"It is the pervading law of all things organic, and inorganic, of all things physical and metaphysical, of all things human and all things super-human, of all true manifestations of the head, of the heart, of the soul, that the life is recognizable in its expression, that form ever follows function. This is the law."
F.L. Wright, 1896 (Sprague, 1985)

***3. Antoni Gaudi** (1852 – 1926)*

Antoni Gaudi was one of the first architects to express his architectural ideas in truly sculptural forms. These forms were often based on the structural geometrical forces of his building construction. Antoni Gaudi was a Spanish architect known for his free-flowing architecture. Though he did not use the term 'organic' nor did he classify his structures according to it, his work was later identified as an exemplar of organic architecture.

Gaudi's structures, though specimens of organic architecture, differed from many of the principles stated by F.L. Wright. His structures were identified by their distinctive mixture of form, colour, texture and organic aesthetics. The form of the structures was inspired from those of nature. His buildings did not merge with surroundings but stood out as landmarks. As compared to Wright, who used a lot of straight lines, Gaudi believed that *"The straight line belongs to man, the curve to God",* which is very visible in the plans and form of Casa Mila, a UNESCO world heritage site designed by Gaudi (fig. 3.i & ii).

Gaudi's inspiration from nature could be seen in the structural elements of his built form. He arrived at a type of structure that has come to be called 'equilibrated' that is a structure designed to stand on its own without internal bracing, external buttressing or any type of support system. This is seen in the Church of Colònia Güell, designed by Gaudi, where he used a multiplicity of forms inspired by nature to derive the structural system of the crypt (fig 11). Gaudi described these structures as trees, supporting self and growing from within. He once said, *"An upright tree, he carries his branches, and these the branches and these the leaves. And every single part grows harmoniously great, since the Artist God created it".* (Gaudi, 2003)

***4. John Utzon** (1918 – 2008)*

Wright's principles of organic architecture marked an entire era inspiring and driving young architects and designers to pursue organic architecture, John Utzon being one of them. He was a keen hunter and sailor who grew up designing and building boats and yachts. He looked upon nature as a source of inspiration for design. He believed that one should study nature and organisms, treat them as a source of imagination but never literally copy it. Utzon was an architect of the industrial era and as a result used a great deal of new materials. As opposed to in-situ cast concrete organic buildings which were dominant in the early ages, he made use of

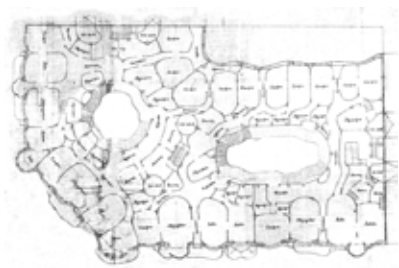


Fig. 3.i

Fig. 3.ii

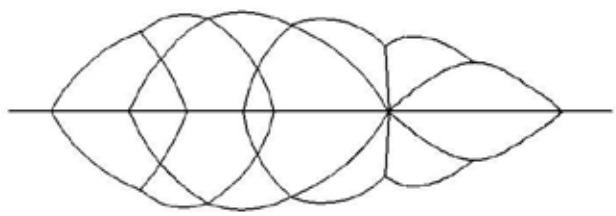


Fig. 4.i

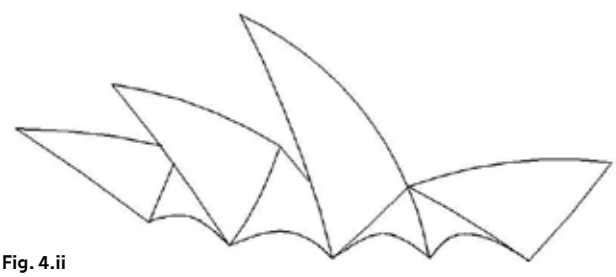


Fig. 4.ii

industrial production, creating unique designs through standardization and repetition of elements. Many of the buildings were inspired from his skills and experience of boat-building. The shell-like structure of the boats and the structural mechanism became the base for his most celebrated work, Sydney Opera House. The complicated floating roof shells were derived from the shape of the boat hulls resolved structurally through geometric application of standard elements (refer fig. 4. i & ii). John Utzon's architecture was a fabrication of geometric discipline with abstract understanding of organic architecture.

5. David Pearson

David Pearson is a planner and architect who has in depth studied organic architecture and the varied interpretations of numerous prominent architects. Based on this study, he published a book in 2001, *The New Organic Architecture : A Breaking Wave* in which he proposed a set of rules about the design of organic architecture. These rules are known as the *Gaia Charter* for organic design and states that the design should (Pearson, 2001):

- Be inspired by nature and be sustainable, healthy, conserving, and diverse.
- Unfold, like an organism, from the seed within.
- Exist in the continuous present and begin again and again.
- Follow the flows and be flexible and adaptable.
- Satisfy social, physical, and spiritual needs.
- Grow out of the site and be unique.
- Celebrate the spirit of youth, play and surprise.
- Express the rhythm of music and the power of dance."

***6. Nari Gandhi** (1934 – 1993)*

Nari Gandhi was the first Indian architect who practiced organic architecture in India. He was a pupil of Wright's and had worked for five years on Taliesin West with him. When Nari Gandhi first started practicing in India, he was highly influenced by the principles of organic architecture stated by Wright. But as time passed, he grew out of it, developing his own style of organic architecture as a mix of the original principles, critical regionalism and his individual interpretation.

Nari Gandhi was a skilled potter and its influence was seen in his architecture. The bent toward complex design and a feel for materials was inspired from this passion as well. He liked ornamenting houses with his pots to create interesting spaces and experiences associated with it.

Gandhi used archaic principles and techniques in his architecture. Arches and flying buttresses became an identity of his structures. Every project, from planning to the minutest details, was designed to complement the five senses of man. He personified nature as a mother who teaches and from whom a child learns doing things a certain way.

According to Gandhi, a patient observation of nature and the set of principles derived from it is what helps architectural design to be organic, flexible and free. *"A house is organic, it evolves and grows. I need a heart and mind not static blueprints."* (Gandhi, 1986) A remarkable aspect of Gandhi's architecture was that he rarely made any drawings for the execution of his works. He personally supervised sites and was a hands-on designer. A design developed in his mind, on site, while working with materials.

Like Wright, Nari Gandhi believed that form and function were one. Indoor and outdoor spaces were intertwined, complementing each other. Brick, stone, steel, timber and glass were the most used materials in his structures. Geometry was not only used for planning and organizing spaces or materials but also for working in the third dimension. Thus the buildings were designed in third dimension with no apparent main view or façade seen of the structure.

Gandhi had a penchant for gardening. He started all his projects by first working on the landscape and growing the trees following the built structure. His structures gave an idea of a house growing from its surroundings- an ideology Wright focused on in his organic architecture as well.

***7. Shirish Beri** (1950 – Present)*

Shirish Beri was Nari Gandhi's disciple, highly influenced by his architecture and design. Though Beri's works were on the same lines as Nari Gandhi's and Wright's, he never used the term 'organic' but just 'nature'. His idea of architecture has been that of a lifestyle growing alongside nature, having compassion and developing a relationship with it. His architecture was a portrayal of the worldly talks of concern, notion of inner peace and senses, his values and principles which transformed to the spaces designed and the process of construction. The basic idea behind every design was to create a space apart from the worldly clutter and noise, a haven amongst nature.

Along with nurturing the bond with nature, his focus was also on initiating meaningful interaction with fellow human beings. His structures depicted humane spaces with man being at the centre. He believed in designing spaces which are modern but still reflect and have a continuity with tradition, history and socio-cultural values.

DISCUSSION

The following is a discussion based on the comparative analysis of the principles of organic architecture seen in some of the works of three architects, Ar. F.L. Wright, Ar. NAri Gandhi and Ar. Shirish Beri, as seen in Matrices A, B and C.

Frank Lloyd Wright identified and gave importance to the contextual organic elements like the big stone in Taliesin West or the waterfall in Falling Waters. Nari Gandhi in his first project, Gobha Mountain Lodge, similar to Wright, gave importance to the contextual and historical importance of the fort and the hills using them as elements of view. But later in his projects, he developed a liking for gardening. As seen in his Korlai House, he started his projects first by designing the landscape, growing the garden and then worked on the built structure. Frank Lloyd Wright had said *"A building*

should appear to grow easily from its site and be shaped to harmonize with its surroundings as if nature itself manifests there" (ArchEyes, 2020). Something which is very visible in Nari Gandhi's structures. Shirish Beri, similar to his mentor Nari Gandhi, took a liking to gardening and similarly worked out numerous projects beginning with the unbuilt followed by the built.

Wright's structures had a specific axis along which the design was planned. Similarly, Nari Gandhi in his first project, Gobha mountain lodge started by defining an axis and then planning the structure. But in his later projects, a perception of the axis was not identifiable and similar is observed even in Shirish Beri's projects.

Each architect has a sense of respect for the site, giving importance to the contextual surroundings and the existing flora on the site. A human scale is observed in the designs. The outdoor and indoor spaces are not segregated but instead the indoors have been designed to extend into the outdoor landscaped spaces, into the nature through patios, decks, huge openings and glass windows.

In every design, space requirements have been worked out as activities and not as rooms. Open floor plans seem to be typical with the idea of indoor spaces flowing into each other catering to numerous functions and activities. Shirish Beri used movable partitions to separate the private spaces whenever needed.

Use of natural materials was very prominent, a feature of organic architecture. Frank Lloyd Wright believed that the site and surroundings of a project had everything required to build a structure in it. Design strategies used were in accordance with the locally available materials and climate. A similar understanding is noticed in Nari Gandhi and Shirish Beri's architecture. Though, along with local materials, Nari Gandhi did sometimes export materials not available locally, like the bricks procured from Gujarat for his house in Korlai. He even had a team of Rajasthani labourers with whom he built a rapport who worked on most of his projects.

Most of Wright's projects followed a geometric pattern with straight lines, grids and rectangles organically juxtaposed to create plans. His elevations were dominated by linear bands and horizontality became an identity of Wright's structures. Nari Gandhi in his initial projects, highly influenced by Wright, created a lot of similarities with Wright's structures. As he developed his own style, he sundered from straight lines and started using a lot of arcuated systems. Key elements in Nari Gandhi's projects became the numerous arches and flying buttresses. Shirish Beri used varied geometrical shapes along with curves, joining them with straight lines arriving at plan altogether different from their initial basic shapes. While Wright's and Gandhi's designs were examples of classical geometry, Beri added complexity to his designs and created a sort of distorted geometry visible in his plans and volumes in numerous of his projects. Some other similar features seen in all the projects are deep overhangs, minimal ornamentation, simple interiors and play of light through different types of openings.

CONCLUSION

Organic architecture developed in the twentieth century. Frank Lloyd Wright put forth the term 'organic architecture' but varied interpretations emerged leading to variations of the same form of architecture.
Gaudi's double curved surfaces and free flowing forms inspired many designers, and a trend of structures extremely unique and which stood out of their surrounding contexts developed. He searched for natural laws that could be incorporated in their building construction and design. In contrast with this, Wright's organic architecture followed a linear geometry and an additive-subtractive form of development for structures which merged with their surroundings and complementing them. Sullivan brought nature into his structures through façade development and heavy ornamentation depicting nature. John Utzon, who worked during the second half of the twentieth century, was exposed to industrial elements and modern technology. He integrated the principles stated by Wright using natural as well as standardized industrial materials to develop complex forms resolved through simple geometry.

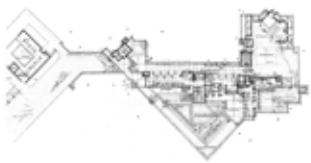
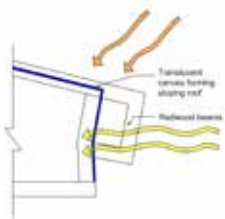
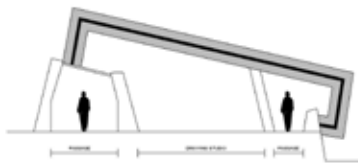
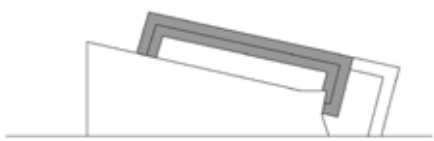
Nari Gandhi brought organic architecture to India. His architecture was an amalgamation of Wright's principles, critical regionalism and his passion for pottery. Landscape was always at the focus and the gardening of a site would be the starting point of his projects. On similar lines, his disciple Shirish Beri practices architecture with the basic idea of designing spaces integrated with the surrounding natural context, which respond to human values and concerns in life.

Each of these architects had a different approach and interpretation of this form of architecture but the core concept remained the same. Every single one of them looked upon nature as their source of inspiration and how nature could be incorporated in the building's design became the fundamental idea.

Frank Lloyd Wright's principles are considered as standards for organic architecture. Organic design aims to include these principles, but even Wright could not fully realize them in his structures. As he wrote, *"The complete goal of the ideal of organic architecture is never reached. Nor need be. What worthwhile ideal is ever reached?"* (Wright F. L., 1975).

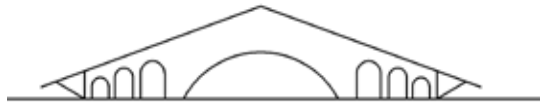
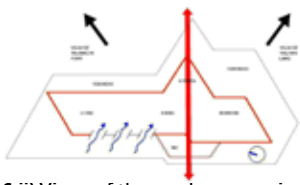
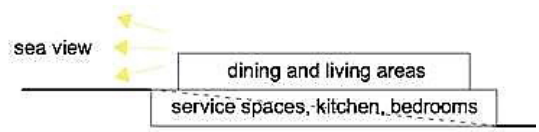
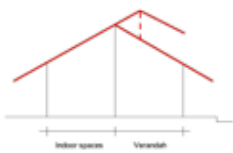
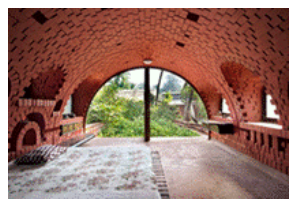
Nobody can fully conceptualize organic architecture, leaving it open for interpretation.

Comparative Analysis Matrix
Part A : Ar. Frank Lloyd Wright

Architectural Project	Taliesin West
CONCEPT	• Co-exists in harmony with its desert environment. • Uses using local materials in the design and substance of the surrounding desert by its structural diversity by combining into a single complex • Its desert masonry and low flat roof profile complements rather than dominating the landscape
LOCATION	Scottsdale, Arizona, USA
SITE	Hundred acres of desert land in the rural foothills of northeast Scottsdale
CLIMATE	• Dry and arid with a strong breeze. • Temp.: 6 to 40°c • Rainfall: 100mm • Thunderstorms
MATERIAL	Use of local materials: rocks, sand, redwood beams, canvas
STRUCTURE AND CONSTRUCTION	 Fig. 5.i) Plan laid out in a strict northwest-southeast axis (Source: ArchEyes,2020)
	 Fig. 5.ii) Canvas stretched tight on frames to form slanting roofs (Source: Author) • Huge overhangs providing shade • The structure's walls are made of local desert rocks, stacked within wood forms, filled with concrete, colloquially referred to as 'desert masonry.' • Construction joint between members on porches.
	 Fig. 5.iii) The drafting room : Low entry base and corridors showcase how the design revolves around human scale (Source: Author)
	 Fig. 5.iv) Taliesin West in Arizona (Source: ArchEyes,2020).
ARCHITECTURAL FEATURE	 Fig. 5.v) Overhangs on porch (Source: Author) • All glass faces showcase mitre joints to enable unobstructed views. • Structural wooden beams projecting out of the structure become elevational features.

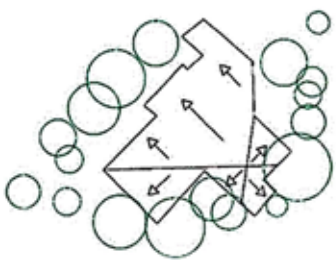
Comparative Analysis Matrix
Part B : Ar. Nari Gandhi

Architectural Project	Gobha Mountain Lodge	House in Korlai
CONCEPT	• The Gobhai Mountain Lodge was the first project by the architect Nari Gandhi. • Triangular geometry was used while planning and massing of the structure. This triangular layout was intended to maximize the heat and light of the sun along the site.	• Sea-facing beach site was selected for the views and vistas. • Elevated open-arched pavilion was designed facing the sea.

Architectural Project	Gobha Mountain Lodge	House in Korlai
LOCATION	Tungarli dam at Lonavla, Maharashtra	Korlai, Maharashtra
SITE	•The site is located on a cliff in a very remote location near an elevated dam reservoir.	Beach-facing site in Korlai, a fishing village 20 km south of Alibaug, Maharashtra
CLIMATE	•Temp.: 9 to 35°c •Rainfall : – 1733 mm	Tropical climate •Temp.: 20 to 49°c •Rainfall: 2402 mm
MATERIAL	Locally quarried stone, asbestos cement, wood	Burnt brick, stone and wood, metal, bamboo, leather, woven textiles, glass, shells, pebbles and a variety of plasters
STRUCTURE AND CONSTRUCTION	 Fig. 6.i) A large roof with deep overhangs above verandas (including long projections at the gable ends) and eaves which touch the ground was built. (Source: Author) The walls of the house were built with Wright's method: desert masonry	 Fig. 7.i) The entrance to the house is through a ribbed structure of archways and flying buttresses, passing two bedrooms tucked into the landscape (Source: Author) •Two parallel arches form the structural frame of the pavilion and support the large pitched roof.
	 Fig. 6.ii) Views of the nearby reservoir and valley, and the distant Rajmachi fort (Source: Author) •The flooring for the lodge is simple concrete, with grooves that follow the triangular geometry of the roof. •The east-west meridian is used as a central divisor of the site, and then used a 30/60 triangle as the form generator for the house plan along this meridian.	 Fig. 7.ii) The living and dining spaces designed open in all directions capturing views of the gardens and the coast. (Source: Author) •Trees jut out from the house as if rooted in it, juxtaposed against the brick walls
	 Fig. 6.iii) Roof overhangs (Source: Author) •Within the lodge, the main living areas were exposed to maximum sunlight, and the deep roof overhangs protected the house from the regional heavy rains. •The roof beams are set at 30 degrees while the roof panels are placed perpendicular to the walls	 Fig. 7.iii) A sandstone bleacher supported on archways (Source: Author)
	Chamfered openings were strategically placed on the south-west side to allow maximum ventilation in the structure	 Fig. 7.iv) The lower-level bedrooms have vaulted ceilings and arched windows (Source: Bondre, Mehta's Bungalow by Nari Gandhi: The Unconventional House, 2020)  Fig. 7. v) Arched pavilion overlooking the gardens and coast (Source: Bondre, Mehta's Bungalow by Nari Gandhi: The Unconventional House, 2020)

Architectural Project	Gobha Mountain Lodge	House in Korlai
ARCHITECTURAL FEATURE	•This was the first time Frank Lloyd Wright's Taliesin West 'desert masonry' method was utilized in India. •Huge overhangs •Triangular geometry followed in plan	Fig. 7.vi) Archways and buttresses (Source: Author)  Fig. 7.vii) Masonry screens punctuated by porthole windows and glass-inlaid apertures suggest a synergy between the coastal context and the thikri work native to Rajasthan, the homeland of the masons who worked on this project. (Source: Author)

Comparative Analysis Matrix
Part B : Ar. Shirish Beri

Architectural Project	Nadhawade Farm House	Neelai Lake
CONCEPT	The idea was to extend the limited scope of architecture (as is generally understood and practiced today) to the sphere of total human environmental design, where landscape architecture, interiors, construction methodologies, horticulture, energy, water, soil, animal & insect world, food etc., are included to interact and evolve design decisions.	•The Neelai Lake House at Andur is designed to give a view of the lake from each space
LOCATION	Nadhawade, Maharashtra, India	Andur, Maharashtra, India
SITE	5 acre farm land in Konkan region with a stream flowing along the west border of the site.	•The site is divided into two parts by a road.
CLIMATE	Warm and humid climate •Temp.: 8 to 37°c •Rainfall: 4000 mm	Warm and humid climate •Temp.: 8 to 37°c •Rainfall: 4000 mm
MATERIAL	Wood, glass, mangalore tiles, cow dung, mud, deccan trap stone, laterite stone	Laterite stone, timber, earth and clay tiles, stone shingles, smooth pebbles
STRUCTURE AND CONSTRUCTION	 Fig. 8.i) A unified interior space instead of segregated, isolated rooms (Source: Author) •The inside and outside spaces mingle into each other. •Microclimate of the house is cooler as it is shaded by the canopy of tall existing mango trees. •Use of fixed wooden and glass louvres. •Steep and deep overhangs on the south and west facade.  Fig. 8.ii) Roof in north and east direction rises up to take in the morning sun and light (Source: Author)	•Growth of trees and landscape on the lower region was used as a blanket to preserve and enhance the privacy of the space above. •Punctured walls framing the hiils. •Using the classic geometry and finding median lines to link them, leads to the formation of various trapeziums and a house with a radially evolving plan. •The outside-inside relation is such that when a person enters through the vista of the verandah he faces a big square puncture on the wall that exposes the back of the hill. Due to such strong geometry on the wall, the hill gains hierarchy when going to the depths of the house.
ARCHITECTURAL FEATURE	• Glass mangalore tiles for sunlight	•The most peculiar feature of the house is the screens that are used as an extension of the walls projecting out of the house.

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Captions

1) Falling Waters, Pennsylvania by Ar. Frank Lloyd Wright
Fig. i) Open floor plan with simple circulation. Multifunctional space. (Source: Author)
Fig. ii) 2d form development through addition and subtraction of squares. (Source: Author)
Fig. iii) Cuboidal massing. (Source: Author)
Fig. iv) Human Scale- Horizontality visible through massing and elevational bands. (Source: Author)

2) Wainright State Office Building, Missouri by Ar. Louis H. Sullivan
Fig. i) Derivation of plan through composition of rectangles. (Source: Author)
Fig. ii) Subtraction of mass for light and ventilation. (Source: Author)
Fig. iii) Maximum use of external façade. (Source: Author)
Fig. iv) Facade composition through repetitive use of rectangular windows. (Source: Author)
Fig. v) Organic ornamentation between windows and on the building capital, a feature of Sullivan's buildings. (Sveiven, 2011)

3) Ar. Antoni Gaudi
Fig. i) Free flowing plan of the Casa Mila, Barcelona showing irregular rooms and curving corridors. (Bianchini, 2019)
Fig. ii) Church of Colònia Güell, Santa Coloma de Cervelló, Spain - Support system inspired from a tree. (Giralt-Miracle, 2014)

4) Sydney Opera House by Ar. John Utzon
Fig. i) Geometric evolution of plan and form of the structure (Source: Author)
Fig. ii) Inspired from the shape of the boat hulls. Use of prefabricated elements creating a whole: additive architecture (Source: Author)

Devansi Sachade is a Final Year B. Arch. student at Aayojan School of Architecture and Design Pune. She has written this paper under the subject of Research in Architecture in the Fourth Year of the course. Being an admirer of Frank Lloyd Wright's style of architecture, since the very beginning of her architectural journey, she has always been keen on exploring organic architecture and its scope. This research paper is one such attempt to understand the evolution of Organic Architecture through the lens of some master architects.

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WATER HARVESTING DESIGN STRATEGIES FOR RESIDENCES IN KERALA

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1. INTRODUCTION

Water harvesting is all about the storage of water for use rather than allowing it to run or evaporate. The noun 'harvest' is a synonym for 'gift of nature' and it means yield or crop. According to Yannopoulos (2017), the harvest should also be utilized and every yield is preceded by its own activities. The growing urban population puts increasing pressure on water resources, since urban areas are one of the main consumers as well as polluters of fresh water globally (Özerol, 2020), hence leading to not a water crisis, but a 'water governance' crisis (OECD Principles, 2015). Considering the importance of water harvesting, it is mandatory in many states. Since rain water is not managed properly we face floods, drought, underground water depletion, etc. In numerous regions water supply is questionable, or where local water sources evaporate for a part of the year. In any case, water harvesting can be presented as the sole water hotspot for networks or family units.

Hence it is worth formulating different aspects of design for water harvesting from the roof, wall and ground for the residences in Kerala. An unorganized water harvesting system can lead to distinct problems. The ultimate purpose of this work is to understand the organizational space, aesthetic and functional aspects of water harvesting and to formulate design strategies in water harvesting to be considered during the designing of residences in Kerala, because every building can include the method of water harvesting considering the future need of water. The methods of water harvesting followed in one particular place need not necessarily hold good for another. So rainwater harvesting (RWH) should be designed considering the topography, microclimate, macroclimate, soil type (Selçuk & Arslan; Kinkade-Levario, 2007).

1.1 History

Over the period of time there have been advances in technology and construction techniques for collecting water. Technologies are the underpinning of modern achievements in water engineering illustrating clearly that. Tracking from the Neolithic age (3200 - 1100 BCE) to Ottoman period (15th - 18th centuries) people have discovered innovative, sustainable, cost-efficient and environment-friendly methods to collect water in large cisterns in areas where pure water is less, in the valleys and islands, by reducing the runoff of water into sea (Yannopoulos, 2017; Mays, 2013). When the need for water increased and high-rise buildings emerged in modern times (19th and 20th centuries), newer technologies like deep wells, pumps, pipes developed for expanding freshwater networks and water pressure was required to supply water for multi-storied buildings. Reinforced concrete structures of cistern have been found (Watershed Blog, 2011). These methods must have been developed based on the amount of rainfall, the nature of the land, the type of soil, the geology and topography of the regions and have been used to store and preserve water as well as collect water (Selçuk & Arslan).

Future trends:

Increased volume of runoff has reduced infiltration, and has caused a water crisis. Green roofs, pervious pavements, grid pavers, and non-structural techniques such as rain gardens, vegetated swales, disconnection of impervious surfaces, and of course harvesting and reuse of rainwater are the measures to meet water crisis with cost-effective and environment-friendly solutions (Travers, 2017).

