



# PEATA CONNECT

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WITTY  
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SCHOOL**

**PEATA'S  
YOUNGEST  
PRESIDENT  
IN 55 YEARS  
TAKES CHARGE**



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# President's Message



*My Fellow Professionals,*

I would like to thank entire PEATA PARIVAR along with the Executive Committee members, Past Presidents and all the senior architects, who have given me the chance to lead our prestigious organization.

I know the responsibility is great. I assure you that I shall do my best to discharge these responsibilities to the best of my ability.

I along with the Executive Committee members shall always keep in mind the interest of members and the Prestige of the Association.

PEATA has done excellent work in the last 55 years, and we shall continue the same in the future.

As I think back over the past 18 years since I first started working for PEATA, with articles for Newsletters in 2002 and then becoming EXECUTIVE MEMBER, it has been a memorable journey. I believe that the vision of our Past President, Ar. Pravin Kanekar Sir of providing a platform to young, budding architects has been fulfilled. Past President Ar. Shirish Sukhatme my professor at JJ college has always motivated me to work for PEATA and with his dynamic style of functioning have influenced lot of young architects. Thank you Sir for your leadership qualities and your constant support.

In all seriousness, I am honoured to follow the line up of people who have provided guidance for PEATA in the past; each of our past Presidents (from Satish Dhupelia, Natubhai Badheka, Sudhakar Dhokne, Vijay Phulkar, Jayant Vaidya, Bharat Shah, Manoj Daisaria, Manoj Dubal, Ajit Khatri, Tarun Motta & Dilip Sanghavi) have brought a different vision with them, and all have proven to have different strengths. I suppose I am no different in that, I have some ideas, and I hope that you will support me as you've supported those Presidents who have preceded me.

Looking forward into my years as a President I can see how much time and energy goes into the smooth running of an organization

I have thought of a few innovative ideas which I would like to implement in the coming 2 years, such as:

1. PEATA (I) would like to extend beyond its forte of BMC/SRA /MHADA and I would start a committee, which would handle the study of approval at Thane Municipal Corporation, with this we would extend our membership to Thane regions as well.
2. We would also be forming a committee on approvals in CIDCO / Navi Mumbai.
3. PEATA CONNECT, a new committee will handle all Public Relations of

PEATA (I), such as follow up of letters to various departments of MCGM / UD. Along with increasing PEATA's presence on social media.

4. Knowledge cell of PEATA (I) would handle the webinar series / lectures series and news letters.
5. PEATA would also now be actively involved with problems faced by our fellow professionals. We would be concentrating to solve issues which can be solved, at Dy che /Chief engineers /MC level.
6. PEATA will henceforth reply to every letter addressed for PEATA's intervention. As a president I will always be available, be it for small issues at zonal bp level or at Municipal Commissioners level.
7. PEATA will also in coming years, be more involved with the design aspect in building industry and hence I would like to bring in design architects to share their views and vision.
8. Though most of the colleges are associated with PEATA for their workshops, hence forth PEATA should also be involved in spreading word of all PEATA activities on college campuses, so that all budding architects can become members of PEATA at an early stage of their careers.

I would need experienced seniors & young architects to fulfill our vision for next 2 years. Today I appeal to all who would like to work for PEATA to come forward and bring in their ideas for betterment of our organization.

As I take over the President ship, I would also be taking over responsibilities of representing our association to various forums, related to building industry and I would see to it that PEATA as a body is given its proper due on these forums.

We would also be, as always, working with the Municipal authorities / SRA / MHADA and would represent our issues as an when required to each and every level of the approving authorities.

Lastly I would also like to thank my dad Ar. Rasik P. Hingoo for teaching us ethics of professional practice , and making us what I am today. Not to forget my brothers Kinjal and Nirav who would be an able support throughout the coming 2 years.

PEATA CONNECT is being launched with a vision of reaching out to our professional Colleagues. This would in a way be the mouth piece of PEATA with various topics from architecture to laisoning issues being covered. I congratulate the young team led by E.C. member Er Nirav Hingoo and wish him a great success with his vision of PEATA Connect.

Thank You Once again

**AR. SAMIR R. HINGOO**  
*PRESIDENT, PEATA (I)*

# Editor's Note



I am delighted to introduce to you all PEATA Connect's first issue which will be the official Newsletter for PEATA(I). With PEATA(I)'s glorious past and heritage the newsletter will be a channel to broaden the reach of PEATA(I) as an organization and also connect with the fraternity in a much better way. The objective of the newsletter is to keep the members updated with the recent developments and policies made by the Government as well as provide information and exposure to its audience across interdisciplinary areas across Architecture, Engineering, Design, and Construction and Real Estate Industry in general.

The Covid-19 pandemic has been a tough period for Real estate industry as a whole. However, over a period of time we are bouncing back slowly wherein there is lot of positive news coming with regards to change in policies and reduction of premiums which are anticipated soon and will surely give the boost to all professionals and stakeholders involved in the sector.

This issue of the newsletter covers the recent activities and initiatives of PEATA in policy matters along with recent updates from MCGM and also few articles on architecture, planning and construction technology. In future, we will be covering many other areas which directly or indirectly are related to the field of Real estate with the goal to have a wider audience and increase the horizons of PEATA.

Further, I thank all the contributions made by various professionals who have been featured in the newsletter along with the team that has made it happen. I also invite fellow young professionals and members who would like to be part of the PEATA Connect team for future editions of the newsletter.

Lastly, my best wishes to all the readers for the New Year and I am sure 2021 will bring you all the success!

**Er. Nirav Hingoo**

Editor

CHAIRMAN (PEATA CONNECT)

PEATA CONNECT Sub-Committee

- Ar. Rita Nayak
- Ar. Jitesh Kamdar
- Ar. Kashyap Shah

# Officer Speak



**SHRI. VINOD CHITHORE**

*Chief Engineer (DP) & Director (ES & P)*

Dear Readers,

It is an absolute pleasure to address you all on this occasion, being the launch of PEATA's bi-monthly newsletter - PEATA Connect, and hope that it provides all the readers (including myself), with updates from the industry, compelling content, new trends, thought-provoking topics, and highlight innovations in our field. I would also like to congratulate Ar. Samir R. Hingoo on taking over the reins of PEATA (I) as the newly appointed President. Under his leadership, I am sure all the objectives pertaining to our industry, will be well addressed and the desired goals will be achieved. My best wishes to the entire team for the same. Let me confess that

PEATA has truly been in the forefront, to safeguard the interest of practicing architects, engineers, and town planning professionals, by holding regular discussions, workshops and seminars for our industry. By way of their recommendations and representations, there has been a continuous evolution of the Development Control Regulations, and their efforts have led to significant improvements in the manner in which building permissions are scrutinized and granted. Due to PEATA's continuous engagement with our team, and the setting-up of Permanent Working Group between MCGM and PEATA members, we have been able to implement several path breaking reforms like the Auto-DCR online system, for grant of approvals, and the Ease of Doing Business Manual, both of which have demonstrated material and tangible benefits to one and all, especially during this COVID-19 regime.

Further, since the notification of the DCPR-2034, there have surely been some moments of uncertainties, re-workings, transition policies, feelings of anxiety, frustration, etc. All of us were challenged, not only mentally and emotionally, but physically as well. No matter what the circumstances were, we have worked together as a team, with all the industry stakeholders, and pushed the development agenda forward.

I look forward to working with PEATA closely, on all the pending matters on its merits towards a speedy resolution.

Thank You and Wishing you all the very best for the New Year!

