

भवन और सिविल इंजीनियरिंग कार्यों की
मापन पद्धति

भाग 11 पक्की सड़क, फर्श की फ़िनिश, डेडो
और स्कर्टिंग

(पाँचवां पुनरीक्षण)

Method of Measurement of Building
and Civil Engineering Works

Part 11 Paving, Floor Finishes, Dado
and Skirting

(Fifth Revision)

ICS 17.020; 91.040.01; 93.010

© BIS 2024



भारतीय मानक ब्यूरो
BUREAU OF INDIAN STANDARDS
मानक भवन, 9 बहादुर शाह ज़फर मार्ग, नई दिल्ली - 110002
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI - 110002
www.bis.gov.in www.standardsbis.in

July 2024

Price Group 4

FOREWORD

This Indian Standard (Part 11) (Fifth Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by the Method of Measurement of Works of Civil Engineering (Excluding Water Resources Development) Sectional Committee had been approved by the Civil Engineering Division Council.

Measurement occupies a very important place in the planning and execution of any civil engineering work from the time of first estimates to the final completion and settlement of payments for a project. Methods followed for measurement are not uniform and considerable difference exists between practices followed by different construction agencies and also among various Central and State Government departments. While it is recognized that each system of measurement has to be specifically related to administrative and financial organizations within the department responsible for the work, a unification of various systems at technical level has been accepted as very desirable specially as it permits a wider range of operation civil engineering contractors and eliminates ambiguities arising out of inadequate understanding of various systems followed.

Among various civil engineering items, measurement of buildings was the first to be taken up for standardization and this standard having provisions relating to building work was first published in 1958 and then revised in 1964, 1971, 1977 and 2013. In the previous revision, the detailed revised provision on in-situ finishes on dados and skirting (including raking dados and skirtings), revised provision on dividing strips in in-situ finishes and on dividing strips in tile, slab or block finishes; as well as detailed revised provision on particulars of sheet finishes had been included.

This revision has been brought out to incorporate the changes found necessary in light of usage of this standard and suggestions made by various implementing bodies. The significant modifications in this revision are:

- a) The measurement of runners has also been included in the standard;
- b) The provision to measure treads, risers and edges of landing separately has been removed;
- c) Dado and skirting have been defined;
- d) The provision for using engineered stones as tiles/slabs/blocks have been included;
- e) New clause on wooden flooring has been included; and
- f) The provision to measure beddings and backing in edges of landing separately has been included.

SP 27 : 1997 'Handbook of method of measurement of buildings works (*first revision*)' published earlier by the Committee covering the consolidated provisions of all the parts of IS 1200 shall be revised after the revision of the other parts of IS 1200.

For standards on method of measurement of river valley projects, the Indian Standards formulated by the Measurement and Cost Analysis of Works for River Valley Projects Sectional Committee, WRD 23 under the Water Resources Division Council may be referred.

This standard contributes to the Sustainable Development Goal 9 'Build resilient infrastructure, promote sustainable industrialization and foster innovation'.

The composition of the Committee responsible for formulation of this standard is given in [Annex A](#).

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a measurement shall be rounded off in accordance with IS 2 : 2022 'Rules for rounding off numerical values (*second revision*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

*Indian Standard***METHOD OF MEASUREMENT OF BUILDING AND CIVIL
ENGINEERING WORKS****PART 11 PAVING, FLOOR FINISHES, DADO AND SKIRTING***(Fifth Revision)***1 SCOPE**

This standard (Part 11) covers the method of measurement of paving, floor finishes, dado and skirting in buildings and civil engineering works.

2 TERMS AND DEFINITIONS

2.1 Bills of Quantities — Items of work shall fully describe the materials and workmanship and accurately represent the work to be executed.

2.2 Booking of Dimensions — In booking of dimensions, the order shall be consistent and generally in the sequence of length, breadth or width and height or depth or thickness.

2.3 Clubbing of Items — Items may be clubbed together provided that the breakup of the clubbed items is agreed to be on the basis of the detailed description of the items.