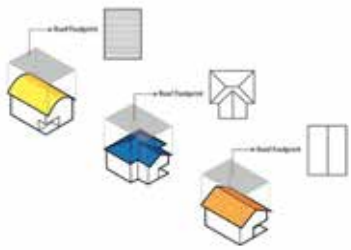
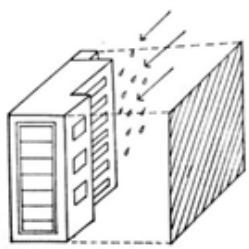
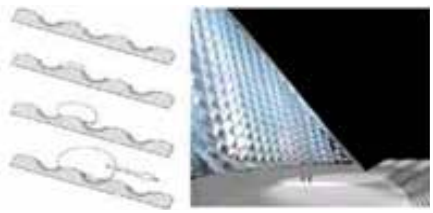
1.2 Components of a system

Method of water harvesting as four components of a system (as seen in Table 1), where each component is different in place, structure, climate, need, topography and design (ArchDaily, 2018; Kinkade-Levario, 2007; Worm & Hattum, 2006):

1) Catchment area 2) Conveyance 3) Purification 4) Storage

Table 1: **Catchment area and conveyance of roof, wall and ground**

(Source: Adapted by Author from (Mariana, 2018; Kinkade-Levario, 2007; Selçuk & Arslan)

	Catchment area	Conveyance
Roof		 Products used to collect rainwater from roof are pipe, chain, rope and more
Wall		 The Las Palmas Water Theatre - the surface directs water to the storage tank

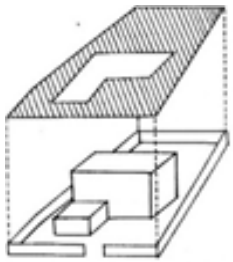
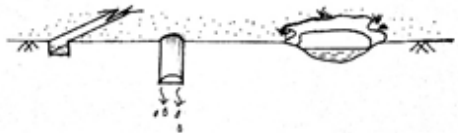
	Catchment area	Conveyance
Ground		 Canal, pit, pond and terrace etc. Percolate rain water into the ground

Fig. 1 Cascading Creek House
Source: (Caandesign, 2013)

1.3 Literature case study

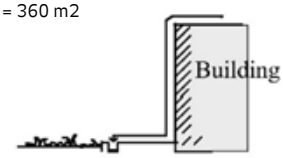
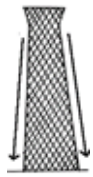
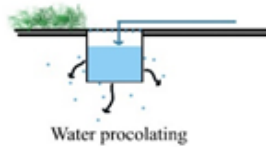
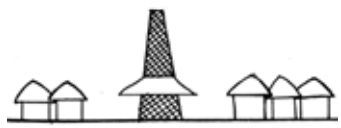
To study the different methods to harvest water from roof, wall and ground, Cascading Creek House has been selected (figure 1), Warka Water (every drop counts) in figure 2 and Climate Tile Designed to Catch and Redirect Excess Rain Water (figure 2) from Climate Change Created by THIRD NATURE WITH IBF and ACO Nordic (2014) in figure 3.

2. METHODOLOGY

The outline of the paper follows: a primary case study of different structures in different design approach and climatic conditions with the parameters derived from literature study and case studies, that is catchment area, conveyance, purification, storage, aesthetics, function, organizational space, humidity and rainfall; along with analyzing the parameters for roof, wall and ground of the residence (see Table 2).

Fig. 2 Warka Water
Source: (Architecture and vision, 2017)

Table 2: **Analyzing the literature case study with the parameters**
(Source: Author)

Parameters	Cascading creek house	Warka water	Climate tile
Catchment area	Roof catchment area 710 m2  Horizontal structure	 Roof catchment area: 16m2 and Fog and dew (Wall): 14m.sq x h (h- high of Warka Water). Vertical structure	Catchment area from roof, wall and ground = 360 m2 
Conveyance	 Flow through open space and loop of diameter 20 cm  Water circulation with gravity and pumping.	 Water drops down through mesh by gravity	Gathered in a canal of 30x30cm. It's made of percolating material. 
Storage	4 storage tanks each of capacity 10000 litres placed at the lowest level of the site. 	 Underground tank of capacity of 3000 litres storage placed in the centre of Warka Water.	No storage. Water percolates through soil.
Aesthetics	Artificial waterfall at the entry point and water ponds on the roof. 	 Form similar to the local surrounding.	Landscape as Buffer zone, quality of life and sense of peace. 
Function	Multifunction- Green roof Geothermal well, thermal comfort, photovoltaic and solar hot water panel.	Light weight material, easy to construct and remove, environment friendly.	Relief from storm water stagnating on streets.
Space	Topography of the site is considered for RWH with multifunction. 	 Placed in open space for direct sun, rain and wind.	Front of the Building 
Humidity	Subtropical humid climate	High humid	Warm humid continental climate
Annual rainfall	870 mm	510 mm to 1530 mm	1164 mm

2.1 Primary Case Study

2.1.1 Case study 1

The residence of Ar. P.B. Sajan and Ar. Shailaja is located at Visala, Powdikonam, Trivandrum, Kerala, designed by the owners themselves (figure 4). The site is sloping, situated at the top of a hill. The area of the site is 345 sq.m (Sajan, 2012). The construction of the building was completed in 2012. Water is collected from the roof through PVC pipes into the storage tank placed under the building as basement as shown in figure 5, below the bed room. Ground water is also recharged by mazha kuzhi (rain pit) placed at the low level of the site.

2.1.2 Case study 2

Residence of Mrs. Santhakumari (figure 7) is located at Chalikkavattom, Vyttila in Ernakulam (figure 6), where the underground water is quite polluted and cannot be depended upon. Alternative sources were corporation-supplied water and collected rainwater. But corporation-supplied water was not available at their residential zone for some years, hence rainwater harvesting was adopted. Two water tanks were installed at different time periods in the side yards. But after many years, corporation water was made available in the residential zone. Thus rainwater harvesting was stopped slowly. Now the tank and PVC pipes are not in use to collect rainwater. The tank is placed at the side yard in between the compound wall and building.

Fig. 3 Redirect Excess Rain Water from Climate Change
Source: (Tredje Nature, n.d.)

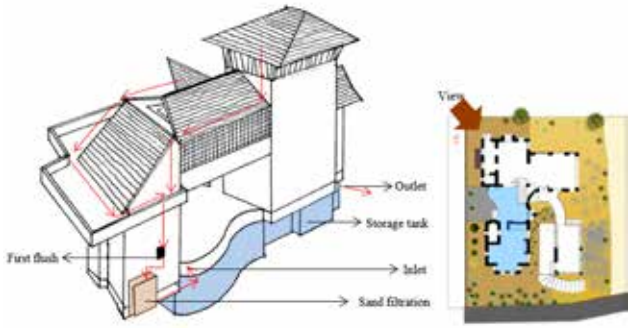
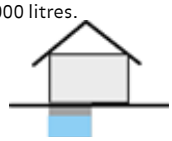
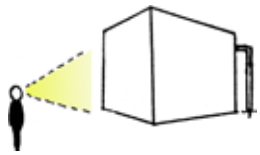
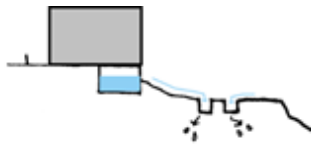


Fig. 5 Rain water harvesting system and the storage space
(Source: Author)

Fig. 6 Google map showing the polluted canal at the location of Mrs. Santhakumari's Residence
Source: (Google map, 2020)

Fig. 4 Front view of residence of Ar. P B Sajan & Ar. Shailaja
Photo courtesy: Author, 2019

Table 3: **Analyzing the primary case study with the parameters**
(Source: Author)

Parameters	Residence of Ar. P.B. Sajan & Ar. Shailaja	Residence of Mrs. Santhakumari
Catchment area	 Catchment area roof is 240 m² Sloping roof	 Catchment area roof is 75 m² Flat roof
Conveyance	PVC pipe of diameter 140 Water drops down by gravity.	PVC pipe of diameter 140 Water drops down by gravity.
Storage	Storage tank placed under the superstructure with the capacity of 56000 litres. 	Two storage tanks each of capacity 5000 litres. 
Aesthetics	RWH does not obstruct the front view of the building. 	Side view of the building is obstructed by RWH. 
Function	Water is collected and underground water is recharged.	Not in use.
Space	Space around the building percolate water storage tank is placed underneath. 	Waste of space due to unused storage tank 
Humidity	Warm humid climate	Warm humid climate
Annual rainfall	3000 mm	3000 mm

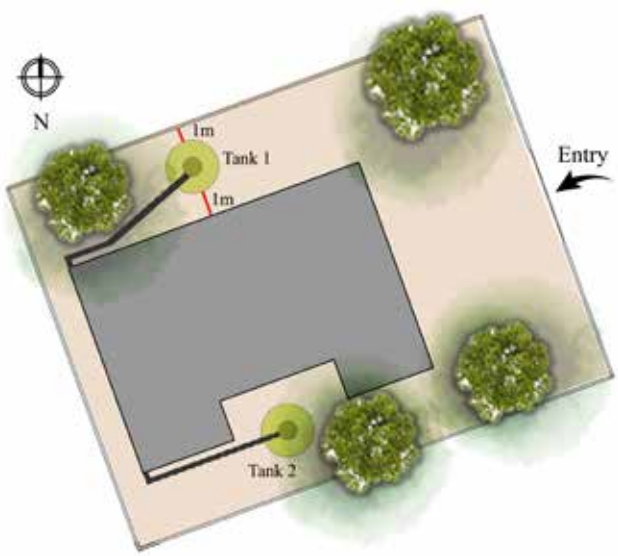


Fig. 7 Schematic layout of the Mrs. Santhakumari's residence
(Source: Author)

Table 3 shows the analysis of the primary case studies with the parameters, for roof, wall and ground of the residence.

3. RESULT AND STRATEGIES

a) Roof:

Roof water harvesting is multi-functionary. It controls the temperature inside the building, acting as storage and supporting roof gardens. The horizontal spread of the building will increase the roof footprint area of collecting water. Materials used on roofs to collect water should not disturb the aesthetics of building and choosing of material is important because use of different materials must not contaminate water as roof gets direct sunlight, wind, rain, etc. The sound of water flow and view while gathering water can be incorporated in design to add more functional and aesthetic features to the building.

b) Wall:

The form, shape, and surface of the building play an important role in water harvesting. If the surface area of the wall is more compared to the roof area, then wall water harvesting can be preferred. Taller buildings will

have increased the wall footprint area. Analyzing wind direction to choose the wall for rainwater harvesting is important. Gathering rain water should be directed to different paths to avoid overflow. Compound module used to collect water should have a smooth flow of water. Use of different compound module material must not contaminate water used for domestic purposes. Water repellent wall is a good option. Evaporating and condensing methods using different materials placed on walls can be used to collect water in a humid climate or when buildings face water bodies with high breeze towards the building. Design incorporating water flow view and sound would create a different feeling around the building.

c) Ground:
The space around the building acts as a catchment area. Understanding the site topography is very important to implement the water harvesting design. Ground water harvesting is water penetrating into the ground or collecting it in a storage tank without disturbing the underground structure. Digging a trench at the lowest level of the site can help groundwater recharge and in paved site water can be directed to the storage tank. Landscaping design including water percolating into the ground or being directed to the storage tank is encouraged to avoid stagnation of water.

- **Purification**

1. Sand filtration is the most economic method of filtration.
2. Charcoal filtration is good to absorb odor if any.
3. Ultrafilter can be installed in any type of rainwater harvesting.

- **Storage**

The storage tank must be placed underground, at the lowest level of the site. The position of the tank can be below the superstructure, so it remains unseen and there is no wastage of space above the ground. If the basement construction is not possible then the position of the tank can be combined with the superstructure or with the compound wall and not at the center of the superstructure and compound wall.

4. DISCUSSION

Water harvesting is not practiced because of wastage of space, aesthetic view disturbance, and it requires good maintenance. The aesthetic function of RWH and its design depends on site, topography, climate, wind direction, etc. The study of past, future and present good and bad examples of water harvesting, formulate good strategies for water harvesting endeavors to give viable direction for family units, Architects, civil engineers, CBOs, NGOs, nearby government authorities can solve the problem of govern water crisis and individuals interested in environment care, interrelationships between people and their surroundings by applying the correct frame works, methods and procedures for collecting water.

5.CONCLUSION & RECOMMENDATIONS

According to the climatic and topographical conditions of various places the rain fall level is high in some places and RWH is not considered to be important because there is no scarcity of water but in other places there may be droughts and less rainfall and people are in need of water in such places. People can encourage and promote rainwater as business by sharing the rainwater with others if the collected rain water is more than the required amount for use in residences thus water crisis can be reduced by solidarity.

Potable water is a basic need in human life but nowadays water crisis is a major issue in the world. Due to the alarming rate of water crisis particularly in drought affected regions and areas with large populations, the government has implemented RWH as mandatory in many states to overcome the water crisis. The contribution of water harvesting by individuals can make great changes in society. This paper presents the design strategies for water harvesting from roof, wall and ground of residences that would enhance the design. Small changes in design can make great changes in environment impact and social function.

Further studies can be conducted on an urban level by considering the runoff water from streets, parks, public space, etc. flowing unused to merge with the sea.

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Prof. Karthik Mohan has been teaching since 2007. He has also taught for more than five years at the Edexel University of London at Dubai. He is presently Assistant Professor at the Department of Architecture, College of Engineering Trivandrum (CET). He graduated from CET, Universit of Kerala and completed his M.Arch. with a first rank from IIT, Roorkee (2017). He holds industry experience in architecture, interior design and product design. Ha has conducted several induction and training programmes all over India for teachers on pedagogy and innovative teaching methodologies through the Council of Architecture and FLAIR (Dept. of Higher Education, Govt. of Kerala).

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Essays, interviews, articles (1500- 2500 words) and book reviews (600 and 750 words) in the areas of architecture, planning, urbanism, pedagogy, heritage, technology, ecology, theory and criticism, visual design, practice or any other relevant subject pertaining to the built environment. (Details of the format will be available on the JIIA website given below).

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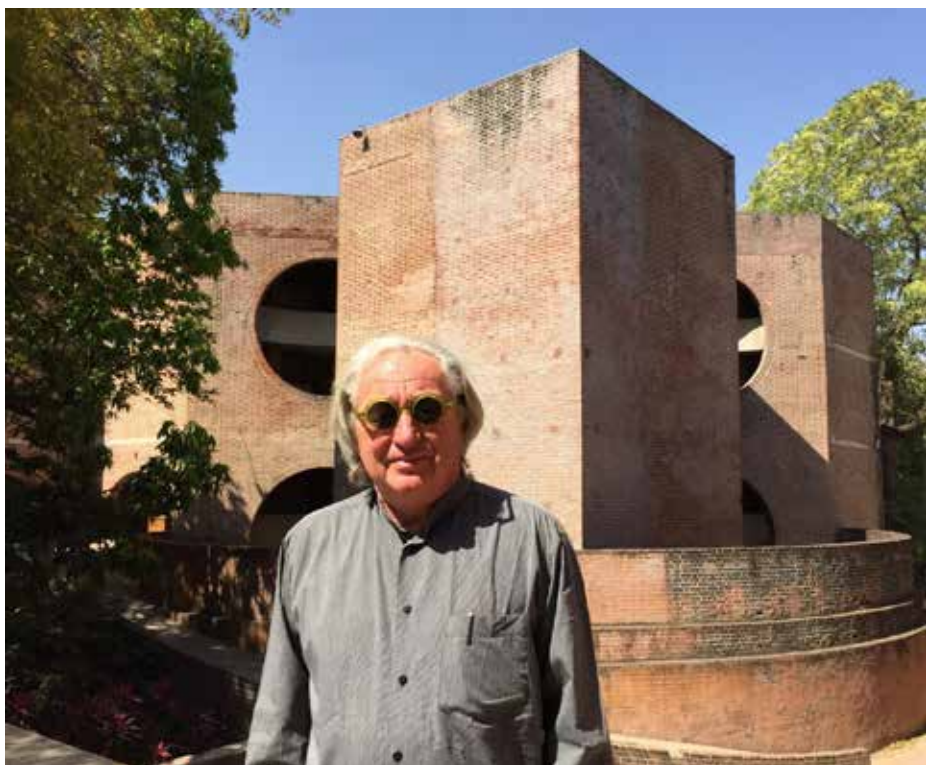
DIALOGUE WITH STEVEN HOLL

AIR, LIGHT AND GREENSPACE: POST-COVID

Prof. Durganand Balsavar



Steven Holl at IIM Ahmedabad in March 2015

Ar. Steven Holl was born in 1947 in Bremerton, Washington. He graduated from the University of Washington and pursued architecture studies in Rome in 1970. In 1976, he joined the Architectural Association in London and in 1977 established Steven Holl Architects (SHA). Considered one of America's most influential architects, he is recognized for his ability to blend space and light with great contextual sensitivity and to utilize the unique qualities of each project to create a concept-driven design.A tenured Professor at Columbia University's Graduate School of Architecture, Planning and Preservation, he was named by Time magazine as "America's Best Architect," for creating "buildings that satisfy the spirit as well as the eye."

LINKS
Website: www.stevenholl.com
Instagram: stevenhollarchitects

On 17 June 2021, the internationally celebrated New York architect, Steven Holl [SH], was in dialogue with Prof. Durganand Balsavar [DB], sharing insights for a paradigm shift in architecture emerging from the pandemic.

Prof. Durganand Balsavar [DB]: Landscape takes on a new role in your projects. For instance, though the Kennedy Centre buildings in Washington remained locked during the pandemic, outdoor civic spaces were accessible for public gatherings, while ensuring safety. It is a democratic gesture. Is this a paradigm shift to ensure that open spaces and "urban voids" such as parks, playgrounds and landscape are accessible to all, during the pandemic?

Ar. Steven Holl [SH]: Absolutely! A very good question! I was educated as a landscape architect. I worked for Lawrence Halprin, a great landscape architect. My teacher, Richard Haag taught us landscape, as a kind of 'first principle' to understand the site. He said “whatever you're going to do for a project, go to the place and "Be the site”. So, landscape, to me, is, when you’re thinking about a project, you are thinking about "voids" first. It gets obvious how important this will be in the future, rightly so.

DB: The projects at SHA, emphasize the role of openness, light and ventilation - an ecological idea. Simultaneously, pavilions and open spaces for circulation lend themselves to social gatherings and communion. In creative institutions, like a school of architecture and arts, or a research centre, the open pavilions convey a sense of freedom. Each of the projects explore a relationship with the ground. For instance, the history of architecture reveals buildings that float on pilotis, or buildings that burrow into the ground. I recall it has its antecedents in your childhood experiences.

SH: Well, I think both in the case of the Kennedy Center in Washington. DC and the University at Columbia, the open landscape is a social gathering space. It's how the openness of the ground is expressed and what’s happening below the ground and what’s happening above it - that's a primary aspect of solving the nature of the project.

When I was teaching at Columbia University, I gave a lecture; I said there are only four types of architecture: under the ground, in the ground, on the ground and there’s over the ground. I gave that lecture with a little diagram. And I began to remember that, that’s how I started as a seven-year-old. So maybe I was destined to be an architect about the earth, about the relationships of the earth. It’s a principle.

Queens Lib (**Photo courtesy:** SHA)

Franklin Benjamin College (**Photo courtesy:** Paul Warchol)

So, by introducing the concept of 'open landscape' as primary, and then organizing the functions under the ground, and pavilions that come above, not only bring in light and air, but also orientation. The idea that drives a design is very important. The openness of the landscape in one case is working or natural light coming down from above, is working in another - that's important. That way, one isn't hamstrung by the size of the project. Louis Kahn once said, "It's what an architect contributes to the project that counts and that's a spiritual aspect". Landscape, air, and light are important. I also believe that students and young architects today want something that reflects an optimism about the future.

DB: New York is a global city. Hunter's Point Library here, overlooks the FDR Memorial, designed by Louis Kahn, and has a view to Manhattan, the Empire State Building and the UN Building across the river. In this context, what does the pandemic change? What does it mean to be global, both politically and ecologically?

SH : When I first got the assignment to do this project, I drew a triangle of the city - it connects the FDR Memorial and the UN building, designed by Oscar Niemeyer and Le Corbusier and this site. It's almost a perfect triangle across the water, and I thought 'Wow! What an incredible site!'

When you're in the library, you see Louis Kahn's FDR Memorial which is a fantastic project. And you see the big Secretariat, the UN building, which has an amazing history of New York's architectural culture. There's a film by Peter Rosen, with the story of Le Corbusier and Oscar Niemeyer. I knew Oscar Niemeyer and met him a few times. The UN building is very important in the urban frame of New York. It is, I believe, as important as the Empire State Building or Chrysler building because it stands for something - the belief in the United Nations. That, to me, is the most important thinking that we need to come back to, today: That we are all global citizens, that the earth is one ecological system; I consider myself a global citizen and think we all are. That's why I'm so honored to be able to speak to India, which is the largest democracy.

It's amazing we have the technology. We can do really interesting things in the future. But we need the political will and I found it on several sites. I'd love to build that museum we designed for Mumbai. We are all global citizens now. I designed a Museum of Surf and Ocean, at Biarritz in France, with exhibits about the ocean and its health. The Mayor said that fishermen and surfers know the ocean is in danger today. We need to bring that knowledge to the public. When I started to work on the ecological exhibits, I realized that every ocean on this planet is connected to every other ocean. The water

Mumbai Museum View

REACH Campus with Video Wall from Terrace at Dusk (**Photo courtesy:** Richard Barnes)

is moving and it takes almost a thousand years to move from one side of the planet to the other with the sub-currents and laminar flows.

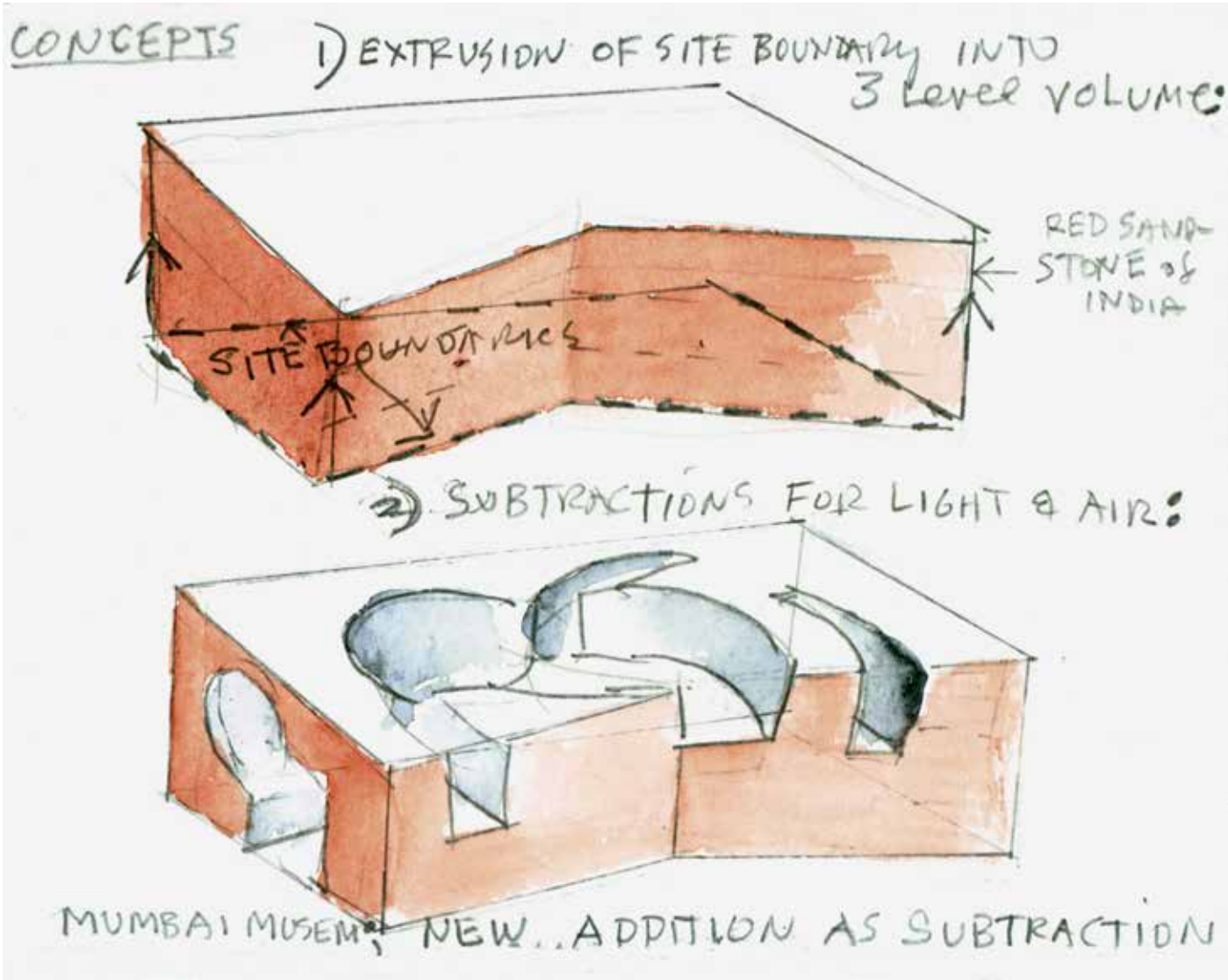
The ocean movements of water are the biggest example that the earth is a global organism and humanity is part of it. Post-COVID means we have got to change. We can't just go back to normal. It's a wakeup call for us and we should come to the future with the optimism that we are one connected organism and we need to build that way.

DB: Some of your most significant projects have come through competitions. Kiasma, Finland was a turning point. You've often had the courage to redefine the program, and not follow the competition brief.

SH : Disobedience is important for an architect. It's in projects we redefined the programme that we won. I was making a list of all the 160 competitions that we've done. But listen to this, Samuel Beckett said that failure is a principle that an artist has to absorb and realize, it's a principle - failure.

Fail, fail again, fail better - 34 wins in 160 competitions. There's a heck of a lot more failure than there is a win. And you got to be able to pick yourself up dust yourself off and try it again. Enjoy it. I actually enjoy competitions! Why? Because it's a place of experiment. I don't try to win and that's probably why we've won some of them. We try to do the best possible solution and not necessarily be obedient to whatever they're asking for.

So that's exciting. Young architects today don't need a big office to do a competition. You can do it with two architects. So, to have the idea: that's the key and suddenly it levels the playing field in a way. We are entering a competition right now against two firms that have 300 people. We're 33 people and I never want to be bigger than that. Nobody's going to know that we are only 33 people, because the renderings are going to look just like that 300-person office.



Watercolour by Steven Holl

This moment that we are living in, has great potential for young architects, in a certain way. I think this moment is open with possibilities. Architecture can come from anywhere. It doesn't have to be from architecture per se. It can be inspired by music, by science, by painting, by sculpture – all these have a lot of potential.

SHA won the competition to build the Mumbai City Museum in India in 2016. We hope they can resolve the blockage and build that project. We have all the drawings; we have the models. It's a place of education for young people and I will definitely get back to Mumbai, if they decide to build it. I would love to see the stepwells in Gujarat, and I think those are worth fighting for. They are an amazing subtractive architecture. There are a lot of cities in India that I am looking forward to visiting in the future.

Prof. Durganand Balsavar is the Dean of Saveetha College of Architecture and Design, Chennai and the curator of COA Social Reads Online Forum of the Council of Architecture, India. Balsavar graduated from the prestigious CEPT-SA – ETH Zurich and was visiting faculty invited by late Prof Kurula Varkey. Balsavar was project architect at VSC- Dr. B.V. Doshi in the 90s. He is the Founder-Principal Architect of Artes-Human Settlements Research Collaborative involved in academia and practice since 1989 in future cities, war refugee rehabilitation, disaster mitigation, and ecological sustainability (insta#c10roots).
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AR. PILOO MODY
THE WORLD REVOLVES AROUND AN IDEA

Meher Marfatia

Ar. Piloo Mody

The Modys on holiday

Visionary architect and Swatantra Party pillar, Piloo Mody, the infamous thorn in Indira Gandhi's side, contributed candidly to the country's artistic and political dialogue.

"I am a CIA agent," proclaimed the bold tag he sported to the Lok Sabha, with insouciance verging on glee. The bait dangled at the Indira Gandhi government was delicious revenge, for the Congress repeatedly denouncing him as "a Washington parrot".

