

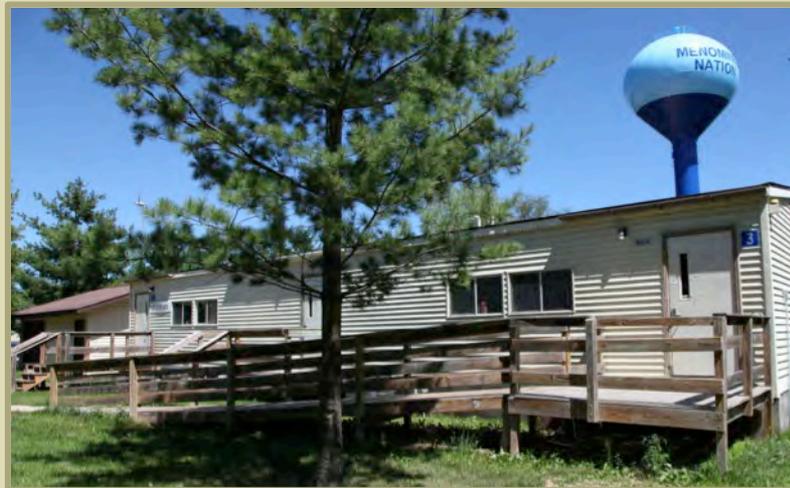


# COLLEGE OF MENOMINEE NATION: THE EVOLUTION OF A TRIBAL COLLEGE CAMPUS

[www.menominee.edu](http://www.menominee.edu)

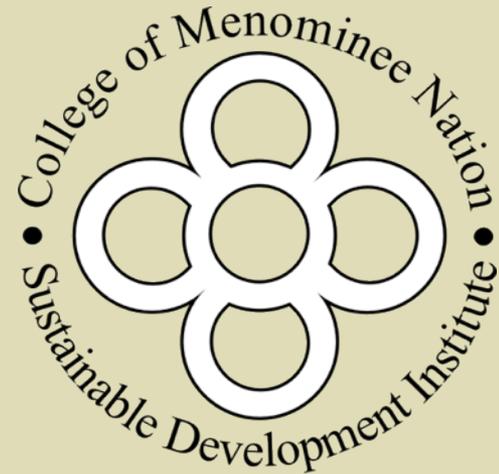
# HISTORY

- Founded by S. Verna Fowler, Ph.D.
- Chartered by the Menominee Indian Tribe of Wisconsin on March 4, 1993
- 42 original students
- Currently 720 full-time equivalent students, 3 baccalaureate programs
- Accredited by the Higher Learning Commission of the North Central Association of Schools and Colleges



# A FOCUS ON SUSTAINABILITY

- Established the Sustainable Development Institute in 1993
- SDI's work centers around five themes:
  - Environment
  - Culture
  - Ways of knowing
  - Health & wellness
  - Economy



## SDI MISSION STATEMENT

“To reflect upon, rediscover and strengthen the Menominee values and approach to sustainable development and to disseminate and advance the tenets of sustainability of what is learned, known and valued of the Menominee approach to sustainability to those who wish to share this knowledge and wisdom.”

