Vol. 11 Issue 4 October-December, 2025

INDIAN BUILDINGS CONGRESS

# BUILT ENVIRONMENT

BI-MONTHLY PUBLICATION OF INDIAN BUILDINGS CONGRESS

**Seven Wonders Park, Kota**

Visit us at **www.ibc.org.in**

# INDIAN BUILDINGS CONGRESS

**CHIEF PATRON**
Minister,Ministry of Housing & Urban Affairs,GOI

**PATRONS**
Minister of State, MoHUA, GOI
Secretary, MoHUA, GOI

**PRESIDENT**
**Er. C. Debnath**
Fmr. SE, PWD, Tripura
Mb: 9436128868, 9402168868,8132998868

**FOUNDER PRESIDENT**
**Er. O.P. Goel**
Fmr. Director General (W), CPWD
Mb: 9810512775

**VICE PRESIDENT**
**Er.Mayank Tilak**
Fmr. SDG, CPWD
Mb :9910732801

**VICE PRESIDENT**
**Er. Salil Rai Shrivastava**
E-in-C,Govt. of Chhattisgarh
Mb: 9425532626

**VICE PRESIDENT**
**Er. M. Nagaraj**
Fmr. Engineer,
PWD, Karnataka
Mb: 9448367475

**VICE PRESIDENT**
**Er. Bijoy Chandra Tripathy**
Fmr.E-in-C, PWD, IDCO,
Bhubaneswar, Odisha
Mb: 9438672484

**VICE PRESIDENT**
**Er. C.B. Ojha**
CE-cum-Special Secretary (Engineering),
Chandigarh Administration
Mb: 7508185419

**VICE PRESIDENT**
**Er. Toli Basar**
Fmr. Sr. Chief Engineer, Govt. of Arunachal
Mb:9436257734/8638878354

**HONORARY SECRETARY**
**Col. (Dr.) Anand Mathialagan (Retd.),**
New Delhi
Mb: 99996 32889

**HONORARY TREASURER**
**Er. Rajeev Kumar**
Chief Engineer, CPWD, Ghaziabad. UP.
Mobile: 87440 81101

**EXECUTIVE MEMBER**
**Er. Ranjit Kumar Majumdar, IAS(Retd.)**
Former Director, UD Deptt.
Govt. of Tripua
Mb: 9436501107

**EXECUTIVE MEMBER**
**Er. S. D. Chandsure**
Aurangabad, Maharashtra
Mb: 9422707269

**EXECUTIVE MEMBER**
**Er. Satyanarayana Mendu**
Fmr. Superintending Engineer,
R & B Deptt.Hyderabad, Telangana
Mb: 8500582959

**EXECUTIVE MEMBER**
**Er. Binod Kumar Jha**
Fmr. Superintending Engineer,
BCD, Patna, Bihar
Mb: 9431248742, 7870833880

**EXECUTIVE MEMBER**
**Er. Suresh Kr. Bairwa**
Fmr. Addl. CE, PWD Rajasthan, Kota,
Mb: 9414180369

**EXECUTIVE MEMBER**
**Ar. (Ms.) Alpna Harjai**
Architect, New Delhi
Mb: 98113 40093

# CONTENTS

# From President's Desk

India stands at a defining moment in its journey toward **Viksit Bharat 2047**, with unprecedented investments in infrastructure, urban development, and the built environment. As the nation builds at scale and speed, safety must form the bedrock of growth, not its afterthought. Buildings are not merely physical assets; they are spaces where lives are lived, livelihoods are sustained, and national aspirations take shape. Ensuring safety across the entire life cycle of buildings is therefore both a professional responsibility and a national imperative.

The safety domains discussed in this bulletin—construction safety, structural safety, fire and life safety, occupancy and operational safety, and environmental and public safety—were conceptualised during deliberations at the Agartala meeting in July 2025, which helped frame building safety as an integrated, life-cycle system, rather than isolated checks.

Building on this foundation, a Safe Approach to Buildings framework has been developed, structured around five Safety Domains and three Life-Cycle Stages—pre-construction, construction, and operation & maintenance (O&M). This approach enables safety risks to be anticipated and addressed at the right stage, reducing disruptions and reactive interventions.

As India advances toward its mission, the Indian Buildings Congress calls upon all stakeholders to champion safety as a shared national value, transforming it from compliance into culture

Let us work together to build a SAFER, stronger, and truly developed India.

With warm regards,

(Er.C. Debnath)

# From Editor's Desk

**Safety-first mindset is the strongest foundation.**

Lessons learnt from failures, mishaps, collapses, and disasters have profoundly shaped the way the built environment is planned, designed, constructed, and managed worldwide. Historic incidents have repeatedly demonstrated that lapses in safety—whether technical, managerial, or ethical—carry irreversible human and societal costs.

The 1981 Kansas City Hyatt Regency walkway collapse, which claimed 114 lives due to inadequate connection design and lack of oversight, led to major reforms in engineering ethics and accountability. Similarly, the 9/11 World Trade Center disaster in 2001 highlighted the importance of structural redundancy, emergency response coordination, and resilience against extreme events, influencing global thinking on life safety and delayed collapse mechanisms.

India's own experience with natural and man-made disasters—including the Latur (1993) and Bhuj (2001) earthquakes, the Odisha Super Cyclone (1999), and the Uphaar Cinema fire (1997)—has driven significant regulatory and institutional reforms. These events culminated in the Disaster Management Act, 2005, the establishment of the National Disaster Management Authority (NDMA), and successive revisions of the National Building Code (NBC), with life safety and integrated risk management as central themes. Worker safety is addressed through the BOCW Act, 1996, and further strengthened under the new Labour Codes.

Despite the availability of codes, technologies, SOPs, and guidelines, incidents such as structural failures, fire mishaps, crane accidents, and electrocutions continue to occur, eroding public trust and highlighting gaps in implementation and enforcement.

Recognising this urgency, Indian Buildings Congress has adopted **Safety** as the central theme of this issue. Through nationwide sensitisation, technical engagement, and capacity building, IBC advocates a holistic, life-cycle-based safety approach across construction, structural, fire and life, occupancy, and environmental safety domains—moving the sector from reactive response to proactive resilience in support of **Viksit Bharat 2047**

**(B.C. Tripathy)**

# How Safe is Safety? - A Comprehensive Framework

**Sansar Pattnaik**
Former ADG, CPWD
**Bipin Bihari Padhy**
Consultant

## Abstract

*Ensuringsafe buildings is a fundamental objective of structural engineering and urban development amid increasing urbanization. This study asserts that safety is defined by synergy between structural integrity, MEP systems, and life-protection protocols. Achieving this requires a three-tiered methodology: pre-construction planning, active oversight, and post-occupancy management. By moving beyond traditional compliance toward performance-based design, this framework incorporates resilience into the structure's entire service life. This research highlights principles necessary to align construction and maintenance into a cohesive strategy, protecting life and property under normal and extreme conditions.*

## 1. Introduction:

A truly safe building is defined by an integrated synergy between the five safety domains such as **construction, structural, fire and life safety, as well as operational and environmental protections.** Achieving this requires a rigorous, three-tiered methodology: **pre-construction** planning, **active construction** oversight, and **post-occupancy** operational management. This holistic framework ensures that structural engineering, MEP (Mechanical, Electrical, and Plumbing) systems, and security protocols function as a single, cohesive unit. By synchronizing these elements, the structure becomes a resilient environment capable of mitigating both natural hazards, such as seismic events, and man-made risks, such as electrical fires.

The Built environment is dominated for mostly privately owned buildings. Government is undertaking many buildings works for public such as Hospitals, Schools, Commercial buildings, IT buildings etc. A safe Building needs to address the following aspects:

i) **Pre-construction Stage :**

- a) Planning aspect : incorporation of safety objectives & sequencing of works
- b) Structural Design aspect : Seismic resistant design, compliance with codes, review of design & provision for future
- c) MEP (Mechanical, Electrical, and Plumbing)design aspect: Integration of MEP design with architectural and structural systems, avoiding conflicts
- i) Mechanical : heating, ventilation and air conditioning system (HVAC) design, lifts, accessibility for all users
- ii) Electrical services design, lightening arrestor, electrical equipment and installation, earthing and grounding systems
- iii) Plumbing: Safe water supply and drainage design
- iv) Fire protection and security systems

ii.) **Construction Stage:** Safety measures during construction

iii) **Post construction Stage:** O&M (Operational & Maintenance) aspects,

- a) Operation of all services (such as HVAC, lifts…), fire services
- b) Maintaining electrical and plumbing components, preventive and predictive maintenance regimes, safe access for maintenance activities

All Building works are carried out under State development acts, which are largely based on the National Building Code (NBC) and often cite NBC provisions for specific requirements. These acts are generally crisp, specifying only general provisions, while fire safety is usually cross-referred to the NBC.

Safety in building projects is focused on three distinct areas: design, construction, and operational safety. Contractors are responsible for site safety, including securing work areas, maintaining equipment, and adhering to safety rules. Typically, a Health Safety Environment (HSE) document is prepared for construction work, and a safety Engineer is posted at all major sites to ensure adherence to safety provisions.

## 2. Safe Buildings:

2.1 The performance of the building safety is dependent on how well the safety standards are integrated in to the building planning, structural design, MEP design etc. Mostly emphasis is given to Fire safety in all high-rise buildings. There is other important area which escapes attention or forsaken.

2.2 Some key issues concerning the 'Safe Buildings' are highlighted

2.2.1. **Planning aspect:**

Building plans integrate design principles and regulatory requirements to ensure structures are safe, functional, and legally compliant. The planning process considers:

a) Spatial Provisions: Setbacks, circulation spaces, approaches, entries, and exits are all designed to manage flow and ensure safety and accessibility.

b) Building Coverage and Height: Ground coverage and the structure are planned as per local acts to manage density and access to light and air

c) Vertical Circulation: Staircases, lifts, and ramps are critical for vertical movement within the building.

d) Life Safety Systems: Features such as fire safety systems, refuge spaces, assembly areas, and lightning protection

e) Water and Fire Suppression: Water tanks and systems like wet risers or downcomers are essential for internal fire demand and controlling incidents.

Adherence to these regulations is crucial for obtaining necessary approvals and ensuring the long-term integrity and safety of any built environment.

2.2.2. **Structural Safety: Design aspect:**

High-rise buildings are executed via Turnkey/ EPC Contracts, where the construction agency handles structural and MEP design works. Contracts usually stipulate proof checking from reputed institutes. These projects include a Supervision Consultant, Authority Engineer, or Independent Engineer appointed by the Government to check and approve designs.

a) **Seismic Resistant design:** Structural design follows relevant IS codes for specific seismic and wind zones. In EPC or Turnkey Contracts, construction agencies often focus primarily on IS 456 requirements, making design appropriateness dependent on the competency of the Authority or Independent Engineer (AE/IE).

Due to growing concerns regarding earthquake resistance, seismic zones are currently under revision. Many aspects escape scrutiny during design checks, leading to safety ramifications. Specifically, departures from IS 13920 provisions for earthquake-resistant design and detailing often result in a failure to increase member sizes and reinforcement as required. Key departures noticed during the design process are highlighted below.

i) **Stilt Floor/Soft Storey Provisions**

- Avoidance of Soft Storey: Ideally, sudden changes in stiffness and strength between floors (creating a "soft" or "weak" storey) should be avoided to ensure uniform performance during an earthquake.

ii) **Cross Walls and Symmetry**

- **Minimum Structural Wall Plan Density:** In cases where an open storey (e.g., for parking) is unavoidable, specific measures are mandatory. The code requires a minimum RC structural wall plan density (*psw*)to be provided along each principal direction. For Seismic Zones III, IV, and V, the required density of shear wall or structural wall is at least 2% of the total floor plan area.
- **Symmetrical Placement:** The provided cross walls (shear walls) must be distributed in a symmetrical manner in the building plan to avoid torsional effects (twisting) during an earthquake. Asymmetrical stiffness distribution can lead to severe damage.
- **Outer Boundary Placement:** Placing these stiffening elements, such as shear walls, preferably near the outer boundary (periphery) of the building is highly effective. This placement maximizes the lever arm to resist overturning moments

and horizontal (EQ) forces, significantly increasing the building's overall lateral resistance.

- **Stiffness Requirement:** The added structural walls and elements must be designed such that the lateral stiffness of the open storey is not less than 95% of that in the storey immediately above it. The older codes used a 50% threshold, but the present code emphasizes the need for similar stiffness to prevent a weak/soft storey mechanism.

iii) For Flexural members, the factored axial stress under earthquake loading shall not exceed 0.08 fck.

iv) According to IS 13920:2016, Clause 7.1.1, the minimum column dimension must be at least 20 times the diameter of the largest longitudinal reinforcement bar in the beam passing through the joint. Using common 20mm or 25mm reinforcement requires column dimensions of at least 400mm or 500mm, often resulting in larger column sizes for residential and commercial buildings.

v) This engineering principle is a core requirement of modern seismic design standards for reinforced concrete structures. The code enforces specific detailing to ensure sufficient anchorage length and confinement within beam-column joints, allowing the building to dissipate energy during an earthquake without collapsing.

vi) Strong-column–weak-beam: This critical seismic principle prevents sudden collapse by forcing plastic hinges to form in beams rather than columns. This ensures columns remain strong enough to support vertical loads and maintain overall structural stability.

b) **Compliance with IS Codes**

i) IS 456 (General RCC Design): The longitudinal reinforcement in a reinforced concrete column must be a minimum of 0.8% and a maximum of 6% of the gross cross-sectional area. This general provision ensures the column has adequate steel for basic load-carrying capacity (gravity and wind loads) without excessive congestion, and it applies regardless of specific seismic considerations.

ii) IS 13920 (Ductile Detailing for Seismic Forces): This code introduces specific requirements for structures in seismic zones to ensure ductile behaviour.

iii) Clause 7.2.1 Requirement: To satisfy the strong-column–weak-beam concept, IS 13920 specifies that the sum of the nominal design strengths (flexural moments of resistance) of the columns meeting at a joint along each principal plane must be at least 1.4 times the sum of the nominal design strengths of the beams framing into that joint.

iv) This criterion often necessitates increasing the column size or reinforcement beyond what is required by IS 456 for gravity loads alone, to meet the desired flexural strength ratio. The design strength of members for this check is calculated considering material properties at their characteristic values and the factored axial forces on the column.