Warm Regards

**Shri. Vinod Chithore**

Chief Engineer (DP) & Director (ES & P)

# New Executive Committee Members Vision for PEATA

**A**r. Samir Hingoo was unanimously elected as President of PEATA (I) for term 2020-2022 during the Annual General Meeting. Further, elections were conducted for eleven executive committee positions which had become vacant and many new faces contested the election, which was well organized by the senior committee members and was a great validation of the interest of fraternity in being part of PEATA.

President Ar. Samir Hingoo has selected the following office Bearers for the term 2020-2021:

Vice President – I	:	Ar. Shashikant Jadhav
Vice President – II	:	Ar. Sandip Isore
Hon. Secretary	:	Ar. Yomesh Rao
Hon. Treasurer	:	Ar. Vilas Nagalkar

President Ar. Samir Hingoo co-opted members Ar. Anil Patil, Ar. Sumedha Joshi-Gore and Ar. Rita Nayak to the Executive Committee for the term 2020 – 2021 and declared that new Sub-Committees have been constituted for the term 2020-21. He wished good luck to all Chairmans & Co-Chairmans of the Sub-Committees in taking up tasks in their respective portfolio assigned to them.

## EXECUTIVE COMMITTEE FOR TERM 2020-2021

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1	Ar. Samir R. Hingoo	• <i>President</i>
2	Ar. Dilip. R. Sanghavi	• <i>Imm. Past President</i>
3	Er. Shashikant L. Jadhav	• <i>Vice President</i> • <i>Chairman D. P. sub-Committee</i>
4	Er. Sandip N. Isore	• <i>Vice President</i> • <i>Chairman MCGM Sub-Committee</i>
5	Er. Yomesh N. Rao	• <i>Hon. Secretary</i> • <i>Chairman Zonal Sub-Committee WS-1</i> • <i>Chairman Maharera Sub-Committee</i> • <i>Chairman Legal Sub-Committee</i> • <i>Co-Chairman Auto DCR/EODB online Approval</i>
6	Ar. Vilas M. Nagalkar	• <i>Hon. Treasurer</i> • <i>Chairman Zonal sub-Committee (WS-II) Kandivali</i> • <i>Co-Chairman D. P. Sub-Committee</i> • <i>Co-Chairman Auto DCR/EODB online Approval</i> • <i>Co-Chairman PEATA Connect</i> • <i>Co-Chairman Study Tour Sub-Committee</i>
7	Er. Sunil R. Deole	• <i>Executive committee Member</i> • <i>Chairman U. D. Sub-Committee</i>
8	Ar. R. B. Bhalwankar	• <i>Executive committee Member</i> • <i>Chairman Study Tour Sub-Committee</i>

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9	Ar. Dilip M. Joshi	<ul style="list-style-type: none"> <li>• Executive committee Member</li> <li>• Chairman Recovery of Membership Fee</li> <li>• Co-chairman Membership Extension</li> </ul>
10	Er. Suyog R. Shet	<ul style="list-style-type: none"> <li>• Executive committee Member</li> <li>• Chairman MHADA Sub-Committee</li> <li>• Co-Chairman LegalSub-Committee</li> <li>• Co-Chairman MCGM Sub-Committee</li> </ul>
11	Er. Ashish N. Bhatt	<ul style="list-style-type: none"> <li>• Executive committee Member</li> <li>• Chairman Zonal sub-Committee (E.S.)</li> <li>• Co-Chairman Auto DCR/EODB online Approval</li> </ul>
12	Er. Keyur Ved	<ul style="list-style-type: none"> <li>• Executive Committee Member</li> <li>• Chairman - SWM</li> <li>• Chairman Tree / Traffic Sub-Committee</li> </ul>
13	Er. Jeegar Tanna	<ul style="list-style-type: none"> <li>• Executive committee Member</li> <li>• Co- Chairman Roads/SWD</li> <li>• Co-Chairman Zonal sub-Committee (WS-II) Kandivali</li> </ul>
14	Ar. Hiten Motta	<ul style="list-style-type: none"> <li>• Executive Committee Member</li> <li>• Chairman TDR Policy</li> <li>• Co-Chairman II Zonal Sub-Committee WS-II</li> </ul>
15	Er Nirav Rasik Hingoo	<ul style="list-style-type: none"> <li>• Executive Committee Member</li> <li>• Chairman PEATA Connect cell</li> <li>• News Letter/E-News/Peata Public Relation</li> <li>• Web Site, Social Media, PEATA APP</li> </ul>
16	Er. Nikhil Jadhav	<ul style="list-style-type: none"> <li>• Executive Committee Member</li> <li>• Chairman MMR ( Thane, New Bombay) sub-Committee</li> <li>• Chairman MMRDA Sub-Committee</li> </ul>
17	Ar. Atul S. Dokhane	<ul style="list-style-type: none"> <li>• Executive Committee Member</li> <li>• Co-Chairman II Zonal Sub-Committee ES</li> <li>• Co-Chairman II Membership Extension</li> </ul>
18	Ar. Leena Nimbalkar	<ul style="list-style-type: none"> <li>• Executive Committee Member</li> <li>• Chairman Fund Raising Committee</li> <li>• Chairman Membership Extension</li> <li>• Co Chairman Events</li> </ul>
19	Ar. Anil R. Patil	<ul style="list-style-type: none"> <li>• Member (Co-opted)</li> <li>• Chairman Revenue Sub-Committee</li> <li>• Co-Chairman U. D. Sub-Committee</li> </ul>

20	Ar. Rita K. Nayak	<ul style="list-style-type: none"> <li>• Member (co-opted)</li> <li>• Chairman Knowledge Cell (Seminars/Webinars/Lectures)</li> <li>• Chairman Student Relationship</li> <li>• Co-Chairman Events</li> <li>• Co-Chairman News Letter E-News</li> </ul>
21	Ms. Sumedha G. Joshi-Gore	<ul style="list-style-type: none"> <li>• Member (Co-opted)</li> <li>• Co-Chairman – Zonal Sub-Committee (City)</li> <li>• CO-Chairman MHADA Sub-Committee</li> </ul>
22	Ar. Pravin R. Kanekar	<ul style="list-style-type: none"> <li>• Past President</li> <li>• Chairman Office Administration</li> <li>• Chairman Peata Upgradation</li> </ul>
23	Ar. Shirish Sukhatme	<ul style="list-style-type: none"> <li>• Past President</li> <li>• Chairman All Peata Events</li> <li>• Chairman PEATA Liabrary/CD-Pendrive /Books Etc.</li> <li>• Chairman Heritage Sub-Committee</li> </ul>
24	Er. Manojkumar Dubal	<ul style="list-style-type: none"> <li>• Past President</li> <li>• Chairman CFO Sub-Committee</li> </ul>
25	Er. Tarun Motta	<ul style="list-style-type: none"> <li>• Past President</li> <li>• Chairman Notification &amp; Court Judgement Committee</li> </ul>
26	Er. Gopal D. Chiplunkar	<ul style="list-style-type: none"> <li>• Chairman CRZ Sub-Committee</li> <li>• Chairman–MOEF/Forest Sub-Committee</li> </ul>
27	Er. Shashank Mehandale	<ul style="list-style-type: none"> <li>• Chairman structural Sub-Committee</li> <li>• Co-Chairman U. D. Sub-Committee</li> </ul>
28	Ar. Sanjay J. Razdan	<ul style="list-style-type: none"> <li>• Chairman–Zonal Sub-Committee (City)</li> </ul>
29	Ar. Suresh Gaikwad	<ul style="list-style-type: none"> <li>• Chairman SRA Sub-Committee</li> </ul>
30	Er. Nilay Goradia	<ul style="list-style-type: none"> <li>• Co-Chairman News letters / E-News</li> <li>• Co- Chairman Fund Raising Sub-Committee</li> </ul>
31	Ar. Hardik M. Pandit	<ul style="list-style-type: none"> <li>• Chairman MIDC Sub-Committee</li> <li>• Chairman Design Cell</li> <li>• (Latest trends in Building Industry)</li> <li>• Co-ordination with Design Architects.</li> </ul>
32	Ar. Kaushal A. Chouhan	<ul style="list-style-type: none"> <li>• Co Chairman– Zonal Sub-Committee (City)</li> </ul>
33	Shri Hemant Deorukhkar	<ul style="list-style-type: none"> <li>• Chairman Hospitality Sub-Committee</li> <li>• Co-Chairman Zonal Sub-Committee (WS-I)</li> </ul>
34	Shri Kunal Chheda	<ul style="list-style-type: none"> <li>• Chairman Civil Aviation Sub-Committee</li> <li>• &amp; E.C Committee Proceedings</li> </ul>

