

BUREAU OF INDIAN STANDARDS**MINUTES**

Panel for Constructional Practices and Safety, CED 46:P11 : **Fifth Meeting**

Thursday, 21 March 2024 : **1030 h**

**Dr Lal C. Verma Conference Hall, Bureau of Indian Standards, Manak Bhavan,
9 Bahadur Shah Zafar Marg, New Delhi 110 002**

Convener: Shri H. S. Dogra

Member Secretary: Shri Arunkumar S., Head(NBC Cell)
NBC Officer : Shri Shubham Chaudhary

Members Present Physically:

1)	Shri Balbir Verma	In Personal Capacity, New Delhi
2)	Shri Manoj Bapna	Military Engineer Services, E-in-Chief's Branch, Army HQ, New Delhi

Members Present Virtually:

3)	Shri P. K. Adlakha	Adlakha Associates Private Limited, New Delhi
4)	Shri S. K. Negi	CSIR - Central Building Research Institute, Roorkee
5)	Shri S. K. Singh	CSIR - Central Building Research Institute, Roorkee
6)	Dr Veena Chaudhary	CSIR - Central Building Research Institute, Roorkee
7)	Shri Dinesh Kumar Ujjainia	Central Public Works Department, New Delhi
8)	Shri Saket Kumar Pandey	Directorate General Factory Advice Service and Labour Institutes, Mumbai
9)	Shri Indrajit Neog	Engineers India Limited, New Delhi
10)	Shri Brihabhan Tiwari	Engineers India Limited, New Delhi
11)	Shri Abid Sheikh	Hindustan Construction Company Limited, Mumbai
12)	Shri Satish Kumar Jain	Hindustan Prefab Limited, New Delhi
13)	Shri Manoj K. Mittal	Indian Association of Structural Engineers, New Delhi
14)	Shri Mohan Ramanathan	Indian Demolition Association, Chennai
15)	Shri P. Krishnan	In Personal Capacity, Bengaluru

16)	Shri Jose Kurian	In Personal Capacity, Thiruvalla
17)	Shri V. Suresh	In Personal Capacity, Thiruvananthapuram
18)	Dr Jagadish Vengala	Institute of Wood Science and Technology, Bengaluru
19)	Shri Anand Nandanwar	Institute of Wood Science and Technology, Bengaluru
20)	Shri Aaroh Swarup	Indian Society for Trenchless Technology, New Delhi
21)	Shri A. V. Hotkar	National Safety Council, Navi Mumbai
22)	Shri Sandeep Bawdekar	The Indian Institute of Architects, New Delhi
23)	Shri Vishwas Kotkar	The Indian Institute of Architects, New Delhi

From BIS :

Shri Abhishek Pal, Scientist 'D' (Civil Engg)
 Shri Abhishek Sharma, Scientist 'B' (Civil Engg)

Item 0 OPENING REMARKS

The Convener, Shri H. S. Dogra, cordially welcomed the members to the fifth meeting of the Panel for Constructional Practices and Safety, CED 46:P11. He further thanked the National Building Code Sectional Committee, CED 46, for entrusting this responsibility on him to revise the chapter on construction management, practices and safety under his guidance. He appreciated active interest by the members in this first meeting of the Panel to identify the topics/points for revision. Shri Dogra mentioned that the provisions of this chapter relate to the standardization being done in BIS by three of its technical committees namely the Building Construction Practices Sectional Committee, CED 13, Construction Management Sectional Committee, CED 29, and Safety in Construction Sectional Committee, CED 45. He further mentioned our endeavour should be to include in this draft the state of art practices on the subject. He solicited active participation and contribution from every member of this group for revising the National Building Code of India.

With these words, the agenda items were taken up item-wise.

Item 1 CONFIRMATION OF MINUTES OF THE LAST MEETING

1.1 There being no comments, the Panel confirmed the Minutes of the last (fourth) meeting of the Panel held on 13 October 2015 in New Delhi, as circulated vide BIS DG letter No. CED 46:P11/A-2.4 dated 29 January 2016.

Item 2 COMPOSITION

2.1 The Panel noted its existing composition as given at Annex 1 to the Agenda. The Panel thereafter reviewed the same and decided/noted as below:

- a) Military Engineer Services would henceforth be represented by Shri S. C. Gupta, Chief Engineer (R & D) and Shri Manoj Bapna, Jt DGW (Des),

Engineer-in-Chief's Branch as their Principal and Alternate Member respectively.