Consider the following example:

- Beam size: 300 × 650 mm
- Column size: 400 × 600 mm
- Initial reinforcement (based on normal design loads): 6 bars of 25 mm diameter for the beam (top and bottom) and 14 bars of 25 mm diameter for the columns.

When performing the strong-column–weak-beam check (IS 13920), the original design might fail the 1.4 x strength ratio requirement. Consequently, column reinforcement must increase—for example, to 18 bars of 25 mm—to ensure flexural capacity exceeds the beams. This highlights how seismic safety requirements override minimum reinforcement dictated by gravity-load design codes.

v) **Close Spacing Links:**

As per IS 456: 2000, under normal circumstances (non-seismic detailing), the maximum spacing of vertical stirrups along the beam's axis shall not exceed the lesser of:

- 0.75 times the effective depth of the beam (0.75d)
- 300mm

Typical spacing generally ranges from 150mm to 300mm based on shear demand, ensuring adequate concrete compaction and proper placement of reinforcement.

According to IS 13920:2016(Ductile Detailing for Seismic Zones), Clause 6.3.5, the stirrup spacing in beams must be reduced based on the diameter of the longitudinal reinforcement.

For enhanced ductility in seismic regions, stricter rules apply, especially near potential plastic hinge locations (e.g., beam ends at column faces). The first link must be placed within 50mm of the joint face.

Over a length of twice the effective depth (2d) from the support face, the maximum spacing of vertical links shall not exceed the least of the following:

- d/4
- 8 times the diameter of the smallest longitudinal bar)
- 100mm

This results in significantly reduced spacing, commonly around 70 to 75mm to provide necessary confinement and prevent premature failure during an earthquake event.

vi. **Minimum Bottom Steel at Support:** The longitudinal steel on the bottom face of a beam framing into a column (at the face of the column) shall be at least half (50%) of the steel on its top face at the same section. This is a mandatory requirement for ductile detailing in seismic zones to ensure sufficient rotational capacity and prevent sudden failure, even if design calculations for gravity loads require less reinforcement.

The bottom longitudinal reinforcement in beams should be provided according to the structural design calculations, ensuring compliance with the requirements and minimum.

Example :

- Design Requirement: Top steel = 3 bars of 25 mm diameter; Bottom steel = 3 bars of 16 mm diameter.
- Code Requirement (Clause 6.2.3): The bottom steel must be at least 50% of the top steel at the support face.
- Calculation:
  - ❍ Area of 3 x 25 mm bars =1473 $mm^2$ (Top Ast)
  - ❍ Minimum required bottom Ast = 50% of top = 0.50 * 1473 $mm^2$ = 736.5 $mm^2$
  - ❍ Area of 3 x 16 mm bars (Designed bottom) Ast = 603 $mm^2$
  - ❍ Since 603 $mm^2$ is less than the required minimum of 736.5 $mm^2$, the design must be revised
  - ❍ Providing 3 bars of 20 mm diameter for the bottom reinforcement results in an area of 942 mm2 which satisfies the minimum 50% requirement (942 mm2> 736.5 mm2)

These provisions are crucial for enhancing the seismic safety of open ground storey buildings, which have historically shown high vulnerability to collapse during strong earthquakes.

c) **Review of Design:**

i) Structural design is the construction agency's responsibility under Turnkey or EPC Contracts, usually proof-checked by engineering institutes. This peer review is an independent evaluation of calculations and plans by a third party to ensure code-compliant, error-free designs. These reviews are crucial for complex projects, verifying loads and criteria against standards and project specifications, offering assurance beyond basic checks and enhancing public safety. The process of such review should consist of

- ❍ Review of design basis, loads, criteria, and calculations.
- ❍ Verification against building codes and standards.
- ❍ Identification of flaws, omissions, and potential weaknesses.
- ❍ Recommendations for improvements and constructive feedback.

- Issuance of a formal report confirming compliance or detailing required revisions

  Most of the proof checker puts their signature and stamp on the drawing and rarely provide any report. Many salient features are ignored by the Proof checker and in cases, they are very casual in proof checking. To have a comprehensive review a check list should be enclosed as to what the reviewer checked and mention about checks made.

d) **Provision for future:**

In building projects, scope of work often defines built-up area (BUA) based on current needs, potentially underutilizing the allowable Floor Area Ratio (FAR). It is desirable to plan for full allowable FAR while constructing only the required BUA. Foundation design must support the full FAR, enabling future built-up area additions.

### 2.2.3. Fire & Life Safety

2.2.3.1: **Fire protection System**

a) **Pipes in FireProtectionsystem:** MS (Mild Steel) pipes in firefighting systems are categorized by manufacturing (Seamless, ERW) and grade (Class A, B, C), with Class C being heavy-duty for high pressure, and often coated (Red/Black) for corrosion protection, used in hydrants, sprinklers, and mains, meeting standards like IS 1239 & ASTM A53 for strength and reliability.

Types of MS Pipes by Manufacturing:

i) Seamless MS Pipes: Made without welded seams from solid steel billets; very strong, used for high-pressure risers and pumps.

ii) ERW (Electric Resistance Welded) MS Pipes: Formed from steel strips and welded; cost-effective, common for general hydrant and sprinkler networks.

- Types by Grade/Thickness (IS 1239):
- Class A: Light duty (less common in firefighting).
- Class B: Medium duty.
- Class C (Heavy Duty): Thickest walls, highest durability, preferred for high-pressure firefighting systems.

iii) It is general practice that light duty or medium duty pipes are used in high rise buildings. Ignoring type of pipes in firefighting systems will affect the building safety.

b) **Internal Fire Load:** Fire safety standards consider internal fire load and external facades when determining water requirements. Material combustibility directly affects fire intensity, requiring engineering solutions beyond basic population formulas. Internal furnishing and facades are often ignored when computing fire load, which is frequently increased through elaborate wooden paneling. Altering internal fire load without corroborative suppression measures renders a building unsafe, often resulting in fatal accidents.

A recent example is the Hong Kong fire, where flammable polystyrene foam boards covering windows acted as accelerants, spreading fire inside and to adjacent blocks.

a) External facades planned without checking fire load can encompass buildings, hindering evacuation and smoke release, creating death traps. Internal fire load (furnishings, wood panelling) determines the fire hazard category (Light, Ordinary, Extra). Higher hazard categories with extensive combustibles require greater water flow and storage. Automatic sprinkler systems, engineered for specific heat release rates, are essential in these high-load areas.

b) External facades are critical for high-rise fire safety. Combustible materials can cause rapid vertical and horizontal fire spread, known as the "leap-frog" effect, creating "fire and smoke traps." International standards like NFPA 285 require large-scale assembly tests to ensure these systems do not facilitate fire spread.

c) To mitigate risks, designs must include fire-rated walls, non-combustible cladding, and fire breaks in cavities to prevent the "chimney effect." For glass facades, internal sprinklers are often required within 600 mm of the glass to provide adequate coverage

c. **How Codes Address Fire Loads and Facades**

i) **Fire Load Calculation:** NBC and NFPA use "fire load"—total heat energy per unit area—to classify occupancy. This data informs required fire protection measures and water supply needs.

ii) **Material Combustibility:** Regulations control combustible materials on walls and facades. High-rise cladding must often be "non-combustible" (e.g., Euroclass A2) to prevent rapid fire spread.

iii) **Active Fire Protection:** Combustible materials mandate automatic sprinkler systems. Fully sprinklered buildings may receive a fire flow reduction (e.g., up to 75%).

iv) **Facade Measures:** Rules address fire traps via specific requirements:

v) **Fire Access Panels:** Openable panels are required on glass facades for ventilation and firefighting.

vi) **Fire Stopping:** Gaps between floor slabs and facades must be sealed with fire-resistant materials to prevent smoke propagation between floors.

vii) **System Testing:** Assemblies undergo large-scale tests like NFPA 285 to ensure they limit fire spread. While basic municipal formulas use population data, building-specific water requirements integrate fire hazards—load, combustible finishes, and facade materials—to ensure adequate supply for firefighting and life safety. A building's fire protection strategy combines these preventative and active measures.

**2.3 Construction Safety:**

In most of the construction site, a safety hand book for construction work foe safety of workers is considered as sufficient to address the safety issue. In High rise structures, equipment safety is taken up in isolation and is limited to some caution or general warning for safety of workers. Some of the key equipment safety requirement is cited as example.

2.3.1 **Tower Crane installation**

Tower cranes (hammerhead, luffing jib, or self-erecting) need special stability checks in high-wind areas. Failures often occur in the loading arm due to fatigue from cyclic loading, where propagating cracks cause abrupt fractures. Some cranes are dangerously repainted without fixing these structural flaws. Diligent safety requires one day of inspection per week, alongside planning, equipment safeguards, and certified personnel. Key safety measures include:

a) Regular Inspections and Maintenance: Daily visual checks and periodic certified inspections (monthly/annually) of all components (wire ropes, hooks, brakes, structure, etc.) are essential to identify and address wear and tear.

b) Qualified Operators and Riggers: Only certified and trained individuals should operate the crane or rig loads. A designated, qualified signal person must be used to communicate with the operator during lifts, following standardized signals.

c) Load Management: Never exceed the maximum Safe Working Load (SWL). Automatic Safe Load Indicators (SLIs) and limiters provide warnings and stop operations if capacity is exceeded. Ensure loads are balanced and properly rigged before lifting.

d) Site and Environment: Crane foundations must be stable, level, and have adequate bearing capacity. Maintain safe clearance from power lines, de-energizing them if possible. Operations must cease if wind speeds, monitored by an anemometer, exceed safe limits.

e) Operational Safety: Enforce exclusion zones to prevent personnel from working under suspended loads.

f) Safety Devices: Utilize limit switches for hook height, trolley, and jib parameters. Anti-collision systems are essential on multi-crane sites to prevent contact.

**2.3.2 Service lift:**

a) Construction sites utilize various lifts like service lifts, scissor lifts, and hoists. These hoists are crucial for moving workers and

materials efficiently, preventing injuries and reducing costs. To ensure safety, strict protocols—including barricading, regular inspections, and proper operation—are required. Establishing a specific safety inspection protocol is essential for safe site operations. The checks shall include

b) Pre-Lift Checks: Daily inspections of lift components, controls, and site hazards (holes, slopes).

i) Proper Setup: Ensure stable, level ground, use stabilizers/outriggers.

ii) No Overloading: Never exceed height or weight limits.

iii) Communication: Use radios/signals; conduct pre-lift briefings.

iv) Fall Protection: Workers must use harnesses and lanyards

2.3.3 **Fabrication yard:** A fabrication yard on a construction site builds large components (like steel structures) but poses risks like fire, electrical shock, falls, and material handling injuries.

a) key safety measures include strict PPE (helmets, gloves, goggles, flame-resistant clothing), proper equipment maintenance (earthing, guards), hot work permits, clear housekeeping (no clutter), barricading, good ventilation, fire safety (extinguishers, water), and trained lifting/rigging procedures to prevent accidents and ensure worker protection.

**2.4 Occupational & Operational Safety (in Internal Wiring and Electrical Equipment)**

2.4.1. **Internal wiring:** Most fire hazards originate from electrical wiring. Over-rated breakers or loose connections causing arcing often bypass protection, as current remains below tripping thresholds. Resulting heat damages insulation, leading to short circuits and rapid fire spread. Therefore, proper breaker selection, fire-resistant wires, and avoiding joints or surface PVC conduits are of utmost importance.

2.4.2. **Transformers:** Transformer safety involves strict installation rules, grounding, and regular maintenance like oil checks and thermal scans. Protective measures include fire suppression, barriers, and warning signs. Operational protocols—avoiding overloading and using PPE—prevent electrical hazards and physical damage, ensuring safety for occupants and equipment.

a) **Design:** Maintain safe clearances per IE rules, ensure essential grounding, and use weatherproof enclosures. Install fire barriers/sprinklers and surge arresters for protection against lightning.

b) **O&M:** Regularly inspect for oil leaks, noises, or damage. Monitor loads to prevent overloading and check insulation integrity. Only qualified personnel should perform maintenance using insulated tools on de-energized systems. Keep dry-type units clean and protected.

c) **Transformer test :** It is essential to conduct pre-despatch tests at the manufacturer's premises. Transformer tests include Routine Tests performed on every unit—such as winding resistance, turns ratio, insulation resistance, and load losses—and Type Tests for design validation, which can be destructive. Type Tests specifically include temperature rise, impulse voltage, and short-circuit tests. Key Type Tests (Design Validation)

- Temperature Rise Test: Assesses cooling system and winding temp limits.
- Impulse Voltage Tests (Lightning/ Switching): Simulates extreme voltage surges.
- Short-Circuit Withstand: Tests mechanical and thermal endurance during faults.

a) **Special & Site Tests**

- Transformer Oil Tests: Breakdown voltage, dissolved gas analysis (DGA).
- Sweep Frequency Response Analysis (SFRA): Detects winding deformation.
- Partial Discharge (PD): Identifies internal insulation voids.

- On-Load Tap Changer (OLTC) Tests: Checks tap changer mechanism.
- Physical/Mechanical: Vacuum tests, sound level.

**2.4.3. Elevators:**

Elevator tests cover safety, mechanical integrity, and performance. These include load tests (up to 125% capacity) to check brakes, ropes, and stopping accuracy. Safety gear tests evaluate overspeed governors, while door tests check safety edges and unlocking mechanisms. Additionally, checks on control systems, emergency functions (alarms, lighting), levelling, and ride quality ensure compliance with safety codes for reliable, breakdown-free operation.

