

**INNOVATIVE BHUJ HOSPITAL WINS INDIAN BUILDINGS CONGRESS  
EXCELLENCE AWARD**

The Indian Buildings Congress has awarded their "Excellence in Built Environment 2003 Award" to the new 300-bed Bhuj District Hospital project that uses earthquake protection building techniques developed in New Zealand.

Earthquake Engineering New Zealand's Chairman Dr David Hopkins, EENZ India Team Leader Dr Richard Sharpe and Dr Bill Robinson have sent messages of congratulations to the Bhuj Hospital Project Architect Mr Uday Pattanayak of EFN Ribeiro & Associates and construction company Larsen & Toubro Ltd.

The Award is being presented today to Mr Uday Pattanayak by His Excellency the President of India, A.P.J. Abdul Kalam, at the 10<sup>th</sup> Annual Conference of the Indian Building Congress at the Vigyan Bhawan Convention Centre in New Delhi. Representatives from New Zealand Trade & Enterprise at the New Zealand High Commission in New Delhi are attending the Award presentation.

"This Award is a credit to all involved in the design and construction of the new state of the art Bhuj Hospital," says Earthquake Engineering New Zealand's Chairman Dr David Hopkins. "The incorporation of New Zealand earthquake engineering design and supply of base isolation bearings technology invented by Robinson Seismic Ltd is a very important development for India and New Zealand."

"This project has been a joint collaborative project, which has included valuable support from the NZ Government through NZAID, Ministry of Foreign Affairs & Trade and NZ Trade & Enterprise," Dr Hopkins said.

The new hospital was officially opened in January this year. It has become a symbol of reconstruction that has followed the devastating Gujarat January 2001 earthquake. It is an important and very visible part of a wider major reconstruction and rehabilitation process that includes a strong emphasis on developing multi-hazard resistant construction to better equip the community to withstand future earthquakes and other natural disasters.

"The quality and speed of building design, construction and the Indian Building Congress Award are tributes to the Indian design team led by architect Uday Pattanayak of EFN Ribeiro Associates and construction firm Larsen & Toubro," says internationally renowned seismic expert Dr Richard Sharpe of New Zealand's Beca Group, which has led the New Zealand team of companies involved in the project.

EFN Ribeiro Associates is a leading architectural and urban planning New Delhi based firm and Larsen & Toubro is the largest construction company in India.

The earthquake engineering expertise for the hospital project was provided by members of the Earthquake Engineering New Zealand cluster – a group of companies including Beca Group, Robinson Seismic Ltd, Dunning Thornton Consultants and Holmes Consulting Group. The cluster includes engineers and scientists who are recognised as world leaders in earthquake protection engineering. It was established in Wellington with assistance from Positively Wellington Business, and receives ongoing support from New Zealand Trade and Enterprise and Ministry of Foreign Affairs & Trade to provide earthquake engineering solutions to countries around the world.

The Earthquake Engineering NZ cluster is investigating a range of project opportunities with its Indian partners worth several millions of dollars involving base isolation building projects and disaster risk management projects in India.

The Indian Buildings Congress is a major organisation comprising professionals belonging to various disciplines connected with the built environment, including architects, administrators, financiers, planners, developers, engineers, builders, teachers, researchers and manufacturers. This influential organisation has over 1,200 individual members and over 60 institutional members from all over India including Central and State Government Department Development Authorities, Housing Boards, Private Organisations, Research and Training Institutes. It strives to improve the quality, affordability, environmental, aesthetics, technology and other sustainability aspects involved in the built environment. It has grown rapidly to address these important issues at a time of very rapid urban growth in India.

Earthquakes are a major risk to people in India. The terrible Gujarat earthquake in January 2001 led to more than 14,000 people being killed in the city of Bhuj with a population of 100,000 people, where the previous hospital collapsed in a pile of rubble killing nearly 200 patients and staff.

“In common with New Zealand’s capital city, Wellington, the capital of India, New Delhi, is located in an area at risk from major earthquakes,” says earthquake engineer Dr Richard Sharpe. “New Delhi has grown to become a huge city with almost 14 million people living in it.”

There is a concern that a major earthquake in New Delhi could result in many of the existing hospitals being damaged and unable to remain operational.

“The seismic base isolation technology design and supplied by New Zealand for the new Bhuj District Hospital has attracted widespread interest in India and has paved the way for use with many further hospitals and other buildings in India,” says Dr Richard Sharpe, who has many years of experience of working in India

and nearby Nepal. He was working on a project elsewhere in India at the time of the 2001 Gujarat earthquake.

“This technology is particularly suitable for the construction styles of developing countries as it is very robust and provides a high level of protection. It is especially relevant for hospitals and other emergency service buildings that will be needed after an earthquake,” says Dr Richard Sharpe.

The new 300-bed Bhuj hospital in earthquake-prone Gujarat State, is the first building in India to use lead-rubber base isolation technology - a building protection system developed in New Zealand and increasingly used in earthquake-prone areas of the world, particularly Japan, China and the USA. The same technology is used to protect Parliament Buildings and the Te Papa National Museum in New Zealand.

New Zealand is a world leader in earthquake protection technology and in particular base isolation technology, a system invented by cluster member Dr Bill Robinson. The technology uses lead-rubber bearings to isolate and protect buildings, bridges and other structures during earthquakes.

The New Zealand Government contributed \$ 150,000 from NZAID to the cost of the project base-isolation feasibility study and design work as part of the initial disaster recovery stage. The Indian Prime Minister's Relief Fund funded the hospital construction, including the cost of the Robinson Seismic Ltd bearings. NZ High Commission and NZ Trade & Enterprise have assisted with valuable liaison support from their New Delhi office.

New Zealand further contributed to the hospital project by donating two ambulances to the people of Bhuj, including one provided with funding from the Gujarat community in New Zealand. These were handed over during the official opening day in January by Earthquake Engineering NZ Cluster Facilitator Graeme Carroll who attended the hospital opening on behalf of the cluster.

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