a sustainable classroom for a mobile new orleans design high school

learning

NOmod’s spatial developments are designed to offer increased flexibility for both visual learning and increase academic performance.

01. Modular studios. All the classrooms space with the light without obstruction from outside the classroom.

02. multimedia station. A designated space for blended approach, computer work, and plug-in work for the Freydis design students.

03. Bath. The bathroom is designed for maximum function, including storage space, washbasin, computer stations, and a teacher’s desk.

04. NOmod’s entry space also serves as an outdoor classroom space.

performance

NOmod’s robust materials and ample daylighting are designed to lower energy demand in the hot and humid Louisiana climate.

05. Decentralized air conditioning. An efficient system.

06. Advanced framing techniques (DFL up to 10’6” UG) reduce labor costs while increasing the wall cavity for insulation, and increasing sound isolation.

07. The classroom is north-facing orientation and natural daylight supports passive heating and cooling. Shyly paper maximum daylight entry while reducing a highly insulated envelope.

08. Windows and Pergola are rated to withstand hurricane winds.

materials

NOmod’s materials are locally sourced and support healthy interior on quality, sustainability, and durability. A few key products/techniques:

09. Engineered hardwood flooring from poplar, handcrafted from locally harvested hardwoods.

10. Insulation and siding made of the Megan factory recycled materials, and provide a recyclable building skin.

11. Lumber courtesy of local and surrounding areas treated with water from a wooden vessel within five miles of the Megan Modular building factory.

12. Concrete in the form of a great dome and under the floor and in the columns made of recycled glass in the walls.

13. Metal surfaces include locally produced brick and recycled wood made from plastic waste products.

14. The prefabricated storage wall is made of a high density board.

15. Composite facade cladding covers the ceiling and the upper part of the wall to absorb sound.

16. Healthy non-toxic cabinetry from high-quality ventilation systems, non-toxic paint, and exterior sealants, and non-toxic materials.

collaboration

In the wake of Hurricane Katrina, the school in New Orleans suffered from damaged buildings, shifting student and teacher populations, and the complete collapse of the civic infrastructure. The Freydis School of Architecture and Construction was founded as a response to this critical context, with a focus on high school programs dedicated to architectural design and improvement of the built environment.

Together, Freydis students along with a team of local university architecture students and Megan buildings, a modular manufacturer, designed NOmod (New Orleans Modular). Although NOmod draws its inspiration from the 95048 region’s post-Katrina landscape and the temperature extremes of the east and south coastal states, this structure addresses many of the same issues that face global communities today, including shifting demographics and landscapes, density and the need for adaptable learning spaces, community development and regional connections, and the dilemmas of social, economic, and environmental sustainability.
January 2009

- Visit to modular classroom precedents | Houma, LA
- Presentation by public health official on indoor air quality and material selection

May 2009

- Visit to modular manufacturing facility | McComb, MS
- Meeting between design team and modular manufacturing engineer

**NOmod | collaborative process**
materials source map

- metal roofing / siding
- high density fiberboard / cabinets
- corrugated cardboard
- yellow pine studs / sheathing
- modular assembly location
- school location
- polygal
- sugarcane tackable sound board
- cardboard wall surface
- cellulose insulation
- spray foam insulation
- hurricane rated windows

FACTORY

TRANSPORT

SITE