- b) Larsen & Toubro Limited, Chennai would henceforth be represented by Shri M. Nachiappan, Sr. Deputy General Manager – EHS in view of the retirement on superannuation of Shri S. Selvaganapathy and Shri N. Ramachandran. They were requested to also nominate alternate representatives.
- c) Dr V. R. Ramkumar and Shri Anand Nandanwar would represent Indian Wood Science and Technology, Bengaluru (IWST) as its Principal and Alternate Member respectively, in view of merger of Indian Plywood Industries Research and Training Institute, Bengaluru with IWST.
- d) BIS to write to NICMAR, Pune and NICMAR, Hyderabad for sending their nominations for representation on the Panel.
- e) To co-opt Indian Geotechnical Society for representation on the Panel in view of their request. The organization would be represented by Shri H. N. Ramesh, Director, Project Monitoring and Evaluation Board as Principal member, Shri Satyendra Mittal, Professor, IIT Roorkee as Alternate member and Dr Meghna Sharma, Assistant Professor, NIT Hamirpur as Young Professional.
- f) To co-opt Shri P. Bhagat Singh, CE, CPWD, Chairperson of Building Construction Practices Sectional Committee, CED 13 on the Panel.
- g) To give one final reminder to the following organizations for sending nominations for representation on the Panel:
 - 1) Tata Projects, Mumbai
 - 2) ITD Cementation Limited, Kolkata

Item 3 PROJECT OF REVISION OF NBC

3.1 The Panel noted the information regarding the comprehensive exercise of revision of NBC 2016, being carried out through the 22 Panels to bring updates to the various Parts/Sections of NBC 2016 (as at Annex 2 of the Agenda) and to bring out the latest and state-of-the-art revision of the Code.

3.2 The Panel noted the existing chapter titled 'Construction Management, Practices and Safety' of NBC 2016 and its contents as given in Annex 3 to the Agenda.

3.2.1 The Panel noted that the ongoing revision of the National Building Code of India (NBC) is a comprehensive document involving thirty-three chapters. The revision exercise aims to refine and update the contents of the Code for ease in understanding and align the chapters as far as possible with the current industry standards and practices. In this context, the Panel agreed that for harmonious revision of the Code, interconnection within the various Parts is essential including with that to Part 11 'Approach to Sustainability'.

3.2.2 The Panel agreed that a methodical and consensus-driven approach, by leveraging the collective expertise of Panel members is essential and that the written suggestions and structured inputs/reviews from all the member organizations will be desirable and essential.

Based on the discussions during the meeting, the following were noted/decided to be suitably included in the revision:

- a) Title of Section 4 to be modified as '**SAFETY IN CONSTRUCTION AND DEMOLITION**'.
- b) Clause 11 to be renamed as '**REPAIRS AND MAINTENANCE MANAGEMENT**'.
- c) Clause 13 to be renamed as '**SEISMIC STRENGTHENING AND RETROFITTING OF BUILDINGS**'.
- d) To include provisions regarding **Building Information Modelling** as being developed under CED 29/P3.
- e) To make suitable reference to IS 17893:2023 *Work Permit System Code of Practice* and include the provisions on 'Permit to Work System'.
- f) A comprehensive paragraph about the demolition of buildings together with reference to IS 4130:2024 be included. The regulatory practices, and safety aspects are to be included in this section.
- g) A clause/provisions on the transportation and erection of precast and prefabricated elements during construction on the site to be included in this Part also, apart from the existing in Part 6/Section 7. (*A meeting of the relevant chairpersons under the Civil Engineering Division Council to be held to address the use of prefabricated and precast construction in seismic areas*).
- h) To further highlight the provisions regarding barricading of construction sites, shoring of excavated soils, and monitoring of adjacent buildings located along the excavation line. To suitably link these provisions with those in Part 2 of NBC to enable necessary monitoring/implementation.
- i) To list clearly the roles of the supervisory team and construction management team both in Part 2 and Part 7 of NBC.
- j) To emphasize the role of structural engineers in the verification of reinforcement detailing on the construction sites and jointly signing the concrete pour card with the project manager. This would ensure responsibility of the engineers involved in design and construction of the project based on the ground conditions encountered in the site.
- k) To include provisions relating to anchoring of various non-structural elements (NSE) and building services in order to secure them properly with the building.
- l) To ensure quality in construction to make provisions for deployment of trained (for a minimum defined time) and certified workers at construction sites.
- m) To Include provisions relating to construction in marine areas, hilly terrain, and snow bound areas.
- n) To include a guide regarding reference and use of ISO 18001, ISO 45001 suitably for specific sizes and scale of projects.
- o) To include provisions regarding construction & installation of non-structural elements, finishes, building services, glass fixing, BMU restraints, etc.