# CAMPUS PLANNING PROCESS

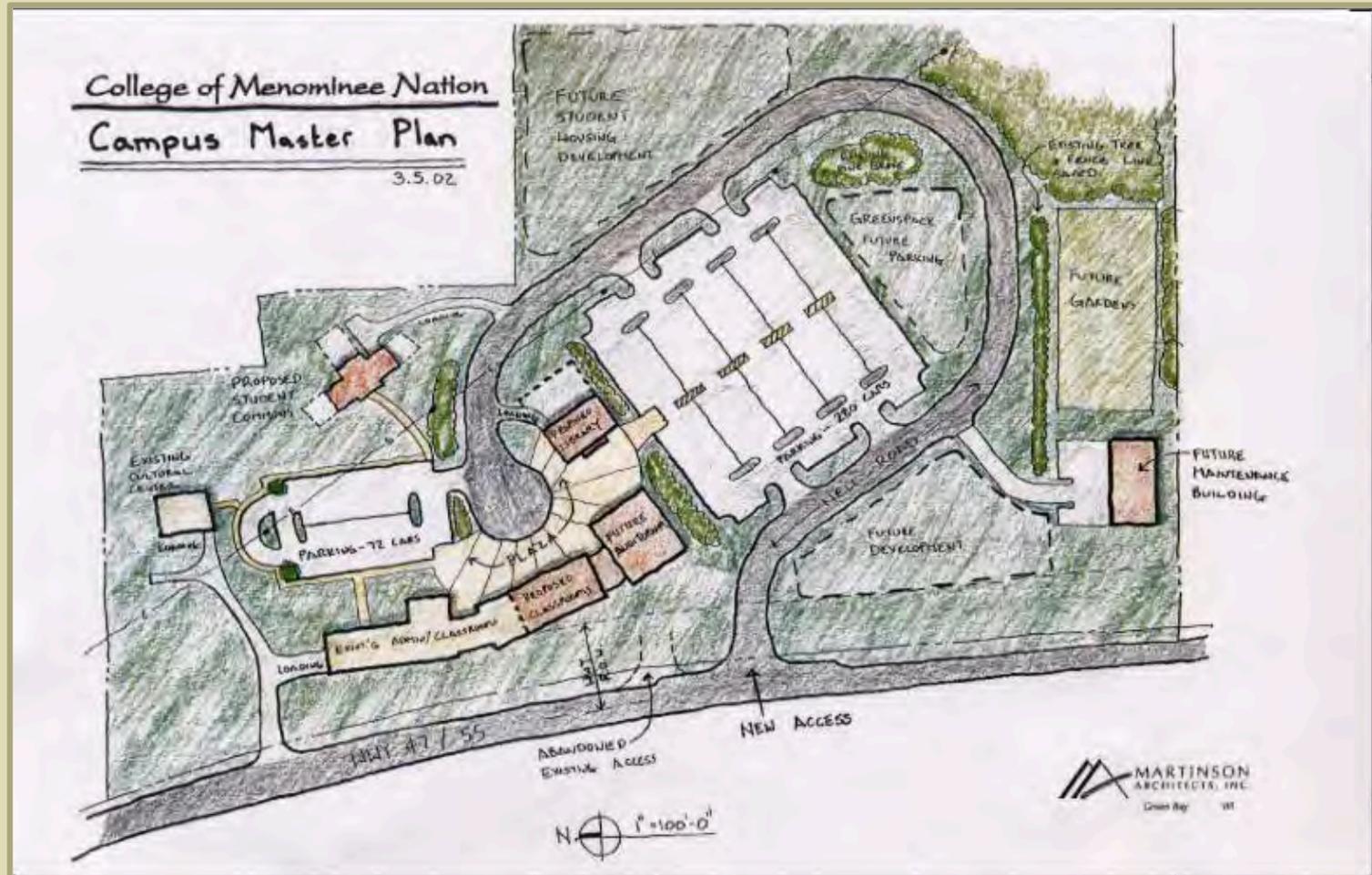
- Lean and adaptive process
- College relies on federal grant dollars to fund projects; does not have an endowment
- Strategic incremental development
- Optimal planning process involves knowledgeable people and stakeholders, and is:
  - Forward-thinking
  - Adaptive
  - Conservative
  - Culturally and environmentally sensitive



