

**ICC Annual Conference 2015 Global
Forum Sept.28 at Long Beach**

**EARTHQUAKE
PREPAREDNESS
AND
RECOVERY IN JAPAN**

Leader of JCBA Delegation

GREAT EAST JAPAN EARTHQUAKE

MARCH 11. 2011

GREAT EAST JAPAN EARTHQUAKE



Rikuzen-takata (Iwate-prefecture, JAPAN) Aug. 2011

GREAT EAST JAPAN EARTHQUAKE



Rikuzen-takata (Iwate-prefecture, JAPAN) Aug. 2011

GREAT EAST JAPAN EARTHQUAKE



Rikuzen-takata Station (Iwate-prefecture, JAPAN) Aug. 2011 

GREAT EAST JAPAN EARTHQUAKE



Otsuchi (Iwate-prefecture, JAPAN) Aug. 2011

GREAT EAST JAPAN EARTHQUAKE



Town-office of Otsuchi (Iwate-prefecture, JAPAN) Aug. 2011

GREAT EAST JAPAN EARTHQUAKE



Namie Station (Fukushima-prefecture, JAPAN) Oct. 2014

EARTHQUAKE PREPAREDNESS AND RECOVERY IN JAPAN

- 1. History of the technical requirements on Structural Safety**
- 2. Subsidy Systems on the Promotion of the earthquake proofing buildings**
- 3. Recovery after the earthquake disaster**
- 4. Further Clarified Subjects and Proposal**

1.

**HISTORY
OF THE TECHNICAL
REQUIREMENTS
ON STRUCTURAL SAFETY**

HISTORY OF THE REQUIREMENTS ON STRUCTURAL SAFETY OF BUILDINGS

A vertical blue arrow pointing downwards, with three black circles at the top, middle, and bottom, indicating the progression of time.

1920 URBAN BUILDING LAW

Newly adapted the stipulation
on earthquake-proof

A red five-pointed star.

1923 GREAT TOKYO EARTHQUAKE (M 7.9)

1950 BUILDING STANDARD LAW (BSL)

A red five-pointed star.

1968 TOKACHI OFFSHORE EARTHQUAKE (M 7.9)

1971 BUILDING STANDARD LAW (BSL)

Revised the design requirement
on the hoop of the column for RC

A vertical blue arrow pointing downwards, with a black circle at the top and bottom, and a black circle in the middle. The arrow is positioned on the left side of the slide.

★ 1978 MIYAGI OFFSHORE EARTHQUAKE (M 7.4)

1981 BUILDING STANDARD LAW (BSL)
The New Earthquake-resistant Design

★ 1995 HANSHIN-AWAJI EARTHQUAKE (M 7.2)

2000 BUILDING STANDARD LAW (BSL)
Introducing the Performance Based Standard

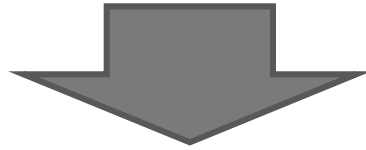
★ 2011 THE GREAT EAST JAPAN EARTHQUAKE (M 9.0)

**2015 Enforced the revised the Mansion
rebuilding facilitation Act**

2.

**SUBSIDY SYSTEMS
ON THE PROMOTION
OF THE EARTHQUAKE
PROOFING BUILDINGS**

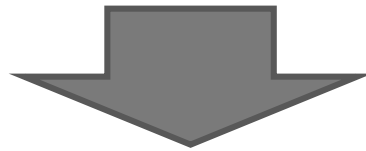
SUBSIDY INSTITUTION BY THE NATIONAL AND LOCAL GOVERNMENTS



**Reduce the Expenditure
by Building owners**

OBJECTIVES OF THE SUBSIDY

- **Diagnosis on the earthquake-resistant**
- **Design on the earthquake-resistant**
- **Improvement construction cost**



REQUIREMENT (SUBJECT)

- **Constructed before BSL in 1981**

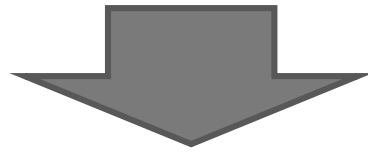
3.

**RECOVERY
AFTER
THE EARTHQUAKE
DISASTER**

RECOVERY AFTER THE EARTHQUAKE DISASTER

Post-earthquake

Rapid Inspection of Buildings



**To protect the people
by secondary disaster**

Implement an emergency safety assessment

PLACARDS POSTED ON INSPECTED BUILDINGS

応急危険度判定結果			
調査済			
INSPECTED			
◆この建築物の被害程度は小さいと考えられます ◆建築物は使用可能です			
建築物名称			
注記：			
INSPECTED			
整理番号			
判定日時	月	日	午前・午後 時現在
<input type="text"/> 災害対策本部 電話 -			

応急危険度判定結果			
要注意			
LIMITED ENTRY			
◆この建築物に立ち入る場合は十分注意して下さい ◆応急的に補強する場合には専門家にご相談下さい			
建築物名称			
注記：			
LIMITED ENTRY			
整理番号			
判定日時	月	日	午前・午後 時現在
<input type="text"/> 災害対策本部 電話 -			

応急危険度判定結果			
危険			
UNSAFE			
◆この建築物に立ち入ることは危険です ◆立ち入る場合は専門家に相談し、応急措置を行った後にして下さい			
建築物名称			
注記：			
UNSAFE			
整理番号			
判定日時	月	日	午前・午後 時現在
<input type="text"/> 災害対策本部 電話 -			

CONTROL AND PROHIBITS

Under BSL

Local government will designate the district that damaged by the disaster.

- The restriction of control and prohibits in certain period.**

4.

FURTHER CLARIFIED SUBJECTS AND PROPOSAL

FURTHER CLARIFIED SUBJECTS



Otsuchi (Iwate-prefecture, JAPAN) May. 2014

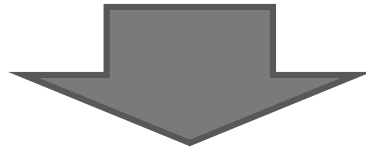
FURTHER CLARIFIED SUBJECTS



Rikuzen-takata (Iwate-prefecture, JAPAN) Aug. 2015

THE HUGE SCALE OF THE TSUNAMI BEYOND EXPECTATION

**Forced to settlement
on the high level lands.**



**Although more than 4 years have
already past , most of families are
still living outside of affcted areas.**

TEMPORARY HOUSING



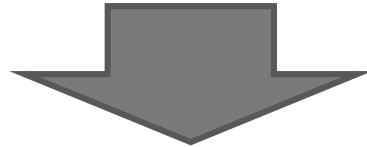
Tono (Iwate-prefecture, JAPAN) Aug. 2012

TEMPORARY HOUSING



Minami-souma (Fukushima-prefecture, JAPAN) Oct. 2014

FURTHER CLARIFIED SUBJECTS AND PROPOSAL



**We faced the issues
on the continuity of
local asset and community.**

TOHOKU ROKKON FESTIVAL (TOHOKU SIX-SOUL FESTIVAL)



Sendai (Miyagi-prefecture, JAPAN) Jul. 2011