- p) To standardize the requirements of competency of structural engineers and other engineers/personnel involved in the construction work.
- q) To include provisions on design and construction of False ceilings.
- r) To include provisions on thermal insulation practices for Glass & Glazing.
- s) Provisions for habitat and welfare requirements of construction workers with reference to IS 16601:2016 to be included.
- t) To include provisions for Emergency Response and Disaster Management Plan at construction sites especially for hazard prone projects.

3.3 It was decided that all members of the Panel shall send their written inputs/comments/suggestions on the Working Draft of Part 7 of NBC including the suggestive draft clauses by **15 May 2024**. Furthermore, an Expert Group, comprising the following members, was constituted to review the forthcoming inputs and formulate the requisite modifications to the existing chapter of the Code:

Sl No.	Name of Member	Name of Organization	Mobile	Email
1	Shri Dinesh K. Ujjainia Group Convener	Central Public Works Department, New Delhi-	9836191117	delsetascsq.cpwd@nic.in
2	Shri S. C. Gupta	Military Engineer Services, New Delhi	01123810260	cezrdd2-mes@gov.in
3	Shri S. Senthil Kumar	Builders' Association of India, Mumbai	9841032860	sk@gfpl.in
4	Shri Indrajit Neog	Engineers' India Limited, New Delhi	8011017963	indrajit.neog@eil.co.in
5	Shri M. Nachiappan	Larsen & Toubro Limited, Chennai	9940166017	Nachiappanm@Intecc.com
6	Representative	Tata Projects, Mumbai		
7	Shri H. N. Ramesh	Indian Geotechnical Society, New Delhi	09845089445	rheddur@yahoo.com
8	Representative	Construction Skill Development Council of India, Gurugram		

3.4 The Panel noted the Programme of Work of the 'Building Construction Practices Sectional Committee', 'Construction Management including safety in Construction Sectional Committee', and 'Safety in Construction Sectional Committee' which

respectively listed the standards formulated till date and those draft standards under development.

3.5 It was decided by the Panel that the above Expert group shall examine the comments from Shri K. B. Rajoria as given under the item of the agenda for suitable incorporation in the revision.

3.6 The Panel noted the recommendations submitted by Indian Building Congress as given under the item of the agenda and suggested that CED 13 may consider the proposal for developing a standard on the subject.

Item 4 COMMENTS RECEIVED ON / INPUTS RELATED TO PART 7 'CONSTRUCTION MANAGEMENT, PRACTICES AND SAFETY' OF SP7 : 2016

4.1 It was decided by the Panel that the Expert group, as constituted at **3.3** above, shall examine the comments from the National Safety Council as given under the item of the agenda for suitable incorporation in the revision.

Item 5 PROJECT OF PROMOTION OF USE OF NBC 2016 IN ALL STATES AND UTs OF INDIA

5.1 The BIS' Secretariat explained about the above Project that involved an exercise of Promotion of use of National Building Code of India 2016 in all States and UTs of India. The major deliverable namely the draft Standardized Development and Building Regulations aligned with the provisions of NBC 2016 and the other deliverables such as the [State wise](#) regulations, [Pamphlets](#) for awareness of general public, [GUIDE TO USING THE NBC](#) were explained to the members who appreciated the work done by the entire BIS team.

5.2 The Panel noted the information about the new special publication, **SP 73 : 2023 'Standardized Development and Building Regulations, 2023'** was also published and released, which is available for access (free download) from the BIS' website and from: <https://standardsbis.bsbedge.com/>

Item 6 DATE & PLACE OF THE NEXT MEETING

6.1 It was decided to hold the next meeting of the Panel sometime in the month **June 2024** or **early July** after the receipt of inputs (as per items **3.2.2** and **3.3** above) from the members of the Panel and after the scrutiny of the comments received on the chapter by the Expert group.
Item 7 ANY OTHER BUSINESS

7.1 It was decided to hold meeting of a Special Group comprising representatives of Construction Skill Development Council of India, Builders' Association of India, National Skill Development Corporation, Directorate General of Employment & Training, Indian Association of Structural Engineers, Shri V Suresh, Shri H. S. Dogra and Shri Balbir Verma regarding the need for organized training of manpower involved in construction sites.

7.2 The BIS Secretariat and the members thanked the Convener, for excellently conducting the meeting and providing leadership in the revision exercise taken up in this important field of Construction Management, Practices and Safety. The BIS Secretariat also thanked all the members for taking active interest in the meeting leading to useful deliberations.

7.3 There being no other business to transact, the meeting, thereafter, ended with a vote of thanks to the Chair.
