Nagomi Town

Mikawa Elementary and Junior High School

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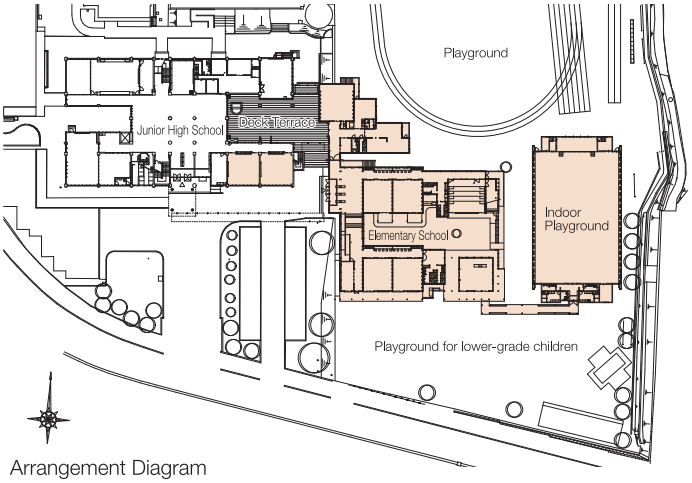
Building Plan Outline

This is a new integrated school building for three elementary schools in the area that has been planned within the site of an existing junior high school. By setting up the new single-story wooden school building on the ground to the east of the existing school building, a playground specifically for the lower grade children has been made available, which can be used safely by younger children who have a different physique than the other children. In addition, the wood and natural energy of the region has been utilized so as to create a school building that is comfortable while being especially environmentally friendly and well prepared against disasters. The classrooms have been arranged to make use of the difference in elevation of the existing school building and ground, and the classrooms of the upper grades of the elementary school have been built by modifying a part of the first floor of the existing school building to include wooden interiors. The new wooden school building and indoor playground is equipped with a solar heat accumulation ventilation system, which offers heating and ventilation in the winter. Rain that falls on the roof of the indoor playground is stored in a storage tank in an underground pit below the classrooms via a rainwater tank, and is used as cleaning water for toilets.

A construction system in which solid cedar wood, “binding/piling” , and braces have been combined is adopted in the construction plan, and while 4 meter and 6 meter fixed size material is used for the classrooms, components that are 10 meters or less are used for the indoor playground, and two, three or four beams and braces are combined together depending on the span and stress. As much as 700 cubic meters of wood is used in total for the school building and the indoor playground, but the processing is done according to the technology of the master builder. Since this is a system in which the slightly inclined roof is supported by braces with different angles, the connection at the joint between every two wood panels is different. The process that involves marking and processing at dimensions below the millimeter as taught by CAD could be implemented only in a country that treasures carpenters like Japan. We have built a special school building taking into account the region’ s wood resources and carpenters’ craftsmanship.



Arrangement Diagram

Architect Profile

Masamitsu Nozawa

1944 Born in Tokyo
1969 Started working at Odaka Architectural Design Office after graduating from the Graduate School of Architecture, Department of Architecture, Faculty of Fine Arts, Tokyo University of the Arts
1974 Established Masamitsu Nozawa Building Workshop
Currently visiting professor at Musashino Art University, part-time lecturer at Yokohama National University Engineering Department

● **Main Works**
Tachikawa Town Hall, Iwamura Kazuo Ehon-no-Oka Art Museum, Aino Gakuen Agricultural High School

● **Record of Awards**
2002 Highest Award of JIA Environment Architectural Award (Iwamura Kazuo Ehon-no-Oka Art Museum)
2007 Good Design Award (Wooden Domino Houses)
2012 Architectural Institute of Japan's Annual Architectural Design Commendation (Tachikawa Town Hall)

Kyoichi Nakamura

1951 Born in Nagasaki Prefecture
1974 Joined Shiroishi Construction after graduating from Nagasaki Junior College of Naval Architecture, Department of Architecture
1982 Established the Kyoichi Nakamura Architectural Concepts and Design
1998-2006 Part-time lecturer in Kyushu Sangyo University, Kyushu Institute of Technology and Fukuoka Construction College, etc.
2011 Reorganized to Ichiu Architectural Concepts and Design Currently President of Ichiu Architectural Concepts and Design, pursuing doctoral degree at Kyushu University Graduate School, and Vice President of Nagasaki Institute of Industrial and Cultural Heritage

● **Main Works**
Fukusayamatsugae Store, Chikyu Kankyo Jikken Jutaku, Kichishima Yanabe Shima Rug Museum

● **Record of Awards**
2003 Japan Commercial Environmental Design Excellence Award, Good Design Award (Fukusayamatsugae Store)
2004 JIA Environment Architectural Award (Chikyu Kankyo Jikken Jutaku)

Masahide Shibata

1958 Born in Kumamoto Prefecture
1982 Graduated from Hosei University Engineering Department School of Architecture
1992 Established UL Sekkeishitsu

● **Main Works**
Triangular houses, Dormitory of Kumamoto College of Agriculture, Houses in Tamukae, Country houses, Joyama Nursery School

● **Record of Awards**
2000 4th JIA Kumamoto Housing Awards Incentive Award (Triangular houses)
2004 6th JIA Kumamoto Housing Award (Houses in Tamukae)
2011 9th JIA Kumamoto Housing Awards Selection Committee Member Award (Country houses)

Hiroko Higashiohmori

1952 Born in Kumamoto Prefecture
1974 Graduated from the Nagasaki Junior College of Naval Architecture, Department of Architecture
1974 to 77 Worked at Nakagawa Architectural Design Office
1980 Established Higashiohmori Hiroko Jikuukan Sekkeishitsu

● **Main Works**
Yunomae Town Council House, Kiiku Nursery School, Tamukae Nursery School, Stream Choanji, Choanji Gallery Building, City Lodge Building, Shuukyouhoujin Konrenji

● **Record of Awards**
1992 19th Japan Federation of Architects and Building Engineers Association Member Work Exhibition Excellence Award (Houses in Suizenji)
1992 1st JIA Kumamoto Housing Award (Houses in Suizenji)

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Construction data

Name	Nagomi Town Mikawa Elementary and Junior High School
Address	1001 Itakusu, Nagomi-machi, Tamana-gun
Main usage	Elementary School and Junior High School
Operating body	Nagomi Town
Designed by	NNSH Design Collaborative (Masamitsu Nozawa + Kyoichi Nakamura + Masahide Shibata + Hiroko Higashiohmori)
Constructed by	Building/Motoyama Construction Co., Ltd., Sanwa Construction Co., Ltd., Utsunomiya Construction Co., Ltd. Electricity/Seiko Electric Co., Ltd., Ariake Densetsu Co., Ltd. Machinery/Nitto Systems Corporation, Kou Tekku Co., Ltd.
Site area	38,179.50 m²
Construction area	2,147.88 m² (New school building + Indoor playground) 1,615.30 m² (Existing modified school building)
Total floor area	1,965.18 m² (New school building + Indoor playground) 4,176.15 m² (Existing modified school building)
No. of floors	One floor above the ground (New school building + Indoor playground)
Structure	Wooden
Exterior finish	Roof (New school building) Galvalume steel sheets ribbed seam roofing Roof (Indoor playground) Galvalume steel sheets standing seam roofing Outer walls (New school building) Cedar planks t = 15 Coated with protective wood paint Galvalume steel sheets sandwich panels Outer walls (Indoor playground) Galvalume steel sheets standing seam roofing
Duration of construction	January 2013 to July 2013 (New school building + Indoor playground) August 2013 to December 2013 (Existing school building, etc.)
Total construction cost	685,000,000 yen

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