

For Immediate Release

## Construction begins on evacuation facilities in Higashimatsushima City

Aiming at the realization of people-friendly wooden evacuation facilities

Sumitomo Forestry Co., Ltd. announces that construction began on disaster evacuation facilities in Higashimatsushima City on February 15.

Responding to Higashimatsushima City's call for proposals, Sumitomo Forestry's design was selected for evacuation facilities that take advantage of the qualities and characteristics of wood. The facilities are set to be erected within the grounds of the city's main government building, and will ordinarily be used for meetings, corporate training, and as a depot; in the event of natural disaster, however, the facilities will be able to provide disaster relief and restoration services including receiving evacuees, distributing meals, and storing relief supplies.

Residents of disaster areas who live in emergency dwellings made from wood have praised the natural construction material, noting "I can feel the softness and warmth of the bark and the fragrance of the wood," and "there is less condensation than in non-wooden temporary housing." For this reason, Sumitomo Forestry proposed a design for medium-size evacuation facilities that utilize a wooden construction.



Image of exterior

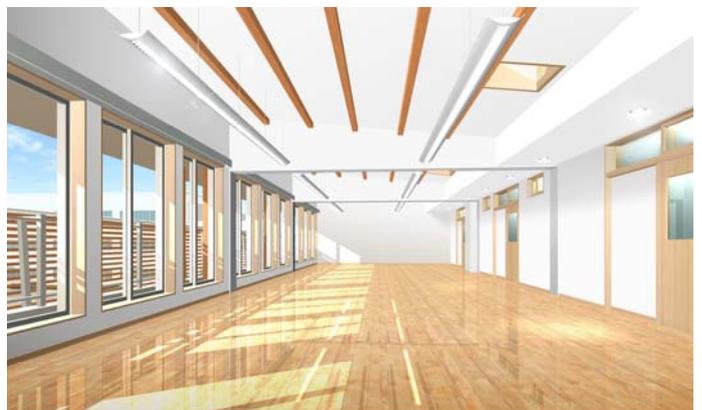


Image of interior

The facilities are of course barrier free, and also utilize Sumitomo Forestry's unique Big-Frame Construction Method technologies to create a large interior space. The use of movable room partitions allows the facilities to provide multi-functional and flexible spaces during non-disaster times; during times of disaster, the spaces can be used to maintain the privacy of infants, those dependent on care, and other people with special requirements.

Research has shown that wood has a positive emotional and physiological impact on people. Consequently, the interior space features exposed wooden girders and wooden flooring made using timber sourced from the Tohoku region, and thereby provides an atmosphere imbued with the quality of wood. Moreover, the facilities make use of skylights that let in natural light, bathing the space in gentle sunshine and drawing out the warmth of the wood.

The "Act for the Promotion of the Use of Wood in Public Buildings" of October 2010 and other

Happiness Grows from Trees

initiatives have encouraged the use of wood in public buildings. For this reason, it is expected that more and more public facilities both made of wood and featuring wooden interiors will be established across the country, including Higashimatsushima City. Going forward, the Sumitomo Forestry Group will actively engage in initiatives aimed at proposing and building spaces that take advantage of the qualities of wood.

## ■ Background

During the Great East Japan Earthquake, many residents of Higashimatsushima City evacuated to the main government building, which was not then a designated evacuation site; in the circumstances, the building was not able to provide satisfactory support to evacuees. Learning from this experience, the city recognized the importance of having public facilities that could be used as evacuation facilities in times of emergency, and therefore moved to build them. Evacuation facilities used during the Great East Japan Earthquake are reported to have had difficulties providing comfortable living spaces due to problems with privacy and noise; this had an adverse impact on the health of evacuees, resulting in the accumulation of fatigue and the deterioration of both mental and physical functions. For these reasons, Sumitomo Forestry has proposed evacuation facilities that are designed to provide all evacuees with peace of mind.

## ■ Chief characteristics of the facilities

### (1) Facilities that combine various functions with beautiful design

- Earthquake resistance	Wooden, beam Rahmen structure features high earthquake resistance.
- Fire resistance	Wooden construction loses strength more slowly than steel-framed buildings; guaranteed semi-fire resistance for 45 minutes.
- Flood countermeasures	Since the site has the potential for 50cm of flooding, the foundations rise 55cm above ground; the entrance door is equipped with a tide protection plate.
- Barrier-free planning	Double-handrails can be used by adults and children alike; elevators have been established for wheel-chair users.
- Outstanding design	By controlling the height of the building, and employing a simple one-sided shed roof, the building realizes a calming and beautiful design

### (2) A comfortable space in times of disaster and non-disaster

- Design that maximizes natural light	Wooden horizontal and vertical louvers to control western light; skylights provide natural illumination and ventilation
- Interior space that exudes ligneous warmth	Immaculate wooden flooring using wood sourced from the Tohoku region; exposed ceiling girders reveal wooden construction

### (3) Functionality in times of disaster

- Cooling and heating equipment	Gas engine driven heat pump air-conditioning with emergency electricity generator; autonomous operation, can provide lighting even during power-cuts.
- Toilets	Equipped with emergency manhole toilets that can be used

	even if the water supply has been cut
- Rainwater tanks	Rainwater storage system, part of which can be used in toilets even if the water supply has been cut
- Car park	The car park can be used to distribute meals and store relief supplies
- Offices	Located next to the car park; can be used for emergency communications and coordination, as well as information collection.
- Meeting rooms	Meeting rooms feature sound insulation and movable room partitions, allowing evacuees to use them in comfort.

## ■ Overview of Facilities

Location	Miyagi-ken, Higashimatsushima-shi, Yamoto Kamikawado 36-1
Facility name	Government building (jointly used as evacuation facility in times of emergency)
Owner	Higashimatsushima City
Construction	Two-story wooden building (beam Rahmen structure)
Site area	approx. 9,526.68 m <sup>2</sup>
Floor space	approx. 832.3 m <sup>2</sup>
Construction period (scheduled)	February–end of August 2016