2.4 Cutting — All cuttings shall unless otherwise stated be held to include the consequent waste.

2.5 Dado — Finishes on the wall above a height of 150 mm and up to a height of 1 200 mm above the floor level.

2.6 Description of Items — The description of each item shall, unless otherwise stated, be held to include wherever necessary, conveyance and delivery, handling unloading, storing fabrication, hoisting, all labour for finishing to required shape and size, setting, fitting and fixing in position, straight cutting and waste, return of packings, and other incidental operations.

2.7 Dimension — All work shall be measured as laid in the decimal system as under unless otherwise stated hereinafter. The length and breadth shall be measured before laying skirting, dado or wall plaster:

- a) Dimensions shall be measured to the nearest 0.01 m; and
- b) Areas shall be worked out to nearest 0.01 m².

2.8 Skirting — Finishes on the wall up to a height of 150 mm above the floor level.

3 MODE OF MEASUREMENTS

3.1 All work shall be measured in square metres unless otherwise stated. Deductions for ends of dissimilar materials or other articles embedded shall not be made for areas not exceeding 0.1 m².

Work in isolated width not matching with the general finish shall be measured as given below:

- a) Width 30 cm and below in running metres (the description to include for cutting to edges, if any); and
- b) Width above 30 cm in square metres.

3.2 Expansion and dummy joints shall be described and measured separately in running metres stating depth and width of joints. The filler shall be described and included in the description of item.

3.3 Work in repairs shall be so described and preparation of old surfaces to receive such work shall be included in the description of item.

3.4 Work in isolated areas not exceeding 1 m² each shall be so described stating the nature thereof.

3.5 Work to a pattern or in more than one colour shall be so described stating the nature thereof.

Curved work, conical work and spherical work shall be described separately stating the radius.

Labour in such works shall be so described and measured separately.

4 IN-SITU FINISHES

4.1 In-situ finishes shall be classified according to the kind of material (for example, granolithic, terrazzo, mosaic, etc) and measured separately. The following particulars shall be given for each classification:

- a) Composition and mix;

- b) Thickness, which shall be exclusive of keys, grooves and open joints;
- c) Number of coats;
- d) Nature of surface treatment (for example, steel trowelled, wood floated, polished, sprinkled with carborundum powder, etc);
- e) Nature of base and any special treatment to the same; and
- f) Location of application, for example, whether in flooring or in dado/skirting.

4.2 Work executed to initiate stone slab, or stone blocks shall be so described stating the average size of the slabs or blocks, the surface finish (for example, plain, rough, etc).

4.3 Work in floors laid in bays and work to floors laid in panels between dividing strips shall be so described stating the size of bay or area of panel or bay. The dividing strip shall be measured separately (*see* [4.11](#)).

4.4 Work in floors to be laid in one operation with the base concrete shall be so described.

No deduction shall be made for voids not exceeding 0.2 m² work in treads and risers shall be measured in square metres. Work in landings shall be included in the main item.

4.5 Work to wall strings and open strings shall be measured in square metres. Ends, angles, ramps and wreathed corners shall be included with the item.

4.6 Moulded nosings shall be measured in running metres; returned moulded ends and angles to mouldings shall be included in the description.

4.7 Dados (including raking dados) shall be measured in square metres. Skirting and runners (including raking skirting) up to a height of 150 mm shall be measured in running metres. Dados, runners and skirting over 150 mm in height shall be measured in square metres. Mitres, stops, returned ends and the like shall be included with the item.

4.8 Work to kerbs shall be measured in running metres stating the girth on face. Raking kerbs and vertical kerbs shall each be so described. Arrises, rounded edges and coves shall be included in the description. Angles and intersections shall be enumerated separately.

4.9 Forming channels shall be measured in running metres as extra over the finishing in which they occur stating the girth on face. Arrises shall be included in the description. Ends, angles, intersections and outlets shall each be enumerated separately.

4.10 Lining to channels shall be measured in running metres stating the girth on face. Arrises and coves shall be included in the description. Ends, angles, intersections and outlets shall each be enumerated separately.