# Past Presidents' Speak



PAST PRESIDENT : 2010 - 2012

## AR. PRAVIN KANEKAR

At the very outset my best wishes to Ar. Samir Hingoo on becoming the youngest president of PEATA (I). Building industry certainly is in a bad shape, the present pandemic situation has further worsened it but with the new young PEATA team will enlighten the path with fairness but without any fear. PEATA is considered as a knowledge bank and since last so many years' authorities in the MCGM & Government looked at us with great respect. PEATA will have lot more interactions with various stake holders like MCHI, NAREDCO, BDA etc. in connection with happening in the building industry. PEATA has past glorious history with backup of more than 3000 members. Our former presidents and other stalwarts have worked hard, devoted their valuable time to uplift PEATA. I am sure that the new President will maintain our dignity & superiority with our technical knowledge & with the help of highly experienced technocrats in the executive committee. Their concurrence & active participation will give you PEATA the further boost it needs to grow. Let all of us get the Privilege to see the youthful PEATA with bunch of energetic & smiling "youth" under the new President's leadership.

For new entrants, take a glance of the pitch before taking stance and your innings will be certainly successful & long lasting.

Ten years back in 2010 during my presidential tenure keeping in view "Vision 2020" young bridge was introduced to PEATA. Today we are experiencing & enjoying the fruits. Let us start visualizing for "Vision 2030" with the help of the digital world.



PAST PRESIDENT : 2012 - 2014

## AR. SHIRISH SUKHATME

Hearty Congratulations to Editor Mr. Nirav Hingoo for this beautiful news letter "PEATA Connect". Its time for PEATA to shed its old image of having expertise in Liasoning and BMC matters. During last 55 years PEATA has grown leaps and bounds and have touched each and every field of construction industry. PEATA President Samir Hingoo's new team is talented in the field of Interior designing, Construction, Project Management and other who have expertise in working with authorities like MIDC, MMRDA, NAINA and other Municipal Corporations like Ambernath, Kalyan and Thane. Contents of this newsletter are a sign of expanse of PEATA's activities in MMR. No doubt due to pandemic situation of Covid-19 all members are missing actual meetings, seminars, symposiums and workshops on the burning issues of building industry, Liasoning and development of Mumbai. But now PEATA has decided to start its activities by conducting small lecture series in PEATA's conference hall soon. PEATA also is planning to bring new publications on DCPR 2034 with its corollaries. Also, a small booklet on the payments to various departments is in the works. We all should expect starting of activities of PEATA from 1st week of January 2021 but it is needless to mention that these activities will be conducted as per the precautionary guidelines issued by government by taking care by using masks, physical distancing and personal hygiene.

# Past Presidents' Speak



PAST PRESIDENT : 2014 -2016

## ER. MANOJ DUBAL

PEATA (I) as we all know is 55 years old strong association and is working for the welfare of members. I have been associated with PEATA (I) since 2007 and have seen it growing stronger & stronger. As a Past President, I am of the opinion that PEATA (I), should also have more dialogues & meetings with Urban Development Department & Housing Department of Govt. of Maharashtra for getting clarity in DCPR 2034 in case of interpretation issues.



IMM. PAST PRESIDENT :  
2018 -2020

## AR. DILIP SANGHAVI

PEATA(I) has been actively pursuing various agenda's during last two years during my tenure as a President wherein many straining issues related to Autodcr and other policy matters and meetings were conducted with various stakeholders to resolve the same. We as an organization have evolved over a period of time and cemented our place as important part of policy making decisions of UDD and MCGM. During the lockdown period many webinars were conducted by the entire executive committee which was productive and insightful in nature. Further, under the leadership of the new President Ar. Samir Hingoo and a young dynamic team, I am sure that desired changes and improvement in policies and procedures of obtaining approvals will come very soon. I give my best wishes to entire team and also will always be there to assist and guide as an when my inputs are needed.

# New Entrants' – Vision for PEATA



**AR. RITA NAYAK**

“As a newly elected member of PEATA executive committee my aim is to bridge the current gap by providing access to students to larger repository of Professional Practice through working with PEATA by actively organizing various Seminars

and Webinars through a Knowledge Cell that will enable everyone to have access to information and engage in exchange of ideas”



**AR. HARDIK PANDIT**

“As a part of PEATA EC committee my vision is to represent and interact with MIDC officials regarding the new policies, framing regulations and amendments in bye laws. Also, assist in organizing design lectures from renowned architects

and designers to grow the knowledge and skills regarding various cutting edge developments in the industry. Also, I would aim to provide relevant and timely information regarding the new policies and regulation in my portfolio to all the PEATA members”



**AR. SANJAY RAZDAN**

“My goals as a part of PEATA EC Committee shall be

- To rejuvenate the community members practicing in City area.
- To follow up with the City building proposal to make them follow EODB

guidelines and timeline in every proposal.

- To ensure that all concessions & approvals are granted to every one.
- To make our community aware of unity and share important concessions granted with others.
- To see that reputation of PEATA is kept high and its members respected equally.”



**AR. KAUSHAL CHAUHAN**

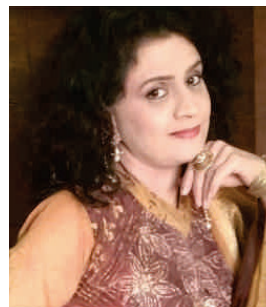
“I believe architecture to be a conceptually based intellectual endeavour and a form of critical inquiry that addresses the built and natural environments from the scale of the city to the scale of the detail. PEATA being

committed to having conceptual thinkers with experience who are versed in the techniques and knowledge of the Bye-Laws and who are not afraid to be critical about the processes is something that I admire. My Vision is to realize these objectives, techniques with which the experienced PEATA members are working for the Architectural & Engineering Fraternity and in the long run I too need to be able to Suggest/accept these constructive techniques, constructive processes and constructive criticism”



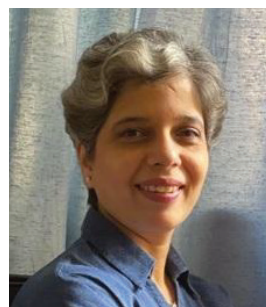
**ER. ATUL DHOKANE**

“My vision working with PEATA is to connect with people and spread ideas alongwith and reach out to PEATA members to propagate PEATA’s aims and objectives”



**AR. LEENA NIMBALKAR**

"I envision that collaborative effort by key bodies like PEATA, IIID & others is essential to bring out the best in us on a professional front. It is necessary to share with each other the responsibilities and knowledge gained over the years "



**AR. SUMEDHA GORE**

“I feel PEATA needs more voice and efforts to bring back that simplicity respect and dignity in day to day practice so that designers can focus on constructing something worthwhile. We are all caught in the maze and complexity of rules and somewhere we are

forced to make compromises on all fronts.