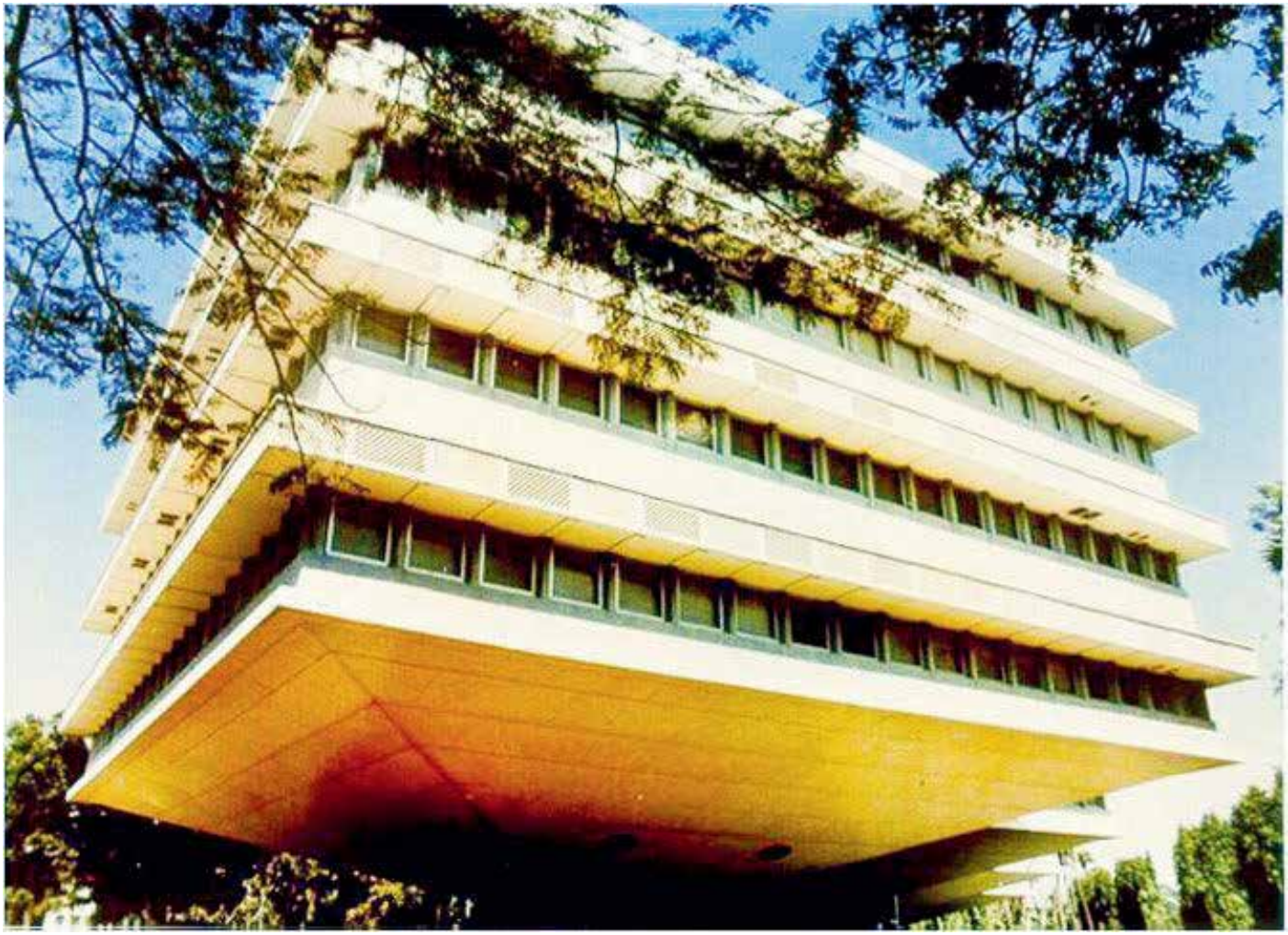
Sometimes witty, sometimes whacky, ever topical and trenchant, that maverick architect-politician was Piloo Mody. The youngest son of Sir Homi Mody, after the redoubtable brothers Russi and Kali, was an alumnus of the JJ School of Architecture and University of California, Berkeley. Piloo possessed idealism tempered with realism. The blend attracted him to the liberal Swatantra Party, headed by C Rajagopalachari, of which he was an ardent founder-member.

Pertinent Piloo-isms ring chillingly true amid today's hyper-jingoist rant and caste combat. Take a 1973 quote from March of the Nation: "It's disgraceful enough if looking down on human beings was confined to keeping out of their way or barring them entry into temples. What cannot be countenanced is when bigotry erupts in vicious, senseless cruelty, connived at by society or condoned by the authorities." And, more positively, "The world revolves around an idea. Every problem has its solution, given a clean heart, good intention and determination."

"Nothing has changed, Piloo's writings hold relevance after over 40 years," agrees his wife Vina, now 94, visiting from Geneva, Nebraska. We are in the penthouse apartment of her nephew Jimmy, Kali's son, at The Cliff, a Carmichael Road mansion built by Austrian-Jewish jeweller Victor Rosenthal, overhanging handsome homes by Claude Batley and George Wittet.

Piloo Mody and Lavina (Vina) Colgan were students at Berkeley. Studios in the architecture department were lined with long tables to accommodate drawings. "There was a vacant space beside Piloo, where I parked myself," Vina smiles.

Returning to India, Piloo inimitably describes two years spent on the Chandigarh Capital Project: "Apparently France has produced in the same generation Le grand Charles de Gaulle and Le grand Charles Corbusier… I allowed him to work without disturbance, while I relaxed on an easy chair. This prompted him to name me L'homme Horizontal."



The Chennai headquarters of Engineering Construction Corporation (ECC), a former subsidiary of L&T, designed by Ar. Piloo Mody. This design is India's sole winner of the Federation Internationale de la Precontrainte prize for excellence in pre-stressed concrete.

Piloo and Vina set up Mody and Colgan in 1953 at Stadium House, Churchgate. "We sat and sat for six months till our first assignment, flats for senior staff of Tata Iron and Steel Company at Marine Lines. Then, air-conditioning relatively new to Bombay, we designed the front casing of Voltas' one-ton machine."

The Modys grew close to the acknowledged pioneer in that field. Mohan T Advani, who established Blue Star Refrigeration and Air-conditioning in 1943, dreamed of an ultra-modern residential block where his mother and siblings, in Bombay post-Partition, could live. "Olympus was the abode of the Greek gods," he declared. "That's what I'm going to build."

He did, with Piloo. "Blue Star was a sole proprietorship when Olympus on Altamont Road was constructed, self-sufficient with a dhobi, tailor, seven elevators in two wings, car spots and a provision store," says Advani's daughter Suneeta Vaswani. "Dad hit it off with Piloo, who understood his obsession for the extraordinary, and Vina for her American concepts. They were a perfect match. I followed them, listening and learning about finishes and colours. Vina helped select Vitrum mosaic for bathroom counters and created the tile clock you see at Olympus' entrance."

City buildings Piloo contoured include three TELCO offices, the headquarters of Bharat Bijlee, Mukand Iron and Steel,

Block of flats for senior staff of the Tata Iron and Steel Company, at Marine Lines. This was the first assignment by the Mody and Colgan firm, bagged in 1953-54.

Sandoz, Voltas and Diners Club and Business Service centres. Reviewing his oeuvre, Vina says, "Piloo was practical, curious, eager to use innovative elements. A fun project was The Oberoi, Delhi, perhaps India's first multi-storied, precast building. The beams were brought to the site, suspended between bullock carts lit by a lantern."

Piloo's political priorities were clear cut. He was with the Swatantra Party from 1960 until he died in 1983. A staunch opponent of the Congress regime when public discourse revolved around socialism, the Swatantra Party and its supporters rejected the Nehruvian consensus of the age. "Piloo found designing pretty buildings unsatisfying with the country going to the dogs via the socialistic road," shares Vina.

A passionate parliamentarian, elected from Godhra in 1967, he urged the passing of an important bill that enabled The Architects Act of 1972.

The legislation critically gave his profession formal recognition, securing it with sanctions and regulations. Before this, architects were clubbed with engineers.

On India launching its first satellite, Aryabhata, in April 1975, hosannas to Mrs Gandhi expectedly echoed. Irrepressibly,

Piloo shot out, "Madam Prime Minister, we know our scientists have taken great strides in technology, I'd be obliged if you could enlighten us as to why our telephones don't work."

That was mild sarcasm. When the Modys moved to Delhi, Piloo's characteristic candour on behalf of the largest Opposition party surged strong. As a result, he was among the initial 1975 arrests. The fateful June night he got picked up, to be detained under MISA for 15 months in a Rohtak jail, his Swatantra Party colleague Madhu Mehta phoned an Ahmedabad reporter. It was one of the Emergency's earliest leaks.

Piloo straddled public life and a design career with equal verve. His manner of drawing plans for buildings was unique. Civil engineer Shirish Patel recounts how stimulating it was to watch the iconoclast work. The collaborators were neighbours too. What is presently the Japanese Consulate was the Mody bungalow, Spiro Spero (from the Latin "Dum spiro, spero — While I breathe, I hope"), which faced Patel's Nanda Deep.

"Unlike any other architect, Piloo wouldn't put pencil to paper without the structural engineer before him," Patel recalls. "You were summoned to a cigarette smoke-filled room which you left with eyes watering for hours. He'd discuss dimensions and spans that then became outstanding sketches." When Piloo assigned Patel the engineering for his Delhi residence, the plan he doodled was strewn with intricate patterns. "These are my carpets," he said. The home was designed around his carpets.

Patel indicates the intelligence Piloo brought to a distinctive project they embarked on in 1977 while Piloo was still a Member of Parliament. The Chennai headquarters of Engineering Construction Corporation, a former subsidiary of Larsen & Toubro, that is the country's sole winner of the Federation Internationale de la Precontrainte prize for excellence in pre-stressed concrete. "Won't he be busy?" L&T President, Nicky Desai, asked when Patel suggested Piloo as the architect. "But for Piloo, architecture was a holiday from Parliament," says Patel. "From site we went to the boardroom, before the suited-booted ECC Joint Managing Director, CR Ramakrishnan. Piloo started sketching on a little envelope while he and I tossed ideas back and forth. Our meeting done, he flapped the envelope under Ramakrishnan's nose, saying, 'Believe it or not, Mr Ramakrishnan, this is the design of your building.'"

Noman Fatehi, an architect with the firm in the 1960s, says, "Piloo being a connoisseur influenced not just our work ethic but theatre and music choices too. I must add that the dedicated way Vina sourced artefacts for CAC showed her as more Indian than anyone we knew." He refers to her establishing the legendary Contemporary Arts and Crafts (CAC), the country's first such wonderfully curated home store, on November 29, 1962, the birthday of her mother-in-law Lady Jerbai Mody. "Thoroughly in tune with our traditions, even how she draped her sari daily was beautiful."

I'm introduced to Fatehi by Amy Irani, whose husband, Mody and Colgan senior associate Rashid Irani, specialised in dressing home interiors with Vina. The duo also decorated restaurants like the Ritz at Churchgate and Bistro at Flora Fountain, and the Rhythm House store at Kala Ghoda. The secretary since 1959, Amy typed drafts of her employer's 1970s cult books, Zulfi My Friend (Piloo was in Bhutto's class at Cathedral Boys' School before shifting to Doon), and Democracy Means Bread and Freedom. "No one can have bosses like mine. That we functioned as one happy family is no cliche but the truth," she says.

"Staff birthdays were celebrated with Mr Mody treating us in the office. Twice a year we were all invited home for brunch. Mrs Mody whipped up scrambled eggs and pancakes in her kitchenette."

Amy considers every project aesthetically handled — "Piloo Mody moulded client taste with his convincing way of putting forth a point of view." Fatehi singles out an exceptional feature of the original Juhu Hotel, done in partnership with Shirish Patel. Piloo drew it low, chalet-type, with a wooden roof truss of different structural calculation. From the trusses he hung the bar on the mezzanine level.

"Mody and Colgan cared for client values," says industrialist Rajen Kilachand. "My father moved from Girgaon to Bakhtawar building (in Colaba), to find Vina mindful of a joint family's requirements. Interconnected rooms led to our grandmother's room, so we could open a door and run in to hear her amazing stories about ancestors. Vina styled for us living and dining rooms ahead of their time; my dad had a classy black and white marble, crescent-shaped desk. Both Piloo and Vina finely balanced an international sensibility with respect for Indian culture."

This article was originally written for Once Upon a City, the fortnightly column in Sunday Mid-day and first appeared in the newspaper's June 9, 2019 edition.

Meher Marfatia
Journalist, author and text editor, Meher Marfatia is also an independent publisher. Her imprint, 49/50 Books, focuses on lesser known communities and fading cultures. After its first title, Laughter in the House: 20th-Century Parsi Theatre, she compiled two editions of the bestselling phrasebook, Parsi Bol, in collaboration with photographer-filmmaker Sooni Taraporevala. Once Upon A City is her most recent book, inspired by the ongoing Sunday Midday column she writes, mapping the local past of Bombay through oral history accounts.
mehermarfatia@gmail.com

PHOTOS COURTESY : FEROZA & JIMMY MODY

THE LEDGE AT PEEREMEDU

Ar. Vinu Daniel

Fact File

Project Name	▶ The Ledge
Project location	▶ Peeremedu, Kerala
Gross Built Area	▶ 178 sq.m
Completion Year	▶ 2021
Architects	▶ Wallmakers
Team	▶ Vinu Daniel, Petchimuthu K., Ayush Nair, Yash Sukhwani, Jaison Joy, Pinak Bhapkar, Pratika Bandiwadekar, Niha Ann, Akshay Sarath
Client	▶ George Manu
Contractor	▶ Johnson N. and Team
Fabricators	▶ Kunjumon James and Team
MEP	▶ Dhanaraj K.N. and team

Exterior view

Perched on the edge of a mountain, *The Ledge* is a residence in Peeremedu that is designed based on a dream sequence. The inquisition that leads one to walk till the edge of a ridge or a child-like whim to jump from the top of a cliff can be attributed to a human desire to walk ahead into the clouds even after the mountain is over. Hence the building has been designed as a shard that seems to be protruding as an extension of the mountain into the air.

Camouflaged within the natural landscape the roof and the external walls are made out of treated casuarina poles, which is a fast-growing tree. Its wood is considered as waste and used only for scaffolding and fencing. Here the long span casuarina-ferrocement composite roof is further supported in between with the help of casuarina trees planted at the onset of construction in the central courtyard of the house.

Finding huge quantities of small loose stones during the excavation process for the foundation led to an improvisation in the *shobri* wall (shuttered debris wall). These stones were utilised in the walls by inserting them into the debris mix in the shutters as alternating bands. Being located in a hill station most of the openings have been designed in glass to retain the heat and to take in the splendid views of the valley. The grills are a collage of scrap cable trays and waste cut pieces of wood have been assembled together to form the flooring of the house.

The casuarina poles on the roof are staggered and placed at different levels so that they double up as an outdoor party space with tables and benches. The crux of this home revolves around creating a living space that gives the best of both worlds : living inside a mountain and on a ledge that is up in the clouds.

Rooftop

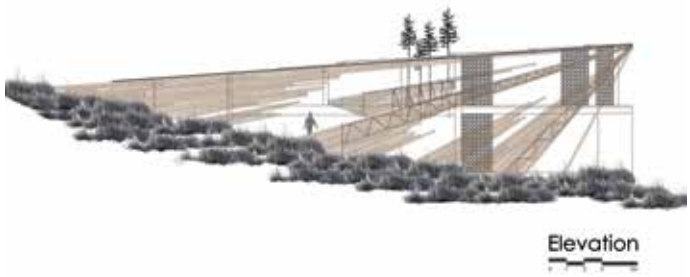
Living room

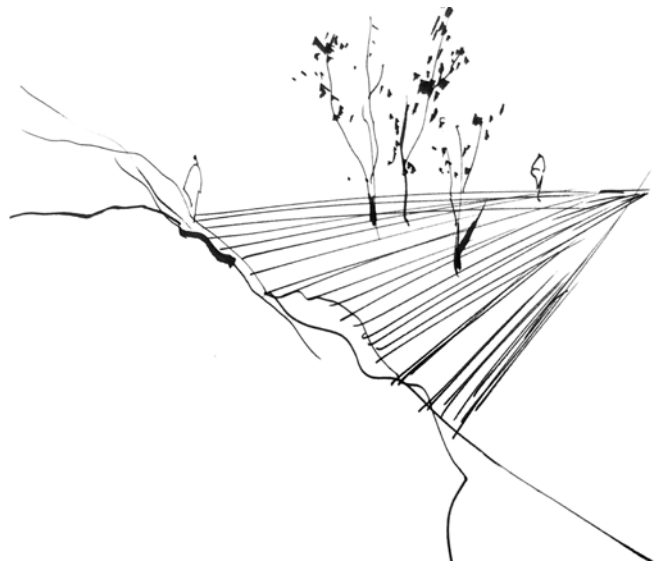
Courtyard

Bedroom

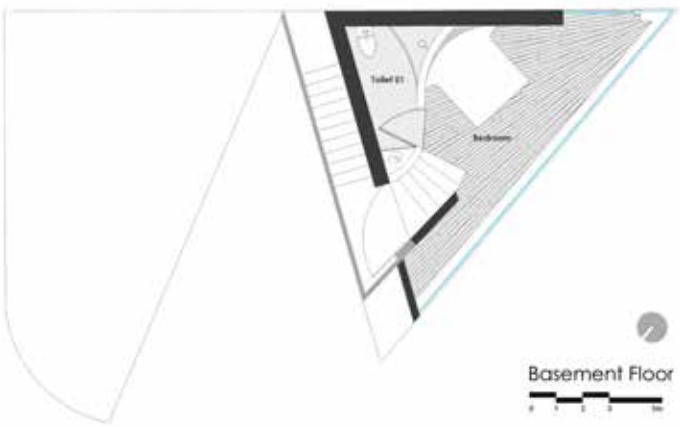
Jacuzzi

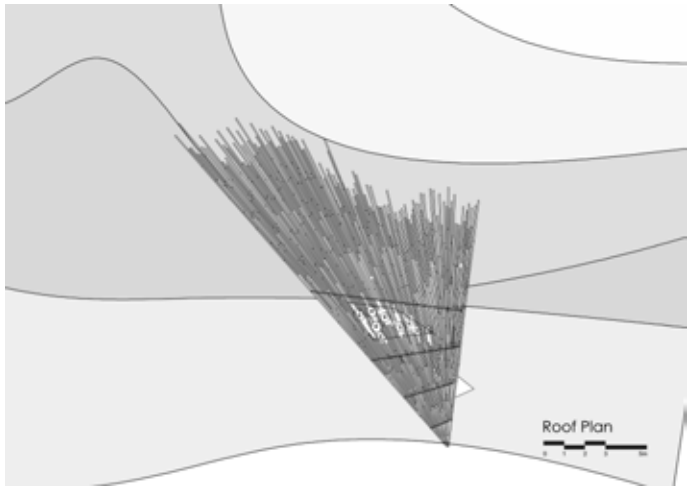
Living room night view





Concept sketch





Wall detail

Entry

Fireplace

Toilet

Ar. Vinu Daniel completed his B. Arch in 2005 from The College of Engineering, Trivandrum, following which he worked with Auroville Earth Institute for the UNDP (United Nations Development Programme) Post-Tsunami construction. On returning from Pondicherry in 2007 he started 'Wallmakers', which offer sustainable building solutions.
vinudaniel@gmail.com

Photo Credits: Syam Sreesylam

MINIMALISM
A RECREATIONAL CLUB AT JWGC, MYSORE

Ar. P.B. Wari & Ar. Chandan

Fact File

Location	▶ Jayachamarajendra Wodeyar Golf Club, Mysore
Typology	▶ Recreation centre
Completion Year	▶ 2019
Gross Built Area	▶ 750 sq.m
Firm Name	▶ Vibgyor Architects. Mysore

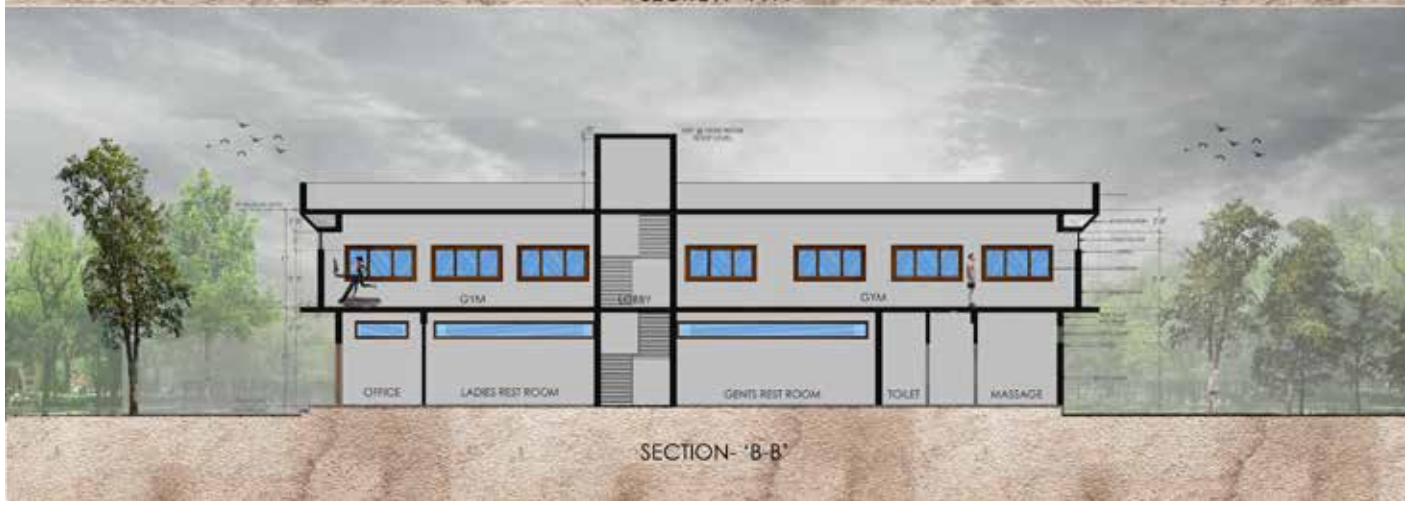
The Recreational Club has a modest and minimalistic approach adopted in designing this recreational club as part of a very well-known Jayachamarajendra Wodeyar golf club located at foothills of Chamundihill, Mysore in the state of Karnataka.

The design concept of the project was to be subtle in all respects as recreational activities were to be linked functionally and visually with surplus natural light and air flowing in. The bareness of the structure makes it more connected with the inner and outer space thus making it more collaborative with pool, gym and spa users.

The linear design of the building is stretched along the pool and the green patch gives an unblemished view from both the approach and exit. Conventional materials have been used, like glass for the façade for the best wide angle view connecting visually; locally available grey granite stone is used to break the monotony of the plastered finish.

The concept of minimalism adopted in designing the project is enhanced through the reflection in the forefront of the pool.

SECTION- 'A-A'



SECTION- 'B-B'

Ar P B Wari & **Ar Chandan** are Founders and Managing partners Of Mysore based firm VIBGYOR ARCHITECTS practicing over 2 decades In many parts of Karnataka. The office is a Multidisciplinary practice specialized in Institutuions, commercial,Automobiles and Residential projects. Firm is also recipient of several awards from indian concrete institiue and ACCE.
vibgyormys@yahoo.co.in

NATIONAL EVENT

YAF RANCHI 2021
23RD YOUNG ARCHITECTS FESTIVAL HOSTED BY IIA JHARKHAND CHAPTER

INTRODUCTION

The IIA Young Architects Festival 2021, an annual national event of The Indian Institute of Architects for the encouragement & participation of Young Architects to come together on a common platform to share their work, discuss on issues of interest for the profession, identify and promote skills and talent and celebrate the contribution of the young to the profession was hosted in Ranchi by IIA – Jharkhand Chapter with more than 300 Architects across the country joining the event at Hotel Chanakya BNR in Ranchi along with several more attending via livestream online mode .

THEME

The theme of the young architects festival was in the backdrop of the pandemic we all have been facing: REthink, REstore and REconnect.

REthink: The idea was about breaking free from the conventions, rethinking the process of design and construction techniques, rethinking our interpretations of the past, rethinking a transition towards more sustainable economy, and rethinking design post-pandemic.

REstore: The idea was about looking at our roots, restoring vernacular construction techniques and systems into contemporary works, and restoring the built landscape in the context of time and place.

REconnect: The idea was to discuss about reconnecting with people and its significance, especially in these times when everyone appears to get distant; involving and including the common man, the society and the community and contexts –and the social responsibility of the architect to connect across one and all.

INAUGURATION

The Building Materials Exhibition was Inaugurated by President, IIA, Ar. C.R.Raju and Vice President Ar. Vilas Avachat wiyth around 24 stalls in which the Gold partners Greenlam Industries Ltd, RAK Ceramics Pvt Limited, Pidilite Roffe, Hitachi Air Conditioning India Ltd and Schneider Electric India Pvt Ltd had put up their installations and interacted with the delegates. This was followed by stalls of seven Silver partners, namely Greenply Industries Ltd, Kajaria Ceramics Ltd, Aerolam Limited, Alstone International, Saint Gobain Assured, Greenpanel Industries Ltd and Timex Bond, Trubild. There were twelve more Exhibition partners, namely Kone Elevators India, Kommerling – Shivangi Infratech Pvt. Ltd, Gemtech – Tensiles, VEKA Upvc windows, Jaquar & Co. Pvt Ltd, Johnson Lifts Pvt. Ltd, Swastik Tiles, Ultratech Cement, TAP Acoustics, Gibeon Building Systems, Quotone Ceramics, and Tribes India who had put up their stalls and interacted with all the IIA Office Bearers and the delegates. The Exhibition continued for two days and was visited by all the delegates and guests.

This was followed by the IIA National Council Meeting attended by IIA Office Bearers and most of the IIA Council members, Chapter Chairpersons or their nominated representatives and Observers.

The IIA National Office Bearers were welcomed and led to the Convention Hall in Jharkhand's folk style "Parchana" to kick off the festivities wherein A live tribal song was performed by a band of Bhair musicians with a dance procession.

The inaugural session started with the lamp lighting ceremony and the welcome address by Jharkhand Chapter Chairman Ar. Sandeep Jha, who welcomed all Dignitaries, Council Members, Delegates and Industry Partners. He shed light on what led to the conception of this YAF's theme: REthink, REstore and REconnect.

On this occasion an introduction to YAF and its history was well explained by Ar. Jitendra Mehta, Jr Vice-President, IIA followed by IIA President Ar. C R Raju delivering a heartening and inspiring speech about the importance of events like the YAF and highlighted issues related to young architects and expressed a need with an action plan on a collective effort.

The IIA Jharkhand chapter released the Chapter Video – 'Asha', a song of hope, prepared and performed by member architects. "Beyond the Forests – The Architectural Journey of Jharkhand", a coffee table book published by the Chapter, was also released during the proceedings. The book aims to introduce the reader to the architectural heritage and stories of Jharkhand's built structures. This book is the outcome of four years of meticulous research done by the team of IIA Jharkhand Chapter.

The inaugural session created a feeling of warmth and primed everyone to experience the three days of extravaganza at YAF 2021, during which Vaibhav Sethia a stand-up comedian Vaibhav Sethia, popularly known for his Amazon Prime special "Don't". Interestingly, a lesser known fact is Vaibhav being a B.Arch. graduate from IIT Roorkee.

RHYTHM OF THE FORESTS

To share a few tales of the bushland and exhibit melodies that have gone unheard, the chapter had invited Mr. Nandlal Nayak - internationally reputed folk artist, music composer, film director, and youth icon known for his exclusive performances. As a Ford fellow, after travelling across the globe spreading the folk music of Jharkhand in his upbeat performance, he mesmerized and helped reconnect all to the roots of our existence.