**2.4.4. LightningProtection:**

Lightning protection shields building structures and electrical systems from strikes. The philosophy is to divert strikes to the ground via low-resistance paths, preventing irreparable structural damage and protecting equipment like transformers.

**2.4.5. Diesel Generator Tests:**

Visual inspections, fuel/oil/coolant checks, and load bank tests assess performance. These check stability, insulation, battery health, and protection relays, confirming efficiency and reliability.

## 3. Concluding Remarks

Achieving "safe buildings" requires commitment beyond design, demanding a holistic strategy that integrates structural engineering, MEP systems, and safety protocols into a cohesive framework. Stakeholders must uphold these aspects throughout a structure's lifespan to ensure resilience against natural and man-made hazards.

As India urbanizes, neglecting integrated safety carries severe consequences. Prioritizing safety across planning, construction, and maintenance is essential for secure cities. **Vikasit Bharat's** development depends on translating regulations into effective on-ground practice.

## Call for Papers – Built Environment ( Jan.–Mar., 2026 Issue)

**Theme: Standards & Quality**

The forthcoming issue of Built Environment (BE), to be published on April 01, 2026, will focus on Standards & Quality in the built environment, inviting reflections on how codified standards and lived quality interact across planning, design, construction, and operation.

**Submission Guidelines**

- **Full Papers:** maximum 5 pages, including text, formatting, figures, references
- **A3 Papers / Posters:** A3 size, 2 pages, left/right print, center spread, visual presentation of concepts or cases
- **Content Focus:** practical, observational, analytical, research-based, standards, quality, interaction, lessons from practice
- **Deadline:** February 20, 2026

Contributions are expected to stimulate reflection, discussion, and learning, and to enrich professional discourse on how standards and quality together shape outcomes in the built environment.

# A Holistic Life-Cycle Approach for Safe Buildings


Building safety is often discussed in fragments—construction accidents, fire incidents, structural failures, or unsafe buildings in use. In practice, ***safety in the built environment is continuous, spanning the entire life cycle of a building***: from pre-construction planning and construction, to occupancy, emergencies, and its impact on the public and environment.

Globally, safety systems recognise that no single stage can ensure safety in isolation. Despite advances in technology, detailed codes, standard operating procedures, and statutory provisions, safety-related incidents continue to occur with alarming regularity.

- Structural collapses, fire mishaps, electrocutions, crane and lift failures, and transformer bursts are often reported as routine occurrences rather than systemic failures.
- Nearly ***38 fatalities occur daily at construction sites,*** largely due to falls from height, electrocution, collapsing walls, and scaffolding failures.
- ***Fire-related incidents claim an average of about 35 lives every day*** across the country.

This has driven adoption of life-cycle-based, risk-driven frameworks integrating safety from the design stage. In India, despite comprehensive codes, gaps in implementation and coordination highlight the need for such an integrated approach.

The conceptual foundation for this approach emerged during deliberations at the Agartala meeting in July 2025, where insights shared by IBC members and Shri Sanjay Pant, DDG, Bureau of Indian Standards, ***reinforced the importance of viewing building safety as an end-to-end system, rather than isolated compliance checks***. These discussions led to the articulation of five interlinked safety domains—***construction safety, structural safety, fire and life safety, occupancy and operational safety, and environmental and public safety***.

While these safety domains are not new and are reflected in the National Building Code and other standards/ books in various forms, this endeavour seeks to organise them into a clear, structured layout for practical application. Across domains, risks and responsibilities vary during the ***pre-construction, construction, and operation & maintenance (O&M) stages.*** Safety outcomes are shaped by early planning and design decisions, and by disciplined execution and long-term operation.

This framework offers a practical pathway to embed safety across all stages, moving the industry from fragmented, reactive compliance to an integrated, prevention-focused safety culture. These five safety domains are discussed in this bulletin through ***FIVE FOCUSED INSERT SECTIONS***, intended to ***inform, sensitise, and guide professionals*** in recognising critical safety risks across the building life cycle.

(Conceptual synthesis and framework articulation: Manoranjan Misra, Frmr. E-in-C & Spl. Secy, Govt. of Odisha)

# Safety Domain 1: Construction Safety – Managing Risks

Construction safety relates to the **most dynamic and risk-prone stage** of a building's life cycle. Most serious accidents occur not because safety measures are unknown, but because *risks are underestimated during routine or short-duration activities*. It must therefore be addressed **from pre-construction planning through execution.**


During the **pre-construction stage**, safety is influenced by site layout planning, sequencing of works, constructability reviews, temporary works strategy, and risk assessments. Construction safety **during the execution phase** can be understood through the following key elements:

1. **Temporary Works and Site Planning** – Scaffolding, formwork, shoring, access platforms, and barricades are temporary but critical to safety. Poor design, inadequate supervision, are a major cause of falls and collapses.

2. **Working at Height / Depth** – Edges, openings, roofs, scaffolds, trenches, and excavations present persistent fall and collapse hazards. Guardrails, shoring, safe access, and fall protection must remain in place throughout execution.

3. **Plant, Equipment, and Lifting Operations** – Cranes, hoists, and material handling equipment create interface risks. Certified equipment, approved lifting plans, exclusion zones, and trained operators are essential to prevent accidents.

4. **Electrical and Fire Safety During Construction** – Temporary electrical systems, hot works, and flammable materials require controlled layouts, proper earthing, fire prevention measures, and continuous monitoring.

5. **Worker Health, PPE, and Training** – Workers face risks from dust, noise, heat stress, fatigue, and manual handling. PPE alone is insufficient; training, supervision, safety awareness, and welfare provisions are critical.

Globally, construction safety is embedded through task-based risk assessments and method statements. In India, **safety often *remains reactive under time pressure and fragmented contracting***. The essential lesson is clear:

***Construction safety must NOT BE TREATED AS AN ADD-ON. Safety is not any department's responsibility, it must be the ORGANISATION SAFETY CULTURE that everyone follows.***

# Safety Domain 2: Structural Safety – Life-Cycle Safety of the Building


Structural safety concerns the **ability of a building to remain stable, robust, and safe throughout its life cycle**, resisting collapse, excessive deformation, and progressive failure. Unlike construction safety, structural safety failures are often **sudden, catastrophic, and irreversible**, with consequences extending far beyond the site. Structural safety must therefore be ensured **from design conception through construction quality and long-term use**.

During the **pre-construction stage**, structural safety is primarily determined by planning and design decisions. Appropriate load assumptions, seismic and wind-resistant design, soil–structure interaction, redundancy, robustness, and compliance with structural codes form the foundation of safety. Peer review and independent checks are especially critical for complex, high-rise, or public buildings. Structural safety of buildings can be understood through the following key aspects:

1. **Design Safety and Load Considerations** – Safe structural design requires realistic assessment of dead, live, wind, seismic, and accidental/ future loads, along with appropriate load combinations..
2. **Quality of Materials and Workmanship** –Inadequate concrete quality, improper reinforcement placement, poor curing, and site deviations are common contributors to structural distress.
3. **Compliance with Structural Codes** – Structural codes translate collective experience and research into minimum safety requirements. Compliance must be ensured in design, during execution and later as per updated codes.
4. **Safety Against Collapse and Progressive Failure** – Structures must be capable of redistributing loads in case of local damage. Redundancy, robustness, and ductile detailing are critical, especially in seismic zones.
5. **Third-Party Checks, Peer Review, and Audits** – Independent review of structural design and periodic structural audits help identify errors, deviations, and emerging vulnerabilities before they result in failure.

During the **construction stage**, structural safety depends on correct execution, sequencing, and temporary stability. In the **operation and maintenance stage**, safety relies on monitoring, maintenance, and control over alterations and change of use.

***A structure is safe not because it once met a code, but because its safety is continuously respected, verified, and preserved throughout its life.***

# Safety Domain 3: Fire and Life Safety – Before, During, and After Occupancy


Fire and life safety focuses on **preventing fire incidents and ensuring safe evacuation and survival** during emergencies. Fire-related failures often result not only from absence of systems, but from poor integration between design, construction, operation, and human response. Fire safety must therefore function as a coordinated system of **design, infrastructure, management, and preparedness**. Fire and life safety must be addressed **from the earliest planning stage and sustained throughout the building's service life**.

During the **pre-construction stage**, fire safety is determined by planning and design decisions, including building layout, fire compartmentation, means of escape, fire load assessment, and integration of active and passive fire protection systems. Fire and life safety can be understood through the following core elements:

1. **Fire Prevention During Construction and Occupancy** – Temporary electrical systems, welding, hot works, and storage of combustible materials make construction sites especially vulnerable to fire.
2. **Means of Escape and Evacuation Planning** – Safe, unobstructed exits, staircases, and corridors are fundamental. Evacuation routes must remain accessible at all times, both during construction and after occupancy.
3. **Active Fire Protection Systems** – Detection, alarm systems, sprinklers, hydrants, and pumps are designed to respond actively during a fire. Their effectiveness depends on proper design, installation, testing.
4. **Passive Fire Protection Measures** – Fire-rated walls, doors, shafts, compartmentation, and structural fire resistance help contain fire and smoke, allowing time for evacuation.
5. **Fire Safety Management and Drills** – Fire safety is incomplete without trained occupants, clear procedures, mock drills, and coordination with local fire services.

During the **construction stage**, temporary fire risks require vigilant control. In the **operation and maintenance stage**, regular inspection, testing, and occupant awareness determine actual safety performance. The core message is:

**Fire safety saves lives only when fire protection systems are functional, evacuation spaces remain clear, and occupants are informed, trained; only *when systems, spaces, and people are all prepared to to act together.***

# Safety Domain 4: Occupancy and Operational Safety – Safety Beyond Construction

Occupancy and operational safety concerns the **protection of users during the normal use of a building**. While construction and fire incidents attract immediate attention, many injuries and failures occur during routine operation due to poor maintenance, unsafe services, or inadequate access provisions. A building remains safe only as long as it is **responsibly operated and maintained**.


During the **pre-construction stage**, safety is shaped by planning and design decisions, including safe layouts, adequate circulation, accessibility, service zoning, and maintenance access. Design choices that ignore inspection and maintenance needs often create long-term operational hazards. Key elements of occupancy and operational safety include:

1. **Safety of Occupants During Building Use** – Safe circulation, adequate lighting, clear signage, and well-designed common areas are essential.
2. **Electrical, Plumbing, and Utility Safety** – Faulty wiring, overloaded systems, leaking gas lines, or poorly maintained plumbing can lead to fires, electrocution, flooding, or health hazards.
3. **Lifts, Escalators, and Vertical Transportation** – Elevators and escalators especially in high-rise buildings require certified installation, regular inspection, and trained maintenance personnel.
4. **Maintenance Safety and Access Provisions** – Buildings must provide safe access for maintenance of façades, services, roofs, and equipment. Unsafe maintenance practices often expose workers/ occupants to avoidable risks.
5. **Safety for Vulnerable Users** – Children, elderly persons, and persons with disabilities require inclusive design features such as ramps, handrails, non-slip surfaces, audible alarms, and accessible controls.

During the **construction stage**, improper installation or temporary alterations often create latent hazards. In the **operation and maintenance stage**, safety depends on preventive maintenance, competent facility management, and user awareness. Globally, operational safety is addressed through **facility management systems**, mandatory inspections, and accountability of building owners and managers. The essential lesson is clear:

***A building remains safe only when those who operate and maintain it understand their responsibility, follow safe practices, and prevent everyday neglect from becoming a serious safety hazard.***

# Safety Domain 5 : Environmental and Public Safety – Beyond the Building Boundaries


Environmental and public safety addresses the **impact of building activities on adjoining properties, public spaces, and the wider environment**, often beyond the project boundary. Environmental and public safety must therefore be managed **throughout the building life cycle**, from planning to construction, operation, and eventual demolition. Globally, public safety is addressed through *integrated planning and environmental regulation.* In India, *gaps in enforcement and coordination* often expose the public to avoidable risks.

During the **pre-construction stage**, safety is influenced by site selection, assessment of surrounding buildings and utilities, traffic impact studies, environmental impact assessments, and disaster risk evaluation. **Early identification of risks related to earthquakes, floods, wind, soil conditions, and climate exposure** helps prevent future failures and public harm. This safety domain includes the following aspects:

**1. Safety of Adjoining Properties and Public Spaces** – Excavations, dewatering, piling, and heavy construction can affect neighbourhood. Protective measures and monitoring are essential.

**2. Construction Impacts on Surroundings** – Dust, noise, vibration, debris, and traffic disruptions affect public safety and health. Poorly managed sites increase the risk of accidents involving pedestrians and vehicles.

**3. Disaster Resilience** – Buildings must be designed and constructed to withstand earthquakes, wind, floods, and other natural hazards, considering local risk profiles and climate conditions.

**4. Safety During Extreme Events and Climate Risks** – Heatwaves, intense rainfall, flooding, and cyclones demand adaptive design, drainage planning, and emergency preparedness.

**5. Demolition and End-of-Life Safety** – Demolition, retrofitting, and major alterations pose significant risks if not carefully planned. Controlled demolition, waste management, and public protection are essential.

During the **construction stage**, uncontrolled activities can directly endanger the public. In the **operation and maintenance stage**, poor upkeep or unsafe alterations may transfer risk to the surrounding community. The essential lesson is clear:

***A building is truly safe only when it protects not just its occupants, but the community and environment around it.***

# IBC NEWS

## I. IBC HQ

### (i) Technical Seminar and 201st Executive Committee Meeting of IBC at Shimla

### Inaugural Session

Dignitaries on Dais

The Indian Building Congress, Himachal Pradesh State Chapter andHP PWDorganised a technical seminar on "Building Envelope and Bridges"and 201stExecutive Committee Meeting in Shimla on 2ndNovember 2025 at the Conference Hall of the Institution of Engineers(India), HP State Centre. The seminar addressed the issue of construction needs in hill regions and the demand for climate-safe structures.