4.11 Dividing strips shall be described stating material, size and thickness and measured separately in running metres. Description shall include for ends, angles and intersections and method of fixing, embedding, etc.

5 TILE, SLAB OR BLOCK FINISHES

5.1 Particulars of the following shall be given:

- a) Kind of tile, slab or block units (for example, precast concrete, precast terrazzo, brick, natural stone, engineered stone/cast stone, woodblocks/engineered wood, cork, rubber, etc);

NOTE — In case of precast concrete work, the mix is to be stated.

- b) Thickness and size of tile, slab or block units;
- c) Shape of units if other than rectangular;
- d) Nature of surface finish (for example, glazed, rubbed, polished, type of dressing in case of stone, etc);
- e) Bedding or other method of fixing units;
- f) Grouting, pointing or other finish to joints;
- g) Nature of base (for example, wood, screeded bed, concrete, brickwork, etc);
- h) Location of application, for example, whether in flooring or in dado/skirting; and
- j) Layout of joints.

5.2 Temporary moulds for precast tile, slab or block units shall be deemed to be included with the item.

5.3 No deduction shall be made for voids not exceeding 0.2 m².

5.4 Square cutting at joint and at boundaries shall be deemed to be included with the items except as provided in [5.5](#). Raking, cutting and curved cutting shall each be measured separately in running metres except where occurring within a pattern. In case of work laid to diagonal patterns, straight cutting at boundary (measured around the perimeter of each area) shall be measured in running metres.

5.5 Fair edges, rebated edges, rounded edges, chamfered edges, splayed edges, bevelled edges and the like shall be measured separately in running

metres including ends, angles, mitres, intersections, etc.

5.6 Moulded edges, grooves, flutes and the like shall each be measured separately in running metres. Ends, angles and intersections shall each be enumerated separately.

5.7 Cutting and fitting around steel stanchions and the like (grouped together) shall be described and enumerated.

5.8 Cutting and fitting around pipes, tubes, bars, cables, conduits and the like shall be described and enumerated.

5.9 Cutting and fitting around profile of steps shall be enumerated.

5.10 Cutting and fitting around ducting brackets, newels, WC pedestals, vents, soot-doors and the like (grouped together) shall be enumerated stating the size in stages of 25 cm girth.

5.11 Dividing strips shall be described stating material, size and thickness and measured separately in running metres. Description shall include for ends, angles and intersections and method of fixing, embedding, etc.

5.12 Dados (including raking dados) shall be measured, in square metres. Skirting (including raking skirting) shall be measured in running metres stating the height. Mitres, stops, returned ends and the like shall be included with the item.

5.13 Channels, and lining to channels shall each be measured separately in running metres describing the section and average depth. Channels to falls shall be so described. Rounded edges shall be included in the description. Ends, angles, intersections and outlets shall each be enumerated separately.

5.14 Kerbs shall be measured in running metres describing the section and shall include rounded edges, coves, etc.

5.15 Special tiles and special slabs to form coved internal angles of any radius, rounded external angles, architraves, mouldings, ceiling ribs, cornices and the like shall each be measured in running metres separately according to size and shape.

5.16 Work in landings shall be included in the main item.

6 SHEET FINISHES

6.1 Particulars of the following shall be given:

- a) Sheetting material (linoleum, cork, rubber, alloy, etc);

- b) Thickness of sheetting material;
- c) Method of laying, fixing and jointing; and
- d) Description of base.

6.2 Laps and seams shall be included in the description stating the lap and type of seam and shall not be measured separately.

6.3 Sheet finishes to vertical, inclined and horizontal surfaces shall be measured separately.

6.4 No deduction shall be made for voids not exceeding 0.2 m².

6.5 Raking cutting and curved cutting shall each be measured separately in running metres except where occurring within a pattern (*see 3.5*). Forming rounded external angles and coved internal angles shall each be measured separately in running metres stating the girth.

6.6 Cover strips over joints of finishes shall be described stating the size and measured, in running metres. Description shall include for ends, angles and intersections.