The trees are what the people of Jharkhand relate to more than any other element, as the name itself comes from nature, 'Jhar' meaning bush. These trees are not just a source of life,

but they are the soul of this land. They are the way of their life. People here celebrate nature and rejoice in its colours, the confluence of nature and the human race. People have lived and grown in oneness, in the lap of nature, learning numerous art forms from nature. There's a popular verse IN Jharkhand "there's music in their dialect and dance in our moves".

ALVIN ROZARIO

Alvin Rozario, an independent musician from Ranchi, a music composer & producer with expertise in guitars, known for his hit singles like 'Kyun', 'Safar' and cover music videos with long list of live acts , performed at some of the most prestigious stages across India since 2008. Alvin co-founded the band Highway 69 in 2012, which is known for its fast tempo, instrumental and aggressive style of playing. The band has performed twice as finalists at the International Rock Contest of Hornbill Festival in Nagaland in 2017 and 2018.

Alvin's performance enchanted everyone present and elevated the festive mood.

On the The second day of the Young Architects Festival, The talks were curated around the event theme of Rethink, Restore and Reconnect, with each technical session having 2-3 speakers. All the speakers were from relatively young practices that have started in around the last two decades, and are rising reputed talents across varying geographies of our country.

ReThink

The first technical session was introduced by council member Ar Manguesh Prabhugaonkar, who stressed on a ReThink of the practice of architecture and the education of architecture in the contemporary context. He also stressed on a rethink on behavioural and ecosystem sensitivities in architecture.

The Purple Ink Studio – Ar. Akshay Hiranjal

Ar. Akshay Hiranjal. Presenting on behalf of his team, as the first speaker of the day, grasped everyone's attention instantly through a charming video of stone balancing - likening the act to the architects' who have to balance multiple facets to achieve design solutions. Their firm's works express balance in numerous aspects. More than the projects themselves, it is their design process which is exceptionally balanced and systematic. The clear and distilled communication of the design process confirms the same.

Being stubborn sticklers to the traditional model-making craft has helped their design process become inclusive of multiple ideas, forms and have a more delicate understanding of scale. They have transitioned from residential scale 'boutique' projects with a bottoms-up approach to large scale institutional projects entailing top-down planning approaches smoothly, without losing out on the intricacy of details.

"The Brick House" was a small project in a tight site in which the designers were able to ReThink the use of bricks not only as a core building material but also as a material apt for aesthetics and the outer skin treatment.

"Vanam" was a builder driven project having 20 apartments, where there was a ReThink on the balcony as not just an extension of the house but also an extension of a garden with emphasis on as much greenery as possible. In the process, there was a ReThink on a "Green Elevation".

"Euphoria", a community driven commercial project, this community center project helped the design team ReThink form, internal external visual connectivity and most of all material uses and aesthetics. The firm was able to ReThink the use of a small and simple palette of contextual locally available material to create a stunning contemporary building.

"School of Architecture Campus" was a competition project on a steep sloping site. The design team took the concept of layering to a whole new level here where the site defined the built form and the boundary between the external and internal spaces started to get blurred. The idea of connecting with one's environment gets a ReThink in this project.

One word which his presentation was replete with was 'layers', be it of surfaces in design, use of materials, scaling, interactive spaces, taking in of light or of the design process itself. Each project left one with the wish to keep discovering the layers and savor them at ease.

Anagram Architects - Ar. Madhav Raman

Ar. Madhav Raman, co-founder of Anagram Architects, along with Ar.Vaibhav Dimri, has been running an architecture practice that is as close to an ideal one as it could be. His well-crafted presentation set the tone for the day. He shared glaring data and facts about the state of the world and our nation in the context of rapid technological, economic and ecological transformations and a perpetual need of re-defining the architects' role in the same. It answered many questions which one has vague notions about and successfully raised many more.

While their practice is well known for one strong concept after another and each one is superbly executed and delivered, the ones he chose to share were landmarks of sorts. Few projects but with a great variety in design approaches, use-cases and scale, clearly demonstrate their prowess with form, geometry and fenestration on one hand and sensitivity to the functions, site, sociological and ecological concerns on the other.

"SAHRDC" was a project that was a ReThink on the use of bricks not just as a building material but also as a shading device and an elevation element. The result in the pre-3D era was stunning and used with great dexterity.

"Cleft House" this house was a ReThink on what an elevation is and can be. The association of the front facade with privacy was looked at in depth and understood in a whole new way. Also the traditional courtyard house got a new contemporary ReThink and the result is a stunningly beautiful house very different from the surroundings.

"Artrovert" An artist's house in greater Noida, which ReThinks the idea of unfurling in architecture. With an artist client who was rethinking the very concepts of creating and displaying art, the design studio was tasked with rethinking open and closed spaces.

"Koodaram" An art pavilion in Kerala for a festival. This project was transient in nature as the pavilion was to be used for only 3 months in two years. Here there was a ReThink of how materials can be used which are permanent but at the same time reusable in a different context, a ReThink on traditional circulation pathways that can be more effective and user-friendly.

"Project Samman" a community toilet project for illegal urban slums. Here the idea was to not just make community toilets which are almost never used but to ReThink their design for maximum use and participation by understanding the user's need, aspiration and habits. Also the design had to be scalable and mass replicable.

"Pucca" A baseline infrastructure project for rural India where interventions and design concepts got a ReThink to make them self-sustaining and cost effective.

"Earth-made Gymnasium" Architecture can influence whole communities. Here the ReThink was in the way locals look at and own the building made for them with the relevant materials and product knowhow.

Their journey inspires the young and the experienced alike, as the joy of surmounting one challenge after the other comes through their works and sharing.

ReStore

Council member Ar Debatosh Sahu introduced this session, who talked about the importance of restoring the climate, Nature and Mother Earth. He emphasized the important role that architects have in Restoring these three fundamental elements by building thoughtfully and being environmentally conscious.

Ar Anubha Fatehpuria and Ar Richa Bose
Ar Anubha and Ar Richa presented their works and design approach together as seamlessly as they must be working together, in perfect harmony while complementing each other. Their works showcased how architecture can quietly seep into the lives and spaces for the people and communities who may not afford the services of formal architects. Anubha's work as a theater artist gives them an opportunity to create and evolve spaces for performing arts. They have worked extensively to come up with a new space typology altogether - 'theater cafe'.

"Residential apartment building" was one of their first projects where they were able to restore the existing louvered windows of the now demolished old building as the facade of the newly constructed apartment block on the same plot.

"Farmers Retail Store" Here the team was able to Restore the faith of the farmers selling their produce from a modern Mall environment and at the same time not threaten the street vendors across the street.
"Dance and Theater Studio" Made for a dance troupe, this building uses minimal material for maximum impact which restores the traditional exposed brick construction of Bengal creating a space which mimics the temple dance form.

"Residential House" The new house was made completely with the materials retrieved for the demolished old house. This design idea not only restored the unique nature of traditional living but also saved valuable carbon footprint by reusing all the old material. The firm uses the idea of adaptive reuse extensively in many of their showcased projects.

The firm has successfully restored one's faith in the healing power of greenery in the urban context even if one has to borrow it from the surroundings like they did in their

residences in Kolkata, Shantiniketan, knowledge Center, apartment building, cafeteria, ladies treatment center projects.

The residence for two brothers with their roots in Banares was designed to restore their way of living and their childhood memories by introducing many architectural elements they could easily relate to. This theory was also very evident in the house the firm designed in Jorhat.

Restoring traditional building systems is a large part of the firm's portfolio as was evident in their residential, performing arts workspace, Himachal eco-resort.

Their architectural interventions work like smart lever actions wherein the space experience is transformed immensely with minimum effort and expense. They do not shy away from renovations and extensions as their clients recognize the impact of their humble contributions.

With no concern for fame or image, they have been crafting the nuances of spaces, light, joys of pauses, view and breeze, simplicity of materials and structure, and all the makings of great architecture.

Wallmakers -
Ar. Vinu Daniel

Ar. Vinu Daniel stressed the need to first restore the need to ask questions and in the process start innovating because inquisitiveness is the birth place of innovation.

A dreamer to the core, his journey began from a wall, hence the name Wallmakers. He is a dreamer with a difference. He has worked on his dreams one step at a time consistently for more than a decade, unfazed by opposition and roadblocks. He researches building materials and systems with a method in his madness.

"The Ledge" was a magical presentation which enforced the architects' belief in the power of dreaming and innovation. It restored the idea of pertinent questioning, dreaming and innovating. The Ledge is a house perched on top of a hill in Kerala with excellent views of the valley. The urge of walking into a dream was the principle concept for the innovative roof and look of this house.

The dreamlike project he shared is a result of this arduous yet steadfast journey.

With fewest words, he made the most lasting impression.

RE-CONNECT

The third technical session was introduced by Council member Ar Brijesh Saijal. The theme for this session was RE-Connect. He emphasized on the current disconnect in society and the need for architects to come forward, Re-Connect and work with the society.

Abin Design Studio – Ar. Abin Chaudhuri
The word 'dynamite' would be an understatement to describe Abin. He is at war - Design and architecture his battleground, Innovation and strategy his weapons. He will go to any extent to make his ideas come alive. And that is the drive we as the youth and nation yearn for.

The "Festival Pavilion" is a project that defines Ar Abin's studio and his philosophy. The pavilion is made with only fabricated boxes of three to four sizes. It was made in just 10 days but the planning took 6 months. During the puja, more than 17 lakh people visited this pavilion. After the pujas, this pavilion was dismantled and reinstalled in a public permanent display. This project is called "Unbox", which was done commercially for the government as he had made the initial pavilion free of cost.

"Happy Works" was a project to create and replicate a multilevel office space in the time sharing model. It is being run by an NGO who take immense pride in the product. The lower level is an air-conditioned office space and the roof has been created as an open air theater where one can work close to nature.

The "Axis Bridge" is a design wholly for the public. It creates a beautiful public arena having kiosks, restaurants, yoga areas etc in the belly of a busy flyover. Connections with the common man and the city authorities are the underlying principles of this project.

Ar. Abin is very attached to his roots. He has influenced the built form of his hometown, Bansberia, in a very substantial way with his projects like the:

"Adishaptagram Workshop": conceived with the intent of tapping undiscovered potential of talented people.
"Adishaptagram Society Hall": a redesigned public building with an elevated experiential space.

" Narayantala Thakurdalan": a people's initiative to drastically improve an existing religious podium.

"Gallery House": a tribute to the indigenous crafts of Bengal which converted a private house into a public utility centre in the terracotta temple style.

"Waterfront Clubhouse": A small building with a large impact for the society acting as a viewing deck for football matches, congregation space for the villagers and an open air training space for various exercises and dance forms.

The most unique aspect of his works is his contribution in the public domain, a domain which architects remain aloof from. He uses his clout as fearlessly as his design talent to navigate through corruption and red tapism. His designs stand out as solutions that are overtly loud but on a closer look reveal how ingenious of a response they are to the locale. And the loud diction is welcome when it is clear and progressive.

His spaces open to people, extend to celebration, and create life. The walls pay homage to the folk arts. The light plays tirelessly on the floor. And the warrior moves on. The Re-Connect is very apparent in almost all of the projects that were showcased.

Compartment S4 - Ar.Monik Shah and Ar.Kishen Shah
Compartment S4 who have re-defined friendship and teamwork while manifesting the theme of Re-think, Re-Store and Re-Connect in the truest sense. They have consciously chosen the path less travelled and it is making all the difference. The multi-talented team of 8 architects, with complementary and overlapping expertise, brings out the best in all they touch upon. In YAF, represented by Ar.Monik Shah and Ar.Kishen Shah, they presented pioneering works undertaken in remote villages solely on their own initiative.

The presentation was called "Engage, Build and Transform". They engage with the entire team of workers, build with them and in the process transform the lives all connected with the project.

"Lakdi ki Kathi" displays this connect quite clearly. It's a community hall made with all local materials and local techniques using local labour.

"Nadi ke Parvat" their next project was a pavilion in a tribal residential school made completely with bamboo. They were able to connect with the masons and other workmen to understand the nature of bamboo and the techniques required to construct it.

"Anneki Aanganwadi" is a project where they were able to revamp an old dilapidated building into a functioning Aanganwadi and a Spandan Kendra after the Aanganwadi shut. This project has created a lively community space in a place which was used as a garbage dump yard.

"Pink Toilet" was a scalable project for the community made in the local style of architecture so that it is well accepted by the village community.

"Basa Tourism Center" : a result of a resilient homes challenge competition that the studio had won. The project was in Khirsu village in Pauri district of Uttarakhand where they have created a completely new ecosystem of 12 women successfully running a home stay, a local food 'dine-in' and a local products unit. It was envisioned from the ground up by first floating the idea to these women, organizing them into the enterprise, creating the web-publicity platform and along with all this, creating the required space and architecture. In the last one year of its completion, the center has hosted many customers and meals, and sold enough products to make a mark on the economic progress of these women and their families.

"Gau Ghar" is a gaushala that looks into the welfare of the prime resident, the cow, more than anything else. The "tree" shape of the sheds makes the cows feel at home. All materials used were in keeping with the needs and comfort of the cows. With this project, they were able to connect not just with fellow humans but also with one of the most domesticated animals, the cow.

"Mumbai Street Labs" is a series of neighbourhood development projects being done in Mumbai with the active participation of the neighbourhood and the municipality, thus connecting with the society to offer a product which is easily accepted.

Their interventions are subtle, bordering on non-architectural, but holistic, and thus have a deep-rooted impact on the livelihood, environment and economy of the locale.

Design Jatra- Ar. Pratik Dhanmer
The technical session closed with the lingering closing image of Design Jatra. 'Jatra' in Marathi is the culminating celebration of various festivities which are mainly accompanied with a journey. It is a time of exchange of greetings, grains, seeds and warmth. This is exactly what Design Jatra is all about – exchanging, applying and growing design – and everything which goes with it to make it happen. The city-bred architects chose to return to their tribal roots where social, cultural and ecological milieu exists as a single intricately woven reality and the built form is a mute backdrop of the status quo.

While one would imagine unlearning to be a difficult process, it came to the team effortlessly as it existed in their very veins. Ar. Pratik Dhanmer, speaking on behalf of his team shared

their story in a flow of a folk singer. Going from a picture to a story, from a project to an anecdote, from a challenge to a victory, defying chronology, systems or structure, much akin to how tribal life is and how life should be.

"Commando House": a two storied arched brick and mud house using local technologies and defying local pre-set notions of a brick house, thus transforming their notions by connecting with them.

"Steep Sloped House" Using ancient local knowledge of roof slopes, this small house was made with steep sloping roofs, defying the more modern forms of shallow sloped roof construction of the village. This house was able to withstand severe cyclones which the other houses could not. With this project the design team was able to again transform the local building techniques and in the process educate the locals on the importance of local learning.

"House made by women" This project displays how architecture can change a society. This house was made primarily by women in a remote village where there was a stereotype for the jobs women can do and building design wasn't one of them. Pratik's team was successful in quashing such stereotypes and give women a lot more respect.

"Doctors House"- A project done primarily to subdue the house and highlight the natural ecosystem. Connecting with nature was the primary goal of this house where the house was surely made with locally sourced material but it was set in a local natural ecosystem complimenting each other beautifully.

"Forest food processing centre" The local tribal population of a village had protected 250 hectares of forest land and wanted a processing centre for the forest produce. The building was made with locally sourced material, village labour and local design ideas. A building which connected the builders and the users for its very onset.

Their works involve working with the community at various levels like creating self-help groups, reviving traditional crafts and building techniques, educating villagers on their rights, government laws, reaching out to the students for workshops, while keeping a keen eye on built form, architecture and the natural ecosystem on the whole.

The day was replete with a lot of energy and enthusiasm as takeaways with each of the 7 presentations being extremely rich in their own right. The tremendous variety and range of projects ensured maximum participation from all delegates, students, beginners and experienced alike.

IIA YOUNG ARCHITECT OF THE YEAR AWARDS

The Young Architect of the Year award was constituted this year by the IIA to recognise and felicitate young architects below the age of 40, who have done exceptional work in their practices or in the academic field and contributed towards IIA in the past year. The winners were selected on the basis of evaluation and nominations across all chapters from their respective chapter chairpersons. The awards were presented by Ar. C.R.Raju, President, IIA. Ar. Jitendra Mehta (Jr. Vice President, IIA) announced the names of winners, chapter wise, as their audio visual introductions rolled on the screen.

The Chapter wise winners (in alphabetical order) of the Young Architect of the year award 2021 are as follows:

Assam	- Ar. Sukanya Das
Bihar	- Ar. Anand Kumar
Chandigarh	- Ar. Komal Preet Singh
Chhattisgarh	- Ar. Ravi Jaggi
Goa	- Yatin Fulari
Gujarat	- Ar. Ravi Ramparia
Haryana	- Ar. Akshay Goyal
Himachal Pradesh	- Ar. Amrita Kumari
Jharkhand	- Ar. Anupam Deb
Karnataka	- Ar. Apurva Bose Dutta
Kerala	- Ar. Arjun Rajan
Madhya Pradesh	- Ar. Vaibhav Singhai
Maharashtra	- Ar. Pratik Hemant Dhanmer
Northern Chapter	- Ar. Jensil John
Odisha	- Ar. Rohit Sharma
Punjab	- Ar. Pappal Suneja
Rajasthan	- Ar. Abhinav Sharma
Tamil Nadu	- Ar. Santhosh Shanmugam
Telangana	- Ar. Shweta Balasubramoni
Uttar Pradesh	- Ar. Rohit Parmar
Uttarakhand	- Ar. Saurabh Suman
West Bengal	- Ar. Sujoy Das

FELICITATION OF THE ORGANISING COMMITTEE OF THE YAF

The three day YAF was the result of the efforts of a team that had worked hard over the last few months to put together such a colossal event. To recognise the same, next after the Architect of the Year award was the felicitation of the organising committee of the YAF by the IIA National Office Bearers.

Ar. Vilas Avachat (Vice President, IIA) presented the awards to the team.

The organising team of the YAF:

1. Registrations
1.1. Ar.Shalini Das
1.2. Ar.Twisha Kumar
1.3. Ar.Harshita Kachchap
1.4. Ar.Mahima Anshu

2. Publicity/Graphics Team
2.1. Ar.Sourav Toppo
2.2. Ar.Sudhanshu Marandi
2.3. Ar.Meenal Bankoti
2.4. Ar.Rohit Tirkey
2.5. Ar.Saket Sagar

3. Hospitality
3.1. Ar.Deo Kr. Raj
3.2. Ar.Anup Kr. Sinha
3.3. Ar.Shikhar Shresth
3.4. Ar.Mukesh Tigga
3.5. Ar. Avishek Singh
3.6. Ar.Anup Kumar

4. Souvenir Committee
4.1. Dr. Smriti Mishra
4.2. Ar. Anila Surin
4.3. Ar. Apurv Ashish
4.4. Ar. Rizwan Kazmi
4.5. Ar. Arighna Mitra
4.6. Ar. Kumar Abhishek

5. YAF Design Competition
5.1. Ar. Ankit Berry
5.2. Ar. Anusha Sinha

The Chapter Chairman Ar. Sandeep K Jha took to the dais to call upon the executive committee of the Jharkhand Chapter, mentioning each of their specific roles within the core team - Ar. Amit J Barla, Ar. Akshat Behl, Ar. Anupam Deb, Ar. Abhishek Gaurav, Ar. Nalin Goel, Ar. Arun Kumar, Ar. Nitesh Paul Nag, Ar. Harsh Raj, Ar. Arun Ranjan and Ar. Preety Vijay.

It was then followed with the office bearers of the Jharkhand Chapter, who had their role in the overall coordination of the entire event - Ar. Sourabh Sahu (Vice Chairman), Ar.Atul Saraf (Joint Secretary), Ar. Anurag Kumar (Joint Secretary) and Ar. Apurb Minz (Treasurer).

Lastly Ar. Jitendra Mehta called upon the convenor of the festival and Chairman of the Jharkhand Chapter, Ar. Sandeep Kr. Jha to collect the award. The award received loud cheers and a standing ovation from the audience. Without his able leadership, the grand and successful event might not have been possible.

ARCHITECTURAL DESIGN COMPETITION

As a part of YAF, an Architectural Design Competition was organised, which received numerous entries from all over the country. The competition was to design the State Ethnographic Museum and Cultural Centre at Smart City, Ranchi, Jharkhand.

The Jury for this competition were Ar. Brijesh Shaijal, Ar. Azmi Wadia and Ar. Jitendra Mehta. The design sheets of the winners were on display at the event pre-function area. The awards were presented by Ar. Leena Kumar (Jt. Hon. Secretary, IIA).

Winners – Architects category

1st prize
Pranjal Kumar
Tanya Shree
Shaista Ghazali
(Jharkhand Chapter)

2nd prize
Rishabh Chadda
Shruti Saumya
Devanshi Kachchap
(Jharkhand Chapter)

Commendation
Jagdish Singh
Riya Gupta
Anushika Sachan
(Madhya Pradesh Chapter)

Winners – Students category

1st prize
Dipansh Sah
Adarsh Akash
Sritej Kumar
(BIT Mesra, Ranchi)

Special Mention
Riddhi Sharma
Nayanthara R
Stevenson Barla
(BIT Mesra, Ranchi)

Honorary Mention
Srabasti Lahiri
Akankha Ghosh
(ABIT- PMCA, Cuttack)

The felicitations were then concluded with certificates and mementos awarded to the event sponsors by Ar. Divya Kush, immediate past president, IIA.

Next after the valedictory ceremony, the IIA Kerala Chapter screened the trailer of the Young Architects Festival 2022, who would be hosting the event next year at Kozhikode. The video with fly throughs and street views of the city with the upbeat folk background music gave a beautiful glimpse of the scenic location and excited the audience to look forward to the event. Ar. Mohammed Afnan, country representative at Arcasia Committee of Young Architects, on behalf of the Kerala chapter gave a brief introduction and invited all to the event.

CONCLUDING REMARKS FROM IIA PRESIDENT

Ar. C.R. Raju appreciated the efforts of all young architects of the Jharkhand Chapter who came together as volunteers and organisers, and stressed on the fact that how events such as these help bring out latent talents and leadership skills, which is much needed within the IIA community. He also spoke to the audience about the varying approaches towards the practice of the young speakers who presented their work earlier during the day. The newly initiated Young Architect of the Year award was noted as a significant development, which would inspire the young members of the fraternity towards better work in the field. Lastly he thanked the Jharkhand Chapter for having hosted the event and their hospitality and management that had helped create a benchmark for more future events.

INTER CHAPTER CULTURAL COMPETITION

The Inter Chapter Cultural Competition was organised to bring out the hidden talents of the architects who are rarely seen beyond sites and drawings.

The first performance was by Ar. Palka Kaur of Ludhiana Centre, IIA Punjab Chapter who gave a beautiful rendition of the hindi song 'Moh Moh ke Dhaage'.

Next up was a short film from the IIA Madhya Pradesh Chapter about the tourist places of the state.

Third in line was an interesting nukkad naatak 'Façade/ Fasaad' performed by IIA Haryana Chapter. It was a theatrical performance with much singing and high energy drama that sucked in the attention of the entire audience. The group put together a sarcastic story of a young architect being kidnapped by goons for a plan of a bank they had intended to loot. Loud claps and hooting from the audience clearly expressed the success of the play delivering across the hidden message. The skit was performed by architects Vivek Logani, Pankaj Jain, Vivek Singh Rao, Surender Singh, Nirmal Makhija, Sonia Ahuja, Kiran Gandhi and Punit Sethi.

Fourth was a poetry recitation and ghazal performance by Ar. Neelratn of IIA Pondicherry Centre, Tamil Nadu Chapter.

Lastly, it was time for the most anticipated Jharkhand Chapter. The group performed a beautifully choreographed traditional tribal dance on the local song 'Bera Uga Le', which translates as 'the morning sun rises'. The costumes and dance so well composed, it easily got the audience mesmerised and made them sway to the folk beats of the song. The dance was performed by young IIA members of the chapter, Architects Preety Vijay, Harshita Kachchhap, Saumya Malua, Ujala Agrawal, Rohit Tirkey, Twisha Kumar, Shalini Das and Mahima Anshu.

The jury for the competition were Ar. Jitendra Mehta, Ar. Leena Jain and Ar. Ashutosh Agarwal, who unanimously pronounced Jharkhand Chapter as the winner, followed at 2nd and 3rd position by Haryana Chapter and Pondicherry Centre.

Lastly the audience moved to the lawns for the performance of the local rock band Sparsh 2.0, whose popular English and Hindi song covers ended the evening at a high note with much dancing and partying till the night.
The third day of the Young Architects' Festival was planned simply to unwind after the intensely packed two days of the conference. Delegates were ferried on buses via the picturesque meandering road down the forested Patratu Valley for a relaxed lunch by the Patratu Dam. It was a slow drive of about an hour and half from the venue, briefly pausing for photography and street snacks at the gorgeous vantage point from where one can see the winding hairpin bends of the road with the water body in the backdrop. A resort has been developed recently at the edge of the tranquil dam, and has become one of popular tourist spots of the town. Delegates strolled around by trees and enjoyed boating in the dam, as they got an informal environment to interact with fellow architects of various chapters. A slow lunch followed with group photography finally concluded the festival. Delegates bade farewells with nostalgia of the two days that seemed to have passed in a blink, after which everyone would resume to regular lives.

The entire composition of the event was appreciated by one and all, with all thought provoking technical sessions, yet peppered with cultural activities and merry making, and the final icing on the cake being the visit showcasing the undulating lush landscape of the land of forests. Delegates were impressed by the fact that an event of such a scale had been hosted by a new chapter, which would be a precedent to events of IIA to come in the near future.

YOUNG ARCHITECTS FESTIVAL – REPORT
Text by: Ar. Nalin Goel, Ar. Kumar Abhishek, Ar. Sandeep K Jha, Ar. Anupam Deb

Compiled by Ar Manguesh R Prabhugaonker .

FIELD ATELIER

Ar. Yatin Fulari & Ar. Teja Amonkar

House In Assagao

The studio is based in Goa, India which experiences tropical climate with monsoons for over six months. The architecture is influenced by it, but not restrained: some horizons have the sea and some the mountains. Most of the houses are built in locally available laterite stone with cement or lime mortar. The need for beauty in architecture along with serving practical purposes is deep rooted in our conscience.

As one walks the village streets one comes across houses with front verandahs- a space that lends a feeling of invitation in the minds of the passerby. A verandah is one of the most important inventions for a Goan house or for a similar climate. It protects the walls of the house from the harsh monsoon and yet allows one to enjoy the rains. While observing vernacular architecture or architecture of the past one learns that the vernacular builders had a profound understanding of climate and the built form evolved to adapt to the climate of the place. For us, this is the essence of 'technology' which comes from the native knowledge and the wisdom of construction.

The process of design for us begins with questioning the nature of the site and the brief. The atavistic feeling that the site and its forces evoke, deserves a certain gesture in terms of space in order to simply exist on a site. No site exists in a vacuum and no matter where it exists, it has its constraints. Feelings of refuge, privacy, sociability are the factors that decide the planning of spaces.

The design process, involves participation of contractors and carpenters that takes into consideration their construction skill and technique and resourcefulness that eases the construction process. We work with a small team of people, consisting of interns and young architects, and primarily work with the builders and carpenters who handle work on site, depending on the kind of work the studio handles at that particular time, thereby making it sustainable and a practice that is inclusive. This is also what one learns from vernacular architecture.