# Peata's Initiatives

**P**EATA has been actively pursuing some issues with MCGM regarding seeking clarifications on outstanding issues and resolving operational issues faced by the fraternity at large while processing approvals. Some of the activities being pursued are as below:

- Letter was submitted to Deputy Chief Engineer (E.S) Shri. Sanjay Kaundanyapure and he was briefed about Audit problems being faced by professionals practicing in Eastern suburbs.
- Representation for making payment gateway available (similar to MCGM's payment gateway) for making DRP/MSRDC share of premium payments is submitted to U.D. so as to reduce the time taken for making these payments. At present, it takes 7-8 days for processing these payments. Letter was submitted to Hon. Municipal Commissioner and Urban Development Department for making all RBI and other payments online which are being physically accepted till date due to which there is sufficient delay in processing approvals.
- A Letter was issued to SRA to restrict entry of slum dwellers on 2nd floor and allow entry to Architects and their staff who have PEATA I - cards.
- Meeting was held with OSD to Hon.MC, Shri Geete to take-up the pending points and inputs on the DCR33(7) and DCR 33(9) circular which is required to be issued for clarity on day-to-day implementation. Points which required clarification from UD such as additional 5% entitlement for non-cessed eligible tenants, etc have been sent to UD. Minor corrections have been made and forwarded to Ch. Eng. (D.P) to take-up with MC at the earliest. Proposal for grant of concessions to Trust project proponents on premiums and penalties is also being considered by Hon.Commissioner.
- Letter was submitted to Hon.Municipal Commisisoner for extension of Installment payments from 26th Dec 2021 to 26th June 2021.
- Letter was submitted to Ch.E(DP) for reduction in time and amending the procedure followed for Audit of files before granting Occupation which is very time consuming currently.



Practising Engineers Architects and Town Planners Association (India)
OFFICE BEARERS & EXECUTIVE COMMITTEE FOR YEAR 2020-21
AR. SAMIR R. HINGOO
PEATA/010/2020-21
Date: 08.12.2020
To: Hon. Municipal Commissioner, Municipal Corporation of Greater Mumbai

Practising Engineers Architects and Town Planners Association (India)
OFFICE BEARERS & EXECUTIVE COMMITTEE FOR YEAR 2020-21
AR. SAMIR R. HINGOO
PEATA/012/2020-21
Date: 14-10-2020
Subject: Online payment facility of various premiums to be shared on account of for MSRDC and Dhruv Planning Authority on 'GRAS' (GRAS-GRAS-GRAS) Accounting System as per Regulation no 30 and DCRP 2034.

Practising Engineers Architects and Town Planners Association (India)
OFFICE BEARERS & EXECUTIVE COMMITTEE FOR YEAR 2020-21
AR. SAMIR R. HINGOO
PEATA/04/2020-21
Date: 2nd November 2020
To: The Hon. Minister, Govt. of Maharashtra, Mumbai, 400 032
Subject: Applicability of RR rate for all 3 uses i.e. Commercial, Residential and Industrial at the same charge prescribed in RR Book published by the G.O.M.

Practising Engineers Architects and Town Planners Association (India)
OFFICE BEARERS & EXECUTIVE COMMITTEE FOR YEAR 2020-21
AR. SAMIR R. HINGOO
PEATA/02/2020-2021
Date: 14-10-2020
Subject: Online Payment of premium to be shared between MCGM and all Govt. departments at present is being done on Gas, (GRAS-Government Receipt Planning authority, which is not option of online payment for MSRDC and Dhruv by generating manual challas.

Practising Engineers Architects and Town Planners Association (India)
OFFICE BEARERS & EXECUTIVE COMMITTEE FOR YEAR 2020-21
AR. SAMIR R. HINGOO
PEATA/07/2020-21
Date: 18.11.2020
To: Hon. Municipal Commissioner, Municipal Corporation of Greater Mumbai, Anand Building Municipal head Office, Mumbai-400018.
Subject: To allow covering of Nalla by making uniform Policy

Practising Engineers Architects and Town Planners Association (India)
OFFICE BEARERS & EXECUTIVE COMMITTEE FOR YEAR 2020-21
AR. SAMIR R. HINGOO
PEATA/05/2020-21
Date: 9th October 2020
Subject: Regarding payment of premium for conversion from Industrial zone to Residential/Commercial Zone as per Reg. No. 14(B) of DCRP 2034



# PEATA's Pursuit

## Issues on PEATA's Agenda

As per the feedback and observation of PEATA Executive Committee following issues are on the agenda to be raised for getting clarification and feedback from different departments of MCGM/UDD :

- Policy for covering of Nalla
- Issue of responsibility of practising Architects/L.S in the event of site violations carried out by the Developer i.e. issue of notices of unauthorized occupation or violations being sent to Architects instead of Project Proponent
- Issue of requirement of revalidation of Bank Guarantee / SWM NOC insisted by MCGM at IOD stage. In projects wherein construction works have not commenced it leads to additional payment of stamp duty at each such renewal of Bank Guarantee.
- Issue of SWM NOC being insisted in Proposals for change of user or regularization that do not need any further construction.
- Issue of requirement of AutoDCR scrutiny at each stage of IOD approval
- Reduction of Premiums from UDD
- Dual step process of issuance of Amended CFO NOC followed by CFO Completion NOC can be avoided by way of issuance of Amended-Cum-Completion NOC
- Deviation in policy and procedures adopted in various building proposal offices of MCGM while granting approval to proposal submitted under regulation 33(7)(A)
- Insistence of areas projecting on upper floors over 1:5 sloped terrace in redevelopment proposals to be counted in FSI by Ch.E (DP) in many cases

# Updation of DCPR 2034 BOOK



**ER. SHASHI JADHAV**  
*Vice President (PEATA)*

The Government of Maharashtra accorded sanction to the Development Control and Promotion Regulations -2034 for Greater Mumbai on 8th May, 2018, excluding the proposed modifications of substantial nature which were excluded from sanction as Excluded Part which were published as EP-1 to EP-168 vide the said Notice.

Subsequently, a Corrigendum and Addendum was issued on 29th June, 2018 in respect of corrections and additions to the Excluded Part. The Excluded Part (excluding certain EP and the provisions which were kept in abeyance) was sanctioned by the State Government vide notification dated 21st September, 2018. Subsequently, a corrigendum was issued by the State Government on 12th November, 2018 in respect of errors and mistakes in the said notification. The compilation of the old specified notifications and corrigendum, was already put together the previous compilation of DCPR 2034.

Now, we are working on the updated DCPR-2034 book incorporating the latest circulars and notifications and make it up to date with all modifications.. All sanctioned provisions, approved modifications in Regulation 33-7(A), 33(19), 34, etc in track mode, corrigendum issued from time-to-time, transition policies, etc will be incorporated in the new version which will be launched shortly.

# Release of Pendrive of Circulars



**ER. SANDIP ISORE**

*Vice President (PEATA)*

The development / redevelopment in Mumbai is influenced by sanctioned Development Plan and sanctioned Development Control & Promotion Regulations for Greater Mumbai. However, as the provisions of DP and DCPR are applied and interpreted during the course of time, various clarifications from government, operative circulars and guidelines from MCGM are imperative. These MCGM Circulars, Government clarifications/notifications and Policy Guidelines are important documents always needed by Architects, License Surveyor and MCGM officers, not only for planning and designing the layout / buildings but for scrutinizing building plans as well.