# EARLY VISIONS



# SHAPING THE VISION



# GLEN MILLER HALL & SHIRLEY DALY HALL



**Glen Miller Hall**

**Built 1994**

**Expanded 1999, 2003,  
2009, 2010, 2011**

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**Shirley Daly Hall**

**Built 2002**

**Expanded 2002, 2004, 2006**



# CAMPUS COMMONS & CULTURAL LEARNING CENTER

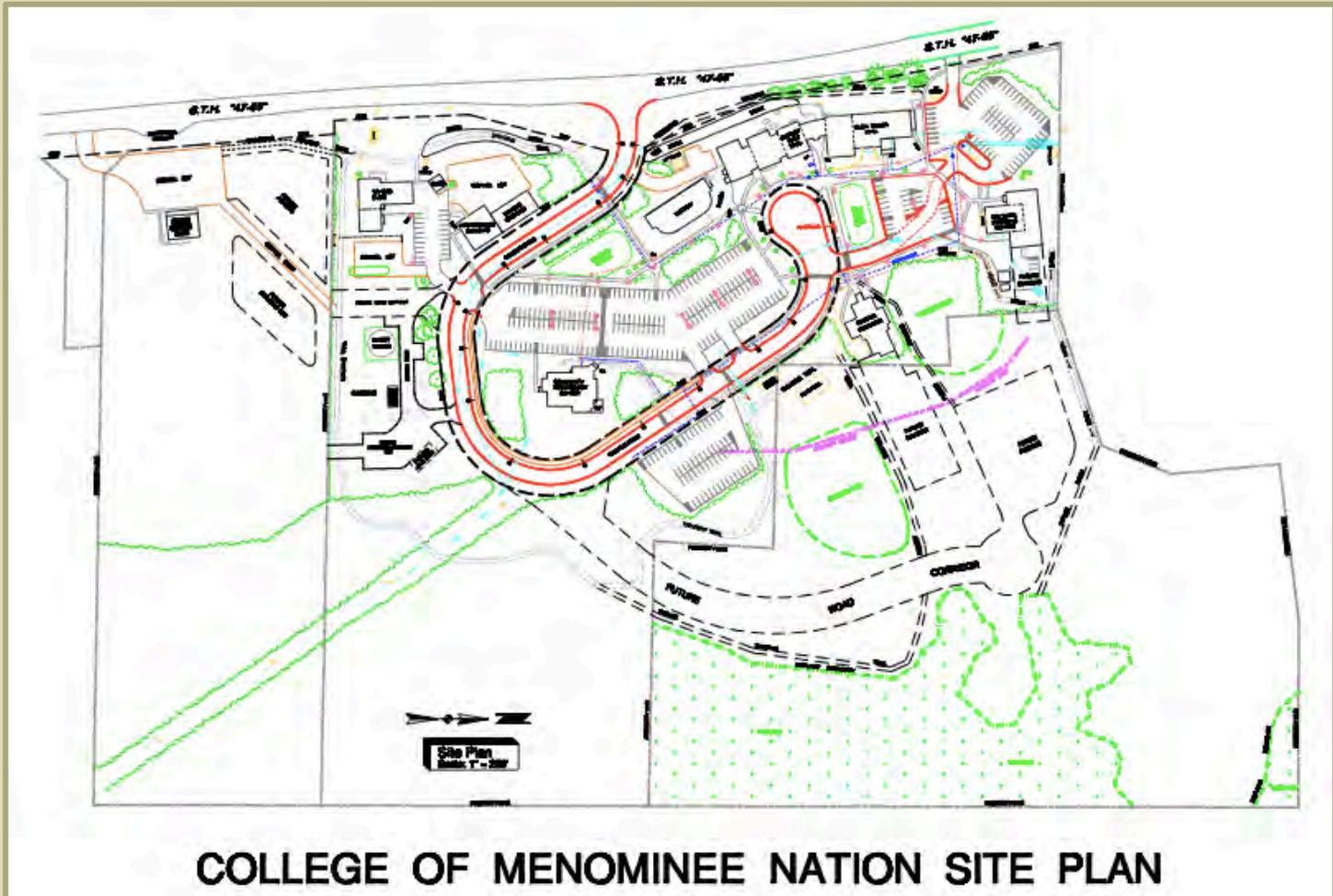
Campus Commons  
Built 2003, expanded 2004