Vernacular architecture is not an archaic response but an ongoing process. Adapting constantly to the contemporary needs and available materials. In Goa we are surrounded by rich built heritage, but one cannot reduce this heritage to only its façade, and try and understand what is the true value and the qualities, not only of its construction and proportion, but also the lifestyle that it serves. Lifestyle of empathy, humanity and culture that is in its core timeless.

The emphasis is never on the form but on the atmosphere. Often these are references in our memory or situations in space or nostalgic memory of our ancestral homes. These feelings are expressed in terms of sketches or models and the mode of expression or use of materials to express these are intuitive. Most study models and sketches do not express the finality of a design but a feeling or a sense of space. The final design however remains true to the initial feelings that reside in these sketches or the models.

House In Assagao

House In Assagao

House In Assagao

House In Salvador Do Mundo

The details as well as certain aspects of the design are left flexible so that they begin to develop as the design takes shape. We seek to design spaces that are truthful and evoke a feeling of sobriety. We believe that a well-designed space is neutral and free of any social and economic prejudices.

A strong feeling of a space, not a form per se, is what the site or a space asks for. We often like to work with our feelings while taking any decision, as we go through a project. Rationalization comes next. Often a site with its dictates requires a certain feeling of a space to exist on it. Every aspect of the design emotes with its form, proportions, colour, texture, its appearance. Sobriety and contemplation are materials that are always interweaved into any space that one tries to design.

How one feels in a space is regulated by various senses.

Our work is not based on any trends or '-isms' or on pre-conceived notions about any form or design. The design is guided by the site, climate and nature of the function. The emphasis is never on the form, but on the 'atmosphere'.

We believe that one has to work with materials available at the present time and how one can add to a very rich heritage of built form. In the past, there was a certain empathy towards the neighbours and pedestrians. For example, a simple, covered pathway that a building lends in an urban context, shows how architecture can respond humanely.

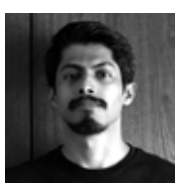
House in Assagao

The house is primordial in its nature. The whole emphasis of the design of the house is not on the elements that make it, but on the 'feeling' that a space evokes. An opening to the sky has an uncluttered view of the sky or the cosmos beyond unlike the horizon which could possibly be blocked someday. A courtyard is an opening to the sky proportioned to be intimate and of human scale. To think of it, the world outside a house is an entire universe. But one tries to domesticate the sky, the cosmos, the rain, the sun and the moon.

House in Salvador Do Mundo

The site is located in an area with houses spread sporadically in the vicinity. The rest of the area is covered in dense vegetation. Especially the front is densely covered with large trees. The house needed to be internal without being anti-social in order to respond to the setting. The initial feeling was to have a hortus conclusus (enclosed garden) of a domestic scale to which all spaces open on to. The light, ventilation and views are borrowed from this court. The wall to the outside gives a sense of security and protection from an uncertain exterior landscape. The court also houses a delicate garden almost an antithesis to the outside landscape.

House In Salvador Do Mundo



Yatin Fulari and **Teja Amonkar** are graduates from Goa College of Architecture. Together, they set up the architectural studio " Field Atelier". The studio is based in Goa, India.

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ARTICLE

UDCPR 2020
A STUDY OF SIGNIFICANCE OF AMENITY SPACES AND RECREATIONAL OPEN SPACES IN LAND DEVELOPMENT AND ITS PROVISIONS

Aryann Bhamare and Ar. Manish Shah

ABSTRACT

This paper talks about the significance of Amenity Spaces and Open Recreational Spaces in land development. Various parameters are examined which explain the importance of such spaces. The purpose of the paper is to support these by studying various provisions made for Amenity Spaces and Open Recreational Spaces under the UDCPR 2020 for the state of Maharashtra and further discuss the changes incorporated in it with respect to older DCRs of Mumbai and Pune cities. The research is based on web articles relevant to the subject and interviewing professionals from the construction field – two architects and two developers. The article tries to understand the significance of the subject in relation to the practical regulations.

Keywords: *Amenity Spaces, Open Recreational Spaces, Land use, Significance, Provisions Unified Development Controls and Promotion Regulations (UDCPR), Transferable Development Rights (TDR), Floor Space Index (FSI).*

INTRODUCTION

During the last decade, the quality of living of urban citizens has highly improved and just having a suitable dwelling unit does not suffice the demand for upgraded living. People look for amenities provided in the residential premises – such as, gym, clubhouse, library, multipurpose halls etc.- and prefer using them instead of travelling to other parts of the city for them. In the year 2020, the lockdown imposed across the globe due to the COVID-19 pandemic has made it important to focus on availability of such amenities within a residential premise and hence study the provisions made for it at the urban level.

Contemporary life in urban cities is stressful and chaotic: people spend hours at work and travelling in traffic. Such a lifestyle leads to increased stress levels and unfit physical as well as mental health. It becomes necessary to seek rejuvenation after hectic schedules. In urban cities, these are mainly identified as amenity or recreational spaces which not only provide rejuvenation but also provide a common platform for people of varied demographics to interact with each other, who come from isolated apartments. Hence, people prefer such recreational and amenity spaces closer to their homes or even in the same premises. Therefore, land development regulations make it necessary to provide a certain percentage of these spaces in the proposed layout. Provisions for Open Recreational Spaces and Amenity Spaces under these regulations vary but their functions are more or less interrelated.

Thus, owing to their importance in the current lifestyle, it becomes necessary to study the significance of these spaces and their potential scope with respect to communal and social wellbeing.

AIM AND OBJECTIVES

The aim of the paper is to study the significance of Amenity Spaces and Open Recreational Spaces and the provisions made for them under UDCPR 2020. The objectives of the paper include understanding the provisions made under UDCPR 2020 for Amenity spaces and Open Recreational spaces with respect to the architect's and developer's points of view. In addition, it also includes studying the inter-dependency between Amenity and Open Recreational Spaces. Lastly, a comparative analysis between the provisions made for Amenity Spaces under old DCRs of Mumbai and Pune city and the UDCPR 2020 is compiled from the UDCPR 2020 for Maharashtra and older DCRs for two metro cities – Mumbai and Pune. The study looks at residential development typology and is limited to the context of Maharashtra Metropolitan Region for ease in understanding the relevance between the urban context of the two metro cities.

METHODOLOGY

The process of analysis included studying the provisions made for Amenity Spaces and Open Recreational Spaces under the UDCPR 2020 and the changes it has undergone with respect to older DCRs of Mumbai and Pune Metropolitan. It was further supported by collecting primary data by interviewing two architects and two developers to understand the subject through their perspectives. An interview-questionnaire was prepared catering to particular parameters and accordingly the answers were recorded from the interviewees. To understand the topic further, certain web articles were referred for secondary data, which helped understand the significance of Amenity Spaces in land use. There is a paucity of research papers for this topic as the UDCPR 2020 has been recently published.

LITERATURE REVIEW

To understand the significance of Amenity Spaces in land use, several secondary reference materials like web articles were studied, which particularly spoke about various aspects involved in providing Amenities in modern housing. These articles discuss how various amenities like multipurpose halls, club houses, gardens, gyms, swimming pools, play areas etc. act as a platform for people of various demographics to interact and help to live a physically, mentally and emotionally healthy lifestyle. The online article Why Amenities and Open Spaces are Important in Residential Real Estate (Anon., 2021) stresses on how urban life has become hectic and chaotic and therefore people want properties which are more than just a place to come back to after work, thereby suggesting the importance and need of providing amenities. The end user satisfaction is highlighted by Bari (2015) by studying a live project which provides five acres of land just for amenity development, comprising several outdoor and indoor amenities like landscaped gardens, sports arenas, swimming pool, multipurpose halls and amphitheatres. It is understood from such examples that such amenities are considered necessary for holistic development of a residential estate/ society. On the other hand, Reed (2020) explains the importance of providing outdoor and indoor amenities in the recession period post-Covid-19, from a buyer's as well as the developer's points of view. These secondary references have helped to form a background for the subject of the paper.

PROVISION FOR AMENITY SPACES AND OPEN RECREATIONAL SPACES UNDER UDCPR 2020

The provisions made for Amenity Spaces and Open Recreational Spaces under UDCPR 2020 are as follows:

- Amenity space is provided for plot area more than 4000 sq.m and the amount of land to be dedicated for amenity space is categorized according to plot area.
- Amenity space is to be developed by the owner of the plot for the occupants of the plot.
- Local authorities can insist that the space be handed over to the Corporation for the following purposes – garden, playground, municipal school, municipal hospital, fire brigade and housing for affected people.
- Owner can avail additional FSI or TDR in the lieu of such surrendered amenity space.
- Regulations implied for provision of amenity space are not applicable for a layout sanctioned entirely for amenity project, hotel construction and IT establishment.
- For an area of 0.4 Ha or more, 10 % Recreational Open Space is to be left as far as possible in a single place.
- For an area of more than 0.8 Ha, 10 % recreational open space can be left at various places in the given plot.
- An owner is allowed to provide more than 10 % Open Recreational Space in a plot.
- For land having area below 0.4 Ha, minimum area to be provided for Open Recreational Space is 200 sq.m, or the owner can pay for 10 % land and avail full basic FSI and other permissible FSI/ TDR.
- Not more than 50 % of such Open Recreational Space is to be provided on terrace/podium in congested and non-congested areas.100% of such Open Recreational Space may be allowed to developed on terrace/ podium if a 1.5m wide strip of land is left around the plot exclusive of setback, for tree plantation.
- No permission for reducing the Open Recreational Space of the existing sanctioned layout can be given. However, it can be rearranged within the plot.
- The provided Open Recreational Space should be exclusive of internal roads, access roads, areas for road widening or reservations.
- The provided Open Recreational Space can be termed as 'green belt' with necessary regulations.
- Minimum dimensions required for such Open Recreational Space is 10 m. If the average width is 20m, then the length should not exceed 2.5 times the average width.
- The permissible structures to be built on such Open Recreational Space should be maximum two-storeyed and should have a built-up area of a maximum of 15 % of the area of the Open Space. This is free of FSI. Examples are gym, pavilions, fitness centres, clubhouse, library, kindergarten, sports structures, indoor outdoor games, swimming pool, religious structure.
- Services can be provided in Open Recreational Space with permission of the residents.

COMPARATIVE ANALYSIS BETWEEN THE PROVISIONS OF AMENITY SPACES AND OPEN RECREATIONAL SPACES UNDER PUNE DCR 2017 AND UCDCPR 2020:

Table 1 states the provisions in the older Pune DCR 2017 which have undergone changes in the UDCPR 2020. It also explains any new additions to any pre-existing provision for various parameters.

Table 1: **Changes in the UDCPR 2020**
(Source : Collated by Author)

No	PARAMETER	PROVISIONS UNDER PUNE DCR 2017	PROVISIONS UNDER UCDPR 2020
1	*Minimum plot area required for it to have reserved Open Recreational Space*	**0.2 Ha**	**0.4 Ha.**
2	***For lands which are subdivided after 11 Jan. 1967 without taking prior permission from the authority and having plot area below 0.4 Ha, applicant may opt for availing the reduced FSI on such land to 75% of the basic FSI as otherwise permissible***		
2.1	*Permissible TDR*	In such cases loading of TDR can be permissible to the extent of 50 %	In such cases premium FSI or loading of TDR shall be permissible on such plots proportionately
2.2	*Availing FSI by payment*	No such provision	Avail full basic FSI and other permissible FSI/ TDR by paying 10 % value of the land under proposal as per annual statement of rates for that year, without considering guidelines
3	*Provision of Open Recreational Spaces on podium*	50% of the total required Open Recreational Space permitted to be developed on podiums	50% of the total required Open Recreational Space permitted to be developed on podium OR 100% of the total Open Recreational Space permitted to be provided on podium with mandatory addition of 1.5 m wide strip for plantation of trees on the plot boundary (excl. setbacks).
4	*Provision of Open Recreational Spaces not necessary*	No such provision	For the uses other than residential, industrial and educational permissible in agriculture zone
5	*Revision of Open Recreational Spaces*	No such provision	Not allowed after a period of 4 years from 1st final sanction, but maybe allowed where plots are not sold or transferred
6	*Permissible structures in Open Recreational Spaces*	G+1 structure with maximum 15 % built-up area of Open Recreational Space. No additional floor allowed	G+1 structure with maximum 15 % built-up area of Open Recreational Space. In case of stilt, additional floor may be allowed. Religious structure allowed to be built with the permission of the respective authority
7	***Provision of Amenity Spaces***		
7.1	*Minimum required plot area and corresponding Amenity space to be provided*	For plot area of 0.4 Ha or more, 15% Amenity Space to be provided	For plot area of more than 0.4 Ha upto 1.0 Ha, 5% Amenity Space to be provided
7.2	*For Amenity Space of area less than 200 sq.m*	No such provision	The Municipal Commissioner can ask for Amenity space in the form of a built-up area equal to 50 % of the required open land. TDR shall be allowed.
8	*Development of Amenity Spaces*	Shall be developed by the local authority or the owner of the plot if the authority allows it according to priority amenities decided.	Shall be developed by the owner of the plot for the uses mentioned in the definition of amenities, for the occupants of the plot. However, the local authority may insist on the space being handed over.
9	*Acquisition of the reserved land for Amenity Spaces by the local authority.*	Land shall be handed over to the authority for the priority development like – playground, park, primary school, high school, hospital, dispensary, fire station, police station, electric substation, parking etc. If not required for the following purposes, then on satisfaction that the proposal is in public interest, owners may be allowed to develop some other amenity.	Can ask for the land for following purposes- garden, playground, municipal school, municipal hospital, fire station, housing for affected etc. If not required for these purposes, it may be taken over by the authority with consent of the owner, in exchange of FSI or TDR.

INFERENCE

As stated in Table 1, the major changes made in the new UDCPR 2020 include increase in the minimum plot area required for it to have reserved Open Recreational Space from 0.2 Ha to 0.4 Ha (point no. 1), as well as reducing the required percentage of Amenity Space to be provided for a plot of area 0.4 Ha from 15 % to 5 %. (point no. 7.1). There are also other changes in terms of better availability of TDR/ FSI in lieu of Open Recreational Space and Amenity Space, flexible provision of Open Recreational Spaces and Amenities in Amenity Spaces.

COMPARATIVE ANALYSIS BETWEEN MUMBAI DCR 2016-2036 AND UCDCPR 2020

Table 2 shows the comparative analysis between the provisions of Amenity Spaces and Open Recreational Spaces under Mumbai DCR 2016-2036 v/s that of UCDCPR 2020. Table 2 shows the comparison between the provisions in the older Mumbai.

INFERENCE

As stated in Table 2, the provisions in the UDCPR 2020 for development of Amenity space by the land owner and permissible FSI/ TDR have been made more convenient as compared to the earlier provisions in the Mumbai DCR 2016-2036. No major changes are seen.

RESPONSES FROM THE INTERVIEWS

To understand the subject and provisions for Amenity Spaces and Open Recreational Spaces from professional points of view, interviews of two architects were conducted : Ar. Sanjay Tasgaokar; Ar. Rajiv Raje and two developers : Mr. Santosh Runwal and Mr. R.B. Chaphalkar.

INFERENCE

The responses from the interviewees showed both similarities as well as contrasts in their points of view for the different parameters. While most of them suggested that the increase in minimum plot area required for it to have reserved Open Recreational Space from 0.2 Ha to 0.4 Ha would result in better planning of spaces, they had contrasting opinions on the reduction in the required percentage of Amenity Spaces to be provided for a plot of area 0.4 Ha from 15 % to 5 %. Architect 1 and Developer 2 suggested that this provision could restrict the development of amenities in such reduced areas. However, Developer 1 was of the opinion that provision of less area equals to ease in management and reduced threat of encroachment on the undeveloped land.

Table 3 also states some potential changes suggested by the interviewees for the UDCPR 2020 included:

- 10 % open space reservation for any plot to avoid concrete jungles
- Green reservations targeting macro level
- Green reservation for amenity spaces

CONCLUSION

From this study it can be inferred that provision of Amenities and Open Recreational Spaces in land use play a pivotal role in social and holistic wellbeing of the development proposed on any land. It has an influence on not just the land value, but also enhances the quality of living in the area surrounding it. Especially in today's urban cities, where life is hectic, busy and congested, the Amenities and Open Recreational Spaces act as a gateway from stressful routines. It can be said that every kind of amenity has something to offer to the people of various demographics. Hence, people demand for such amenities near their homes. Consequently, availability of amenities and recreational spaces has become one of the prime deciding factors while buying land and hence understanding the importance of such amenities is essential.

It can be seen that UDCPR 2020 for the state of Maharashtra has regulated provisions, which offer adequate development of such Amenities and Open Recreational Spaces. Also, various provisions of the previous DCRs of Mumbai and Pune Metropolitan have been revised and developed so as to provide maximum public satisfaction through these amenities. All these factors clearly indicate the significant role that Amenity Spaces and Open Recreational Spaces play in the development of land. Therefore, it can be inferred that provision of amenities in urban land use is not just a luxury, but one of the most essential requirements modern man needs to live a happy and contented life.

Table 2: **Comparison between the provisions in the older Mumbai DCR 2016-2036 which have undergone changes in the UDCPR 2020**
(Source : Collated by Author)

PARAMETER	PROVISIONS UNDER MUMBAI DCR 2016-2036	PROVISIONS UNDER UCDPR 2020
1. Development of Amenity Spaces	The actual size, location and plot sizes of public amenity shall be specified by the Planning Authority.	The owner shall develop amenities on the reserved land unless the Authorities insist on taking up the land
2. Acquisition of land by the local authority	The land reserved shall be handed over free of cost to the Planning Authority or any agency specified by it.	The land is to be handed over to the Authority with consent of the owner in lieu of additional FSI or TDR
3. Minimum percentage of Amenity space to be provided	For 0.4 Ha and more but less than 2.0 Ha, 5 % of the total plot area to be reserved as Amenity Space.	For more than 0.4 Ha and up to 1.0 Ha, 5% of the total plot area to be reserved as Amenity Space.
4. Permissible TDR/FSI	The permissible FSI for the plots of land thus surrendered to the Planning Authority shall be 0.6.	The generation of TDR or in situ FSI shall be equivalent to the quantum mentioned in the regulation.

Table 3: **Comparison of interview responses**
(Source: Collated by Author)

PARAMETERS	ARCHITECT 1	ARCHITECT 2	DEVELOPER 1	DEVELOPER 2
1 Most important and significant provision or change made under Amenity Spaces in the UDCPR 2020	No major changes	Clarity in interpretation and application of the DC Rules	Increasing the minimum required plot area for providing Amenity Spaces	No major changes
2. Potential amenities that should be developed as priorities	Community space, vegetable market, space for hawking, etc.	Any land use except industrial, commercial and private residential which is open and accessible to the public.	School, hospital, old age home, commercial offices, hostels, temples, club house, swimming pool, fitness activity etc.	Should be developed by the local authorities according to need
3. Advantages and disadvantages of increasing the minimum required plot area for providing it with Open Recreational Space from 0.2 Ha to 0.4 Ha	Better planning since 0.2 hectare doesn't provide a sizable plot area for amenities	-	Better planning with greater area	Better planning with more area
4. Advantages and disadvantages of reducing the minimum required percentage of amenity space for a plot of 0.4 ha or more to 5 % from 15 %	Benefits are nil. If development is to be on an individual basis, it should be on a larger scale	-	Lesser amenity space provides ease in management, reduces the threat of encroachment and allows better planning of plots less than 0.4 Ha	Smaller amenity plots may not be helpful for better amenity planning
5. Potential changes for Amenity Spaces and Open Recreational Spaces regulations, under the UDCPR 2020	Certain things similar to the Town Planning Scheme can help in generating larger amenities and open spaces	No change is necessary	10% open space reservation for any plot to avoid concrete jungles.	Minm. required plot area for providing Amenity Spaces should be more than 0.4 Ha for better planning
6. Need for more than 10 % Open Recreational Space for a plot of 0.4 Ha and more	Not necessary	Not necessary	Needed for better development of green areas	Not necessary
7. Need for green reservation for Open Recreational Spaces and Amenity Spaces	Reservations targeting macro level areas are needed	Required for Amenity Spaces	Required for Amenity Spaces	Not necessary

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MY LIFE, MY INK

Ar. Yashwant Pitkar

Visconti crystal glass ink pot with lid

It has been over fifty years that I am using fountain pens. As time passed, so did my passion. The journey has been long.

The heart of a fountain pen is its nib and its blood is the ink. In the early days, the only known ink colours were blue, black, red and green. My journey began with blue Camel ink and then there was no end … I started to collect other brands and colours and the list slowly grew. The ink brands, colours and shapes of bottles have multiple stories, and I can briefly point out the same for users and collectors:

• Ink Brands

The basic and most economical ink to use was Camel, followed by other Indian brands like Bril from Bangalore (which now has many colours) and Chelpark (now difficult to obtain), and the famous Sulekha from Kolkata. As time passed, I gathered many brands in my collection, including a few well-known ones too like Sheaffer, Parker, Cross, Pelican, Waterman, Sailor, etc. The others which I procured were Caran d'Ache, Mont Blanc, S.T. Dupont, Aurora, Noodlers, Private Reserve. To the best of my knowledge, we have over ninety ink brands. Surprised? Yes, so am I.

• Colours of Inks

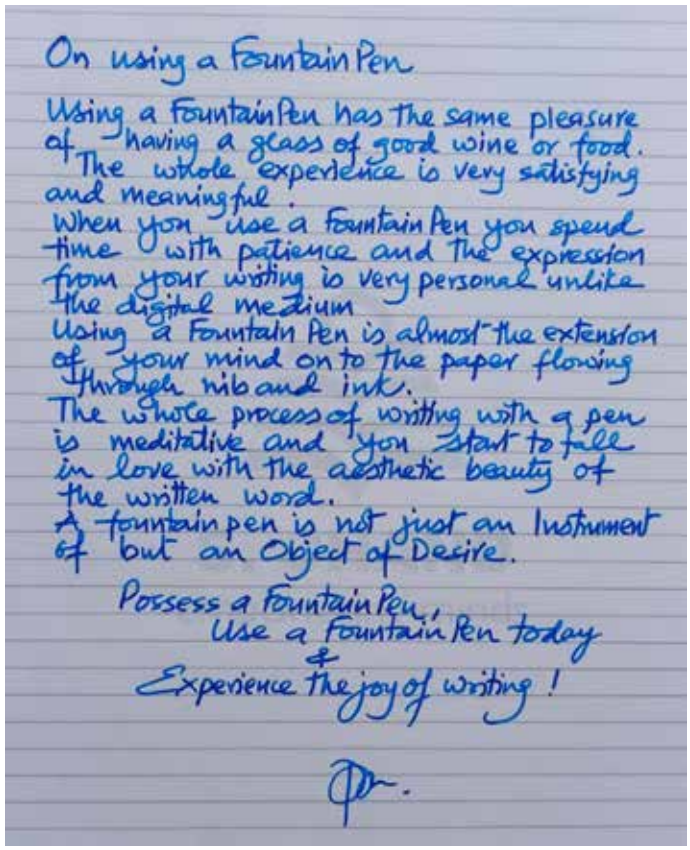
Inks come in various colours, right from the simple blue, black, red and green. Some brands like Private Oyster have a huge range of colours. There are also perfumed inks available from Mont Blanc(MB) – like the Ink of Love by which smells of roses, or James Purdey with the fragrance of single malt whisky. There are also inks that have chocolate- and tobacco-flavoured fragrances.


J. Herbin in a heart-shaped bottle


Italian ink for a glass dip pen


Brass ink pots and an ink stand


Beautiful ink from Italy


On using a Fountain Pen

Using a Fountain Pen has the same pleasure of having a glass of good wine or food. The whole experience is very satisfying and meaningful.
When you use a Fountain Pen you spend time with patience and the expression from your writing is very personal unlike the digital medium
Using a Fountain Pen is almost the extension of your mind on to the paper flowing through nib and ink.
The whole process of writing with a pen is meditative and you start to fall in love with the aesthetic beauty of the written word.
A fountain pen is not just an Instrument of but an Object of Desire.

Possess a Fountain Pen,
Use a Fountain Pen today
&
Experience the joy of writing!

Handwritten note

• Special Inks

Certain special inks deserve a mention here like the Personal Code ink by MB. This ink has DNA of the specific users implanted, which is used by that specific person to sign very important or precious documents, so that the originality of the signatory can be verified by forensic reports. The Elixir Gold ink, limited to an edition of just a hundred bottles by MB, has real gold dust in the ink. Then there is Shimmer ink which has very fine metallic powder which shines when written with, on paper. And there is the old favourite, Invisible Ink, where the writing can be made visible only under UV light.

• Ink Bottles

Ink bottles come in different shapes and are made of different materials. The most common being glass and plastic. There are some ink bottles made of metals like brass, and special ones of engraved crystal. One must look at the Visconti bottles which come in beautiful shapes, the most remarkable being the Eternal Bird in crystal, which has a bird sculpted in gold or silver, and naturally comes at an extremely high cost. There are also several sites worth visiting which have a huge collection of antique ink bottles.

There is a lot of written material, dedicated books and articles and websites available as well - which talk of inks, ink bottles, ink brands and ink colours - which one can refer to for further reading or research. I can only conclude by saying that collecting fountain pens and ink bottles of various brands and shapes is very exciting and is a passion that is of its own kind.

Passion is indeed the Essence of life.

Ar. Yashwant Pitkar, born 1953, is an architect and was professor at the Sir J.J. College of Architecture, Mumbai for 28 long years. After he retired in 2015, he joined the Academy of Architecture, Mumbai. He has been a collector of fountain pens and ink bottles for the last 40 years. He has given public lectures on the history, design and development of fountain pens in many places and conducted a 12- day workshop at NID, Ahmedabad. Recently, he has held pen design studios in colleges. An avid photographer with 14 one-man exhibitions, he has worked on ten books till date. He is also a collector of stone spheres and likes flying, gliding and skydiving.
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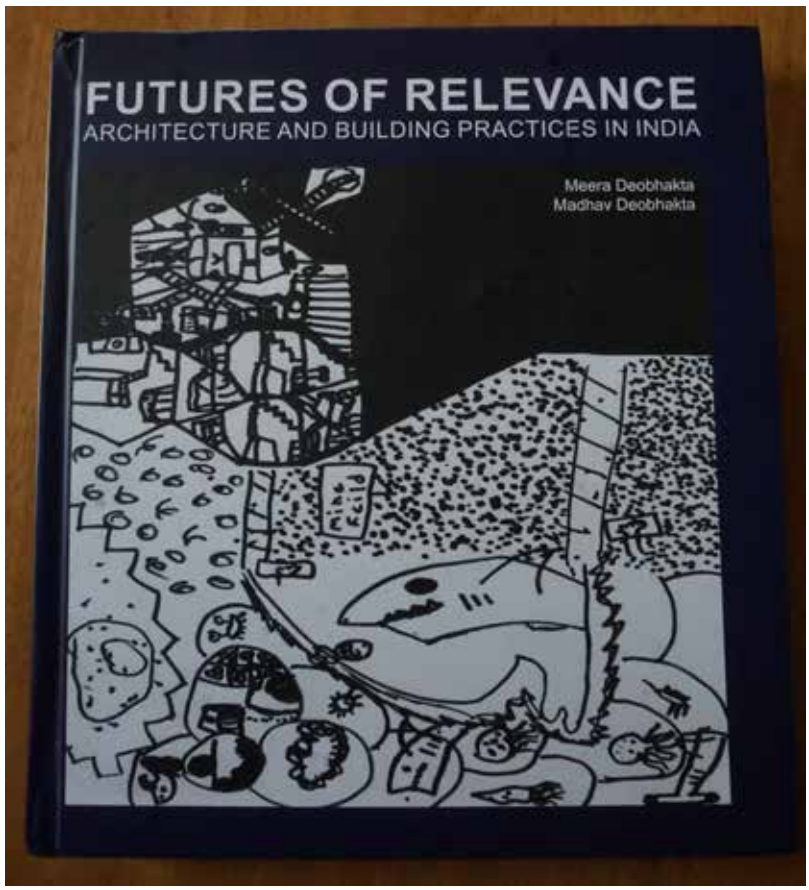
FUTURES OF RELEVANCE
ARCHITECTURE AND BUILDING PRACTICES IN INDIA

Prof. Meera Deobhakta & Prof. Madhav Deobhakta



Prof. Meera Deobhakta is an practicing Architect and Educationist. she graduated from Sir J J college of Architecture in 1963. She is an Arts graduate in Child Psychology, . she is a member of world society foe Ekistics and worked in different capacities in the past. An ardent naturalist and animal lover. She is a founder trustee for education and research. she was the organising secretary for conferences of Arcasia and world society of Ekistics in india.