Lighting of lamp by Shri Vikramaditya Singh, Hon'ble Minister, PWD & Urban Development accompanied by Er. C. Debnath, President, IBC

Shri Vikramaditya Singh, Hon'ble Minister, Public Works and Urban Development,the Chief Guest of the programme inaugurated the session by lighting of lamp in presence of Er. C. Debnath, President, IBC & other senior officers of HP, PWD and IBC office bearers.

**Er Anita Kathuria**, CE PMGSY, HP & Chairman, IBC, HP Centre delivered the welcome address. Er. N. P. Singh, E-in-C, HP PWD was the Guest of Honour. He called for better project quality and quicker adoption of technical learning. Er. C. Debnath, President, IBC explained how IBC links field experience with current research in formats that engineers can use on site.

Hon'ble Minister Shri Vikramaditya Singh, while addressing, stressed on safe construction practices in Himachal Pradesh. He emphasized the importance of sustainable and climate-resilient infrastructure in view of recent natural disasters and called for pre-disaster preparedness and the adoption of innovative technologies. He also mentioned the need to reduce damage during earthquakes and heavy rain. He asked the engineers to use methods that raise the safety of buildings and bridges through better detailing and site assessment. He accepted the request of President, IBC to be the Chief Patron of IBC, HP Centre.

### Technical Seminar on "Building Envelope and Bridges"


Technical Seminar in Progress

**Ar. Rajiv Sharma**, Chief Architect, HP PWD & Vice Chairman, IBC Himachal Pradesh State Chapter welcomed the dignitaries. Er. Suresh Kapoor, Chief Engineer (SZ), HP PWD, Chairman of the session delivered opening remarks. The Key Note address was delivered by Er. R. K. Majumdar IAS Fmr. Director UDD Tripura.

**Ar. N. K. Negi**, Fmr. Architect-in-Chief, HP PWD, presented on the topic **"Building Envelope Response to Climate Change"**. Key-points were:

- Use passive solar design in all public buildings in hill zones.
- Allow natural light to reduce energy load.
- Improve insulation of walls and roofs to maintain indoor comfort.
- Plan self-healing concrete and rainwater control where possible.

He shared example of public building at Kalpa that achieved up to 20 percent energy savings with these methods.

**Er. Alok Pandey**, Bridge Expert, spoke on modernization of bridges and buildings. He presented on the topic **"Modernization of Bridges and Buildings".**

**Key Points:**

- Prefer integral bridges in steep valleys
- Use Ultra High Performance Concrete above M150 grade for long span structures
- Improve quality control during pre-stressing and grout filling.
- Review life cycle cost during design.

He shared data on bridge planning for more than 100-year service life with reduced maintenance need. He also noted that better checks during construction reduce repairs by upto 30 percent. The seminar ended with a clear aim to apply safe and sustainable practices in future projects.

**201st Executive Committee Meeting of IBC**

**201st Executive Committee Meeting in Progress**

The 201st Meeting of the Executive Committee (EC) of IBC was convened on November 2, 2025, in Shimla, under the chairmanship of Er. C. Debnath,President, IBC. This milestone meeting focused on streamlining administrative protocols and implementing fiscal measures to optimize the council's operational budget.

### (ii) Technical Seminar on "Role of Building Structures in Development of Tourism in Kota" and 202nd Executive Committee Meeting

The Indian Buildings Congress, Kota Local Chapter had the privilege of hosting the National Technical Seminar and 202nd Executive Committee Meeting with the objective of deliberating upon contemporary issues related to infrastructure development, best construction practices, sustainability, urban growth, and tourism infrastructure on 14th December, 2025 at Kota.

## Inaugural Session

The inaugural session began at 10:00 AM with the ceremonial reception of dignitaries on the dais. The session was graced by Shri Sandeep Sharma, Hon'ble M.L.A., Kota South as Chief Guest and presided by Er. C. Debnath, President, IBC, New Delhi. Er. D. R. Meghwal, Secretary, PWD Rajasthan & Vice President, IRC; Er. O. P. Goel, Founder President, IBC and Shri Pradeep Mittal, Former President, IBC were the Guests of Honour.

**Saraswati Poojan**

The session commenced with Saraswati Poojan and Lighting of the Ceremonial Lamp, followed by floral welcome and felicitation of all dignitaries.


**Shri Sandeep Sharma, Hon'ble M.L.A., Kota South addressing the gathering**

Shri Sandeep Sharma, Hon'ble M.L.A. highlighted that civil engineers play a vital role in the development and reconstruction of the nation. He emphasized that civil engineering has a significant contribution in tourism development, particularly in the creation of modern, heritage and environmentally sustainable infrastructure.

Er. C. Debnath, President, IBC, stated that the suggestions and recommendations provided through IBC forums are instrumental in supporting policy formulation and implementation, particularly in the infrastructure and public works sectors.

The technical session commenced at 11:45 AM under the chairmanship of Er. B. C. Tripathi, VicePresident, IBC, with Prof. (Dr.) R. C. Mishra (Retd. Professor, RTU Kota) as Co-Chairperson.

The session included the following key technical presentations:

**Er. Mayank Tilak**, Former Special Director General, CPWD delivered a Key Note Address through a Power Point presentation. He highlighted that the tourism sector is a strong pillar of the Indian economy, contributing approximately 6–7% to the GDP and providing employment to nearly 4.65 crore people. He emphasized that a long-term vision is essential for sustainable tourism development in Kota.

**Er. Peeyush Goyal**, Aakaar Consultants presented a Technical Presentation. He elaborated that Kota's tourism infrastructure can be developed under three broad categories:

- Modern
- Heritage
- Natural

He emphasized that coordinated efforts by all stakeholders are essential to realize Kota's tourism potential.

**Dr. Praveen Kumar Agarwal**, Former Professor, RTU Kota presented a Technical Presentation. He highlighted that Kota has immense tourism potential and stressed the need to incorporate new technologies, modern construction practices, planned urban development, and restoration of heritage buildings for sustainable growth.

A special session was allotted to the event sponsor M/s Jaideep Ispat & Alloys Pvt. Ltd., presented by Shri Akhil Raikwar, Assistant General Manager (Projects). The sponsor and speakers were formally felicitated by the dignitaries.

**202nd Executive Committee Meeting of IBC**

**202nd Executive Committee Meeting in Progress**

The Executive Committee Meeting was held in the afternoon on December 14, 2025 at PWD conference hall, Kota.

## II. Zonal Meetings

### (i) Zonal Coordination Committee Meeting of IBC, North Eastern Region and Technical Seminar at Guwahati

The Indian Buildings Congress, Assam State Chapter (IBC - ASC) & the Institution of Engineers (India), Assam State Centre (IEI-ASC) jointly organized a Technical Seminar on the theme "Sustainable Built Environment" in the Auditorium of IEI-ASC, Panbazar, Guwahati-1 on 7th December 2025 in connection with the North Eastern Zonal co-ordination meeting of IBC.

The Technical Seminar was preceded with an Inaugural Session graced by Er C.Debnath, President, IBC and Past President, IEI. Er. (Dr) Toli Basar,Vice President,IBC & Chairman, IBC, North Eastern Zonal Committee; Er.Bhaben Kalita, Chairman, IEI-ASC; Er. Dilip Deka, Chairman, IBC-ASC and Er. Raj Chakraborty, Special Commissioner & Secretary to the Govt of Assam, PWD (NH &Bldg) were on dais.

Er. C. Debnath, Er Toli Basar and Er.Raj Chakraborty lauded the joint initiative of the IEI-ASC and IBC-ASC. Er. R. K. Majumdar, EC member,IBC &Vice-Chairman, IBC-NE Zonal Committee also spoke on the occasion.

In the Technical Session, Er.Kushanabh Baruah, a young Engineering Consultant and executive of Reliant Foundation Pvt Ltd brought a beautiful presentation on a Sub-topic - "PQC Excellence"- Quality Assurance in Modern Pavements. Er. R K Mozumdar, IAS (Retd) from Tripura deliberated at length on another Sub-topic - "EPC Contract". Er. Dilip Deka presented on interesting Sub-topic – "Green Buildings and its' Sustainability in India".

A physical Coordination meeting of all IBC chapters of NE States was held in the Conference Room of IEI-ASC in the afternoon. Delegates from all the IBC Chapters of North East States except Meghalaya, Mizoram and Sikkim, took part in the discussion physically. However these Centres joined the meeting online on virtual mode. Er. O P Goel, Founder President, IBC also joined the meeting online.

Er. C. Debnath FIE, President, IBC called upon all the delegates to work hard to fulfil the mandates of IBC and keep the esteem of IBC high & gave responsibility to some State Chapters to co-ordinate with week chapters for better activity. Er.Toli Basar & Er.R.K.Majumdar spoke on the occasion.

### (ii) Zonal Coordination Committee meeting of IBC,Western Region and Technical Seminar at Bhopal

Strengthening the professional network across Western India, the Indian Buildings Congress (IBC) Western Zone organized a comprehensive Chapter Meeting and Technical Seminar on December 21, 2025 at Bhopal. Hosted in the capital of Madhya Pradesh, the event served as a vital platform for aligning regional chapters with national construction standards.

The meeting saw active participation from senior officers of the MP PWD (Building Wing), alongside a diverse group of engineers, academicians, and industry consultants. The discussions, led by Shri S.D. Chandsure, EC Member, IBC & Co-Chairman of the Western Zone, focused on a strategic "Future Roadmap" for the region. Key agenda items included enhancing coordination with State PWDs, streamlining audit and grant mechanisms from IBC Headquarters, and intensifying membership drives to encourage institutional participation.

Prominent dignitaries representing various state chapters attended the session, including Shri Anil Tiwari, Hony Secretary, Chhattisgarh IBC State Chapter; Shri Girish Kumar Shah, Hony Secretary, Gujarat IBC State Chapter and Shri Shubham Shah, GC Member, IBC; Shri Chandra Shekhar Prabhu Desai, GC Member, IBC from Goa.

The technical seminar was highly lauded for its practical relevance to public works, specifically regarding technical training and organized site visits for young engineers. The session concluded with a summary of key action points aimed at fostering better inter-chapter coordination and maintaining professional excellence in government construction projects across the Western Zone.

### (iii) Zonal Coordination Committee meeting of IBC, Eastern Region and Technical Seminar at Ranchi

The Indian Buildings Congress (IBC) Jharkhand State Chapter, under the aegis of the IBC Eastern Zone Committee, successfully hosted a high-profile Physical Meeting and Technical Seminar on "Safety Measures in Buildings" on December 21, 2025, at Project Building, Dhurwa, Ranchi in collaboration with BCD, Govt. of Jharkhand.

**Seminar in Progress**

The event was inaugurated by the Shri Arava Rajkamal, IAS, Secretary, Building Construction Department (BCD), Jharkhand.

Key technical sessions were led by experts including Er. Sanjay Kuzur, Chairman, IBC Jharkhand & Engineer-in-Chief, BCD Jharkhand; Er. Kanishk Kumar Prasad and Er. Zakki Ahmad. Speakers presented sobering data on fatalities in the construction sector, emphasizing that most accidents are preventable through strict code compliance and heightened awareness.

Er. C. Debnath, President, IBC & Col (Dr.) Anand Mathialagan, Hony Secretary, IBC delivered speech through online.

The technical proceedings focused on the urgent need for rigorous safety measures in the building construction sector. Experts presented data-driven evidence linking the high rate of industry casualties to non-compliance, lack of awareness, and general ignorance of safety protocols. The session demonstrated how strict adherence to standard safety measures and proactive risk management can significantly minimize site accidents.

A dynamic panel discussion featured prominent figures such as Er. Bijoy Chandra Tripathi (Chairman, Eastern Zone & Chairman IBC Odisha State Chapter), Er. Dukhabandhu Behera (GC Member, Odisha), Er. B. Sengupta (Hon. Secretary, IBC West Bengal), and Er. Rakesh Kumar (Chairman, IBC Bihar). Er. Kalyanmoy Mitra, G.C. Member, IBC West Bengal State Chapter, Er. Bhaskar Sengupta, Hon. Secretary, IBC West Bengal State Chapter, Shri Abhishek Kumar Singh: Member, IBC Bihar State Chapter were also present.

The panel addressed the challenge of maintaining code compliance and quality control under strict government timelines. Key discussions focused on integrating sustainable construction technologies and establishing mentorship frameworks to instil safer field practices in young engineers.

The seminar successfully reinforced the IBC's commitment to technical upgradation and the safety of the built environment.

## III. Training Programme

### (i) Two days Executive Development Programme on "Project Management"

The Executive Training Programme on "Project Management," hosted by the Indian Buildings Congress (IBC) was successfully conducted on December 17–18, 2025 at IBC HQ.

The programme targeted high-level professionals from various state and central departments, including the PWDs of Nagaland, Madhya Pradesh, Uttar Pradesh, and Delhi, as well as the CPWD and DDA. The curriculum was structured as a logical progression from strategic design to digital execution and quality control.

**Training Programme in Progress**

The training was delivered across six intensive technical sessions by a panel of distinguished industry veterans:

**Er. D.S. Sachdev**, Director, Training opened the programme with "Project Management Concept & Strategy" and "Design Management." He provided a comprehensive framework for integrating architectural, structural, and services planning to ensure a cohesive project start.

**Er. Rajeev Kumar**, Chief Engineer, CPWD & Hony. Treasurer, IBC focused on the administrative backbone of construction, covering "Procurement of Public Works" (including e-tendering) and the "Management of EPC (Engineering, Procurement, and Construction) Contracts."

**Shri Mandeep Mathur**, Consultant, Project Planning & Cost Control addressed the practicalities of the job site through "Project Construction Planning, Scheduling, and Monitoring," emphasizing the use of modern Project Management Software for real-time oversight.

**Maj. Gen. K.T. Gajaria** (Retd.) delivered a specialized lecture on "Quality Management in Construction," highlighting the rigorous standards and inspections necessary for long-term structural durability.