Over a period of time due to large number of these circulars, notifications, compilation of these documents has become necessity of time. Taking into consideration such need PEATA(I) has taken lead and in year 1985, 1995 had published such compilations in past. In the year 2000 and 2014 PEATA (I) had come up with Compact Disk (C.D.) of all compiled data with word search program.

I would like to emphasize here that while discharging the duties as part of MCGM building proposal and Development Plan department in the past i.e. till my retirement in 2008, the compilation of circular in CD format helped me a lot to submit the report for building proposal for approval of competent authorities. The related circular searched from Compilation and attached to MCGM file used to help all the hierarchy to take a decision on the report submitted. With this background at MCGM, now as a professional the compilation of circulars helps a lot to prepare plans for proposed layout and proposed buildings on any given plot/s for submission to MCGM.

This time PEATA (I) have opted for further advance digital format in the form of Pen Drive for ease of search of circulars. The Pen Drive contains D.C.R 1991 as amended up to 2018 and sanctioned DCPR2034 with all subsequent clarifications / modifications to DCPR 2034 by U.D. Department, all MCGM circulars / guidelines issued there from along with documents from other various organizations i.e. MoEF, MHADA, SRA etc.

We at PEATA (I) hope that the Pen Drive with compiled circulars will be useful to all stakeholders connected with the development of the City including Municipal Engineers, Architects, Developers and General Public.

# Handing Over of Pendrives to MCGM Officials

PEATA Executive committee members also handed over the newly released pen drive of circulars to officers in respective zonal offices. Some of the moments captured are represented as below:



PEATA Connect Chairman Er. Nirav R. Hingoo handing over the Pen Drive to Ch.E (D.P.) Shri. Vinod Chithore



PEATA President, Ar. Samir Hingoo along with Er. Suresh Gaikwad handing over Pendrive to Dy. Ch. Eng. (SRA) Shri. Mitkar



PEATA City Sub-Committee Chairman handing over Pendrives to Dy. Ch. Eng (BP) City - Shri Atul Kulkarni & EEBPC - I Shri Rajendra Jadhav



PEATA Connect Chairman Er. Nirav R. Hingoo handing over the Pen Drive to Dy. Che (WS)- II Shri. Kunta



PEATA Sub-Committee Zonal Chairman Er. Yomesh Rao handing over Pendrive to Dy. Ch. Eng (BP) WS- 1 Shri. Sanjay Mahale



PEATA Vice President Er. Shashi Jadhav along with MMR Chairman Er. Nikhil Jadhav handing over Pendrive to Dy. Ch. Eng. (E.S.) Shri. Kaundanyapure



*PEATA Committee members along with WS-II zone Building Proposal Officials*



*PEATA Zonal Sub-Committee Member Ar. Kinjal Hingoo handing over the Pen-drive to E.E. (BP) 'R' Ward Shri. Kekan*



*PEATA Zonal Sub-Committee Co-Chairman Er. Jeegar Tanna handing over Pen-drive to E.E (BP) 'P' Ward Shri. Dhiver*



*PEATA Connect Chairman Er. Nirav R. Hingoo handing over the Pen Drive to Executive Engineer Shri. Sunil Bhatt*



*PEATA Secretary, Er. Yomesh Rao handing over Pendrive to EEBP 'H' Ward (WS -1) Shri. Tawde*



*PEATA Secretary, Er. Yomesh Rao handing over Pendrive to E.E (BP) 'K' Ward Shri. Chaudhari*

# Study Tour to Witty International School at Borivali (West), Mumbai



## **AR. RATAN BHALWANKAR**

*Chairman, Study Tour Committee (PEATA)*

“Blend of design with amazing facilities” - this is how I can sum up our study tour visit to the prestigious Witty International School owned & run by Dr Vinay Jain.

On 12th Dec 2020 by Peata members were honoured to have visited Dr Vinay Jains - Witty international school at Borivali. The school leaves anyone stunned with its facilities, amenities, design and the mode of imparting education- all done with the benefit of and understanding the changing needs of today's student in mind.

Mr & Mrs Vinay Jain ( Owners & Trustees) have in all constructed this 9th such school apart from running 8 such schools all over India , this was completed in a record period of 14 months including civil construction & interiors, all spread across 1,75,000 sqft construction area which is commendable job. Though he is a Doctor by education, he has himself worked and designed the layout & planning which took him 6 months with the team of professionals right from concept to execution upto a minor detailing.

Mr Jain has personally given demonstration of each & every amenity provided for students of KG to XII Std in this iconic school.

He took us on a tour starting from class rooms, lecture halls situated on 5th to 8th floors & other amenities like laboratories, music room, seminar room, auditorium at a spl audio system etc. on the lower floors. A large Banquet hall is provided in the basement with separate access. He has not forgotten to provide an emergency medical facility for student's pre- hospitalization if needed.

A special feature introduced to modern education system by Dr Vinay Jain is a lab for Home Science which subject is made compulsory for 9th Std student to pass with 80% to be promoted to 10th Std. Its about learning basics of day

to day life such as of fitting gas regulator, preparation of breakfast, washing utensils, cloths, brooming & wopping floor, use of vacuums cleaner, setting of bedsheet to cleaning toilet. This class will teach them to carry out day to day activities without any household help & will be useful to all students who stay away from home for post studies either in India or abroad.

Another innovative idea was to provide Art gallery where one can exhibit products, art, manufacture of any industrial item including plastic production, goldsmith apart from display of paintings on a nominal rent.

Thirdly, for young generation who wants to celebrate functions like birthdays with bang are given a facility of dance floor with music & disco lighting to get feeling of celebration & avoid going to outside clubs & places where kids are exposed to unwarranted things like hukka, liquor etc.

Another special feature was a Recording studio for learning how to report any News to media to overcome stage fear.

These all facilities with grade one quality specifications of materials need good funds & its maintenance. Wisely Mr Jain has introduced 20% commercial premises like Banquette, Art gallery, dining facility to compensate expenses, which facilities are segregated from school activity with provision of seperate entrances. With all such extra modern amenities, the fee structure for CBSC is kept affordable by Dr. Jain.

I can describe this Study Tour which has enriched Architects who visited, about how best can a modern school design be with all facilities of international standard.

A special thanks to Er. Tarun Motta for the connect of this site visit.

## **Ar. Ratan Bhalwankar,**

*Chairman, Study Tour Committee of PEATA*



# PEATA Expands It's Horizon



## **ER. NIKHIL JADHAV**

*Chairman MMR (Thane, New Bombay)  
Sub-Committee*

In accordance with the vision of PEATA President Ar. Samir Hingoo to extend the scope of PEATA beyond MCGM jurisdiction, we have formed the MMR Sub-Committee in first week of November with several experienced architects practicing outside MCGM jurisdiction. Senior practicing architects such as Ar. Abhinay Jogi, Er. Jeetendra Parmar, Er. Chetan Wajekar, Ar. Devyani Khadilkar, Ar. P K Madhav and Ar. Neha Jain among others.

Introduction of few of the members is as follows –

- Ar. Abhinay Jogi has experience of over 25 years and has contributed to the preparation of six Development Plans across Maharashtra, in addition to his flourishing practice.
- Er. Jeetendra Parmar is a senior engineer practicing in Navi Mumbai and has experience of over 25 years.
- Er. Chetan Wajekar is a practicing engineer with extensive experience in MMR area.
- Ar. Hardik Pandit is a practicing architect having projects in Navi Mumbai as well as MIDC area.
- Ar. Devyani Khadilkar is a leading practicing architect having extensive experience in MMR region.

