



## JSSI Award ~The 25th Prizes, 2024~

### **Purpose of the commendation**

The JSSI award system recognizes individuals, corporations, and organizations that have contributed to the technological advancement and the proper spread and development of seismically isolated (SI) or vibration controlled (VC) structures and devices.

### **Description of the commendation**

They are five prizes, such as 'Prize for Distinguished Service', 'Engineering Award', 'Architectural Design Award', 'Practical Achievement Award' and 'Diffusion Award'.

Prize for Distinguished Service will be given to individuals who have achieved remarkable achievements in the proper spread and development related SI or VC over the years.

Engineering Award will be given to individuals, corporations and organizations that have achieved excellent results in SI or VC engineering field.

Architectural Design Award will be given to individuals, corporations and organizations that have made major contributions to the realization of exceptionally excellent buildings that reflect the characteristics of SI or VC. New construction or renovation of the work is not required.

Practical Achievement Award will be given to individuals, corporations and organizations that have made outstanding achievements in renovation, maintenance, restoration, realization of difficult projects, etc., reflecting the characteristics of SI or VC.

Diffusion Award will be given to individuals, corporations and organizations that have contributed to proper spread and awareness-raising activities of SI or VC.

Details of prizes depend on the commendation regulations of JSSI.

### **Choosing prizes**

Committee of commendation of JSSI that consists of eight experts decided them.

### **Number of applications in 2024**

They were three in 'Engineering Award' and sixteen in 'Architectural Design Award'.

### **Results of selection**

They were the followings: (prize winner personal names and the honorific titles are omitted)

## 'ENGINEERING AWARD'

**Technical endeavor to seismic isolated houses in preparation for Large-Scale Earthquakes exceeding the expected level 2 earthquake**

*Ichijo Housing Research Institute Co., Ltd*

*ICHIJO CO., LTD*

*H.R.D. SINGAPORE*

**"Dynamic Live Floor", a Vibration Isolation System with Dynamic Mass**

*SHIMIZU CORPORATION*

## 'ARCHITECTURAL DESIGN AWARD'

**Kudan-Kaikan Terrace**

*KAJIMA CORPORATION*



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Kudan-Kaikan Terrace consists of two buildings, a preserved building that has been renovated while preserving a portion of the Kudan-Kaikan which was designated as a Registered Tangible Cultural Property and a new building that has been rebuilt as a skyscraper. The preserved building preserves and restores the design from the time of the building's founding about 90 years ago while adding new functions such as shared offices and rooftop garden. And to improve seismic resistance of secondary member such as ceilings and preserve the historical value, it was required to implement base isolation, therefore, seismic retrofitting was carried out on the first basement floor and measures against concrete carbonization were taken by the re-alkalization method. The building is designed to ensure "functionality" and "safety" while respecting "authenticity" to preserve its historical value as a cultural property.

## Tokyo Aquatics Centre

*Obayashi Corp.*

*YAMASHITA SEKKEI INC.*

*Arup*



Tokyo Aquatics Center is a certified swimming facility equipped with a main pool and a diving pool. The main arena roof offers column free space and floating sense on appearance with slender perimeter sloping columns, inspiring traditional Japanese style. The roof itself behaves as isolation system with rubber bearing on each corner cores as well as works as mass damper for stand structure. The roof was assembled at ground level, lifted up to its designed level. This construction method offers not only safe and quick ducting and lighting and ceiling works but also shade in summer. The roof was set onto rubber bearings whose position and level are adjusted so that it fit to the roof deformation when hanging to take desired loadings.

Key words; Isolation system, mass damper, sloping column, lift up

## The Onomichi City Office

*Nikken Sekkei Ltd.*



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The Onomichi City Office was reconstructed on the same site as the old building completed in 1960, the public hall completed in 1963, and the municipal parking lot completed in 1975, all of which had become obsolete. The government building was required to have a high level of earthquake resistance as a disaster prevention center in the event of a disaster. Onomichi is also a city with a thriving tourism industry as a “miniature garden city” with intricate alleys and slopes that connect many temples, shrines, houses and the port. Therefore, the government building was required to be not only a disaster prevention center but also a tourist center. By adopting a seismic isolation structure, the seismic forces acting on the building were reduced, and a building that is both earthquake resistant and has an impressive appearance was realized.

## T & TIII bldg.

*Kume Sekkei Co., Ltd.*



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The building is a commercial and office building with a middle layer isolation structure, intended to replace the aging existing building facing Shinjuku Street. The existing building was completed in 1961 and was the most state-of-the-art rental building constructed in Shinjuku. We were asked to inherit that pioneering character and realize "high-quality rental buildings" with a high level of structural safety.

As a solution, we adopted a middle layer isolation structure that minimizes the distance between the site boundary and the building in to achieve both effective use of the site and high seismic performance. And we developed an inexpensive fail-safe mechanism for restraining displacement of the seismic isolation layer against unexpected big earthquake and incorporated this into seismic isolation layer.

We proposed "urban-type middle layer isolation structure" suitable for urban areas where buildings are densely packed.

## **Commendation**

The commendation ceremony was held after the general meeting of JSSI on June 14, 2024.