6.7 Cutting and fitting around steel stanchions and the like (grouped together) shall be described and enumerated.

6.8 Cutting and fitting around pipes, tubes, bars, cables, conduits and the like shall be described and enumerated.

6.9 Cutting and fitting around profile of steps shall be enumerated.

6.10 Cutting and fitting around ducting brackets, newels, WC pedestals, vents, soot-doors and the like (grouped together) shall be enumerated stating the size in stages of 25 cm girth.

7 WOODEN FLOORING

7.1 Particulars of the following shall be given:

- a) Wooden flooring material;
- b) Thickness of material;
- c) Method of laying, fixing and jointing; and
- d) Description of base.

7.2 Finishes to vertical, inclined and horizontal surfaces shall be measured separately.

7.3 No deduction shall be made for voids not exceeding 0.2 m².

7.4 Raking cutting and curved cutting shall each be measured separately in running metres except where occurring within a pattern (*see 3.5*). Forming rounded external angles and coved internal angles shall each be measured separately in running metres stating the girth.

7.5 Cover strips/moulding/beading, etc over joints of finishes shall be described stating the size and measured, in running metres. Description shall include for ends, angles and intersections.

7.6 Cutting and fitting around steel stanchions and the like (grouped together) shall be described and enumerated.

7.7 Cutting and fitting around pipes, tubes, bars, cables, conduits and the like shall be described and enumerated.

7.8 Cutting and fitting around profile of steps shall be enumerated.

7.9 Cutting and fitting around ducting brackets, newels, WC pedestals, vents, soot-doors and the like (grouped together) shall be enumerated stating the size in stages of 25 cm girth.

8 BEDDING AND BACKINGS

8.1 Particulars of the following shall be given:

- a) Composition and mix;

- b) Thickness which shall be exclusive of keys, grooves, open joints; and
- c) Nature of base and any treatment of the same.

8.2 Screeded beds for all floor finishes shall be described.

8.3 No deduction shall be made for voids not exceeding 0.2 m².

8.4 Bedding and backing laid in bays or laid in panels between dividing strips shall be so described stating the size of bay or area of panel or bay.

Bedding and backing in treads and, risers shall each be measured separately in square metres. Work in landings shall be included in the main item. Bedding and backing in edges of landings shall each be measured separately in running metres.

8.5 Bedding and backing in skirting and dados shall be measured separately.

8.6 Forming channels in beds shall be measured, in running metres, as extra over the beds in which they occur stating the girth on face. Arrises, rounded edges, coves, ends, angles, intersections, outlets and the like shall be included with the items.

ANNEX A

(Foreword)

COMMITTEE COMPOSITION

Method of Measurement of Works of Civil Engineering Construction (Excluding Water Resources Development) Sectional Committee, CED 44

<i>Organization</i>	<i>Representative(s)</i>
In Personal Capacity (<i>Flat No.-370 Asiad Village Complex Siri Fort, New Delhi - 110049</i>)	SHRI SARVAGYA KUMAR SRIVASTAVA (<i>Chairperson</i>)
Association of Consulting Civil Engineers India, Bengaluru	SHRI CHANDAN GHOSH SHRI NANDKISHORE K. CHOUDHARY (<i>Alternate</i>)
Border Roads Organization, New Delhi	SHRI R. SRINIVASA RAO
Central Public Works Department, New Delhi	SHRI PREM MOHAN SHRI DINESH K. UJJAINIA (<i>Alternate</i>)
Central Water Commission, New Delhi	SHRI AJAY SHIVLAL BANODE SHRI KIRAN PRAMANIK (<i>Alternate</i>)
CSIR - Central Building Research Institute, Roorkee	SHRI S. K. SINGH SHRI SUBHASH CHAND BOSE GURRAM (<i>Alternate I</i>) SHRIMATI HINA GUPTA (<i>Alternate II</i>)
Engineers India Limited, New Delhi	SHRI INDRAJIT NEOG SHRI RABISANKAR KARMAKAR (<i>Alternate</i>)
Guru Gobind Singh Indraprastha University, New Delhi	SHRI SHAILESH AGRAWAL
Hindustan Construction Company Limited, Mumbai	SHRI HARISH M. P.
Institute of Valuers, New Delhi	COL (RETD) B. B. SHARMA SHRI AJIT FAUZDAR (<i>Alternate</i>)
Malla Reddy Engineering College, Hyderabad	SHRI B. VAMSI KRISHNA
RICS India Private Limited, Gurugram	SHRI ASHWANI AWASTH
In Personal Capacity (<i>A-103, Ganesh Residency, Near Yash Avenue, IOC Road, Chandkheda, Ahmedabad - 382424</i>)	SHRI VISWASKUMAR B. DARAJI
In Personal Capacity (<i>688, Sector 10, Panchkula - 134109</i>)	SHRI ASHOK KUMAR GROVER
In Personal Capacity, New Delhi (<i>Balbir Verma & Associates K-11, Ground Floor Kailash Colony, New Delhi - 110048</i>)	SHRI BALBIR VERMA
BIS Directorate General	SHRI DWAIPAYAN BHADRA, SCIENTIST 'E'/DIRECTOR AND HEAD (CIVIL ENGINEERING) [REPRESENTING DIRECTOR GENERAL (<i>Ex-officio</i>)]