Prof. Madhav Deobhakta is a renowned Architect and educationist having nearly six decades of professional and teaching experience. he was the past president of IIA. Member of executive committee of COA, Chairman of education committee of CAA. An Active member of WSE. He was honoured with the Presidentship of World Society of Ekistics in 2010/2011. he is an expert in techno legal matters relating to Architecture profession.

The book by Meera Deobhakta and Madhav Deobhakta is an excellent compilation dedicated to mother earth which narrates a story on the transformation in the nature of architectural practice in India.

With fast changing concepts of improved technologies , social factors ,environmental issues, new legislative measures etc. author addresses multi dimensional issues to the Architects in practice and research who actually understand the effects of numerous innovations such as spread of digital technologies, use of artificial intelligence, robotics, virtual reality, drones etc. in todays times. On many aspects of human life the change in terms of numerous innovations is very appropriately portrayed by characterizing the challenges linked to architecture and building practices in India as strengths the opportunity.

The book has some vital contribution by Prof. Meera Deobhakta, Prof Madhav Deobhakta, Prof. Harshad Bhatia, Ar. Prem Nath, Prof. Anand Achari, Eng. Ashok Tamhankar, Prof. Anil Nagrath, Dr. John Byrom, Prof. Akhtar Chauhan along with several significant visual contribution by artists.

Depicting artistic impression of the present state of the universe and our urban areas many authors contributing significantly in this book from their own practice and their involvement in national and international organisation like The Indian Institute of Architects, Council of Architecture, Arcasia, Commonwealth Association of Architects have depicted several holistic approaches that shows connection between human life environment through their work as a part of Architects social responsibility . The content of the book which emphasises on the basic tenents of excellence, innovations and ethics have been primarily directed by the author with an objective of addressing the basic foundations of practice which are must to be read by clients, stake holders of the building industry, policy makers, allied professional, students of architectural and masses who are looking for developing and engaging architect services .

The emerging trends in the building industry like smart cities, sustainable architecture ,green building and their rating systems , project management, slum development, have been very well featured that have been giving newer dimensions to the architectural practice with new layers like digital design , artificial intelligence, virtual reality , automation globalisation.

The author has provoked the readers on the changing scenarios of the realities of the world's situation today. The book explores various socio cultural identities with concerns of the widening gaps between rich and poor education and technological gaps between people and population exploration effecting the supply change. The book has explored the changing political and economic borders leading to global economy and society with pressure from tourism and economical interactions .

Architectural practice and its future challenges linked to destruction of nature over consumption of natural resources, presentation of environment and sustainable strategies have been very well analysed generating thought provoking dialogue among architectural practice in India. The authors have critically addressed corrupt practices on levels which is initiating the need for a positive forum. which poses a question. What is our dream for the future. A world full of values, ideas, ethics and positive visions, issues linked to corrupt practices have been featuring as the consistent focus writings which summarises the need for ideas of living in harmony with nature towards appropriate planning and implementation system.

The book is a huge advisory for both teachers and professionals about the need for continuing professional development for their own development. The book also emphasises the role of an architect in the society, his registration as architect, his duties and responsibility to clients in particular society at large along with the need for the role of allied professionals for successful completion of projects. The genesis of Architects Act, the role of council architecture with its regulatory guideline's is also discussed with the vital role of the Indian institute of architects and other voluntary organisation.

The author has also touched upon a road map for setting up for a practice with reference to nature of practice right from its establishment upto formats of contracts indicating consultancy fees.The book establishes and significantly highlights the main objectives of the Indian institute of architects and how several boards and committees play an important role in the betterment of the build environment with a common objective of good human life. The perfect organisation with pedagogy in architecture education also find a place in this book with guidelines to teachers of architecture through various teachings through frame works. The author is also making the architecture fraternity review about the goals of continuing professional development on relevance of specialised knowledge up-gradation of knowledge about new technologies with expertise to cope up with emerging challenges and to conduct research among build and natural environment with focus on human settlement.

The authors has previewed the short falls and strength of faculty positions in school of architecture and also addresses the objectives of council of architecture to facilitate the proves and the minimum standards of architecture education as applicable . The multidimensional theories of Urban design, environment education , landscape design, conservation of architectural heritage , project management and all above with emerging innovations impacting Architecture are very well featured in the book with a huge form of tutorial to students and professionals . Writings from all the contributors also highlight aspects linked to sustainability for a better tomorrow, planning for desirable urban development, earth and its respect to inhabitant, green with historic connections of the past emphasizing on the policies of resources and its efficiency levels of performances

The book also depicts examples of holistic architecture, that reflect the values of aesthetic, sustainability, culture, heritage conservation, innovative housing and research in vernacular architecture, etc, provoking and inspiring architects in practice to follow newer paths of innovation. Works of architects in context based locations like Bhutan, Lonavala , Himanchal and many more actually elaborates the contents of authors intensions in their writings.

Humane habitat and all aspects of housing such as real estate development in luxury apartments, affordable housing, redevelopment of old hosing stock and slum rehabilitation, unsafe buildings does opens newer debates in this book on its direction and on rental and ownerships aspects that channelizes our design ideologies in practice, especially legislations with reference to promotion of development of smart cities in our country based contexts .The author has strategically addressed subjects like easements, fire protection and human safety and their impacts on architects practice in some way. acts related to arbitration, valuation.

In Futures of relevance, The prime focus revolves around Profession of architecture and other related professions, education of an architect, engaging a professional, architects act and role of council of architecture, setting up of practice, professional organisations, specialised subjects in architecture and their importance to architecture, building project management, innovations impacting architecture, changing scenarios, sustainability of better works, planning for suitable urban development and its resects for its inhabitants, housing and related issues, ancillary aspects like arbitration, compulsory land acquisition, fire protection and human safety, rent controls, valuation for real estates and many more basics related to architecture practice and education, and many more that actually make this book a must collection in every architects office and schools of architecture to add holistic approach to our profession.

The Book is available at Super Book House, kindly email: superbookhouse@gmail.com

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ANGKOR WAT TEMPLE COMPLEX, CAMBODIA

Ar. Hamid M.M.

Ar. Hamid M.M. is a graduate (2013) from the University of Kerala. He is the cofounder of Zero Studio; a multiple award winning, creative design studio based at Malappuram, Kerala. His practice is close to being an art studio that aims at creating a subtle blend of architecture with all its other counterparts.
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Angkor Wat, an epitome of the spectacular Khmer architecture, is the world's largest religious structure stretching over 400 acres of land.

The five central towers of Angkor Wat symbolize the peaks of Mount Meru, which according to Hindu mythology is the dwelling place of the gods.

With the grandeur and harmony of its architecture, the temple testifies to an exceptional civilization.

The balance of design through volumes and spaces is portrayed in this picture.

The scale.

The passage with intricately detailed columns visually stretching to infinity.

The remains of the temple.

The buildings aged gracefully intertwining with nature.

A picturesque view where the sun perfectly renders the landscape in the moat, captivating the spectators.

The streets were lit and brimming with people and the guitarist filled the air with pleasant music.

And finally the man who took me around the city in his Tuk Tuk.

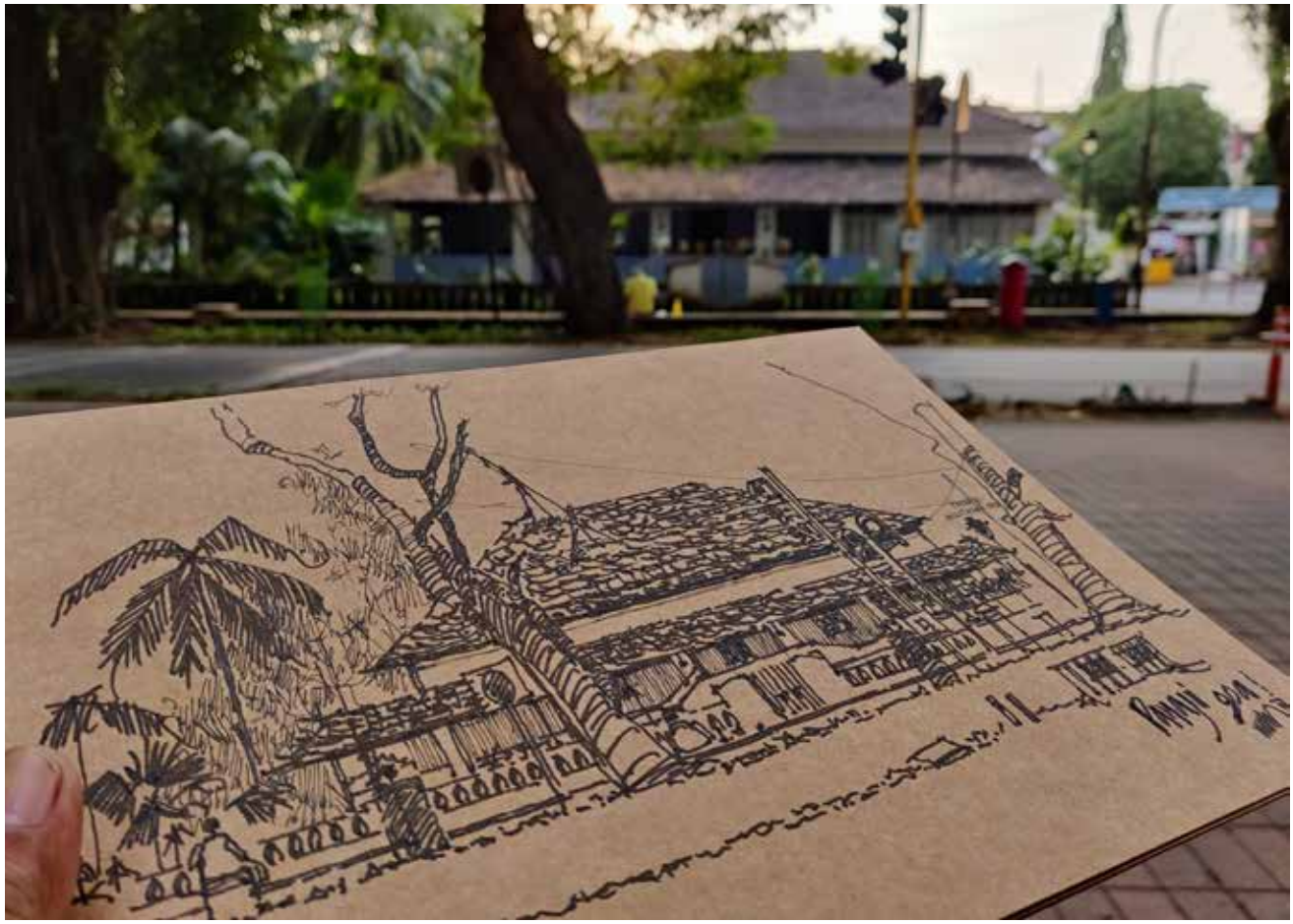
SKETCHES

Ar. Hemant Shantaram Mahajan

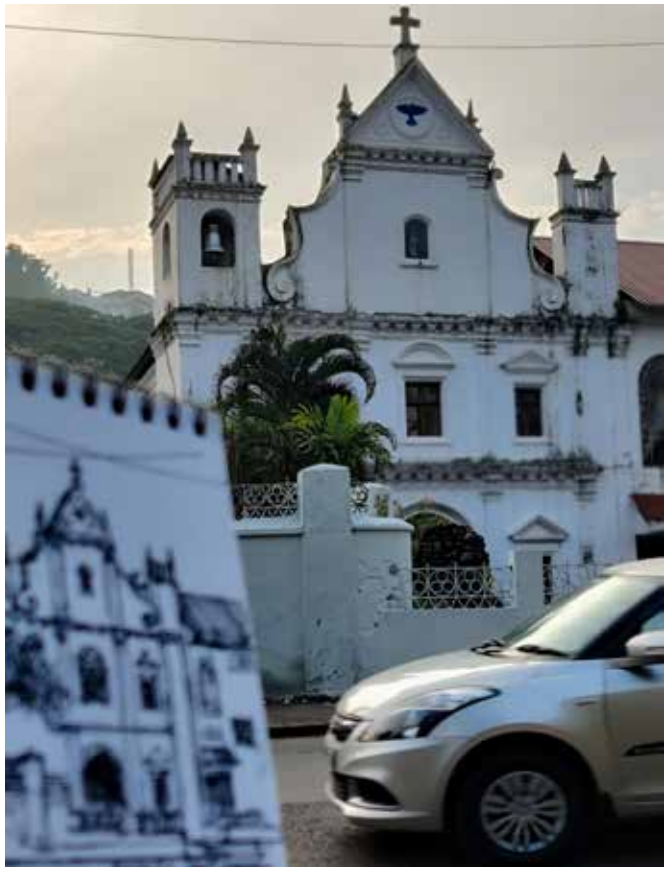
Many sketchers were very inspired by the virtual sketch walks, that offered the possibility to explore new remote places of the world and to meet new friends. Furthermore, virtual sketching events are a good alternative to outdoor drawing sessions, if you cannot attend in person, or simply if you would like to explore distant places of the world, even when you cannot actually travel there.

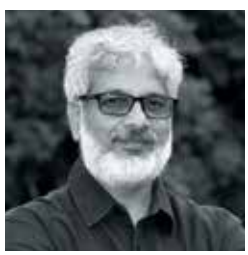
Shadows always attracts my Eye as they appear larger than the real object Hence I draw sketch and then highlight the outside spacesWhich makes all the difference.


Panaji goa




Panjim Goa...
heritage Street:





Ar. Hemant Shantaram Mahajan
An Architect and Planner with over 33 years of experience, Hemant Mahajan is the founder, Partner and Principal Architect of GROUP PHI Architects and Designers based in Pune, India. He has been working in the field of Architecture, Interior Design & Campus planning from the year 1986 in India & abroad.
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FOR JHARKHAND CHAPTER

Ar. Leena Kumar

It's many years ago, that I was born,
Into this land of contradictions, that is mine to adorn.
Divergent we all are, like fire and water,
Meant to exist together as celestial sons and daughters.
Worship we all do, to the powers of this earth,
Often unable to hear the whispers of their search.
Imagine for a moment,
Of what we could do,
If from our interdependence we drew,
Inspiration good enough for all of us and you.

Through the journey of life, each one does
Witness a life-changing event that causes a buzz.
A buzz so strong, it makes us pause
To review life and figure out the cause,
That led us here, to this dismal loss.
For us it was the pandemic that came,
As a warning to mankind, for greed not to proclaim.
Two years of time it gave us to ponder,
But have we changed, sometimes I wonder?
The forces of the Earth will again announce,
Their verdict dependant on us, it will pronounce.
And if it's harsh, it's only us to blame,
And if it's soft, it is ours to claim.

For us at the IIA, we did our bit
With copious stories of kindness and of grit.
Many Chapters came forward and did,
Humanitarian acts of aid, with dignity they bid.
For a year and a half we did try,
To announce through webinars that we must all comply,
To the dictates of this planet, and that no matter what we may try,
As architects we need to be very clear-cut and dry,
That it's health that matters most of all, and that is something we can never deny.
For however small or large the sprawl,
However rich or poor the cause,
It's health and joy that must form the primary laws.

For a year and a half we were virtually placed,
Waiting for someone to come forward and embrace,
The joy of meeting and celebrating,
To converge in person and exchange,
What we have learnt, and what remains.
Jharkhand came, to end the wait,
Supported by the Committee of the Young, they came with a date.
Delighted we all were at the IIA,
To applaud this young Chapter for breaking the spell.
The harbinger of good tidings,
We, the office bearers and council members, did congratulate the team for providing
A platform to rejoice again and learn,
To Rethink, Restore, and Reconnect,
As it is our duty to give to society,
A place that is calm and without anxiety,
A place that is safe for all of society.

Ar. Leena Kumar is the principal architect of Kumar Consultants, Bangalore, a practice of three decades. In her own words - "Life is about relationships; relationships with people, with ideas, with spaces, with nature, with your talents, with work. And life is essentially very simple. The difficult part is to keep it simple. " Her practice is firmly rooted in this idea. Her firm has worked through projects of hospitality, residential, industrial, institutional, public and health care. She is presently the Jt. Hon. Secretary of the IIA National Council.
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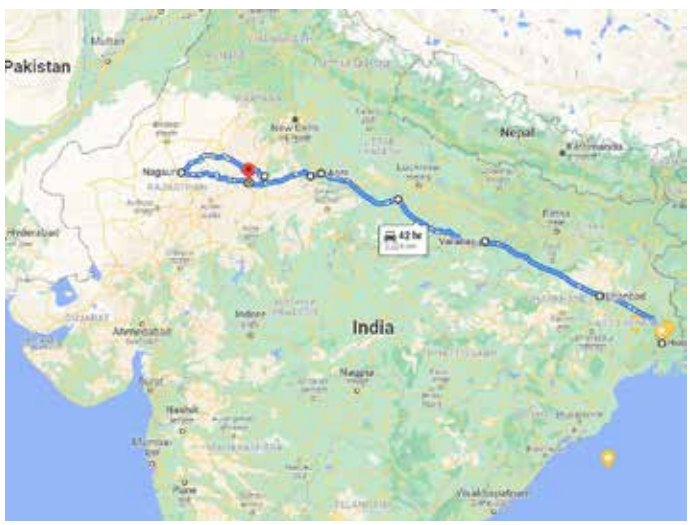
ARCHIVENTURE
BIKE TRIP FROM KOLKATA TO JAIPUR

Ar. Debjit Adhikari

Roads were made for journeys, not destinations.
Confucius

I needed an excuse to take off with my new Royal Enfield Meteor. Rajasthan gave me the impetus to do so. I wondered why I should not explore the history of architecture on a bike trip. So, I just had to get my dates right and my spirit high. The usual hurdles of venturing out during the extended pandemic notwithstanding, the route was finalized keeping in mind my halts and location. This culminated in the following narrative.



The weather started playing spoilsport two days before the trip. All logistics went haywire so I decided not to have hotel reservations done in advance. Video images of flooded highways enroute to Dhanbad doing the rounds on social media added to my misery. On the day of my departure, the sun god obliged. I decided to make a temporary halt at Durgapur, 190 km from Kolkata. An architect-friend of mine did the favour of hosting me at lunch and the trip commenced.

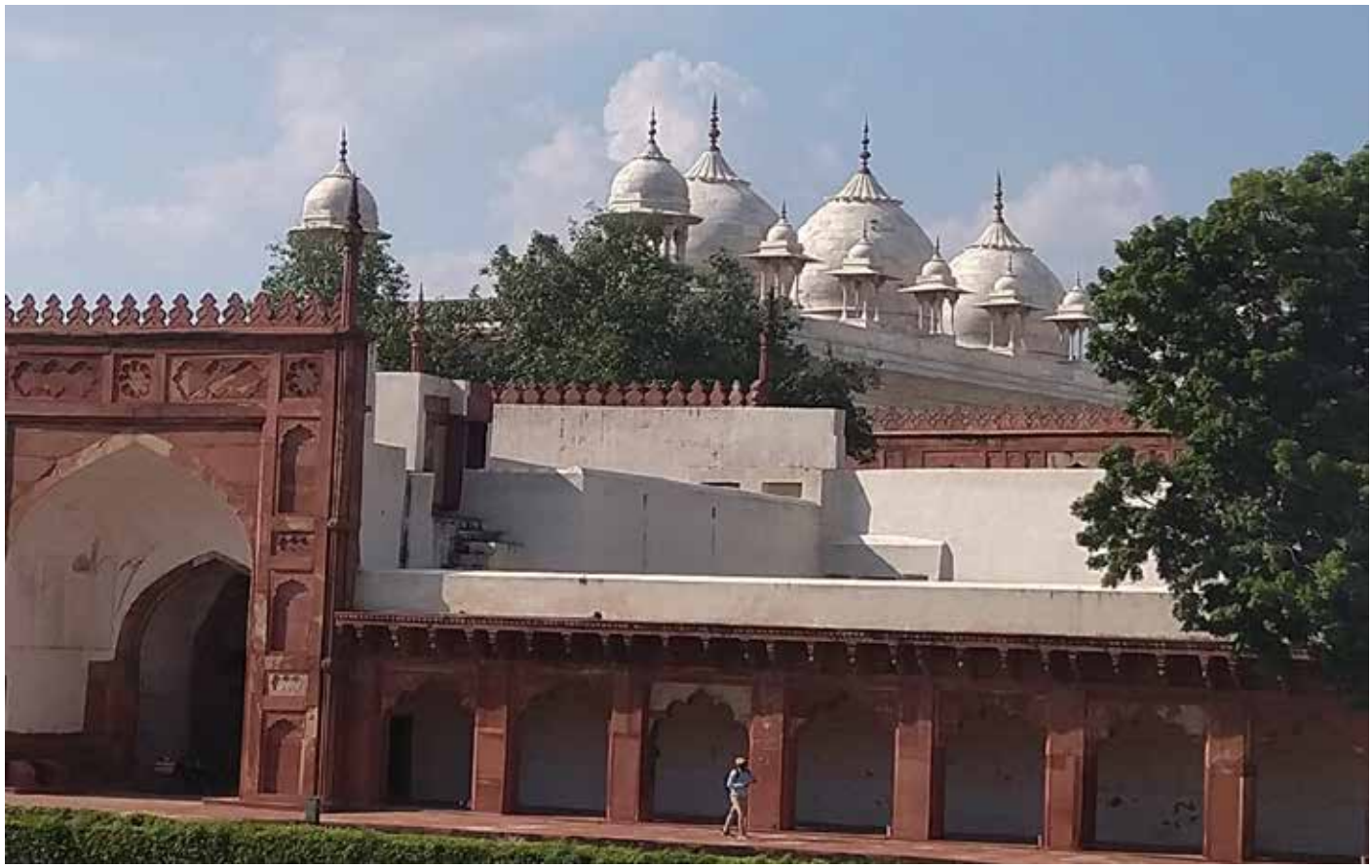
I got all my essentials packed. The trip would be for 10 days, so necessary clothing was in the saddle bags. My biking jacket came with the necessary built-in protection gear. In addition, range, ropes, spare cables, medicines (unavoidable at 59), vehicle papers and finally Covid vaccination documents took up the nooks and crannies of my bags. Carefully uploading all digital versions of the documents to the Digi locker and M-Parivahan App was done with precision. Last but not the least, the cell phone, pad and the charger were packed. I could feel the excitement building while I packed. D-Day finally arrived and my daughter took my pic before I vroomed away.

The route initially finalized was Kolkata – Dhanbad – Varanasi – Agra. No hotel bookings were done in advance as the satellite images along the route were very discouraging. The depression which initiated from Odisha was moving along my route towards Jharkhand and Bihar. I wasn't prepared for the rains and left it to fate. The best part of the ride was my machine – Meteor. This bike was suitably designed for long distances with ABS, comfortable seating, electronic controls and the Trip Meter, which was supported by Google, linked to my cell phone and showed me the way to the destination, a unique feature so much required when one is driving and on the move.

After a brief night halt at Dhanbad, the trip continued towards Varanasi, 425 km away. Road conditions were more or less good, and the ones in Jharkhand were excellent. The landscape, consisting of intermittent hills, was a real trip booster. After another night halt at Varanasi the real "Archiventure" started. Planning to take the Lucknow Agra Expressway, I made a detour towards Kanpur because of excellent road conditions and then shortly afterwards realized my mistake after witnessing the state of the roads to Kanpur, but by then it was too late to turn back. After a short halt at a motel which had a toilet, but no water, I started all over again. This journey was interrupted by a few spells of rain, but I scraped through. A brief tryst with a flat tire made life all the more exciting. After its repair, the road to Agra was as good as it could be. After a while, I heard google call out the expressway, which I entered after a few turns and was greeted by a burst of rain. I was already up the elevated freeway and there was no shelter to look forward to. I went ahead and within a few seconds the rains stopped and then started the drive of my life. As the sun set in the horizon right in front of me, I could see lightning strike. It was evening by the time I reached Agra and the Trip Meter guided me very efficiently to my hotel. 625 km and counting.

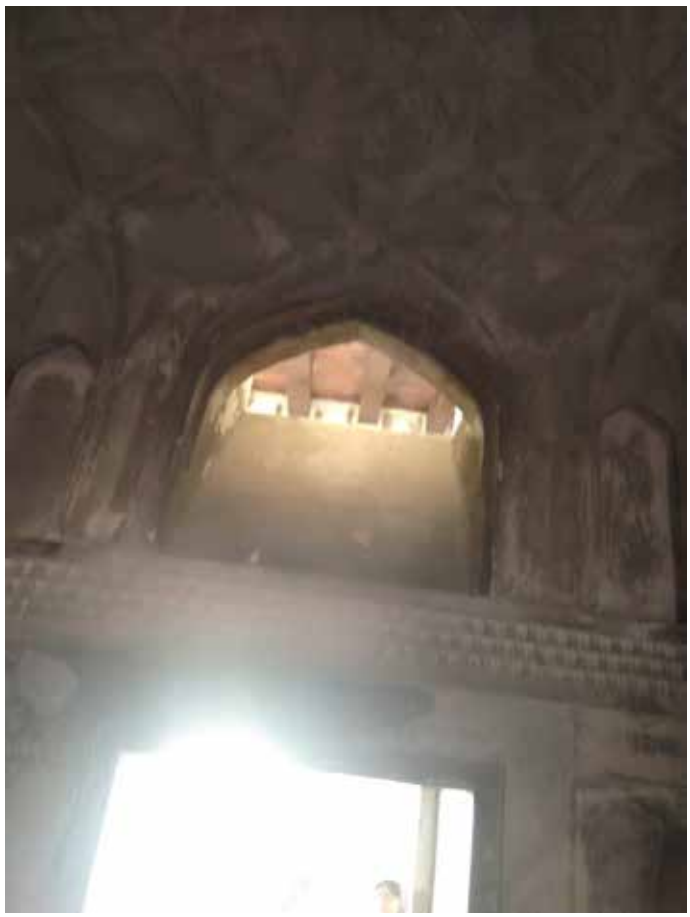
AGRA

Agra was history revisited. Having images of the last visit during my college days in 1984, when we visited the Taj Mahal on our annual educational tour in my mind, what I was greeted with was totally unexpected. The entry, starting with online ticket bookings, battery car rides to the entry gate and being frisked by security personnel was pleasantly surprising. The guide took me along the pictorial archive section of the monument's past history and this was when he was dumbfounded realizing my age was a bit on the higher side for someone biking from Kolkata, a cool 1325 km away. History was narrated and the coalescence of Indian, Persian and Islamic architecture was explained to me with élan. The use of precious stones imported from different countries all over the world as inlay work over white Makrana, was explained in minute detail. The magic of proportion and balance took me to a different era of art and architecture.