On 21st November, the first introductory meeting was held amongst the Subcommittee members along with Past Presidents Ar. Shirish Sukhatme, Ar. Pravin Kanekar and PEATA President Ar. Samir Hingoo. Several issues with respect to approvals of NAINA authority were identified which can be addressed through PEATA.

The UDCPR (Unified Development Control and Promotion Regulations) for Maharashtra State were sanctioned by the State Government on 2nd December, 2020. In response to this, the MMR Subcommittee formed a Study Group among few of the Subcommittee members and have started a series of online meetings first of which was held on 22nd December. It was an in-depth brainstorming session led by Ar. Abhinay Jogi and Er. Chetan Wajekar. The Sub-committee aims to create a list of questions that need to be addressed to the Director, Town Planning, UD Department for clarification.

With the formation of the MMR Sub-committee, PEATA aims to further delve deep into the issues of professionals practicing in the MMR region and create a support system for our members practicing in these areas.



# Technically Speaking – Tensile Structure



**DR. DEEPALI HADKER**

An Architect, Deepali pursued her doctorate degree in Space Structures from the University of Surrey in Guildford, UK.

Subsequently, she worked at an architectural practice in Central London and also lived and worked in Toronto, Canada for three years.

She is now a Director at Sterling Engineering Consultancy Services Pvt. Ltd.

She also writes for leading engineering and architectural magazines and journals. She was the Curator for the World Build Exhibition and Conference which took place in 2017 and 2018 at Bombay Exhibition Centre.

Deepali's special interest has been in Tensile Structures. She continues to lecture and conduct workshops for tensile structures in various architectural colleges.



*FIG 1 Denver International Airport, USA*

## Tensile Fabric Forms:

The light weight, dramatic sculptural translucent forms of tensile fabric structures continue to attract architects and engineers alike. Today, they are being used worldwide for a variety of large span structures such as stadiums, airports, malls and exhibition grounds. This is because tensile forms offer architecturally pleasing shapes, appear lightweight and provide shade and protection from UV rays. Besides, their translucent quality saves daytime lighting costs and creates illuminated landmark structures at night as seen at the Denver International Airport, USA (Fig 1).



*FIG 2 Teepees in Europe, Asia and North America.*

## Brief History:

Earliest examples of tensile structures were the tents built by nomadic tribes. Their forms were distinct and evolved in response to climatic conditions, materials available and structural principles used. For example, Teepees (Fig 2) made from animal skins, built in cold Northern regions of Europe and North America had a conical framework of inclined poles arranged in a circle and secured at the top. Bedouin tents (Fig 3) used by Arab nomads were rectangular in plan, supported by vertical poles. The thick felt made from goat hair was stretched by means of chords fixed to the ground.

In the course of settlement, pavilions and tents were used for military purposes as they could be transported easily. Gradually, tents as temporary shade structures became popular for public gatherings, circus events (Fig 4) and travelling exhibitions.



FIG 3 Bedouin tents used by Arabs



FIG 4 Large circus tents



FIG 5 German Pavilion in Canada – Expo 1968



FIG 6 Munich Olympic Games Stadium - 1972

## Frei Otto's contribution:

In 1967, a very dynamic structure was constructed by Frei Otto a German architect and structural engineer. This was the German Pavilion in Montreal – built using cable nets and membranes (Fig 5). In the World Exposition in 1970 membranes

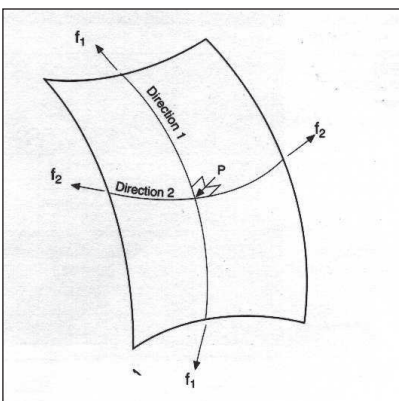


FIG 7 Basic Tensile Anticlastic form

were commercially introduced. The main credit for this extensive study and development goes to Frei Otto and his Lightweight Structures Institute in Stuttgart University in Germany. Another landmark structure is the roof of the Olympic Stadium in Munich built in 1972 (Fig 6). Otto developed a theory of using doubly curved surfaces with minimal surface and equal tension under pre-stress. Since then, we have seen rapid technological advancements in materials available for membrane structures giving rise to permanent tensile systems.

## A tensile system:

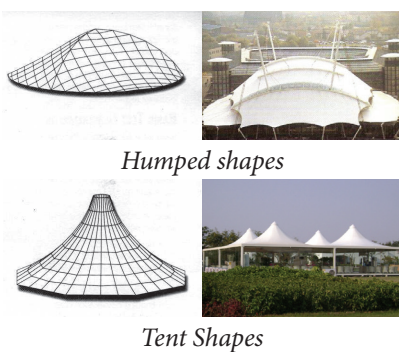
A tensile structure consists of membranes and cables, which are **held in tension**.

A “**membrane**” can be defined as a surface so thin that for all practical purposes it cannot resist compression, bending or shear but only tension.

A “**cable**” is defined as any support element that can be loaded by tension but is very flexible. Therefore, tensile structures carry load only in tension and must be kept in tension at all times if they are to remain stable.

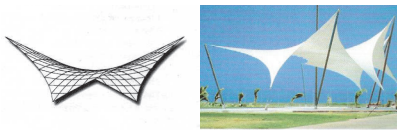
The surface of the membrane has to be doubly curved (anticlastic) to resist loads (Fig 7)

These cables and membranes carry the loads to compression elements like beams, arches or masts and also act as the cladding and roofing elements. Hence,



Humped shapes

Tent Shapes



Saddle shapes

FIG 8 Basic Geometries for fabric structures Shanghai Sports Centre, China

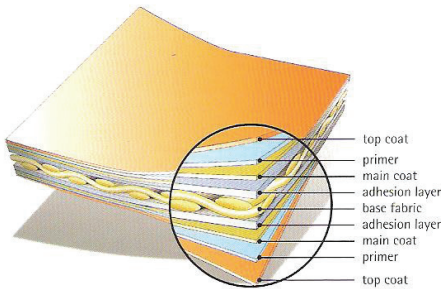


FIG 9 Cross section of a membrane



FIG 10 Shanghai Sports Centre, China

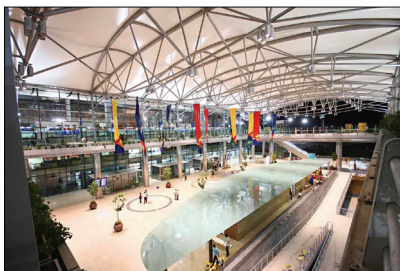


FIG 11 Hyderabad International Airport, India



FIG 12 Mumbai International Airport, India

a tensile system often performs an architectural as well as a structural function. The possibilities in shape generation are numerous and largely depend on the support conditions (Fig 8). The support elements of fabric roofs could be masts, ring supports, beams and cables.

## Membrane Materials:

The most widely used materials are woven polyester cloths coated with polyvinyl chloride (PVC), and woven fiberglass coated with either polytetrafluoroethylene (PTFE) or silicone. The base material for membranes is cotton, polyester, glass reinforced plastic and the weave is made up of yarns. The weave takes up the forces in two directions namely the warp and the weft (Fig 9). Both sides of the weave are typically coated either with PVC or PTFE. The coatings protect the fabric from UV deterioration as well as moisture. The coatings are also combined with fire retardant chemicals. The final coat contains certain coloring pigments and lacquer which makes the surface dirt repellent.