Member Secretary
SHRIMATI DIVYA S.
SCIENTIST 'D'/JOINT DIRECTOR
(CIVIL ENGINEERING), BIS

Bureau of Indian Standards

BIS is a statutory institution established under the *Bureau of Indian Standards Act, 2016* to promote harmonious development of the activities of standardization, marking and quality certification of goods and attending to connected matters in the country.

Copyright

BIS has the copyright of all its publications. No part of these publications may be reproduced in any form without the prior permission in writing of BIS. This does not preclude the free use, in the course of implementing the standard, of necessary details, such as symbols and sizes, type or grade designations. Enquiries relating to copyright be addressed to the Head (Publication & Sales), BIS.

Review of Indian Standards

Amendments are issued to standards as the need arises on the basis of comments. Standards are also reviewed periodically; a standard along with amendments is reaffirmed when such review indicates that no changes are needed; if the review indicates that changes are needed, it is taken up for revision. Users of Indian Standards should ascertain that they are in possession of the latest amendments or edition by referring to the website-www.bis.gov.in or www.standardsbis.in.

This Indian Standard has been developed from Doc No.: CED 44 (25068).

Amendments Issued Since Publication

Amend No.	Date of Issue	Text Affected

BUREAU OF INDIAN STANDARDS

Headquarters:

Manak Bhavan, 9 Bahadur Shah Zafar Marg, New Delhi 110002

Telephones: 2323 0131, 2323 3375, 2323 9402

Website: www.bis.gov.in

Regional Offices:

Central : 601/A, Konnectus Tower -1, 6th Floor,
DMRC Building, Bhavbhuti Marg, New
Delhi 110002

Telephones

{ 2323 7617

Eastern : 8th Floor, Plot No 7/7 & 7/8, CP Block, Sector V,
Salt Lake, Kolkata, West Bengal 700091

{ 2367 0012
2320 9474

Northern : Plot No. 4-A, Sector 27-B, Madhya Marg,
Chandigarh 160019

{ 265 9930

Southern : C.I.T. Campus, IV Cross Road, Taramani, Chennai 600113

{ 2254 1442
2254 1216

Western : Manakalya, 4th Floor, NTH Complex (W Sector), F-10, MIDC, Andheri
(East), Mumbai 400093

{ 283 25838

Branches : AHMEDABAD, BENGALURU, BHOPAL, BHUBANESHWAR, CHANDIGARH, CHENNAI, COIMBATORE, DEHRADUN, DELHI, FARIDABAD, GHAZIABAD, GUWAHATI, HARYNA, HUBLI, HYDERABAD, JAIPUR, JAMMU & KASHMIR, JAMSHEDPUR, KOCHI, KOLKATA, LUCKNOW, MADURAI, MUMBAI, NAGPUR, NOIDA, PARWANOO, PATNA, PUNE, RAIPUR, RAJKOT, SURAT, VIJAYAWADA.