Cultural Learning Center  
Built 2001, expanded 2008



# LOOKING AHEAD





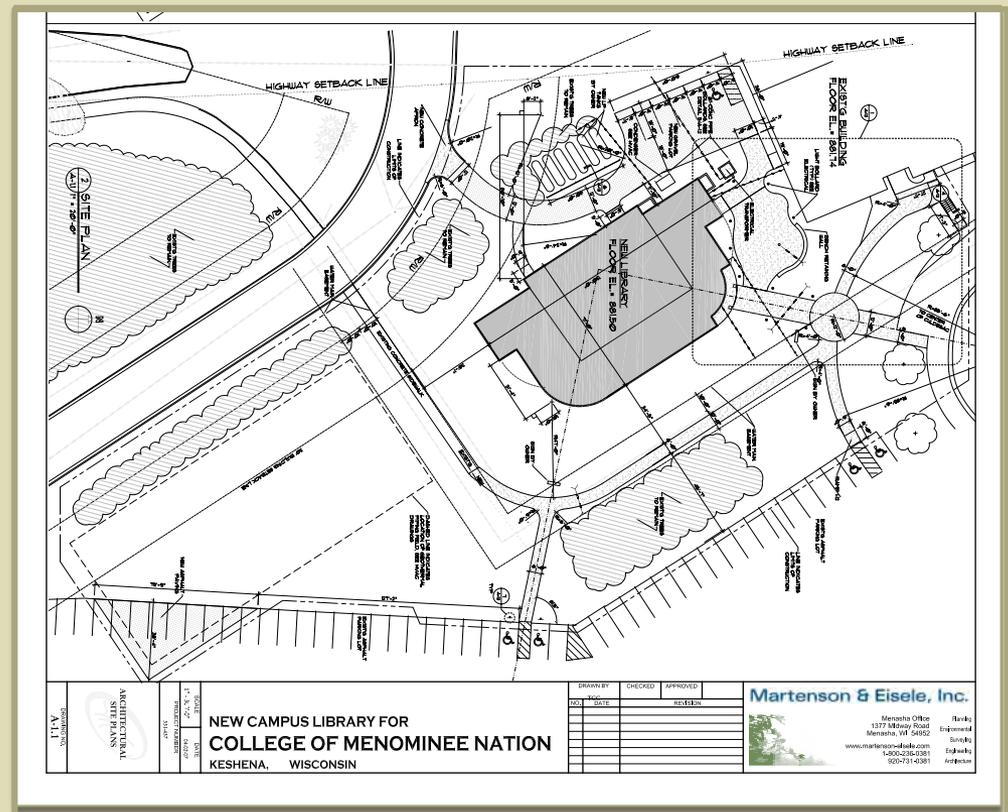
# A SUSTAINABLE CAMPUS

- In 2007, President Verna Fowler signed the American College & University Presidents' Climate Commitment (ACUPCC) to neutralize greenhouse gas emissions on campus
  - In 2008, completed a greenhouse-gas emissions inventory
  - In 2009, submitted a Climate Action Plan outlining planned actions to reduce GHG emissions
  - In 2011, installed 2.4 kW wind turbine on campus; offsets one month's worth of electricity use per year for 3,600 sq. ft. Facilities Building
  - Since 2008, new buildings on campus have been built to either the equivalent of LEED Silver or Green Globes standards



# BUILDING THE FUTURE: CMN LIBRARY

- Structural shell and main level completed 2008
- Fully operational fall 2010
- 18,506 sq. ft.
- Home of CMN's student-run Fair Trade coffee shop
- **Built to the equivalent of the U.S. Green Building Council's LEED Silver**
- 29% more efficient than Wisconsin's Uniform Building Code minimum standards
- Anticipated future generator/PV panels



# BUILDING THE FUTURE: CMN LIBRARY



## Features:

- Natural daylighting
- Open, efficient floorplan
- 36 ground-source heat pumps
- Tight building envelope
- Structural insulating panels
- Energy-efficient lighting
- Daylight sensors
- Occupancy sensors
- Low-flow plumbing fixtures
- Bioswales
- Use of native plants
- Low-VOC-emitting materials
- Use of sustainably harvested Menominee wood products
- Tight infill
- Efficient space planning

# BUILDING THE FUTURE: CMN LIBRARY



# BUILDING THE FUTURE: COMMUNITY TECHNOLOGY CENTER

- Opened in July 2012
- 15,603 sq. ft.
- **Green Globes certified by the Green Building Initiative**
- Provides community members with access to technology and technology education



# BUILDING THE FUTURE: COMMUNITY TECHNOLOGY CENTER



## Features:

- Natural daylighting
- Daylight sensors and timers
- Energy-efficient light fixtures
- Occupancy sensors
- Low-flow plumbing fixtures
- Dual-flush toilets
- 11 energy-efficient heat pumps
- Reflective window coatings
- Tight building envelope verified with blower door test
- Tight infill
- Native, drought-resistant plants
- Use of locally produced materials, including sustainably harvested Menominee wood products

# BUILDING THE FUTURE: COMMUNITY TECHNOLOGY CENTER



# CHALLENGES & LESSONS LEARNED



- **Scarce resources**
  - Small endowment
  - Limited operational funds
  - CMN serves many low-income, first-generation college students
- **Grant dependency**
  - Fitting grants to the mission
  - Meeting scope and contractual obligations of grants
  - Transitioning out of grants
- **Rural location**
  - High cost of professional services
  - High cost of energy (propane vs. natural gas)
- **Constant change**
  - Fast growth
  - Ongoing adaptation
- **Cost of being innovators**
  - Scarcity of highly qualified green-building professionals
  - Adaptation of unproven technology

# A VISION FOR THE FUTURE

- **Diagnostics: Establish existing conditions**
  - Benchmarking
- **Prioritize and commit to campus-wide energy improvements**
  - **Low-hanging fruit:** Build user awareness, change usage behavior, reduce usage
  - **Short-term:** Weatherization, insulation, IT power management, outdoor lighting upgrades, engagement through dashboards
  - **Long-term:** HVAC system improvements/upgrades, computerized controls and monitoring (BMS), variable drives, renewables
- **Education & community involvement**
  - Residential Sustainable Building Program
  - Involve all stakeholders, including students



# EDF & CLIMATE CORPS



## EDF Climate Corps works

### Cumulative Results from 2008-2011

|   |               |
|---|---------------|
| Total number of Fellows                                     | 187           |
| Cost savings identified (NPV)                               | \$1.1 Billion |
| GHG savings identified<br>(metric tons CO <sub>2</sub> /yr) | 1 Million     |
| Energy savings identified<br>(M kWh/yr)                     | 1.5 Billion   |
| Implementation rate to date                                 | 86%           |



Joel Kroenke  
Campus Planner, College of Menominee Nation  
jkroenke@menominee.edu

Sarah Jeglum  
EDF Climate Corps Fellow  
sarahjeglum@uw.edu