## Design and Construction:

The painstaking task of form finding and cutting, detailing and welding is done with the help of computers and advanced software and machinery. Close cooperation of the design team is very important – the Client, Architect, Engineer, membrane manufacturers and fabricators are required to work together from the concept stage. Preliminary designs are made in the form of physical models and computer models. The geometry of the shapes is finalized along with the position of supports, beams, anchors etc.

A budget is estimated from this study. Regional requirements like wind, climatic conditions and snow loads have to be taken into account for the intended site.

An example of a roof constructed using membranes and pre-stressed cables, is the Shanghai Sports Centre built in 1997 for China's National Games (Fig 10). This multipurpose facility can accommodate 80,000 spectators. The roof of the stadium is a saddled shaped ring which is a cantilevered spatial structure composed of radial and circular trusses. There are 57 umbrella like cabled structures covered with a fabric membrane.

Closer to home is the Hyderabad International Airport (Fig 11) where a large PVC fabric is used over the concourse area covering almost 6000 sq mts. The translucent fabric provides soft diffused light during the day. Another example is the tensile structure at Mumbai Airport (Fig 12) where several "inverted umbrellas" in PVC fabric cover the pedestrian walkways. These provide immediate shelter from the sun and rain.

Tensile structures can also be designed in modular patterns. Smaller, repetitive modules can be produced more economically and used to cover larger outdoor spaces. When used in the correct context, possibilities of shapes and forms remain endless and only our imagination is the limit!

# Project Showcase / Interview

THE TAB (Tera Art Box), West Bengal by Ar. Prashant Sutaria, PSA.



AR. PRASHANT SUTARIA

Prashant Sutaria, is the Principal Architect, PSA, and Founder of CELPT- centre of living and planning for tomorrow. He is a creative architect who believes in designing solutions for long term and likes to explore various Architectural vocabularies. He is working on a variety of projects and exploring ideas for well designed, built environments which can contribute towards the betterment of humanity. Over the years his firm has won many national and international awards, He has delivered talks at various forums across India, South East Asia, Middle east and Africa.



## Can you tell us little bit about your project? What was the inspiration?

This is a multiple award winning mixed use building, set in the very heart of DURGAPUR CITY CENTRE, West Bengal. The project is a Public Private PARTNERSHIP between the Asansol Durgapur Development Authority (ADDA) and a private developer. The project started in September 2014 in Durgapur, and completed in September 2018. It has public parking along with other usable mixed use spaces.

The vision was to draw inspiration from the historical and culturally rich region and transcend it into architectural expressions of modernism. This in a way is symbolic of the development and progress this industrial city is making. The architectural solution was to create **THE BOX**, representing a modernist and progressive approach suitable for the purpose & "fill it with art and terracotta works." The use of Terracotta on the facade and the Gitanjali verses on the lower part of the eastern face result from this concept.

## Can you describe the background research study undertaken before project commencement?

The research started by conducting a study tour of the Bishnupur temples, campus of Shantiniketan and the tribal area of Purulia. Bishnupur inspired the artwork, form of the building & use of Terracotta. Artists from Shantiniketan were used to create the stainless steel sculpture, bronze statue & some other artworks in glass. Shantiniketan also inspired the use of verses of Nobel prize-winning poem 'Gitanjali' on the lower facade.

## What are the unique properties that best describe this project?

THE TAB is inspired by traditional art and architecture of its culturally rich surroundings namely temples of Bishnupur and Shantiniketan. It has obtained IGBC Platinum Rating (core & shell category). It is located in the city centre of

Durgapur, an industrial and mining town in east India. It is developed in Public Private Partnership model with the government of West Bengal.



### **Describe the operations and circulation / interaction flow of the different user groups that the building caters to?**

There were multiple end users namely - occupants of 5 star hotel namely ITC FORTUNE PARK PUSHPANJALI, office goers at lower floors, retailers & their customers on ground floor & visitors to the city centre who use the public parking in the basement. All these occupants were segregated with the help of various entry / exit points. Besides this, there is also a service entry hidden from the general visitor. Each of them have been carefully planned to give a unique user experience keeping the functionality in mind.

### **What is the Structural and facade strategy used in the building?**

We have used conventional RCC frame structure with raft foundation due to the unique soil condition. Part of the structure is MS and attached with the RCC structure. A second skin of fibre cement board is used on the shorter facades. Coreten steel is used on the lower facade of the hotel to add an element of timelessness for the verses of the poems. A high performance glass is used to optimize daylight and cut down on solar/heat gain.

## **Describe the building specifications and technical properties?**

The building has double basements and close neighboring buildings with shallow foundations. The use of sheet piles was avoided due to time and budgetary constraints. This led to phase wise execution of the basement. The length of the building (84m) required an expansion joint considering the weather conditions. The box rim fabricated with MS and fibre cement board was added towards the end of the project, and became the most challenging task due to the scaffolding requirement.



## **Describe the challenges encountered and the solutions developed.**

A balance between the diversified requirements, like a five star hotel, office premises, retail outlets and public parking were to be achieved. An attempt is made to go beyond this and enhance the streetscape in its vicinity. Re-accommodating overhead city power transmission lines going along the length of plot on both sides underground. The width to depth ratio was 1:3.5. The stringent building bye laws along with a maximum permissible height of 50 meters with high Far at 4.5. After accommodating transmission lines underground there was practically no place for water tank, STP, earthing pits. Even the backup generators, transformers, gas bank etc had to be adjusted in an innovative way.

## **How would you describe your experience doing this project?**

Any good project happens only with a good team work. I am thankful to the entire team, from consultants to contractors, for their contribution. The biggest satisfaction comes from the fact that the end users and clients are happy. We are also happy to share that the design of this project has won 3 International Awards. They being THE BERG from Singapore, International Awards in Dubai and recently A”Design Awards in Italy.

# Construction Technology in Architecture



**AR. ARTI DAGA**

*Architect, Academician,  
Fitness Enthusiast*

A graduate from Sir J.J. College of Architecture (2002), did her PG PCM, NICMAR and Diploma in Built Heritage Studies & Conservation. An IGBC AP, GRIHA Evaluator and GEM CP. Professionally, she is presently an Assistant Professor at Balwant Sheth School of Architecture and a Visiting Faculty at School of Business Management, NMIMS University, Mumbai. A Freelancer and a Green Building Consultant, she has an industry experience of almost a decade. Project Management and Sustainable Architecture are her core areas of interest. She is a National Level Swimmer, Marathoner, Cyclist, Triathlete, Yoga Instructor and PADI Certified Scuba Diver by Passion and holds several accolades to her credit.



*Fig.1a & 1b – RCC w/ Wooden Formwork*



*Figure 2a & 2b - Aluminum Formwork*

## AEC ADVANCEMENTS 01- CONSTRUCTION TECHNOLOGY

### 1. INTRODUCTION

The Architectural, Engineering and Construction (AEC) industry has evolved enormously over time from Prehistoric homes to 3D Printed homes. Today, times have changed and so have the needs. We need to be aware, accept, adapt and apply the solutions judiciously as the way forward to achieve righteous results. Advancements can bring about the much needed radical change. In the words of Maureen Forrest, “Be the Change Be the Difference.”

