



# NEPAL NATIONAL BUILDING CODE

## NBC 102 : 1994



## UNIT WEIGHT OF MATERIALS

His Majesty's Government of Nepal  
Ministry of Physical Planning and Works  
**Department of Urban Development and Building Construction**  
Babar Mahal, Kathmandu, NEPAL  
2060



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This publication represents a standard of good practice and therefore takes the form of recommendations. Compliance with it does not confer immunity from relevant legal requirements, including bylaws

श्री ५ को सरकार (मन्त्रिपरिषद्) को मिति २०६०।४।१२ को निर्णयानुसार स्वीकृत

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## Preface

**This Nepal Standard was prepared during 1993 as part of a project to prepare a draft National Building Code for Nepal.**

In 1988 the Ministry of Housing and Physical Planning (MHPP), conscious of the growing needs of Nepal's urban and shelter sectors, requested technical assistance from the United Nations Development Programme and their executing agency, United Nations Centre for Human Settlements (UNCHS).

A programme of Policy and Technical Support was set up within the Ministry (UNDP Project NEP/88/054) and a number of activities have been undertaken within this framework.

The 1988 earthquake in Nepal, and the resulting deaths and damage to both housing and schools, again drew attention to the need for changes and improvement in current building construction and design methods.

Until now, Nepal has not had any regulations or documents of its own setting out either requirements or good practice for achieving satisfactory strength in buildings.

In late 1991 the MHPP and UNCHS requested proposals for the development of such regulations and documents from international organisations in response to terms of reference prepared by a panel of experts.

This document has been prepared by the subcontractor's team working within the Department of Building, the team including members of the Department and the MHPP. As part of the proposed management and implementation strategy, it has been prepared so as to conform with the general presentation requirements of the Nepal Bureau of Standards and Metrology.

The subproject has been undertaken under the aegis of an Advisory Panel to the MHPP.

### **The Advisory Panel consisted of :**

|  |                 |
|--|-----------------|
| <b>Mr. UB Malla, Joint Secretary, MHPP</b>   | <b>Chairman</b> |
| <b>Director General, Department of Building</b>  |                 |
| <b>(Mr. LR Upadhyay)</b>   | <b>Member</b>   |
| <b>Mr. AR Pant, Under Secretary, MHPP</b>  | <b>Member</b>   |
| <b>Director General, Department of Mines &amp; Geology</b>                                 |                 |
| <b>(Mr. PL Shrestha)</b>   | <b>Member</b>   |
| <b>Director General, Nepal Bureau of Standards &amp; Metrology</b>                         |                 |
| <b>(Mr. PB Manandhar)</b>  | <b>Member</b>   |
| <b>Dean, Institute of Engineering, Tribhuvan University</b>                                |                 |
| <b>(Dr. SB Mathe)</b>  | <b>Member</b>   |
| <b>Project Chief, Earthquake Areas Rehabilitation &amp; Reconstruction Project</b>         | <b>Member</b>   |
| <b>President, Nepal Engineers Association</b>  | <b>Member</b>   |
| <b>Law Officer, MHPP (Mr. RB Dange)</b>  | <b>Member</b>   |
| <b>Representative, Society of Consulting Architectural &amp; Engineering Firms (SCAEF)</b> | <b>Member</b>   |

**Representative, Society of Nepalese Architects (SONA)**  
**Deputy Director General, Department of Building,**  
**(Mr. JP Pradhan)**

**Member-Secretary**

The Subcontractor was BECA WORLEY INTERNATIONAL CONSULTANTS LTD. of New Zealand in conjunction with subconsultants who included :

Golder Associates Ltd., Canada  
SILT Consultants P. Ltd., Nepal  
TAEC Consult (P.) Ltd., Nepal  
Urban Regional Research, USA

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## TABLE OF CONTENTS

|                        |           |
|------------------------|-----------|
| <b>Preface.....</b>    | <b>i</b>  |
| <b>0 Foreword.....</b> | <b>iv</b> |
| <b>1. SCOPE .....</b>  | <b>1</b>  |

## 0 Foreword

This Nepal Standard for Unit Weight of Materials adopts the Indian Code IS:875 (Part 1) - 1987 Code of Practice for Design Loads (Other than Earthquake) for Buildings and Structures, Part 1, Dead Loads-Unit Weights of Building Materials and Stored Materials, (Second Revision).

## **1. SCOPE**

### **JUSTIFICATION FOR ADOPTING IS:875 (PART I)**

During the desk study of codes from various countries (Uniform Building Code, Indonesian Earthquake Code, National Building Code of Indian and Yugoslavian Code, New Zealand Code) it was found that unit weight of very common types of materials were maintained the same in each country. For country-specific materials, their variation in unit-weight with respect to those of similar materials in other countries was also found to be minimal. Because of the unavailability of specific unit weights of Nepalese materials for various uses, and because of the similarity of materials and their uses in Nepal and India, Indian Standard IS: 875 (Part I) -1987 has been recommended for adoption in Nepal.