The training programme culminated in a practical case study presented by Er. D.S. Sachdev, which synthesized the multidisciplinary lessons into a real-world scenario. The Valedictory Session was chaired by Er. I.S. Sidhu, Executive Director, Er. D.S. Sachdev, Director, Training, Maj. Gen. K.T. Gajaria (Retd.). Delegates were awarded participation certificates and, in their final feedback, rated the programme as "Very Good."

## IV. Participation of IBC in Various Events

### i) Meeting of President, IBC with CMD, NBCC

**Meeting with CMD, NBCC**

A Meeting with Er.K. P. Mahadevaswamy, CMD NBCC (India) Ltd. was held on October17, 2025 in his office at NBCC (India) Limited, E block World Trade Center, Nauroji Nagar, New Delhi. Er. C. Debnath, President; Col. (Dr.) Anand Mathialagan (Retd.), Hony. Secy. and Er. I.S. Sidhu, Executive Director from IBC were present in the meeting. Er. C. Debnath, President, IBC presented the IBC Magazine Built Environment; April-June, 2025 issue to Er.K. P. Mahadevaswamy.

### (ii) Meeting of President, IBC with DG (W), MES

**Meeting with DG (W), MES**

A meeting with Maj. Gen. Vijay Jotwani, SM,Director General (W), MES was held on October17, 2025 in his office at Kashmir House, Rajaji Marg, New Delhi. Er. C. Debnath, President; Col. (Dr.) Anand Mathialagan (Retd.), Hony. Secy., Er. I.S. Sidhu, Executive Director and others were present in the meeting. Er. C. Debnath, President, IBC presented the IBC Magazine Built Environment; April-June, 2025 issue to Maj. Gen. Vijay Jotwani.

### (iii) Meeting of President, IBC with President, IRC

Er. J.Mohan Naik, E-in-C,R & B, Telangana has been elected as President, IRC. During the visit of Hyderabad on 18th Dec, 2025, Er. C. Debnath, President, IBC had a meeting with IRC President in his office. A cordial discussion held between President, IBC & President, IRC in presence of Chairman & Hony Secy, IBC, Telangana Chapter; Council member of IBC & Chairman & Hony Secy of IEI, Telangana Chapter. In principle, it was agreed to conduct joint programme between IRC & IBC.

**Built Environment July-Sept., 2025 issue being presented to President, IRC**

### (iv) Meeting of President, IBC with CE, Bldg., R&B, Deptt.,Govt of Telangana

**Dignitaries being welcomed**

A discussion of President, IBC was held with Er. Rajeswar Reddy, CE, Bldg., R & B Deptt., Telangana in his office chamber in presence of Chairman & Hony Secy, IBC, Telangana; Council member of IBC & Chairman & Hony Secy of IEI, Telangana on 18th Dec., 2025. Various matters related to IBC was discussed.

### (v) Meeting of President, IBC with President, IEI

Er. Manish Mohan Kotari has taken over the charge as President, the Institution of Engineers (India) (IEI) during the Engineering Congress of IEI at Durgapur on 21st Dec. 2025. During this programme at Durgapur, Er. C. Debnath, President, IBC & also Past President, IEI had a meeting with IEI President in presence of Council Member of IBC Er. Anirban Datta.

**Built Environment July-Sept., 2025 issue being presented to President, IEI**

## V. News of Activities at IBC Chapters

### A. J&K State Chapter

#### (i) World Habitat Day (6th October, 2025)

The Indian Buildings Congress J&K Chapter organized a webinar to commemorate World Habitat Day under the theme "Urban Crisis Response." Er. Aamir Ali, Chairman, IBC J&K Chapter, inaugurated the session by addressing the specific challenges confronting Srinagar and Jammu.

The Keynote Address was delivered by Shri Vishal Pathak, Senior Coordinator at AIDMI, Ahmedabad. He analyzed the converging threats of extreme heat, urban flooding, and geophysical shocks in the Himalayan region, advocating for a transition from reactive management to proactive risk governance through local community empowerment.

The webinar included participation from faculty and students of the University of Kashmir, University of Jammu, NIT Srinagar, Govt. College for Women Srinagar, AAA Memorial Degree College Bemina, SSM College of Engineering and Technology Parihaspora, ITI Srinagar, and ITI Jammu.

#### (ii) World Standards Day (14th October, 2025)

The Indian Buildings Congress J&K Chapter organized a webinar to mark World Standards Day under the theme "A Shared Vision for a Better World." Chaired by Er. Aamir Ali, Chairman, IBC J&K Chapter, the event highlighted standards as the foundation of safety and their vital role in achieving United Nations Sustainable Development Goals.

The keynote address was delivered by Er. Shah Gazi Suhaib, Legal Metrology Officer, Srinagar, who detailed the Legal Metrology Act, 2009, and the traceability of standards from local to international levels. He emphasized the necessity of uniform weights and measures for consumer protection, fair trade, and industrial growth. The session was attended by professionals, engineers, and students from various states who engaged in discussions regarding the benefits of standardization in trade and building safety.

#### (iii) Webinar on Energy Conservation & Sustainable Buildings (14th December, 2025)

IBC J&K Chapter organized a Webinar on "Energy Conservation & Sustainable Buildings" at Srinagar.

Er. Aamir Ali highlighted that energy demand in Jammu & Kashmir rises sharply during winters due to heating needs and during peak summers due to cooling requirements. He emphasised that energy conservation must become an integral part of building planning, design and operation.

Er. M. Aaquib Sultana Waheed Deva, Chief Engineer, JKPTCL Kashmir, was the Chief Guest. In her address, she stressed the need to improve system efficiency, reduce transmission and distribution losses and strengthen grid infrastructure to ensure reliable, affordable and sustainable power supply.

Er. Bashir A. Dar, Former Secretary (Technical), JKPDD and Managing Director, JK Green Technologies presented a detailed analysis of supply-side and demand-side energy conservation measures.

Er. Suhail Qadir, Founder & Managing Partner, JK Green Technologies, spoke on demand-side energy management and smart energy solutions. He highlighted the role of load shifting, smart load control, battery integration and building automation in reducing energy consumption and electricity costs, while also improving indoor air quality, particularly carbon dioxide monitoring, and occupant comfort through modern and IoT-based technologies.

The Webinar concluded with a call for enhanced awareness, professional capacity building and accelerated adoption of energy-efficient technologies and building codes.

### B. Kota Local Chapter

#### (i) World Habitat Day (6th October 2025)

IBC Kota Local Chapter organized World Habitat Day at PWD Campus, Nayapura, Kota.The theme of the World Habitat Day was **"Urban Crises Response"**. The programme was anchored and conducted by Er. Manish Jain, Honorary Secretary, IBC Kota Local Chapter. Sh. Nishoo Gupta, Addl. Chief Engineer, PWD Zone, Kota was the President of Programme.

Sh. S. K. Singhal, Fmr. Chief Engineer, Rajasthan Housing Board, Jaipur was the Chief Guest on this occasion. He addressed the gathering on the topic of "RHB DwaraSantulit Vikas (Balanced Development by RHB)" and the importance of planned housing and infrastructure for inclusive growth.


**World Habitat Day Celebrated**

Sh. Amjad Ahmad, Dy. Housing Commissioner, Rajasthan Housing Board, Kota was the Special Guest. He delivered an address on "City Development for Residential Environment". Er. Om Jain, Engineer &

Architect, Advance Technocrats, Kota was the Keynote Speaker. He delivered an inspiring and insightful address on "How to Plan and Create a Better Environment for Better Living".

### (ii) World Standards Day

The Indian Buildings Congress (IBC) Kota Local Chapter organised World Standards Day on the global theme **"Shared Vision for a Better World – Spotlight on SDG-17 (Partnerships for the Goals)"** on 14th October 2025 at P.W.D. Campus, Nayapura, Kota.

**World Standards Day Celebrated**

Shri Raj Singh,Fmr. Chief Engineer, Water Resources Department was the Chief Guest on this occasion. He shared his insightful views on the broader relevance of standardsnot only in engineering and construction but also in everyday professional ethics and behaviour.

Er. B. L. Malav wasthe President of the Programme. He underlined the need to adopt standardization in materials, food products, and textiles, thereby promoting discipline and uniformity in all aspects of life. Er. S. K. Bairwa, Immediate Past Chairman also expressed his valuable thoughts on maintaining quality and adherence to standards across all professional fields.

### (iii) Technical Visits (13th and 14th December 2025)

The IBC Executive Committee and Kota Chapter members conducted technical visits to Kota's landmark infrastructure projects to study the integration of civil engineering with urban tourism.

The visit to the Chambal Riverfront on 13th December allowed members to examine riverfront engineering and sustainable urban development. This landmark project enhances city aesthetics and public engagement through complex execution.

**Rajasthani Folk Dance**

The technical tour concluded with Rajasthani folk performances, highlighting the successful blend of modern engineering with local cultural heritage.

Also on 13th December, members visited Seven Wonders Park, a theme-based urban space featuring replicas of world-famous monuments. The group studied the park's architectural planning and the use of RCC and steel frameworks designed for durability and visual appeal. The project serves as a prime example

**Technical visit of Seven Wonders Park, Kota**

of aesthetic engineering, balancing public safety and accessibility with maintenance-friendly landscaping and lighting.

On 14th December, the delegation visited Oxyzone Park, an essential urban green space focused on environmental quality and sustainability. The visit included a boat trip to offer practical exposure to water-based recreational infrastructure. This project offered members valuable insights into how engineering planning can be harmoniously combined with environmental sustainability and public recreation.

## C. Haryana State Chapter

### (i) World Habitat Day (6th October 2025)

The Indian Building Congress, Haryana Chapter, in association with the Haryana Public Works (B&R) Department and Ultratech Cement Ltd., organised World Habitat Day. Er. Anil Kumar Dahiya, Engineer-in-Chief (Bldgs.), Haryana PWD (B&R)-cum-Chairman, IBC-Haryana Chapter graced the occasion

as the Chief Guest. Two insightful presentations were conducted during the event. Miss Prerna from Hanu Al Pvt. Ltd. (Road Athena), delivered a presentation on behalf of the company. The presentation highlighted the innovative applications of Al in the built environment and infrastructure development.

Dr. Navdeep Asija, Consultant, delivered a presentation on **"Safe School Zone"**. He highlighted the importance of creating a secure environment for students. The presentation covered various aspects of school safety, including infrastructure, emergency preparedness, and measures to prevent accidents and injuries.

**World Habitat Day Celebrated**

### (ii) National Energy Conservation Day (12th October, 2025)

**National Energy Conservation Day Celebrated**

IBC Haryana Chapter organized a National Energy Conservation Day. The programme was attended by Shri Anil Kumar Dahiya, Engineer-in-Chief (Bldgs.), Haryana PWD (B&R)-cum-Chairman, IBC - Haryana Chapter, as the Chief Guest. The presentation on energy-efficient buildings, covering design strategies, technologies, and best practices was particularly informative and highlighted the significance of reducing environmental impact and operational costs over a building's life cycle. The celebration fostered knowledge sharing among stakeholders and underscored the commitment of the IBC and the Haryana Public Works Department to promots green building practices and sustainable development.

## D. Puducherry Chapter

### (i) World Habitat Day (6th Oct., 2025)

The Indian Buildings Congress Puducherry Chapter in co-ordination with Public Works Department organised World Habitat Day 2025 in the Conference Hall of PWD, Puducherry. The celebration was attended by Engineers of PWD and members of IBC Puducherry Chapter. Er. K. Veeraselvam, Chief Engineer, PWD, Puducherry, Guest of Honour felicitated the function.

Dr. Thirougnaname, Chairman, IBC Puducherry Chapter and Former Executive Engineer, PWD Puducherry gave a speech on **"Urban Crisis Response"**. The vote of thanks was delivered by Er. M. Kandar Selvan, Honorary Secretary of IBC Puducherry Chapter.

### (ii) World Standards Day (5th Nov., 2025)

The Indian Buildings Congress Puducherry Chapter in co-ordination with Public Works Department organised World Standards Day in the Conference Hall of PWD, Puducherry.

**World Standards Day Celebrated**

The programme was attended byEngineers of PWD, Puducherry and members of IBC Puducherry Chapter. Er. M. Kandar Selvan, Honorary Secretary of IBC Puducherry Chapter welcomed the participants. Dr. S. Thirougnaname, Chairman of IBC Puducherry Chapter and Dr. E. Manimaran, Executive Engineer, PWD, Puducherry gave speech on the **"Method of Measurement of Building Works"**. The vote of thanks was delivered by Er. Vidjea Nehru Velayutham, Treasurer, IBC Puducherry Chapter.

## E. West Bengal State Chapter

### (i) World Habitat Day (7th October 2025)

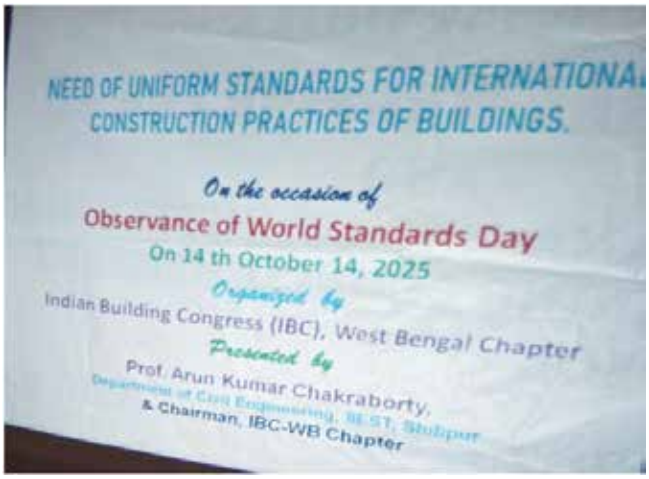
In keeping with the global mandate for sustainable urbanization, the chapter organized a session in hybrid mode. Prof. Arup Sarkar of IIEST Shibpur delivered a

keynote talk focusing on modern habitat challenges. The event successfully bridged the gap between physical and digital attendance, with 5 members present at the office and 4 joining online. Prof. A.K. Chakraborty was the Chief Guest.