The mosque, seen in the picture, was made from the debris of the Taj Mahal- an excellent example of recycling of waste materials in construction.

Wind harvesting, rain water harvesting and other green techniques used, would motivate contemporary architects to go back to their drawing boards to revise green building solutions. This is the view of the skylight from outside.



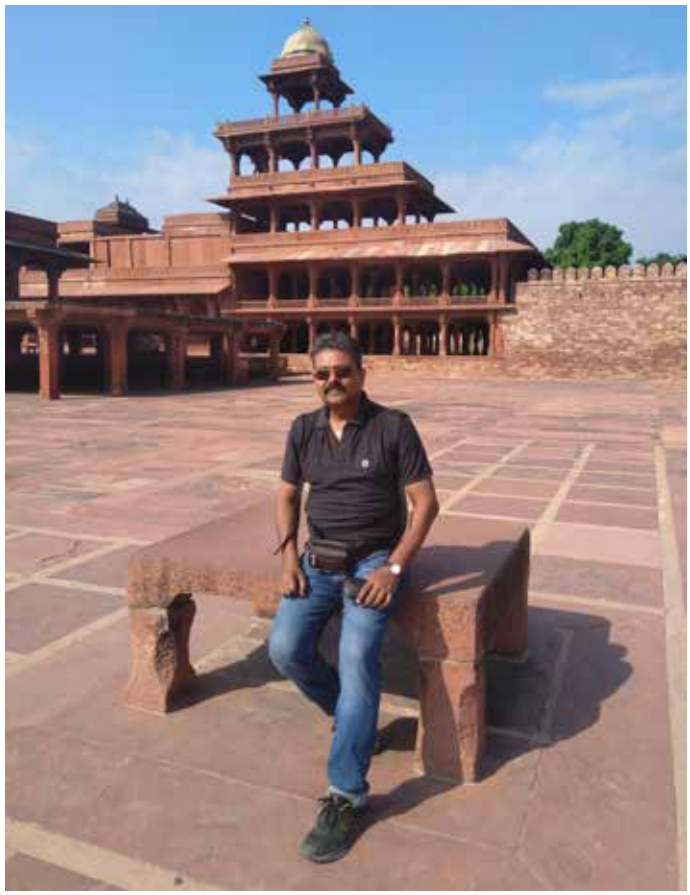
The view of the skylight from the inside, designed to facilitate wind harvesting.

These hollow walls had water inside them supplied from overhead water tanks to form a natural cooling system.

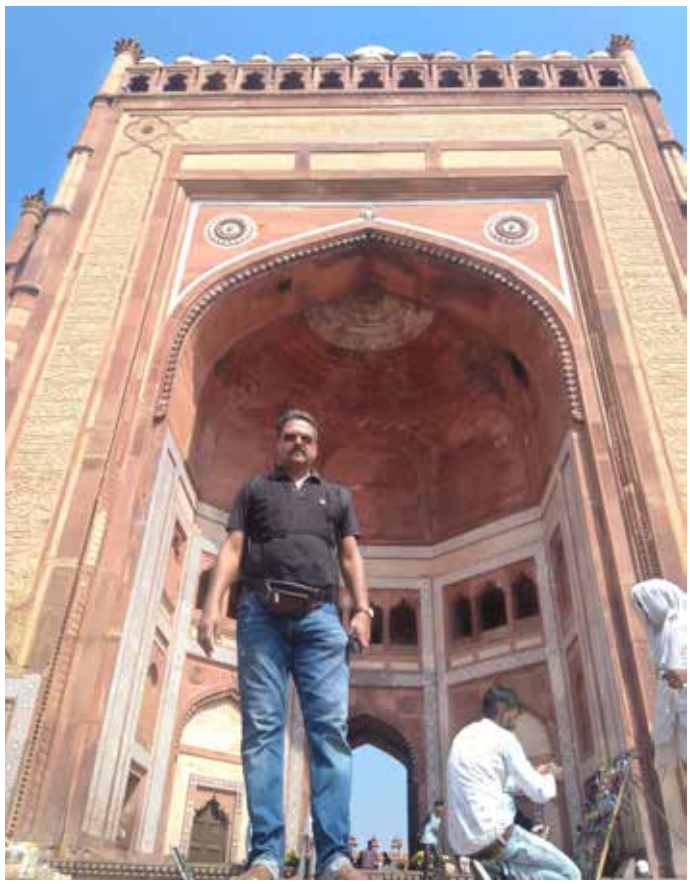
The crack in the black onyx throne is testimony to the British attack to destroy Indian heritage. A cannonball was responsible.

SIKRI

Another palace, with stories to tell. Another creation keeping in mind the use of natural ventilation. A creation by Akbar had its share of grandeur, proportion and exquisite use of indigenous materials. The pandemic has affected tourism, which was evident from the empty courtyards. The usual hustle bustle was replaced by a serene and tranquil environment.



Nooks and corners provide spaces for cool outbreaks during the hot summer. Energy conservation at its best. Just 36 km from Agra, it was a stroll on my bike.



The world's largest gate held testimony to the power of the erstwhile Moghuls and kings. This holy complex adjacent to the Sikri Palace is another example of Indian, Persian and Islamic Architecture.

Supposed to be the City of Victory, made famous by the fact that Akbar got his wish fulfilled by fathering Jahangir, supposedly by the blessings of Salim Chisti. The only white marble structure in this sandstone complex, is home to thousands coming to offer prayers for fulfilling their wish.

JAIPUR

The road from Fatehpur Sikri to Jaipur was smooth. The entry to the Pink City was a joy ride with hills cut out for entry into this historical place.

Waiting for another tomorrow for another trip, when tomorrow comes.....
If tomorrow comes.

Ar. Debjit Adhikari
A professional practicing Architect in Kolkata, graduating from erstwhile Bengal Engineering College in 1986, was always passionate about riding and exploring the rich heritage of Indian Architecture. His passion revolved around discovering the mysteries and stories of the monuments clubbing with his passion for riding solo on his motorbike.
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THE ROLE OF BUILDING SERVICES IN ARCHITECTURAL EDUCATION

Ar. Kalyani Nilesh Junankar

Looking at today's scenario, teaching and learning services-related matters to students have become extremely important. It is necessary for this subject to be taught and learnt properly, and incorporated in a structure. We cannot just have a structure without lights, electricity, HVAC, without water supply, without a drainage system. Can we live in a situation where we still have to struggle for water storage in our house? Can we live with open drainage trails running around our house? Nowadays it is impossible to live without the internet and electricity in houses or offices. Therefore, it is essential that we also focus on these fundamental issues as much, or more than the design and external façade or elevational treatment of the building.

Julia Evans, CEO of Building Services Research and Information Association (BSRIA), in her interview with *Designing Buildings Wiki* (DBW), explained the increasing importance of building services:

Architects can design the most beautiful or complex building, but without building services being introduced effectively it's not going to work. It won't give Generation Z the kind of environment they expect - natural light, air conditioning which is not intrusive, clean air, and so on. The flexibility of buildings needs to be constantly at the forefront of the architect, builder and any other subcontractors' minds - they need to be thinking about what else the building might look like or be used for in the future.

There is a list of services one needs to understand the details of, and incorporate in buildings, not only for correct working of structure but also to maintain the comfort and hygiene of the working environment. Though there are experts, known as MEP consultants, who exclusively work on such facilities, it is also the architect's role as well to take part in the decisions of the specifications, details, sizes and finishes which ultimately are going to affect the final experiential output.

However, when architectural design is taught or implemented, the main focus is almost always towards the views - external or internal. It is equally important to pay attention towards the services while designing, which absolutely helps at the execution stages. The services mentioned in Table 1 are all equally important, and none can be missed out, albeit variations in materials, systems and applications. This could be the checklist for an architect before finalising the layout or design or to analyse the basic requirements and mandatory services provided.

Table 1: **Important areas where focus is required on types of services to be provided**
(Source: Collated by Author)

Mechanical services	Electrical services	Plumbing systems	Data-based / Low voltage systems
Fire-fighting systems	Power supply	Water supply	Security systems
Elevators and escalators	Backup power (diesel generators)	Drainage of wastes	fire alarm systems
HVAC systems (heating, ventilation, air-conditioning)	Emergency power (battery-based uninterrupted power supply)	Water recycling systems (Which allow recovery of water from waste and re-use that water for low-grade applications such as flushing)	Building management systems
Gas supply systems (for heating and cooking in residential buildings, or oxygen and nitrogen in hospitals)		Rainwater harvesting	Public address systems
			Cable TV systems
			Data networks
Compressed air systems used in industries		Storm water drainage	Voice networks

Figure 1: Wrong positions of two WCs within the same toilet

Figure 2: No space to open the door due to WC positioned in the entrance

Figure 3: Basin tap fixed in the wall with no extension pipe for a usable water flow

Figure 4: Side by side positioning of the urinals in public toilets without separator or usable space

Figure 5: Position of the shower rose is such that a shower can be taken by even seating on the WC. No space for standing below the shower

Figure 6: Position of pillar taps on Jacuzzi

Figure 8: Narrow space to access WC

Figure 10: No task light or sufficient light provided in the kitchen to work on the platform

Figure 7: Corner WC with no space to stand, while close to the WHB

Figure 9: Inadequate arrangement of lighting design to light the living space

Figure 11: Ventilator provided in flooring due to which the mat has to be cut

Figure 12: A single plug point with multiple chargers. No provision of sufficient plug points

There are some hilarious images showing the results of incomplete or incorrect knowledge or misunderstanding of services leading to the undesirable situations in a house, as seen in figures 1 to 12. The solution to this is that there has to have at least 50 % focus on services for the design to work efficiently in reality. A checklist in the design preamble itself while designing, given at the institute or college level only would provide a good grounding. Otherwise there will be no dearth of bad projects coming up, with a lot of extra and unnecessary expense incurred in order to rectify connections for water supply, electrification, HVAC and drainage lines or as remedial treatment for such circumstances.

There are some important points to be focused upon by teachers as well as students:
i) Building services play a pivotal role in contributing to the design of a building, in terms of overall strategies and standards to be achieved, as well as in façade engineering, the weights, sizes and location of major plant and equipment, the position of vertical service risers, routes for the distribution of horizontal services, drainage, energy sources, sustainability, and so on.

ii) Building services design must be integrated into the overall building design from a very early stage, particularly in complex building projects such as hospitals. For the services requirements of such large and complex buildings, a building services engineer might be appointed as the lead designer.

iii) As time passes, technology, treatment, tools, are all going to progressively change. We, as architects, need to move with this evolution and try to learn and incorporate all new terms and techniques into our buildings as well as in study materials in schools and colleges.

This is definitely going to help our students who are the future of society.

Image Sources

Figure 1 :
https://www.loveproperty.com/gallerylist/75500/epic-home-fails-worlds-worst-design-and-diy-mistakes
Figure 2 :
https://www.reddit.com/r/funny/comments/2hpvg0/fixing_a_toilet_leak_i_took_2_trips_to_home_depot/
Figure 3 :
https://www.boredpanda.com/poor-design-decisions-fails/?utm_source=google&utm_medium=organic&utm_campaign=organic
Figure 4 :
https://www.google.com/search?q=architectural+mistakes&hl=en&ndsp=15&srf=AOaemvKKL8xAwhbeSCBMb-ARqfT8BfOwHA:1636445594201&source=lnms&tbm=isch&sa=X&ved=2ahUKEwjZhNjy6or0AhUZuksFHYWIDxkQ_AUoAXoECAEQAw&biw=1707&bih=802&dpr=1.13#imgrc=cJZSzC3H0rncJM
Figure 5 :
https://www.instagram.com/p/BfzRoPvg9C3/
Figure 6 :
https://old.reddit.com/r/CrappyDesign/comments/b13w0p/this_bathtub_looks_like_somebody_was_killed_in_it/
Figure 7 :
https://admin.nanoresort.com/stories/these-are-probably-the-worst-designed-bathrooms-of-all-time/
Figure 8 :
https://www.reddit.com/r/backrooms/comments/hz215n/the_bathrooms/
Figure 9 :
https://www.google.com/search?sa=G&hl=en_GB&tbs=simg:CAQSiwIJ8Ya9E7qrL4oa_1wELELCMpwgaOwo5CAQSFMMYkzT7M4s1nCaiGbsQnhy9D8QJGhsEvX0hYAKI_1M5zDvyw2k8GIwdEg8AG7PuGZTMgBTAEDAsQjq7-CBoKCggIARIEK9o-rAwLEJ3twQkangEKIgoPZnVybml0dXJIIHN0eWxl2qWI9gMLCgkvai85dzBxanMKHQoKZGVjb3JhdGlvbtqliPYDCwoJL2ovNzZ5dHIkCh8KDGNvZmZlZSB0YWJsZdqliPYDCwoJL20vMDc4bjZtCh4KC2xpdmluZyByb29t2qWI9gMLCgkvbS8wM2Y2dHEKGAoFY291Y2japYj2AwsKCS9tLzAyY3JxMQwandsxsrf=AOaemvLHLUyNSz2k5LEIqT99aWShCmcDWQ:1636446347351&andq=hue+light+strip+behind+couch&tbm=ischandved=2ahUKEwjL3OjZ7Yr0AhULed4KHddrDq8Qwg4oAHoECAEQMgandbiw=1707&bih=802&dpr=1.13#imgrc=KXyP-TeG3RpNGM
Figure 10 :
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Figure 11 :
https://www.google.com/imgres?imgurl=https://bemorepanda.com/files/2020-08-17/images/529140.jpeg&imgrefurl=https://bemorepanda.com/en/posts/1597922492-the-family-turned-their-home-into-a-disney-fairy-tale-where-magic-awaits-you-behind-every-door-20-photos&video-andh=692&andw=700&andtbnid=6QN5RI4Ej_OQsM&andtbnh=223&andtbnw=226&andusg=AI4_-kTOr1tChO-uO5DQSf-ZOz6fQz8SpA&andvet=1&anddocid=uc1zTNQ2FNILZM&anditg=1&andhl=en_GB
Figure 12 :
https://d.facebook.com/100370951396938/photos/pcb.180565746710791/180564210044278/?type=3&andsource=49

Ar. Kalyani Nilesh Junankar is Principal Architect at *Antaranga Associates Architects and Interior Designers,* Pune, since 2004. She has handled several projects including town planning as well as auditoriums, residential and commercial interiors. Her major focus has been on construction detailing and services in an effort to improve the experience and appearance of the executed design. She has taught the subjects of services and construction in various institutes. Currently, she has been teaching at Smt. Kashibai Navane College of Architecture, Pune, since 2017.
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PRESENTS

IIAPL SEASON 10

KOLHAPUR

6TH ,7TH , 8TH & 9TH JANUARY 2022

ORGANIZED BY IIA SPORTS & CULTURAL COMMITTEE

HOSTED BY IIA KOLHAPUR CENTER, IIA MAHARASTRA CHAPTER

NEWSLETTERNOVEMBER

PROTEST

The Indian Institute of Architects condemns the assault on our fellow architect, Jitendra Bhandari, Treasurer of Karad Sub-Centre of IIA. He was brutally attacked by his clients last month and had to be hospitalised for almost a week with broken ribs and other serious injuries.

The architectural fraternity in India, through our professional body of the Indian Institute of Architects, has raised concerns regarding the safety of architects and has decided to take this matter up with all the noted authorities, as per the law of the land and with huge protests that were seen in the social media across India.

Ar. C.R. Raju, President of IIA, reiterated that this is a matter of concern and very unfortunate that one of our members has been physically assaulted. On behalf of IIA, he strongly condemned this and requested the authorities to take necessary action on the perpetrators of this dastardly act.

Ar. Jitendra Mehta, Junior Vice President of IIA, also visited the hospital for a ground status report about the well-being of Ar. Bhandari, who was completely traumatised. Ar. Mehta too seriously condemned the attack on Ar. Bhandari and said that this was a very cowardly act. The incident was akin to an attack on the entire fraternity. Ar. Mehta also met the members of the Bhandari family along with Ar. Sandeep Bawdekar, Chairman of IIA Maharashtra Chapter, Ar. Satish Jagadale, the Jt. Hon. Secretary of IIA Maharashtra Chapter. Ar. Mehta, while addressing the architects' fraternity, requested members across the country to come together against this cowardly act and stand together and fight for Ar. Bhandari.

Guidelines mentioned in the Code of Conduct of the Council of Architecture of India and the Handbook of Indian Institute of Architects, clearly specifies the scope of work of architects and the duties of the stakeholders and also clarifies the Conditions of the Contract along with Arbitration clauses, if applicable.

The primary concern in this matter is to intervene and firstly protect architects from such elements that are threats to the working of professionals in India. As a team, we are with the family of the architect and would like to ensure the safety of all architects and their dear ones.

IIA has taken strong cognizance of the said incident and has taken adequate steps to address this at the highest level to ensure the safety of architects in the country.

Ar. Manguesh R. Prabhugaonker
Chairman, IIA Architects Welfare committee

IIA-Haryana Chapter

GBM and Architects Meet held at Gurgaon

IIA Haryana Chapter conducted its second General Body Meeting of the current term, on Sunday, 17 October at Hotel Ramada Central, Gurgaon. The Chapter released a diary published for the members of the Chapter during the meeting. This diary was also released at the IIA Council Meeting held at Ranchi on 22 October.

It was also announced that the Chapter would publish a quarterly newsletter named Vaktavya from January 2022. The newsletter was unveiled at the GBM and the Editorial Committee was introduced to the General Body.

An Architects Meet, sponsored by Magic Windows and Fritt Solar, was held after the General Body Meeting. The Fellowship Meet was followed by dinner. The programme was attended by members from various parts of Haryana State.

A Diary for Members being released at the General Body Meeting.

Newsletter 'Vaktavya' being unveiled at the General Body Meeting

IIA-Jharkhand Chapter

23rd Young Architects Festival at Ranchi, Jharkhand

The 23rd Young Architects Festival at Ranchi, Jharkhand was hosted by the IIA Jharkhand Chapter on at Hotel Chanakya BNR on 22 - 24 October. It was attended by physically by more than 300 architects from across the country while many more attended the event livestream online. All National Council members along with all Chapter Chairpersons also attended. Though IIA Jharkhand Chapter is just four years old, their efforts are appreciated and praiseworthy.

Keeping all concerns of the pandemic in mind, the registration for the event required a compulsory double vaccine certificate, or an RT PCR test not older than 72 hours prior to the event. Additionally, a counter for COVID testing at the venue was also arranged for the on-the-spot registrations.

The theme of this year's YAF was REthink, REstore and Reconnect, with the social responsibility of the architect to connect across one and all. Along with the inaugural ceremony, the event commenced with the inauguration of the building material expo and the IIA Council Meeting.

This was followed by a stand-up comedy performance by Ar. Vaibhav Sethia and cultural programme Rhythm of the Forests by Shri Nandlal Nayak and a performance by Alvin Rosario.

The second day consisted of technical sessions and presentations of work by several young architects from various parts of India. The day ended with a Valedictory session. During this, IIA Young Architect of the Year Awards were given and the organising committee was felicitated. The winners of the Young Architects Design Competition were also awarded. YAF 2022 was introduced by Kerala Chapter. The concluding remarks were given by IIA President Ar. C.R. Raju. The day ended with the inter-chapter cultural competition and a rock show by the band Sparsh 2.0.

On the third day, many of the participants went on a trip to Patratu.

Inauguration of building materials expo

Book Launch of *Beyond the Forests*

Technical session *ReThink* Presentation of work by Ar. Akshay Hiranjal

Technical session *ReStore* Presentation of works by Ar. Vinu Daniel

IIA-Karnataka Chapter

Representation to the Government

IIA Karnataka Chapter under the leadership of Chairman, Ar. Mohan B.R on 11 October 2021, submitted a memorandum to the Honourable Chief Minister of Karnataka, Shri. Basavaraj Bommai highlighting the need for architects to be included in Urban and Rural development for sustainable development. The memorandum also requested the CM to appoint eminent architects in various state boards and initiate Rajyotsava award for architects under Architecture category.

Outlining the activities that the IIA Karnataka chapter aims to undertake, the memorandum outlined that IIA-KC intends to

- Curate public exhibitions of the best works of architecture
- Conduct public events to create awareness about built environments.
- Educate students in schools and colleges about the profession and promote consciousness about the future impacts of how they shape their built environments.
- Support Architecture education in architecture schools through regular lectures and seminars by a panel of practicing architects to expose and empower the students with practical knowledge at an early stage.
- Conduct mentoring programmes for fresh graduates to hand hold them during the initial years of their career.
- Actively participate in formulating building byelaws and urban planning guidelines to ensure better quality spaces.
- Participate in rural development to bring in advanced technology whilst maintaining the local ethos intact.

Meeting with Honorable Chief Minister of Karnataka, Shri. Basavaraj Bommai to submit a memorandum on behalf of IIA, Karnataka Chapter on 11 October 2021

Third Executive Committee Meeting

The third Executive committee Meeting for the term 2020-2022 was held at "The Terrace, Century Club", on Saturday, 09 October 2021 at 6pm.

World Architecture Day Celebrations

The Indian Institute of Architects, Belgaum Center celebrated World Architecture Day on 4th Oct 2021 in the auditorium of Angadi School of Architecture, Belagavi. The chief guests were Ar. Jeetendra Mehta (Junior Vice President IIA, National Council) and Ar. Leena Kumar (Joint Honorary Secretary, National Council). The program also included felicitation of Ar. M.K. Joshi. A teaser of film on Ar. M.K.Joshi which is in the making by Ar. Vinayak Mutekar, was screened. On the occasion Ar.M.K.Joshi thanked the IIA Belgaum center and shared his experiences. The program was attended by architects and architecture students from Belgaum, Hubli and Dharwad.

World Architecture Day celebrations and felicitation of Ar.M.K.Joshi by IIA, Belgaum Center on 4 October 2021

Webinar

The Indian Institute of Architects, Kalaburagi Center in association with PDSS School of Architecture, Kalaburgi organized a webinar on 'Sustainable Development – A Means to Better Future' on 10 October 2021 for architects and students of architecture.

The speakers at the webinar were Ar. Sharanagouda Biradar, Voidspace Architects and Ar. Anusha Akki, an expert in Sustainable Architecture.

Webinar on Sustainable Development conducted by IIA, Kalaburagi Center on 10 October 2021

Nomination for Young Architect Award

The Indian Institute of Architects, Karnataka Chapter received nominations for Young Architect award and forwarded the same to the jurors Ar. Alex Jacob, Ar. Geetha VG and Ar. Sathish Kumar Desai. Care was taken to mask the competitors names, address and firm's name and each was given a code before sending them to jury members. Based on their evaluation and marks, Ar. Apurva Bose Dutta has been recommended for the Young Architect award from Karnataka Chapter. None of the elected members were involved in evaluation process to ensure that it is a fair selection.

IIA Brihan Mumbai Centre had organized the first edition Design Dissertation (IIA BM DD) Awards 2020 for the colleges of the Mumbai Metropolitan Region (MMR) to encourage students doing the B.Arch. course to have a practical approach through their Design Dissertation. The students of Semester 10 (2019 – 2020) were invited to participate in the annual IIA BMC-DD Awards Programme 2020 by submitting their Design Dissertation. 64 entries were received online from 18 colleges in the Mumbai Metropolitan Region. At Stage 1, 15 entries were shortlisted in May 2021. At Stage 2, on 26 June, the shortlisted entries presented their dissertation projects online to the jury which consisted of three of Mumbai's prominent architects- Ar. Ratan Batliboi, Ar. Kiran Kapadia and Ar. Sandeep Shikre.

On relaxation from the pandemic situation, IIA Brihan Mumbai Centre organized the felicitation of the first edition of the IIA BM DD Awards 2020 at the Nehru Science Centre Auditorium on 30 October. The audience present were the winning students, with their parents, dissertation guides and principals and faculty members of colleges. The three jurors had consented to be the chief guests. The guests of honour were the national Vice-President of IIA, Ar. Vilas Avachat and Honourable IIA members, Ar. Paresh Kapadia and Ar. Yashwant Pitkar, along with veteran architect and past President of IIA, Prof. Madhav Deobhakt.

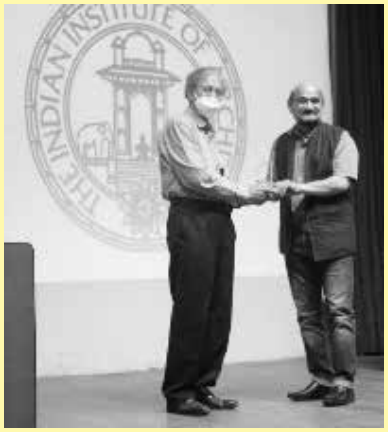
All the participating students were given certificates of participation, while the top 15 students also received a memento. The top three winners were awarded certificates, trophies, cash awards and a laser measuring device. The unique and heart-warming aspect of this programme was that along with felicitating the students, the principals and guides of the top fifteen winners were also felicitated with mementos and certificates.

The Brihan Mumbai Centre also launched the Smart Card, which will be distributed to all members of the Centre at a nominal cost.

The list of top 15 winners are as given below:

Position	Name of Participant	Dissertation Topic	Representing College	Guide's name
First	Anushka Samant	Protean Living: Adapting to the Climate Crisis	L.S. Raheja School of Architecture	Prof. Mridula Pillai Gudekar
Second	Trushad Poladia	Re-thinking Architectural Heritage: A Case of the Watson Hotel Building	IES College of Architecture	Prof. Siddharth Shirur
Third	Rohan Shetty	Integrated Mobility	Baliram Hiray College of Architecture	Prof. Shantanu Khandkar
Special Mentions	Tina Kedia	Unravelling Hyperdensity : Re-imagining Habitation of Project-affected People (PAP) in Mumbai	IES College of Architecture	Prof. Siddharth Shirur
	Mayank Mangal	Aakrati: A Safe, Nurturing Environment for Street Children in Mumbai	IES College of Architecture	Prof. Khudeja Patel
	Aditya Verma	Hybrid 1 – Mixed Use Hub	Aditya College of Architecture	Prof. Rita Nayak
	Mahak Jain	Alternate Avenues : A Case of Coastal Wetlands	Aditya College of Architecture	Prof. Rita Nayak
	Shivani Patil	Urban Catalytic Centre	B.R. Harne College of Architecture	Prof. Mohd Haseeb Rangrej
Runners up	Jayesh Jain	Transit Hub - An Urban Node	Thakur College of Architecture	Prof. Sanjeev Joshi
	Nikhil Nichite	Bioplex - Centre for Biodiversity Conservation and Education at Gureghar, Mahabaleshwar	B.R. Harne College of Architecture	Prof. Ketaki Gupte
	Nikhil Patni	Namasya Convention and Exhibition Centre	Baliram Hiray College of Architecture	Prof. Shalini Shrimali
	Ketaki Apte	Cultural Hub : Sanskrutik Adda	Sir J.J. College of Archtiecture	Prof. Parul Kumtha
	Vedant Khopkar	ROPAX: A Transport Threshold Between Land and Water	Baliram Hiray College of Architecture	Prof. Sameer Naik
	Khyatee Likhar	Essence of Spirituality in Urban Area	Lokmanya Tilak Institute of Architecture and Design Studies	Prof. Anuradha Kapadia
	Namrata Parab	Community Resource Centre for the Turbhe Quarry Worker Community.	Pillai HOC College of Architecture	Dr. Joydeep Dutta

(L to R) Trushad Poladia (2nd place), Anushka Samant (1st place), Ar. Nilesh Dholakia (Chairman of IIA Brihan Mumbai Centre), Rohan Shetty (3rd place), Ar. Paresh Kapadia (Member, IIA)



Honourable IIA member, Ar. Yashwant Pitkar felicitating Ar. Vilas Avachat, national Vice-President of IIA

IIA-Maharashtra Chapter

The Treasurer of Karad Sub-Centre of The Indian Institute of Architects Ar Jitendra Bhandari was brutally attacked last week and he was hospitalized for almost a week with broken ribs and other injuries.