### 2. CONSTRUCTION TECHNOLOGY: A CHOICE

#### 2.1 Conventional Construction Methods

The two most common conventional construction techniques known and used presently in the Indian AEC industry are RCC Framed Construction with Wooden Formwork (Fig. 1a & 1b) and Alu-Form Technology, i.e. RCC Construction with Aluminum Formwork (Fig. 2a & 2b). Both these are Cast In-situ Concrete Construction methods.

#### 2.2 Modern Methods of Construction (MMC)

Rapid technological advancements along with the fierce competition in the construction market for providing better services have stimulated profound change towards using innovative and technology driven methodologies. Also known as Industrialized Building Systems.

##### 2.2.1 Precast Concrete Construction

An alternative to Cast In-situ Concrete Construction. Precast Concrete Construction is also addressed as PCCons. It is a ‘construction product’ produced by casting concrete in a reusable mould or “form” which is then cured



Fig.3a & 3b- Commune 1, Bangalore – Residential B

Example 1 - Commune 1, Bangalore – Residential Building - It is a 550 apartment scheme, it has basement + G +13 floors with Load bearing Precast Walls, Precast Solid Slabs. The project had a Site based Precast Plant (Fig. 3a & 3b)

in a controlled environment (a factory or a manufacturing unit), transported to the construction site and lifted, installed and assembled into place.

Applications – Residential Buildings, Commercial Buildings, Hospitality Buildings, Infrastructure Projects – Bridges, Metro Lines, Tunnel Linings, Mono Rails, etc.

### 2.2.2 Pre Engineered Metal Buildings

Pre Engineered Metal Buildings (PEMB) or Engineered Metal Buildings (EMD) are the buildings / systems / members which are engineered (with built up sections) at a factory to exact size, transported and lifted, installed and assembled at site. The metal sections are mostly hot or cold rolled steel sections. These structures are usually addressed as Pre Engineered Buildings (PEB).

Applications: Warehouses, Factories, Workshops, Office Buildings, Gas stations, Vehicle Parking Sheds, Showrooms, Aircraft hangars, Metro Stations, Schools, Amusement Parks, Stadium roofs, Bridges, Railway platform shelters, Residential, etc.

Example 1 - JSW Headquarters, BKC (1982), Mumbai – Office Building for Jindal. (Fig. 4a & 4b).

Example 2 – Volvo Eicher Commercial Vehicles Ltd. Pithampur, Indore – Office Building. It has G+5 floors, it was completed in 60 days, with zero shuttering, zero water and 100% safety. IFCI building in New Delhi – Office Building, it has 26 floors, a multi-storied steel building construction, it was completed in 6 months (Fig. 5a & 5b)



Fig.4a - JSW Headquarters, Mumbai, Office Building, Pre Engineered



Fig. 4b



Fig.5a - IFCI in New Delhi - PEB Structure



Fig.5b - Volvo Eicher Commercial Vehicles Ltd., Indore PEB Structure





Fig.6a - Clement Canopy buildings, Singapore – Residential Building built with Concrete PPVC System



Fig.6b- Concrete PPVC Modules

### 2.2.3 3D Volumetric Construction

3D Volumetric Construction is the production of three-dimensional modular units in controlled factory conditions, transported to site and at site, stacking and joining of factory-finished modules with building services lines (MEP) in place forms a substantially complete building. Only bolting and interconnection of building services is required to be done at the site. It is also known as 3D Monolithic Volumetric Construction, Modular Construction, Pre-fabricated Prefinished Volumetric Construction (PPVC). On the basis of the framework of the module there are two types - RCC PPVC and Steel PPVC. Application – Residential Buildings, Office Buildings, Mixed Use Buildings, etc.

Example 1 - Clement Canopy buildings, Singapore – Residential Building -World’s Tallest Modular Buildings. It is built with Concrete PPVC system. It has 40 floors and 2 towers measuring approx. 150 m each, 1,899 modules were stacked and assembled, it has 505 luxury apartments, loss of time due to poor on-site weather conditions was mitigated and on-site waste was reduced drastically (Fig. 6a & 6b).

Example 2 – Wisteria at Yishun, Singapore – Commercial and Condominium Development. It is built with Steel PPVC system with concrete floor base. It has 12 floors and 3 blocks, 3 floors are commercial rest are apartment units, it has 756 modules were stacked and assembled, it has 216 apartment units (Fig. 7a & 7b).



Fig.7a -Wisteria at Yishun Singapore – Residential



Fig.7b - Installation of PPVC Modules

### 2.2.4 Hybrid Construction

Hybrid Construction is the combination of different materials or techniques to design a range of building types. It utilizes the strength and unique properties of different materials. Architects and Engineers have an opportunity to construct taller, larger and more complex buildings. These are also known as Composite Structures.

Application: Residential Buildings, Office Buildings, Mixed Use Buildings, etc.

Example 1 - Deya Atmosphere, Kolkata – Residential Condominium Building (2011 - 2019) - Hybrid Construction, built in RCC and Prefabricated Steel Members. It has B+G+37 floors and is approx. 152 m high built in PCCons. Its special feature is the Deya Deck – a bridge like structure installed at a height of 100 meter, it has four floors of activity areas and the structure is built in steel (Fig. 8a & 8b).



Fig.8a -



Fig.8b - Constructed in Precast Concrete and Prefabricated Steel Members



Fig.9a - Metropol Parasol, Seville, Spain



Fig.9b - Constructed in RCC and LVL (Engineered wood)

Example 2 - Metropol Parasol, Seville, Spain – Museum and Commercial Space (Market & Shopping) (2005 – 2011) - Hybrid Construction using Engineered wood – Laminated Veneer Lumber (LVL) and RCC (Fig. 9a & 9b).

### 3. CONCLUSION:

Ingenious Construction solutions can address some of the most pressing issues of country. It calls for a smart, sensitive and sensible integration of the Conventional with the Modern Methods of Construction and Digital Technology along with intelligent collaboration amongst the project participants.

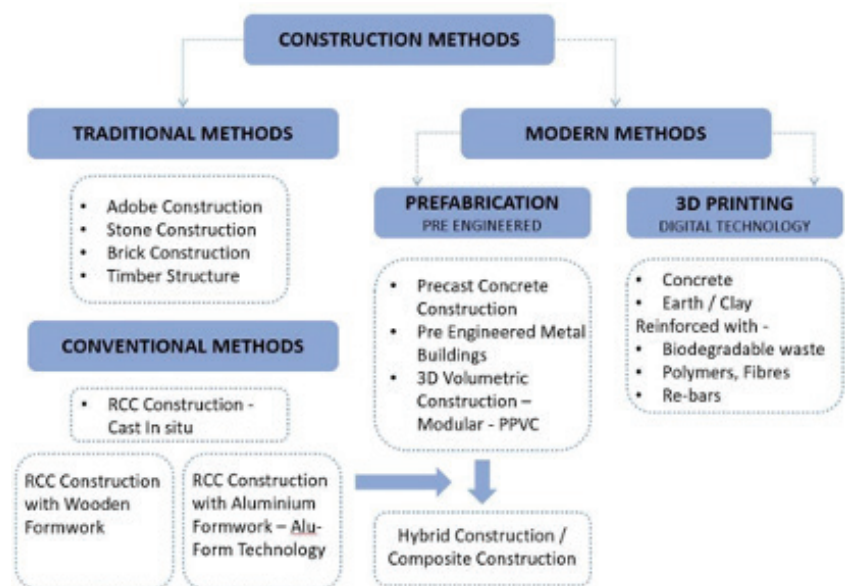


Figure 11 - Different Construction Methods (Source: Author's Compilation)

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