World Habitat Day Celebrated

### (ii) World Standards Day (14th October 2025)

Emphasizing the role of codes and standards in infrastructure, Prof. Arun Kumar Chakraborty, Chairman of the WB Chapter, delivered an insightful lecture. The hybrid session saw an attendance of 10 members (7 physical, 3 online) and focused on the practical application of standards in the building industry. Prof. A.K. Chakraborty was the Chief Guest.




### (iii) National Energy Conservation Day (17th December 2025)

To mark the importance of energy efficiency, Er. Anirban Datta (GC Member) delivered a technical lecture. The session provided a platform for members to discuss low-carbon building materials and energy-saving technologies, with a combined physical and digital audience.

### (iv) Collaborative Workshops & Industry Interaction (25th October 2025)

**Structural Repair & Waterproofing Workshop:** Moving beyond lectures, the Chapter partnered with Pidilite for a hands-on workshop titled *"Repair & Rehabilitation of Structures through Right Waterproofing."* Held at the Pidilite office, 20 engineers participated in the training, which covered chemical solutions and diagnostic techniques for structural maintenance.

### (v) Brainstorming Session (29th November 2025)

The Chairman and Vice Chairman represented the chapter in an intensive morning brainstorming session aimed at outlining the Eastern Zone's future technical roadmap and inter-chapter synergy.

## F. Arunachal Pradesh State Chapter

### (i) World Habitat Day (13th October 2025)

IBC Arunachal Pradesh State Chapterorganised World Habitat Day at Western Zone, PWD Office Arunachal Pradesh. Theme **"Urban Crisis Response"** focussing on how Cities can better manage crises like Climate Change, Conflict & displacement to become more resilient, Inclusive & sustainable was discussed. Engineers & other officials of Arunachal Pradesh PWD actively participated in the Programme.

World Habitat Day Celebrated

The Chief Guest, Er. GamnyaPadu, Chief Engineer, Western Zone, AP PWD, while speaking on the theme, shared his practical experience throughout the state whereby, also highlighted the importance of Building Construction in consonance with the nature. He said that the villages & towns are becoming concrete jungles.

### (ii) World Standards day (14th October, 2025)

The World Standards Day was organised at PWD

World Standards day Celebrated

Office, Arunachal Pradesh Chapter with the theme **"Shared Vision fora better World".**

The Programme commenced with welcome & keynote address by Dr. Toli Basar. Chairman IBC, Arunachal Pradesh Chapter. While addressing the delegates he shared his insightful thoughts on the theme of the day.

The Programme followed with speech by the Chief Guest Shri. Dobin Doke Lendo (IFS).He shared his practical experiences highlighting the importance of international standards in achieving the sustainable development goals.

## G. Rajasthan State Chapter

### (i) World Habitat Day

The School of Architecture & Design and Institutional member of IBC in collaboration with IBC Rajasthan Chapter celebrated World Habitat Day. The celebration featured an Architectural Quiz Competition, where students showcased their knowledge of architectural history, sustainable design, and urban development. The engaging quiz fostered curiosity, critical thinking, and teamwork among participants.

**World Habitat Day Celebrated**

The day concluded with an evening gathering, graced by Prof. (Dr.) Madhura Yadav, Director, School of Architecture & Design andGoverning Council Member, IBC who addressed the audience, emphasizing the importance of creative responsibility, collaboration, and sustainable thinking in architectural education and practice.

### (ii) World Standards Day (14th October2025)

The Indian Buildings Congress (IBC) Rajasthan State Chapter organised World Standards Day with great enthusiasm and participation.


**World Standards Day Celebrated**

Prof. (Dr.) Madhura Yadav, Director, School of Architecture & Design and Governing Council Member, IBC and Er. Suresh Kumar Bairwa, EC member, IBC also joined the occasion online and gave valuable insights. The event included discussions on the role of building codes, innovative materials, and sustainable construction practices aligned with national and international standards.

## H. Tripura State Chapter

### (i) World Standards Day (28th October 2025)

The Indian Building Congress (IBC), Tripura State Chapter in a collaborative effort with the Tripura Renewable Energy Development Agency (TREDA) and the Tripura State Pollution Control Board (TSPCB) organised World Standards Day. The programme was held at Tripura State Pollution Control Board (TSPCB) and witnessed the gracious presence of esteemed dignitaries from the national and state chapters of IBC, government departments, academia, and industry professionals.

The programme aimed to highlight the critical importance of global standards in building design, construction and sustainable development, aligning with the broader theme of creating a more resilient and efficient built environment.

**World Standards Day celebrated**

Er. Debabrata Sukla Das, Director General of TREDA, delivered an insightful presentation showcasing the department's pioneering work in harnessing renewable energy across Tripura.

Er. Arijit Banik, Associate Professor from Tripura Institute of Technology, Agartala, delivered a keynote address on the significance of global standards. The key highlight of his talk was the emphasis on theurgent need to update long standing Indian Standards, such as IS 456:2000, to align with contemporary global benchmarks and incorporate advancements in material science and construction technology. Er. C. Debnath, President, IBC graced the occasion & it was presided over by Er. B. Das, Chairman, IBC, Tripura Chapter.

### (ii) World Standards Day 2025 & BIS Stakeholders Conclave (30th October, 2025)

"A Shared Vision for a Better World: Spotlight on SDG 17 – Partnerships for the Goals".

The Bureau of Indian Standards (BIS), Guwahati Branch Office, in a strategic partnership with the Indian Building Congress (IBC) Tripura State Chapter organised World Standards Day at Hotel Noah Spire, Agartala with a Stakeholders Conclave in Agartala. The event, aligned with the global theme spotlighting SDG 17 – "Partnerships for the Goals"served as a dynamic platform to unite government officials, industry leaders, academicians, and consumer advocates.


**Lighting of Lamp**

The program commenced with a serene and symbolic lighting of the lamp ceremony, invoking the spirit of knowledge and enlightenment.

The programme was graced by the presence of eminent personalities who guided the deliberations: Shri Asit Kumar Das, Additional District Magistrate and Collector, Agartala; Shri Amrit Lal Saha, Senior Advocate and President, Consumers' Protection Association, Agartala; Er.C. Debnath,President, Indian Buildings Congress (IBC) and Shri Shouvik Chanda, Director & Head, BIS Guwahati Branch Office.

Shri Shouvik Chanda, Director & Head of BIS Guwahati elaborated on BIS's pivotal role in standardization, product certification, and hallmarking across the North Eastern Region.

Er. C. Debnath, President of IBC elaborated on the crucial role of the Indian Buildings Congress in advancing quality infrastructure and promoting sustainable construction practices across the nation.

The conclave featured a series of insightful technical presentations:

- Dr. Suman Deb, Assistant Professor, NIT Agartala, shared his expert perspectives.
- Shri Somdeep Chakraborty, Associate Professor, Tripura Institute of Technology, delivered a presentation on relevant academic linkages with standards.
- Shri Pritam Agarwala, Scientist-C, BIS Guwahati, highlighted BIS's recent initiatives and achievements in the realms of consumer protection, quality assurance, and public awareness on standardization.

The conclave successfully reinforced the core message that standards are the fundamental building blocks for a sustainable future, and that their true power is unlocked through partnerships and a shared vision.

### (iii) Word Habitat Day (19th November 2025)

The Indian Buildings Congress, Tripura State Chapter in collaboration with the Institution of Public Health Engineers, India (IPHE), Tripura Chapter organized a seminar on World Habitat Day on the global theme **"Urban Crisis Response"** at UDD (UD Bhawan), Agartala, Tripura. The seminar witnessed activeparticipation from various departments including the Urban Development Department (UDD), Public Works Department (PWD), Tripura Urban Development Agency (TUDA), Tripura Jal Board (TJB), and the DWS Department.

The Chief Guest, Ms. Megha Jain, IAS, Director, UDD, Government of Tripura, delivered an impactful address. She focused on the importance of the theme and shared a moral story. She appreciated theefforts of IBC and IPHE for hosting such a meaningful technical platform.

Er. Mihir Kanti Gop, IAS, Commissioner, TUDA and CEO, TJB Guest of Honour, delivered an insightful and solution-oriented Keynote Address. His focus was on Urban water stress; Waste management challenges; Urban flooding & drainage; Climate-adaptive planning and strengthening municipal administration

Er. R. K. Majumdar, IAS (Retd.) made a presentation on "Urban Crisis Response – Global & National Overview".

His talk emphasized engineering responsibility and policy alignment for resilient city development.

Er. Sitangshu Chakraborti, EE, TJB & Secretary, IPHE, Tripura Centre presented through PPT on World Habitat Day.

Er. C. Debnath, President, IBC graced the occasion & it was presided over by Er. B. Das, Chairman, IBC, Tripura Chapter.

Er. Debabrata Debbarma, Honorary Secretary, IBC, Tripura Chapter delivered Vote of Thanks.

## I. Bihar State Chapter

### (i) World Standards Day


**World Standards Day Celebrated**

A panel discussion was held at the IBC Bihar office on the occasion of World Standards Day. Sri Santosh Kumar, Former Engineer in Chief and Sri Dhananjay Kumar, Senior Architect discussed its importance in detail.

## J. Tamil Nadu State Chapter

### (i) World Habitat Day & World Standards Day (11th November 2025)

**World Habitat Day & World Standards Day Celebrated**

The Indian Buildings Congress Tamil Nadu State Chapter (TNSC) organised World Habitat Day and World Standards Day with a meaningful and well-attended event at the PWD Conference Hall, Chepauk, Chennai. The programme commenced with a warm welcome address by Er. Rajamohan, Vice Chairman, IBC TNSC followed by the Chief Guest Address delivered by Er. S. Manikandan, Chief Engineer, PWD Chennai Region and Chairman, IBC TNSC. The technical session featured two distinguished keynote speakers: Er. C. Kalyanasundaram, Former Superintending Engineer, PWD, who presented an insightful talk titled **"Myths & Facts in Civil Engineering,"** encouraging professionals to challenge misconceptions and embrace evidence-based practice; and Er. K.P. Sathyamurthy, Former Engineer-in-Chief & CE, TNPWD, who spoke on the importance of standardisation, ethics, and the moral compass that should guide every engineer's professional journey.

### (ii) Technical programme with VIT Chennai

A technical programme was conducted byVellore Institute of Technology (VIT), Chennai Campus and the Indian Buildings Congress,Tamil Nadu State Chapter (IBC TNSC) on 10 December 2025 at the PWD Complex, Chepauk, Chennai.

The event marked a significant milestone in strengthening academic–industry collaboration for the benefit of the civil engineering fraternity.

The programme commenced with a welcome address by Er. K. Vinodh Raja, Secretary, IBC TNSC, who highlighted the purpose of the MoU and the importance of fostering structured engagement between academia and professional bodies.

This was followed by the addresses of the Chief Guests. Er. S. Manikandan, Chief Engineer – PWD Chennai Region & Chairman, IBC TNSC, spoke about the need for bridging theoretical learning with practical exposure. Dr. T. Thyagarajan, Pro Vice Chancellor, VIT Chennai, delivered an inspiring and impactful address, articulating the importance of industry–academia synergy and the opportunities this MoU would create for students and faculty.

Er. K. P. Sathyamurthyand Er. Rajamohan, both former Engineers-in-Chief of TNPWD, the Guests of Honour shared their experiences and encouraged young engineers to embrace continuous learning and professional ethics.

## K. Odisha State Chapter

### (i) Technical Seminar

The seminar on Maintenance of Buildings convened experts from government and technology sectors to discuss best practices, innovations, and sustainability. The sessions focused on shifting from reactive to predictive maintenance to ensure the longevity and safety of infrastructure as per the following topics.


**Evolution and Strategic Importance:**
Er. Bijoy Ch Tripathy (Former EIC, Works Dept., Govt. of Odisha & Chairman, IBC Odisha) traced the evolution of the built environment and emphasized its role in achieving 2070 SDG goals. He highlighted safety-critical areas like power reliability and lift systems, urging regular fire and electrical audits.

**Comprehensive Facility Management (CFM):**
Er. Dukhabandhu Behera (Former EIC, Works Dept., Govt. of Odisha & GC Member, IBC) focused on a holistic approach to building operations. He categorized services into "Soft" (housekeeping, sanitation) and "Hard" (mechanical, plumbing, structural) and emphasized the Nirmal++ guidelines for sanitation.

**CPWD Approach and Digital Integration:**
Er. A.K. Khatua, Chief Engineer, CPWD and his team presented the CPWD's maintenance module, which covers civil, electrical, and HVAC systems. A major highlight was the SEWA System, a digital platform for transparent response management. They also discussed structural retrofitting techniques, including guniting, shotcreting, and the use of carbon/glass fibre jacketing.

**Conservation and Future Technologies:**
Er. Chittaranjan Dash (Dy. Superintendent, ASI) addressed the specialized nature of maintaining over 5,000 historic sites, emphasizing a balance between technical skill and historical authenticity.

**AI and Predictive Maintenance:**
Er. Trinath Behera (Chief Engineer, Works Dept., Odisha) delivered a forward-looking presentation on AI and Predictive Maintenance. He outlined how AI facilitates pattern recognition and data-driven decisions while cautioning that it should augment, not replace, human engineering judgment.

**Industry Contributions:** The seminar featured specialized solutions from event partners, each contributing a vital component to building longevity:

- **Kansai-Nerolac** (Shri Debdutta Mukherjee): Presented advanced waterproofing compounds and polymer-based coatings to protect critical building areas from basements to terraces.
- **Ravels India** (Shri Kushal Maji): Showcased innovative fire detection and alarm control solutions designed for safety compliance in modern industrial and residential spaces.
- **Trane Technologies** (Shri Gopal Saha): Focused on high-efficiency HVAC solutions and air conditioning systems that prioritize environmental sustainability and occupant comfort.
- **Dynamic Engineering** (Er. Sanjit Kr Acharya): Highlighted the necessity of systematic maintenance in the industrial sector to ensure operational continuity and regulatory safety.
- **Carbon Out** (Shri Pradipta Panigrahi): Demonstrated the integration of IoT and solar energy systems to create green, energy-efficient offices and smart road infrastructure.