It is learnt that the attack was carried out by a client of Architect Bhandari. Mr Bhandari was invited by the attacker to settle the remaining amount of his fees. During the discussions, the attacker along with 7-8 associates started abusing and beating him and his brother who accompanied him. They hit both of them with hands, kicked them and even hit with chairs, as per the FIR files by Architect Bhandari.

The police have arrested seven persons in connection with the incident and bail was granted to them.

It is observed that recently, there is increase in the number of attacks on professionals. The case of dumping original architect after getting required design and drawings and continuing the work with other architect or no-architect/ engineer have also increased.

It is a shameful incidence for a progressive and culturally rich state of Maharashtra. The incidence has caused a sense of insecurity in the minds of family members of architects. There are more than 20000 architects in Maharashtra and it is a peace-loving, art-oriented and devoted fraternity.

The issues of professional relations and economic relations between an architect and his client are, no doubt, personal ones. But if there are any disputes between the two, those can be amicably resolved with the help of an arbitrator, if required. Any physical attack on the architect is highly condemnable and deplorable.

Architect in one of the nation-builders. Any city/region is represented by architectural monuments. Like Tajmahal or Shaniwarwada or Parliament etc. the Government as well as the society must take serious cognizance of the attack on an architect and take steps to prevent any incidence of this type in future.

The first step to prevent this is to make it mandatory to attach 'Letter of Appointment' of the architect to every proposal for sanction. No change in the architect be allowed in any ongoing/sanctioned project without NoC from previous architect.

All architects are going to protest against the incident on 25 November 2021 by wearing a black ribbon for the day. They will also give their representations to concerned authorities throughout the state.

IIA-Punjab Chapter

IIALC celebrates 'Azadi' with masses of Ludhiana

Date: October 3, 2021
Place: LUDHIANA +-

As a part of Azadi ka Mahotsav, masses in Ludhiana joined the Food, Civil Supplies and Consumer Affairs Minister Bharat Bhushan Ashu, Mayor Balkar Singh Sandhu, Deputy Commissioner Varinder Kumar Sharma, The Commissioner of Police Gurpreet Singh Bhullar and the MC Commissioner Pradeep Kumar Sabharwal to celebrate 75 years of India's Independence. On behalf of IIA, Punjab Chapter our worthy Chairman Ar. Sanjay Goel attended the event.

Cyclothon and Walkathon at Ludhiana

Architects for a Healthier World

Date: October 4, 2021
Place: LUDHIANA

During the World Architecture Day, The Chief Guest of the Event DC Ludhiana Mr. Varinder Kumar Sharma spoke on the importance of a clean environment and the professional responsibility architects have towards the city on planning for hygiene in the cities. Ar. Sanjay Goel, our worth Chairman of IIA Punjab Chapter, who was the guest of honor at the event echoed the same thoughts of how architects can help create a healthy world. Eminent speakers, Ar. Yogesh Singla, Ar. Akanksha Sharma , Ar. Vikas Sharma , Mr. G.S Sachdeva, Mr. G.S Dhillon further reiterated the importance of contextual relevance and historic precedence in design. Architects from GNDU school of Architecture also participated in the event.

World Architecture Day Celebrations at Ludhiana

IIA Ludhiana celebrates World Town Planning Day
Date: November 8, 2021
Place: LUDHIANA

On the occasion of World Town Planning Day (WTPD) and the World Urbanism Day (WUD), Architect Sanjay Goel, Worthy Chairman of the IIA Punjab Chapter and the Director of Ludhiana Smart City Mission emphasized the importance of planning in City especially in Ludhiana. Being one of the main industrial towns of Punjab he highlighted the need to create livable urban communities in a safe, sustainable and environment friendly environment. Cohesive urbanization, an improved fabric of the city is sure to bring about a wellness to our lives too, he stressed. Attended by Architects and Engineers, pledging endeavors for climate change; the event revisited the crucial connection between living environments and nature.

Chairman IIA Punjab, Ar. Sanjay Goel addressing the audience on World Town Planning Day

President IIA and members at the NICHE IPM at LPU
4th Neo-International Conference on Habitable Environments and International Professionals Meet
Date: November 12-13, 2021
Place: ONLINE; LPU (Lovely Professional University, Phagwara) platform

Dr. Ar. Atul Kumar Singla IIA Chairman Jalandhar Chapter with our worthy Punjab Chapter Chairman Ar. Sanjay Goel have always endeavored to keep the young generation informed and the older ones stimulated at the thought of sustainable surrounds. Being the Dean at LSAD, Lovely Professional University, Dr. Ar. Atul Singla never misses the opportunity to bring together brain-storming expert minds from around the world and young inquisitive ones to debate at this educational platform of NICHE. Being held for the fourth time now, the Niche gives crisp lessons on smart ideas and delivers great knowledge skills by discussing the concurrent projects of the leading architects. Amongst the eminent speakers this time were Ar. Raj Rewal, Ar. Habib Khan, President, Council of Architecture, Dr. Semra Arslan, Gazi University, TURKEY, Dr. Sandeep Agrawal University of Alberta, Alberta, CANADA., Prof. Utpal Sharma, Director Institute of Architecture & Planning, Nirma University, Ahmedabad, Ar A K Singh Director SMVDU Jammu & Kashmir, Ar. Tarun Gupta, Elegant Design Solutions, Dr. Sarbeswar Praharaj Arizona State University, USA. IIA had a celebrated presence at the event. Graced by the IIA president Ar. C R Raju, President Indian Institute of Architects, Mumbai, and eminent members Ar. Punit Sethi Chairman IIA Haryana Chapter, Council of Architecture Representative from Northern Region of IIA, Ar Ameet Babar, Jt. Hon. Secretary of the, Indian Institute of Architects (Northern Chapter), the Niche was a roaring success.

IIA-Rajasthan Chapter's

1. Celebrated World Architecture Day, at Kalaneri Art Gallery.

IIA Rajasthan chapter celebrated World Architecture Day on 4th October 2021 at Kalaneri Art Gallery with two eminent speakers Ar. Ashok Pareek and Ar. Neeraj Gupta. The talk show was on the topic "Learning from Vernacular Wisdom", it was a very interactive and fruitful session.

The speakers shared their experiences and stated the importance of vernacular practice is being timeless. Several architects & architecture students as well attended the eventwhich was followed by Hi-tea.

2. Master speak series & Launch of Design Concept Competition-Expression, at Marriot Jaipur

After a long gap because of the covid-19 pandemic, The Indian Institutes of Architects Rajasthan chapter organized a Master speaks session in Hotel Marriott Jaipur on Saturday 25th September 2021. The event was started with a warm welcome of Key Note Speaker Mr. Aman Nath& the National President of IIA, Ar. C.R. Raju by Ar. Tushar Sogani , chairman IIA Rajasthan chapter.

The honourable speaker Mr. Aman Nath, a famous Indian writer, hotelier and architectural restorer, shared his learning of work practice with the audience, along with his experience in restoration world.

The event was also followed by launching of concept design competition "Expression" for all the members to design and conceptualize its very own building on its own land, making it a competition "by an Architect for an Architect".

The event was very well attended by the members of IIA from all over the state and was followed by dinner.

3. ECBC Capacity building training program, at ITPI Jaipur

IIA (Rajasthan Chapter) in association with Bureau of Energy Efficiency, Rajasthan Renewable Energy Corporation organized a two-day training program on ECBC and ENS capacity development at JLN Marg Institute, on 25th & 26th September 2021.

This event was graced by Ar. C.R. Raju, President, Indian Institute of Architects who was the chief guest of the inaugural ceremony. In this training program, panel of experts gave many suggestions for better development of the city.

4. IIA Corona warriors Cup

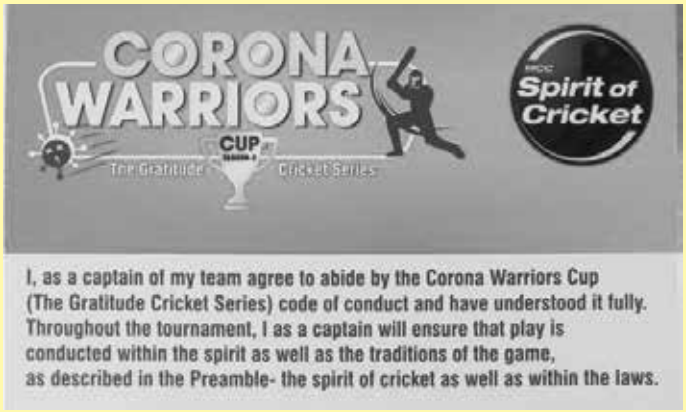
The city of Jaipur recognized the role of Architects during the testing Covid times. Team IIA was invited to participate in this year's Corona Warriors Cup as 'architects' along with Doctors, Administration, Media, Banker and Police. It was a very proud moment for the Architect's team as they were able to reach the semi-finals.

5. Courtesy Meeting with UDH Consultant.

The executive committee of IIA Rajasthan Chapter planned a meet with Mr. GS SandhuJi - UHD Consultant to discuss the future development initiative let by government. The members of IIA conveyed their support for the same.

6. Building Regulation Bye-laws books

IIA (Rajasthan Chapter)in association with Department of UDH distributed complementary copies of the Building Regulation Bye-laws book to all the members of IIA Rajasthan chapter.



The Preamble of the Event.

IIA-Gujarat Chapter

IIA Vadodara Centre started a lecture series on Connecting Our Built and Un-Built World's Knowledge Series. The first speaker for the series was Ar. Jitendra Mehta was held at The Grand Mercure Vadodara Surya Palace on 16 Oct 2021. Ar. Jitendra Mehta is an eminent architect and urbanist of central India, with more than 25 years of experience, and has a proactive response to sustainable architecture and urban planning. He has also been a National Council Member, IIA (2015-2019) and Chairman of IIA, Madhya Pradesh Chapter (2011-2015) and member of the International Affairs Board of IIA. He has conducted various professional development programmes and educational events for architects and students of architecture. The programme, sponsored by Berger Paints, was attended by over a hundred architects, interior designers and students of Vadodara, Anand, V.V. Nagar.

IIA-Kerala Chapter

IIA Kerala Chapter Executive Committee meeting was held on the 9th October 2021, hosted by IIA Calicut Centre at Malabar Palace, Calicut. IIA Kerala Chapter Executive committee interacted with Sri. P. A Mohammed Riyas, Honorable Minister of Public Works Department and Tourism, Government of Kerala- flagging off the visits to public projects in Calicut on the 10th of October 2021. "Experience-A Walk with the Architect" was an event organized by IIA Calicut Centre, hosting IIA Kottayam Centre on 9th October and both IIA Kottayam Centre and IIA Executive Committee members on 10th October. THE GENDER PARK by Space ART, YAHVI and MALABAR HEAD QUARTERS by Stapati Architects were visited on the first day. FREEDOM SQUARE by De Earth Architects, SAMUDRA by Satkriya, UDAYAM by TWOI Architects and GHSS KARAPARAMBA by DAC Global were visited on the second day.

CRICKETIIA 2021

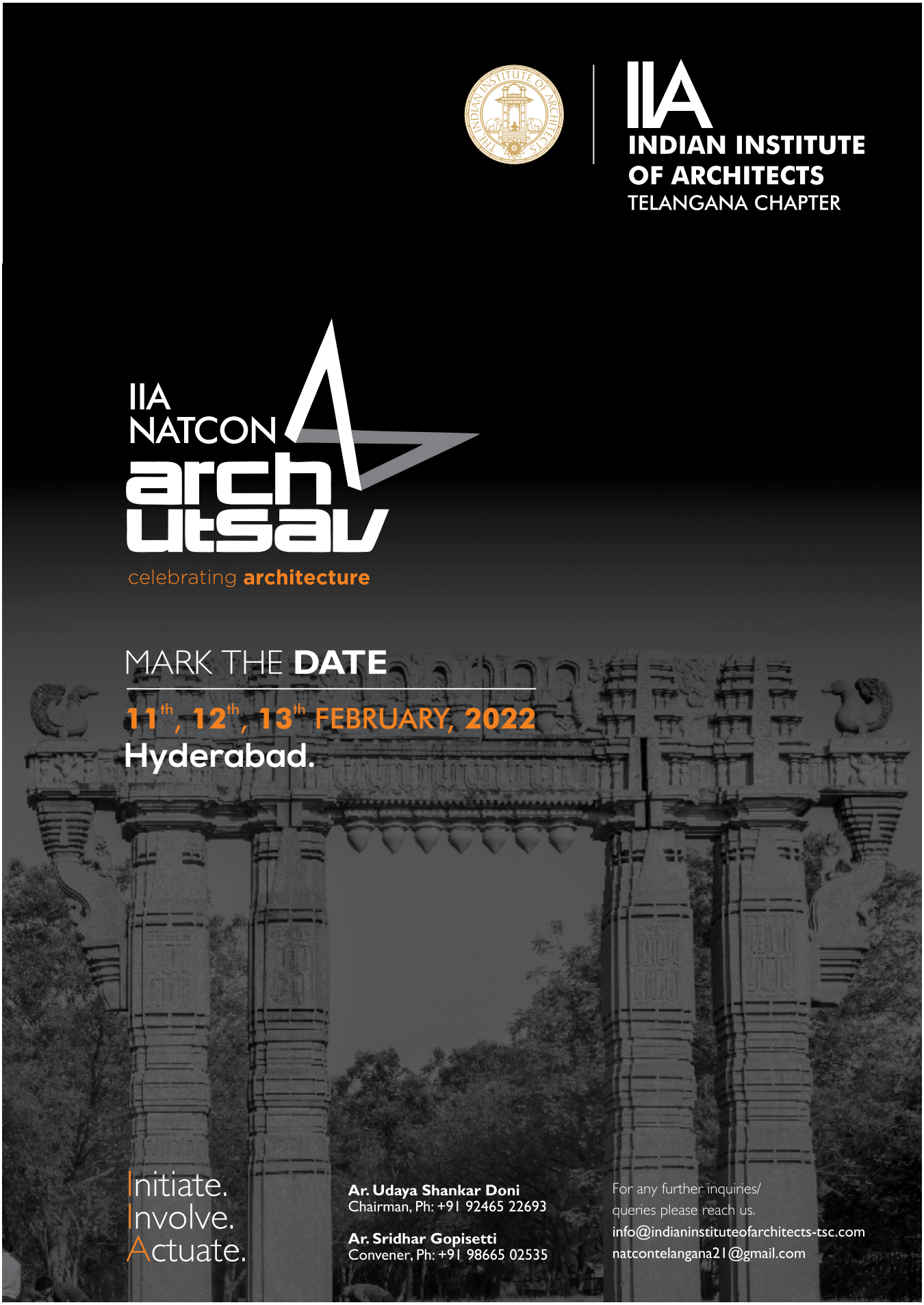
The Inter Centre Cricket Tournament of IIA Kerala Chapter was organised by the Sports Committee headed by Ar. Amshunath Radhakrishnan at Rajagiri Cricket Ground, Kochi on 20th, 21st and 22nd of November 2021. The event was inaugurated by IIA Kerala Chapter Chairman Ar.L Gopakumar by handing over the team jersey to the respective captains on 20th morning at the cricket ground. A total of eight team participated in the tournament, namely:
- THRISSUR TITANS (IIA THRISSUR CENTRE)
- PALAKKAD WARRIORS (IIA PALAKKAD SUB CENTRE)
- QUILON CRICKET COLLECTIVE (IIA KOLLAM CENTRE)
- CALICUT KINGS (IIA CALICUT CENTRE)
- KANNUR RAPTORS (IIA KANNUR CENTRE)
- TRIVANDRUM MONKS (IIA TRIVANDRUM CENTRE)
- KOTTAYAM TUSKERS (IIA KOTTAYAM CENTRE)
- KOCHI UNITED (IIA COCHIN CENTRE)

After neck to neck competition on the first & second day, THRISSUR TITANS (IIA THRISSUR CENTRE), CALICUT KINGS (IIA CALICUT CENTRE), KOCHI UNITED (IIA COCHIN CENTRE) & QUILON CRICKET COLLECTIVE (IIA KOLLAM CENTRE) reached the semi-finals. The final was played between KOCHI UNITED (IIA COCHIN CENTRE) & QUILON CRICKET COLLECTIVE (IIA KOLLAM CENTRE) on 22nd November. QUILON CRICKET COLLECTIVE (IIA KOLLAM CENTRE), a team of ardent cricket lovers who kept the love for cricket alive through years, won the IIA KERALA PREMIER LEAGUE TROPHY.

The following individual trophies were achieved by the below mentioned players.
Star Bowler of the tournament- Ar Amshunath(Kollam)
Star Batsman of the tournament-Ar Deepak divakaran(Cochin)
Man of the series-Ar Shaheer (Calicut)
Young player of the tournament- Ar Afin Sabjan(Kollam)

We extend our gratitude to the title sponsor of the tournament- Trojan Plywood and Co-Sponsors: Tostem windows, Nitco Tiles, Beautile, Volte electricals, and Kerovit by Kajaria. The much awaited tournament post the pandemic blues was indeed a booster for the cricket enthusiasts of IIA Kerala Chapter.

The winners of the KC Cricket - IIA Kollam Centre


IIA
INDIAN INSTITUTE
OF ARCHITECTS
TELANGANA CHAPTER
IIA
NATCON
arch
utsav
celebrating architecture
MARK THE DATE
11th, 12th, 13th FEBRUARY, 2022
Hyderabad.
Initiate.
Involve.
Actuate.
Ar. Udaya Shankar Doni
Chairman, Ph: +91 92465 22693
Ar. Sridhar Gopisetti
Convener, Ph: +91 98665 02535
For any further inquiries/
queries please reach us.
info@indianinstituteofarchitects-tsc.com
natcontelangana21@gmail.com

WELCOME NEW IIA MEMBERS

4th Council Meeting held on 22nd October, 2021

Sr. No.	Associate to Fellow	Memb. No.	Place
1	Ar. Bhuvana Sundar Marappan	F08173	Coimbatore
2	Ar. Siddarth Gopala Sankar	F17033	Coimbatore
3	Ar. Aravindan V	F15855	Coimbatore
4	Ar. M Arivudainambi	F11040	Coimbatore
5	Ar. Nandlal Chandel	F09222	Himachal Pradesh
6	Ar. Ravindhar S	F17772	Chennai
7	Ar. Mazahir Sheikh Abdul Razak	F18886	Lonavla
8	Ar. Meenakshi Pappu	F17642	Andhra Pradesh
9	Ar. Sanjay Bhargava	F12079	Uttarkhand

Sr. No.	Dirct Fellow	Memb. No.	Place
1	Ar. Sanjukta Bhaduri	F24674	Delhi
2	Ar. Mohammed Firoz C.	F24675	Kerala
3	Ar. Anjana Bhagyanathan	F24676	Calicut
4	Ar. Ashish Gupta	F24677	Noida
5	Ar. Pooja Agrawal	F24678	Uttar Pradesh

Sr. No.	Assoicate	Memb. No.	Place
1	Ar. Bhupinder Kumar Pal	A24679	Haryana
2	Ar. Sarathkumar M	A24680	Chennai
3	Ar. Umesh Subrao Namde	A24681	Pune
4	Ar. Joel T Joseph	A24682	Kerala
5	Ar. Siddharth Mahim Bansal	A24683	Chandigarh
6	Ar. Swati Kumawat	A24684	Chandigarh
7	Ar. Jayadevi Venugopal	A24685	Cochin
8	Ar. Vinu Elias Jacob	A24686	Kerala
9	Ar. Esha Vinay Dalal	A24687	Vadodara
10	Ar. Vikas M V	A24688	Bangalore
11	Ar. Devyani Priyanshu Shrivastava	A24689	Gujarat
12	Ar. Priyanshu Ashokkumar Srivastava	A24690	Gujarat
13	Ar. Khyati Tewari	A24691	Vadodara
14	Ar. Satpritika C	A24692	Salem
15	Ar. Rohini Vijay Wali	A24693	Vadodara
16	Ar. Ruma Singh	A24694	Vadodara
17	Ar. Suvaj Mohanty	A24695	Odisha
18	Ar. Takbir Fatima	A24696	Telangana
19	Ar. Megha Goyal	A24697	Rajasthan
20	Ar. Radhika Sukumar	A24698	Calicut
23	Ar. Shilpa S Sambargi	A24701	Bangalore
24	Ar. Mandar Dattatrya Mhaskar	A24702	Pune
25	Ar. Shreyash Gupta	A24703	Uttar Pradesh
26	Ar. Swati Mohapatra	A24704	Pune
27	Ar. Rujuta Prashant Sandhya Muley	A24705	Aurangabad
28	Ar. Yash Kiran Kranti Bagad	A24706	Navi Mumbai
29	Ar. Challa Ravikumar Babu	A24707	Visakhapatnam
30	Ar. Krut Atulbhai Kavathia	A24708	Ahmedabad
31	Ar. Akash Jayeshbhai Trivedi	A24709	Ahmedabad
32	Ar. Sarojini A	A24710	Chennai
33	Ar. Rahul Shrinivas Sarita Sulge	A24711	Mumbai
34	Ar. Prakriti Mehta	A24712	Mumbai
35	Ar. Ritesh Ramesh Bharti Rohra	A24713	Thane
36	Ar. Alex Wilson	A24714	Thrissur
37	Ar. Aditya S Unnithan	A24715	Trivandrum
38	Ar. Darshan Jayesh Lineswala	A24716	Surat
39	Ar. Robin Benny	A24717	Kerala
40	Ar. Gautami Sanjay Mayuri Bhoite	A24718	Mumbai
41	Ar. Balaji R	A24719	Tamil Nadu
42	Ar. Barathi S. N.	A24720	Chennai
43	Ar. Vignesh M	A24721	Tamil Nadu
44	Ar. Anuvind M S	A24722	Cochin
45	Ar. Nishan Alex Koshy	A24723	Cochin
46	Ar. Sujeet Kumar Mishra	A24724	Bihar
47	Ar. Siraj Mohammed O	A24725	Kerala
48	Ar. Shailesh Subhash Khopkar	A24726	Mumbai
49	Ar. Jatin Kishor Harshida Talsania	A24727	Mumbai
50	Ar. Rajeev Krishnan G	A24728	Trivandrum
51	Ar. Alok Dinesh	A24729	Kannur
52	Ar. Vivek V	A24730	Trivandrum
53	Ar. Stalin M	A24731	Coimbatore
54	Ar. Sadiq Moosa S	A24732	Coimbatore
55	Ar. Praseen C M	A24733	Trivandrum
56	Ar. Abdul Hakkim A	A24734	Tamil Nadu
57	Ar. Gokulraj T	A24735	Tamil Nadu
58	Ar. Tanvi Shajan	A24736	Kannur
59	Ar. Ansil A J	A24737	Trivandrum
60	Ar. Rajshree Krishnan Rajmohan	A24738	Trivandrum
61	Ar. Shan Choudhary	A24739	Indore
62	Ar. Vijay Kataria	A24740	Delhi
63	Ar. Jashid T	A24741	Kerala
64	Ar. Pratima Joshi	A24742	Pune
65	Ar. Suryanaryana Kakani	A24743	Ahmedabad
66	Ar. Nayankumar Chimanlal Barot	A24744	Ahmedabad
67	Ar. Vinay Shankar Gajakos	A24745	Mumbai
68	Ar. Sibin Sabu	A24746	Kottayam
69	Ar. Ajay Krishna P K	A24747	Salem
70	Ar. Sugadevan A	A24748	Salem

71	Ar. Sangeetha R I I	A24749	Salem
72	Ar. Jake Joseph	A24750	Kottayam
73	Ar. Kavita Ganpat Bhosale	A24751	Lonavala
74	Ar. Anjali Nair	A24752	Cochin
75	Ar. Meghna Anilkumar	A24753	Kerala
76	Ar. Nadeem Anwar Khokar	A24754	Lonavala
77	Ar. Rachana M	A24755	Bangalore
78	Ar. Nithya E. S.	A24756	Chennai
79	Ar. Avinash Kalyenee Ankalge	A24757	Pimpri Chinchwad
80	Ar. Nikhil Harry	A24758	Indore
81	Ar. Naresh V	A24759	Tamil Nadu
82	Ar. Ruksana Najeeb	A24760	Kottayam
83	Ar. Giby George	A24761	Kottayam
84	Ar. Aadityaraj Jain	A24762	Indore
85	Ar. Akshay Yashwant Borati	A24763	Lonavala
86	Ar. Shilpa Madan Gopal	A24764	Bangalore
87	Ar. Akshat Bhatt	A24765	New Delhi
88	Ar. Diggaj Aashish Shah	A24766	Surat
89	Ar. Gopal Chand Sharma	A24767	Himachal Pradesh
90	Ar. Vrushali Vitthal Dhakate	A24768	Nashik
91	Ar. Neha Harish	A24769	Bangalore
92	Ar. Goutham D M	A24770	Bangalore
93	Ar. Prashanth N.	A24771	Bangalore
94	Ar. Milana M. V.	A24772	Bangalore
95	Ar. Mohamed Inamul Hasan M	A24773	Madurai
96	Ar. Vyshakh Sasidharan	A24774	Calicut
97	Ar. Rohith A.	A24775	Calicut
98	Ar. Abin P Syriac	A24776	Cohin
99	Ar. Athul Binesh	A24777	Cochin
100	Ar. Devendra Sanjay Deshpande	A24778	Nagpur
101	Ar. Harshwardhan Panditrao Nagpure	A24779	Nagpur
102	Ar. Komal Vishwanath Dhakate	A24780	Nagpur
103	Ar. Radha Vilas Nanoti	A24781	Nagpur
104	Ar. Revati Indrajeet Wasu	A24782	Nagpur
105	Ar. Muhammed Sayyaf A C	A24783	Calicut
106	Ar. Sushma V	A24784	Bangalore
107	Ar. Yash Vijay Modi	A24785	Pondicherry
108	Ar. Rashi K Bhandari	A24786	Gujarat
109	Ar. Piyush Pareta	A24787	Rajasthan
110	Ar. H. Ahmed Fazeel Akram	A24788	Tamil Nadu
111	Ar. Kamini Jain	A24789	Indore
112	Ar. Chaitanya Avinash Ketkar	A24790	Pune
113	Ar. Hindocha Falgun	A24791	Ahmedabad
114	Ar. Alhad Digamber Gore	A24792	Mumbai
115	Ar. Ramanjyot	A24793	Ahmedabad
116	Ar. Shivee	A24794	Bihar
117	Ar. Manasi Gautam Swati Chokshi	A24795	Mumbai
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