**Conclusion and Key Takeaways:** The seminar concluded that maintenance must transition to a Preventive and Predictive model. Key takeaways included the need for technology integration (AI/BMS), strict regulatory compliance with NBC and ECBC codes, and a multi-disciplinary approach to integrated facility management to ensure long-term resilience and carbon reduction.

### (ii) Circle Level Seminar, Phulbani

Indian Buildings Congress (IBC), Odisha Chapter, jointly with the Office of the CCE, R&B, Phulbani and Rayagada, successfully conducted the 6th Circle Level Seminar at Phulbani on 21st December 2025.

A thought-provoking presentation on **"Lean Construction"** by Sri Manoranjan Misra proved to be an eye-opener for the participants regarding reduction of standard eight construction wastes. He highlighted the use of Lean Construction concepts in the Mahanadi bridge, Sports Department buildings and Medical colleges. The lively interactions during the session made it highly engaging and enriching for both the presenter and the audience.

The session on MEP coordination in various types of buildings, covering elaborate aspects from design to

post-execution maintenance, presented by Subhendu Bhattacharya, was widely appreciated and acknowledged by the participants for its practical insights so as to benefit them not only in planning, designing and execution of the works, but also in maintenance period.

### (iii) World Habitat Day (6th October 2025)

IBC Odisha Chapter organised World Habitat Day at 6 PM through online mode.


Prof. S. S. Ray, Director General, KIIT School of Architecture, Bhubaneswar & MD, Vastukaar Ltd. was the Guest Speaker. Er Ashok Basa, Advisor, IBC Odisha Chapter Chaired the programme. Prof. Dhanadakanta Mishra was the Distinguished Guest. The session focused on the emerging challenges and solutions related to sustainable habitats.

### (iv) Technical Sensitization Programme on Odisha ECBC –

A Technical Sensitization Programme on Key Aspects and Enforcement of Odisha Energy Conservation Building Code (ECBC) was organized by IBC Odisha Chapter on 11th October 2025 in collaboration withEIC, Electrical-cum-PCEI and Chief, SDA Odisha.The programme aimed to create awareness about the implementation of the Odisha ECBC, applicableto buildings with:

- Connected load of 100 KW or above, or
- Contract demand of 120 KVA or above

Er. Bijoy Ch. Tripathy, Chairman emphasized its relevance for engineers, architects and field professionals involved in planning, design, construction, and maintenance.The programme supports the sustainability mission of IBC in the built environment. Special appreciation was extended to Er Pyarimohan Misra, EIC, Electrical & PCEI, for his initiative and support. 25 Senior Engineers of the Works Department were sponsored to attend.

### (v) World Standards Day (14th October 2025)


Indian Buildings Congress Odisha State Chapter organised online World Standards Day. Prof. P. K. Parhi, Vice Chairman, IBC Odisha Chapter chaired the programme. Dr. Bimal Sarangi, Resource Person, renowned consultant & columnist was the Invited Speaker. Er. Subhendu Bhattacharya, Secretary, IBC Odisha Chapter, presented the presentation.

### (vi) Constitution of Core Committee on Odisha Standard Specifications & NSR Rates

A core committee was constituted for recommending updates on Odisha Standard Specification and Rates for NSR Items.

### (vii) Technical Exhibition

IBC Technical Exhibition was inaugurated by Er. Bijoy Ch. Tripathy, Chairman, IBC Odisha Chapter on 6th November 2025 at the 84th IRC Venue, Bhubaneswar.

### (viii) Energy Conservation (15th December 2025)

The National Energy Conservation Meeting, organized by the Indian Building Congress (IBC), Odisha State Chapter, was held at Nirman Soudha.

Shri D. Sarangi (Ex-DG, MoRTH) highlighted the urgency of transitioning to clean energy, noting India's third-place global ranking in coal-based power and $CO_2$ emissions. He argued that energy should be treated as an efficiency and capacity issue rather than just conservation. He advocated for demand-side interventions, such as car-pooling and public transport, to reduce the energy footprint of transport infrastructure.

Shri Pyari Mohan Misra (Former EIC-Elect & Principal Chief Electrical Inspector) provided a strategic outlook, emphasizing a full life-cycle assessment of infrastructure. He noted that energy consumption starts long before commissioning and continues through maintenance and renewal.

Shri M. R. Misra (Former EIC) summarized the event by breaking energy use into three phases: design and construction, operation and maintenance, and end-user consumption. He strongly urged the adoption of materials with lower embodied energy, which significantly reduces costs over the asset's lifespan. He concluded that smart systems and preventive maintenance are essential for sustaining long-term energy gains.

The programme concluded with closing remarks by Shri Nihar Nayak, Superintending Engineer (Electrical), who reinforced the collective responsibility of professionals in achieving national energy-efficiency goals.

## L. Durg Local Chapter

### (i) World Habitat Day (6th October, 2025)

Indian Buildings Congress Durg Local Chapter, Chhattisgarh organised the World Habitat Day at Engineer Bhawan, Civic Center Bhilai with the Institution of Engineers, Bhilai Local Chapter.


**World Habitat Day Celebrated**

### (ii) World Standards Day (14th October 2025)

Technical Seminar and Celebration of World Standards was organised at Civil Technical Solutions Conference Hall by Indian Buildings Congress Durg Local Chapter, Chhattisgarh.

**World Standards Day Celebrated**

IBC DLC ER. R.S. Gurudiwan, Fmr. Principal Govt. of Polytechnic was the Chief Guest. Dr. R.P. Dewangan, Resource Personwas Keynote Speaker. Dr. R.P. Dewangan delivered a lecture on "Overview of BIS Standards"

Civil Engineers, Architects, Builders, Contractors, Building Material Suppliers etc and approx 23 participants participated in the programme.

## M. Punjab State Chapter

### (i) World Standards Day (15th August 2025)

World Standards Day 2025 was organised at Guru Nanak Dev Engineering College Ludhiana. The program was organized by the Punjab State Chapter of Indian Buildings Congress in collaboration with the Civil Engineering Department of GNDEC.

**World Standards Day Celebrated**

Er. H.S. Sahota, Life Member, IBC presented a lecture on "Key Role of Standards: Shared Vision for a Better World, with a Focus on SDG-17: Partnership for the Goals." He also emphasized the importance of standards in national development. Engineering students were encouraged to enhance their technical competence to meet the requirements of current industry.

Dr. Rajbir Singh, Head, Civil Engineering Department, elaborated the relevance of modern technology, machinery, and automation in engineering practice. He highlighted the fundamental role of engineers across various sectors and motivated students to adopt standard-based approaches for professional excellence.

## N. Madhya Pradesh State Chapter

### (i) Technical Seminar

Technical Seminar on "Smart plumbing & Waterproofing Techniques for Sustainable Buildings" was organized by IBC MP State Chapter on 21st Dec., 2025 at Hotel Motel Siraj MP Nagar, Near Board office Square, Bhopal.


**Technical Seminar in progress**

The event witnessed overwhelming participation from senior government officers, engineers, architects, academicians, industry experts, and IBC office bearers, making it a grand and highly successful professional gathering.

The gathering was addressed by Er. S.R. Baghel, Chairman, IBC MP State Chapter & Engineer-in-Chief, MP PWD; Er. Vijay Singh Verma, Former President, IBC; Er. A. R. Singh, Deputy Secretory MP PWD; Er. S Chandsure, Co-chairman Westen Zonal Committee; Er. Ajay Shrivastava, E-in-C BDC and Er. K.S. Yadav, Chief Engineer.

The speakers emphasized upon :

- Quality, durability, and sustainability in public building projects
- Role of IBC in policy guidance and capacity building
- Need for continuous technical upgradation of engineers

## Technical Sessions

**Technical Session–I**

Theme: **"Effective Waterproofing Solutions for Wet Areas"**

Key focus areas included:

- Failures commonly observed in wet areas of government buildings
- Root causes of seepage and durability loss
- Relevant IS codes (IS 3067, IS 2645, IS 13182, etc.)
- Modern waterproofing materials and correct execution practices

**Technical Session–II**

Theme: **"Smart Plumbing Systems for Sustainable Buildings"**

The session covered:

- Modern plumbing design principles
- Water conservation, reuse, and recycling
- NBC & CPHEEO compliance
- Practical challenges in public building projects

Both sessions were highly interactive and well received by participants.

**Panel Discussion**

A highly engaging panel discussion was conducted with addressing the topics.

- Code compliance challenges
- Quality vs. time constraints in government projects
- DLP issues and long-term durability
- Adoption of sustainable and innovative construction technologies
- Guidance for young engineers

The rapid fire round added dynamism and generated practical insights from the panel.

## VI. National News

### Noise Barriers on Flyovers Reduce Health Risks: CSIR Study

Installing noise barriers across Delhi could yield annual health-related savings of up to Rs to 5.5 crore per 1,000 people exposed to noise pollution in a 1 km stretch, a Council of Scientific & Industrial Research (CSIR) study has found.

At a conference on recent advances in traffic noise modelling and mitigation for urban areas organised by CSIR-CRRI (Central Road Research Institute), researchers discussed solutions to the city's growing noise pollution and showcased the barriers it has been developing to shield residents living near the city's flyovers.

Director of CSIR-CRRI, Prof. Manoranjan Parida, said, "Air and noise pollution don't have to be discussed in a sequence," adding that both continue to affect the city deeply. Dwarka Expressway is an example of effective implementation of noise barriers on highways, he said.

The institute has been recommending the installation of such barriers on several flyovers, including key traffic points, such as Vasant Vihar flyover and 'silent zones' like the AIIMS flyover.

According to the study presented by Dr. Nasim Akhtar, which undertook a cost-benefit analysis of noise barriers and health impact in case of different

modes of transport, exposure to loud noise is linked to several chronic health problems, including sleep disturbance that disrupts productivity, mental health and hormone regulation, stroke, dementia, heartattack and psychological distress

Akhtar highlighted the possibility that if harmful exposure to noise continues for the next three to five generations, the biological burden can increase the prevalence of genetic disorders.

Claiming the barriers reduce noise levels by 10-19 decibel, depending on their height and material, the study suggested that noise barriers of three to five metres in height be installed along major highways, with residential stretches prioritised.

Suggesting the use of double glazed windows in houses as a potential way to avoid health risks, the study proposed that vehicles exceeding the permitted number of decibels could be penalised.

Workshops for administrative bodies on noise measurement and control can help provide an efficient framework to tackle the problem, it noted, adding that noise pollution should be curbed at the source with integrated design solutions that are not an afterthought.

Another study co-authored and presented by Dr. Rajeev Kumar Mishra highlighted that railway noise levels affecting vulnerable urban communities remain high (around 90 dB) and frequently exceed limits, with diesel locomotives causing the most severe impact. The affected areas include 14 key locations in the city. (Source TOI:22/11/25)

## New Quake Map: Himalayan Arc in Highest Danger Zone

India has released a radically updated seismic zonation map under the new Earthquake Design Code, introducing a highest-risk Zone VI that now encompasses the entire Himalayan arc. This revision reveals that 61% of India lies in moderate to high hazard zones, necessitating a significant shift in urban planning and construction standards.

According to seismologist Vineet Gahalaut, previous maps underestimated risks from "locked" fault segments in the central Himalayas that have accumulated stress for nearly two centuries. The new classification replaces arbitrary administrative boundaries with geological consistency, specifically identifying the Himalayan Frontal Thrust as a primary rupture path. To ensure safety, any location straddling two zones is now automatically assigned the higher-risk category.

The Bureau of Indian Standards (BIS) built this 2025 map using internationally accepted methods. Unlike the 2016 version, which relied heavily on past epicenters and damage surveys, the new model incorporates detailed data on active fault locations and their maximum potential magnitudes, ground shaking attenuation (how shaking diminishes with distance) and tectonic regimes and specific rock/terrain characteristics.

This updated zonation provides a precise picture of peak ground accelerations expected during future quakes. With nearly 75% of India's population living in seismically active areas, BIS urges all new infrastructure projects to adopt these standards to mitigate the impact of tectonic stress.

# New Members enrolled during to 1/10/2025 to 31/12/2025

**Individual Members:**

| S.No. | M. No. | Name | Qualification | Designation | Department | City | State |
|---|---|---|---|---|---|---|---|
| 1 | ML-10605 | Shri Koti Veera Raghava Charyulu | B.Tech. (Civil Engg.) | Former Superintending Engineer | Roads & Buildings Department | Khammam | Telangana |
| 2 | ML-10606 | Shri Praveen Kumar Verma | B.Tech. (Civil) | Executive Engineer | HP PWD | Shimla | Himachal Pradesh |
| 3 | ML-10607 | Shri Akshaya Kumar Pradhan | B.Sc Engg., M.Tech. | Former E-in-C cum Spl. Secy | Works Deptt. Govt. of Odisha | Bhubaneswar | Odisha |
| 4 | ML-10608 | Shri Bipin Bihari Padhy | M.Tech. (Strct & Foundation Engg.) | Executive Director | S.M. Consultants | Bhubaneswar | Odisha |
| 5 | ML-10609 | Shri Kabak Neema | B.E. (Civil) | Assistant Engineer | Water Resources Deptt. | Itanagar | Arunachal Pradesh |
| 6 | ML-10610 | Shri Nabam Kasa | B.E. (Civil) | Assistant Engineer | Arunachal Pradesh PWD | Itanagar | Arunachal Pradesh |
| 7 | ML-10611 | Shri Soumitra Kumar Deb | B.E. (Civil) | Former Executive Engineer | Arunachal Pradesh PWD | Ulubari | Assam |
| 8 | ML-10612 | Shri Saurabh Kumar | B.Tech. (Civil), M.Tech (Strct.) | Structure Engineer | Balaji Builders | Gariyaband | Chhattisgarh |
| 9 | ML-10613 | Shri Upendra Kumar | B.Tech. (Civil Engg.) | Scientific Assistant | Nuclear Power Corporation of India Limited | Tapi | Gujarat |
| 10 | ML-10614 | Dr. Bhakta Kabi Das | B.E. (Civil), M.Tech., Ph.D | | | Bhubaneswar | Odisha |
| 11 | ML-10615 | Shri Surendra Rajput | B.E. (Civil) | Former Executive Engineer | Roads & Buildings Deptt. | Gandhinagar | Gujarat |
| 12 | ML-10616 | Shri Ashok Kumar Behera | B.Sc Engg. (Civil), M.E. (Hydraulics & Irrigation Engg.) | Chief Construction Engineer | Rural Development Department | Cuttack | Odisha |
| 13 | ML-10617 | Shri Ritesh Aggarwal | B.Tech. (Civil Engg.) | Executive Engineer | Haryana PWD (B&R) | Panchkula | Haryana |
| 14 | ML-10618 | Ar. Prashant | M.Arch. | Associate professor | Dayalbagh University Agra | Agra | Uttar Pradesh |
| 15 | ML-10619 | Shri Kamleshkumar Madanlal Chhajed | B.E. (Civil Engg.), Diploma in Civil, | Director | K.M. Construction | Dahod | Gujarat |
| 16 | ML-10620 | Shri Karamvir Singh | Diploma in Civil Engg. | Addl. Sub Divisional Engineer | Haryana PWD (B&R) | Ambala Cantt | Haryana |
| 17 | ML-10621 | Shri Amarjeet Singh | B.E., DIC | Senior Engineer | BRIC-National Brain Research Centre | Gurugram | Haryana |
| 18 | ML-10622 | Shri Sanat Kumar Das | Diploma in Civil Engg. | Former Junior Engineer | Road Construction Department | Khagra | Bihar |
| 19 | ML-10623 | Shri Kuldeep | B.Tech. | Junior Engineer | Haryana PWD (B&R) | Rohtak | Haryana |
| 20 | ML-10624 | Shri Shailendra Singh | B.Tech., MBA | Chief Engineer | CPWD | New Delhi | Delhi |
| 21 | ML-10625 | Er. Moi Riba | B.E. (Civil) | Junior Engineer | Hydro Power Development | Basar | Arunachal Pradesh |
| 22 | ML-10626 | Er. Subongliba | B.E. (Civil) | Superintending Engineer | Nagaland PWD | Kohima | Nagaland |
| 23 | ML-10627 | Er. Pankaj Dadwal | B.Sc. (Elect. Engg.) | Former Managing Director | HPSEB Ltd. | Shimla | Himachal Pradesh |
| 24 | ML-10628 | Er. Jyoti Prakash Samal | B.Tech. (Civil Engg.) | Superintending Engineer | Odisha PWD | Bhubaneswar | Odisha |
| 25 | ML-10629 | Col. Tushar Vig | M.Tech. Soil FDN | Addl Chief Engineer | MES | Gandhinagar | Gujarat |
| 26 | ML-10630 | Brig. Gaurav Talwar | M.Tech. | Chief Engineer | MES | Gandhinagar | Gujarat |
| 27 | ML-10631 | Er. K.P. Krishna Murthy | Diploma in Civil Engg. | Former Assistant Executive Engineer | Karnataka PWD | Tumakuru | Karnataka |
| 28 | ML-10632 | Er. Narayan Tripathy | M.Arch. | Principal Architect & Proprietor | NESTERS | Bhubaneswar | Odisha |
| 29 | ML-10633 | Er. Saju S. | M.Tech. (Civil), M.Tech. (Strct.) | Director (SE) Design | Kerala PWD | Trivandrum | Kerala |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 30 | ML-10634 | Er. Prathap Raj K.G | B.Sc. Engg. (Civil), M.Sc. Engg. (Strct.) | Director (Infrastructure) | Kerala Agro Business Company Ltd. | Thiruvananthapuram | Kerala |
| 31 | ML-10635 | Er. Ramesh Chandra | B.E. (Civil) | Former Chief Engineer | CPWD | Delhi | Delhi |
| 32 | ML-10636 | Er. Girisha B. | B.E. (Civil) | Assistant Engineer | Irrigation Deptt., Govt. of Karnataka | Hassan | Karnataka |
| 33 | ML-10637 | Er. Govind Singh Saini | B.Tech. | Executive Engineer (Civil) | CPWD | Gurugram | Haryana |
| 34 | ML-10638 | Ar. Somdeep Chakraborty | B.Arch. | Associate Professor | Tripura NIT | Agartala | Tripura |
| 35 | ML-10639 | Er. Samir Debbarma | B.E. (Civil) | Executive Engineer | Tripura PWD | Agartala (W) | Tripura |
| 36 | ML-10640 | Dr. Rajeev Goel | Ph.D, B.E.(Civil), M.E. (Civil) | Chief Scientist | CSIR-Central Road Research Institute | Noida | Uttar Pradesh |
| 37 | ML-10641 | Er. Abhishek Yadav | B.E. (Civil) | Executive Engineer | Uttar Pradesh PWD | Lucknow | Uttar Pradesh |
| 38 | ML-10642 | Er. Mukkera Laxminarayana | B.Tech. (Civil Engg.) | Former Executive Engineer (R&B) | Roads & Buildings Deptt. | Hyderabad | Telangana |
| 39 | ML-10643 | Er. Ashok Kumar | M.Tech., B.Tech. | Assistant Engineer | Water Resources Deptt., Govt. of Jharkhand | Ranchi | Jharkhand |
| 40 | ML-10644 | Er.Wahid Quemar Faridi | B.Sc. Engg. (Civil), M.Sc. Trans. | Former Chief Engineer | Jharkhand RCD | Ranchi | Jharkhand |
| 41 | ML-10645 | Er. Shah NawazKhan | Diploma in Civil Engg. | Former Executive Engineer | Rural Works Department | Ramgarh | Jharkhand |
| 42 | ML-10646 | Syed Ozair Ahmad | B.Sc Engg. (Civil) | Former Executive Engineer | Road Construction Department | Ranchi | Jharkhand |
| 43 | ML-10647 | Er. Ashok Kumar Mandal | B.Sc. Engg. | Former Executive Engineer | Water Resources Department | Ranchi | Jharkhand |
| 44 | ML-10648 | Er. Rethish Kumar P B | B.Sc. Engg. (Civil) | Managing Director | Arcot Engineering LLP | | Kerala |
| 45 | ML-10649 | Er. Pynhunlang Suchiang | B.E. (Civil) | Dy. General Manager (Tech.) | North Eastern Electric Power Corporation | Shillong | Meghalaya |
| 46 | ML-10650 | Er. Roshan Cherwa | B.Tech. | Assistant Engineer | Jharkhand BCD | Ranchi | Jharkhand |
| 47 | ML-10651 | Er. Y H Ramu | B.E. (Civil) | Assistant Executive Engineer | Karnataka PWD/ WRDO | Bangalore | Karnataka |
| 48 | ML-10652 | Er. Shivashankar B. | B.E. (Civil) | Former Chief Engineer | | Mysuru | Karnataka |
| 49 | ML-10653 | Er. Satya Narayana Khura | B.E. (Civil Engg.) | Chief Construction Engineer | Works Department | Rayagada | Odisha |
| 50 | ML-10654 | Er. Hanumantharayappa G. | B.E. (Civil), PGDY | Former Superintending Engineer | Karnataka PWD | Bengaluru | Karnataka |
| 51 | ML-10655 | Er. Raja Sekhar Tadepalli | M.Com, CMA | Chairman & Managing Director | JIL IMPEX | Chennai | Tamil Nadu |
| 52 | ML-10656 | Er. Mohanraj Arumugam | B.Tech. (Civil), M.E. (Constn. Engg. & Mngt.) | Project Technical Engineer | AI Sahel Contracting Company LLC-Dubai | | Tamil Nadu |
| 53 | ML-10657 | Er. Onka rPandey | B.Tech. (Civil), MBA (Infra Mngt.) | Executive Engineer | Uttarakhand PWD | Rudraprayag | Uttarakhand |
| 54 | ML-10658 | Er. Syriac Cherian | B.Sc. Engg. (Civil) | General Manager | Cochin Shipyard Ltd. | KOCHI | Kerala |
| 55 | ML-10659 | Md. Jawed Jishan | B.Tech. (Civil Engg.) | Assistant Engineer | Jharkhand BCD | RANCHI | Jharkhand |

**Institutional Member:**

| S.No. | M. No. | Name of Representative | Qualification | Designation | Department | City | State |
|---|---|---|---|---|---|---|---|
| 1 | IL-90229 | Shri Sudhanshu Shekhar Rai | B.Tech. | Chief Engineer | Bihar State Warehousing Corporation | PATNA | Bihar |

**Student Member:**

| S.No. | M. No. | Name | Qualification | Designation | Institute | City | State |
|---|---|---|---|---|---|---|---|
| 1 | SM-80375 | Shri Vinay Vrat Singh | Pursuing B.Tech. (Civil) VII Semester | Student | Vision Institute of Technology Kanpur | Kanpur | Uttar Pradesh |
| 2 | SM-80376 | Shri Santro Williyam P | Pursuing B.E. | Student | J.P. College of Engineering | Thannuthu | Tamil Nadu |

## INDIAN BUILDINGS CONGRESS,

Sector-VI, R. K. Puram, New Delhi-110022

**IBC Publications Available for Sale**

| S. No. | Code | Name of Publications | Price | Packing/Postage Extra |
|---|---|---|---|---|
| 1. | IBC:2:2001 | Effectiveness of Alternative Models of Land Use Planning | Rs.50/- | 30/- |
| 2. | IBC:3:2002 | Urban Infrastructure in India – An Overview | Rs.50/- | 30/- |
| 3. | IBC:4:2003 | Finance for Building Industry | Rs.50/- | 30/- |
| 4. | IBC:5:2003 | Habitat—Vision 2020 | Rs.50/- | 30/- |
| 5. | IBC:6:2004 | Rural Housing Policy | Rs.50/- | 30/- |
| 6. | IBC:7:2004 | Housing Policy | Rs.50/- | 30/- |
| 7. | IBC:9a: | Making Building Safe Against Earthquakes -A Primer : Simple Overview of Handbook on Seismic Retrofit of Buildings | Rs. 100/- | 30/- |
| 8. | IBC:11:2012 | Public Toilet Facilities for Women in Indian Cities | Rs. 50/- | 30/-- |
| 9. | IBC:12: 2012 | Manual on Water Proofing of Buildings | Rs.250/- | 40/- |
| 10. | IBC:13: 2012 | Quality Manual for Civil Works in Building | Rs.400/- | 40/- |
| 11. | IBC:14:2012 | Review on Jawahar Lal Nehru National Urban Renewal Mission (JnNURM)-A Preliminary Assessment | Rs.50/- | 30/- |
| 12. | IBC:15:2012 | A Guide to District Planning | Rs.100/- | 30/- |
| 13. | IBC:16:2012 | Planning & Management Approach Towards Storm Water Drainage for Delhi | Rs.100/- | 30/- |
| 14. | IBC:17:2012 | Guidelines for Design of Universally Accessible Built Environment | Rs.80/- | 30/- |
| 15. | IBC: 18:2013 | Guidelines for Electrical and Mechanical Works in Buildings (Including Energy Conservation, Lifts & Escalators, Life Safety and Security, Fire Safety System & HVAC) | Rs.500/- | 50/- |
| 16. | IBC:19:2013 | Use of Ferrocement in Buildings | Rs.150/- | 30/- |
| 17. | IBC:20:2013 | New Building Materials & Technologies – Innovations in Concrete (Vol. I) | Rs.400/- | 40/- |
| 18. | IBC:21:2013 | Concrete Technology | Rs.500/- | 40/- |
| 19. | IBC:22:2013 | Affordable Housing | Rs.400/- | 40/- |
| 20. | IBC:23:2014 | Buyer's Guide (Part-I) Purchase of Residential Apartment Glossary & Check List | Rs.75/- | 30/- |
| 21. | IBC:24:2016 | New Building Materials & Technologies-Vol. II (Manufactured Sand, Fly Ash, Blast Furnace Slag, Geo-synthetics, Geo-polymers, Fibers & Fiber Glass) | Rs.200/- | 40/- |
| 22. | IBC:25:2017 | New Building Materials & Technologies Vol.III (Formwork, Flooring, uPVC Door-Windows, Hardware, Aluminum Composite Panel & Paints | Rs.200/- | 40/- |
| 23. | IBC:26:2017 | Manual for Safety in Building Construction | Rs.200/- | 40/- |
| 24. | IBC:27:2019 | New Building Materials & Technologies (Vol IV.-Compendium of New Building Technologies) | Rs.800/- | 100/- |
| 25. | IBC:28:2025 | Construction Handbook for Civil Engineers & Architects Vol.– I | Rs.1600/- | |

a. Discount of 25% is allowed for members i/c student members of IBC on purchase of one set of all publications of IBC.

b. Discount of 25% is allowed for Institutional members of IBC on any number of copies of all publications of IBC.

**For sending publications through Registered Post please send advance payment includingpacking/postage charges by DD drawn in favour of "Indian Buildings Congress" payable at New Delhi.**

# INDIAN BUILDINGS CONGRESS

River Front, Kota



**Printed and published by Col. (Dr.) Anand Mathialagan (Retd.), Honorary Secretary, Indian Buildings Congress, Kama Koti Marg, Sector VI, R.K. Puram, New Delhi-110022, Ph:011-26169531, 26170197**
**Email: info@ibc.org.in; indianbldgscongress@gmail.com**
**Websites: www.ibc.org.in**

PRICE : ₹ 20/-

Printed at I G Printers Pvt. Ltd., Ph. 41406927