

BRENNAN N. SCHUMACHER

Be Green Consulting

QUALIFICATIONS:

- *Owner and founder of Be Green Consulting*
- *Seven years of electrical design-build experience*
- *Industrial, commercial, residential construction*
- *Green building and sustainable design*
- *Architectural lighting design*
- *Daylight integration and lighting controls*
- *LEED Accredited Professional*
- *Educator in green building strategies*

EDUCATION/LICENSES:

- *A.A.S. Degree from Dunwoody Institute - Electrical Construction Design and Management*
- *LEED Accredited Professional - The United States Green Building Council*
- *Courses completed on Energy Conservation and the National Electrical Code via ICC, Advanced Lighting Topics via IESNA, Green Building Strategies and multiple LEED workshops via the USGBC.*

HIGHLIGHTED PROJECTS:

Headquarters Facility for the Canaan Valley Institute – Thomas, WV 2005 **Institutional Research and Learning Center**

Served as Lighting Consultant, working under David Nelson & Associates, LLC.
Architect: Susan Maxman & Partners, Ltd.

55,000 sq.ft. institutional building. The facility will include labs, classrooms, an auditorium and exhibits. This new headquarters building will go beyond the green building and the LEED Rating System. Strategies include a vegetated roof, Living Machine™, rainwater harvesting, lighting controls and an efficient mechanical system. The lighting design includes a DALI system providing break through technology in lighting controls, in addition to energy efficient lighting, Programmable Lighting Control Panel, Light Sensors and Occupancy Sensors. This project will serve as a demonstration project to the community providing an example of green building strategies through extensive interpretive signage on the green building strategies.

WECU- Commercial Loan Center – Bellingham, WA 2005 **Office Building**

Served as Lighting Designer and Green Building Consultant
Architect: Zervas Group Architects

9,000 sq.ft. commercial office building. This LEED Registered project scheduled for certification at the Gold Level will be a green building icon for the City of Bellingham. This project has utilized an integrated approach to design the building in way to maximize the energy efficiency and maintain a productive working environment. The mechanical system will provide occupants with individual control over their spaces through an under floor air distribution system. The design team worked with

the Seattle Daylighting Lab to maximize the usable natural light in the occupied areas. The lighting system consists of dimming ballasts, light sensors, occupancy sensors and provides manual override for occupants. Rain gardens in the parking areas will help reduce and treat stormwater runoff. Full-cut off luminaires will eliminate all light trespass into the night sky.

Student Union Center - University of Nevada Reno – Reno, NV

2004

Student Union Center

Served as Lighting Consultant, working under David Nelson & Associates, LLC.

Architect: WTW Architects and Lundahl & Associates

175,000 sq.ft. student union center which includes three stories of multi-use spaces including a theatre, dining rooms, classrooms, and a large atrium spaces. This large scale project includes energy efficient lighting, lighting controls via Programmable Lighting Control Panel, Light Sensors and Occupancy Sensors. This project will serve as a demonstration project to the community providing an example of green building strategies.

Sustainable Connections Green Building and Sustainable Design – Bellingham, WA 2005

Green Building Technical Advising

Served as Green Building and Sustainable Design Technical Advisor

Client: Sustainable Connections

Be Green Consulting serves as the Technical Advisor to the Green Building and Sustainable Design Program at Sustainable Connections. Sustainable Connections is a local non-profit organization. This program has created a green building movement in Bellingham and Whatcom County. Working with local governments, this program has developed Green Building Resolutions which were unanimously passed by the City of Bellingham City Council and Whatcom County Council which required LEED Silver Buildings on all major construction. The program provides educational opportunities for the local building industry to learn about cutting edge green building technologies. Through Green Building classes, the number of LEED AP's in Bellingham has increased by 6 times and continues to grow. This program continues to provide a bridge between a city that struggles with growth issues and dedicates itself to upholding a very high quality of life.

Railroad Avenue Market Depot Square - City of Bellingham – Bellingham, WA

2004

Farmer's Market

Served as Green Building Consultant, Daylight Integration and Commissioning Agent

Architect: Stewart-King Partnership

7,000 sq.ft. farmer's market center. This LEED Registered project is the first LEED Project by the City of Bellingham. This relatively small building includes a renovation of a large site to include several sheds. This demonstration project will provide the community with an education in green building. Working with the Seattle Daylighting Lab, the design takes advantage of natural light while minimizing the direct sun impact on the fruit and vegetables. This project will also provide interpretive signage developed by Be Green Consulting educating visitors on Low Impact Development strategies. Natural ventilation, light sensors and instantaneous water heaters provide the city with low-maintenance, energy efficient building that will help to connect the urban center with local farmers.

Jackson Hole Center for the Arts – Jackson Hole, WY

2004

Performing Arts Center

Served as Lighting Consultant, working under David Nelson & Associates, LLC.

Architect: Stephen Dynia Architects, PC and Carney Architects

32,700 sq.ft. performing arts center. This high profile project will provide a state of the art performing arts center. With a focus on sustainability, this project will provide a rich resource to the community, while minimizing the impact on the environment. The design includes LED luminaires to highlight architectural features, energy efficient lighting, lighting controls via Programmable Lighting Control Panel, Light Sensors and Occupancy Sensors.

Moyer Student Center - University of Nevada Las Vegas – Las Vegas, NV **2004**
Student Union Center

Served as Lighting Consultant, working under David Nelson & Associates, LLC.

Architect: Tate, Snyder Kimsey Architects

140,000 sq.ft. student union center which includes three stories of multi-use spaces including a theatre, dining rooms, classrooms, and a large atrium spaces. This large scale project includes energy efficient lighting, lighting controls via Programmable Lighting Control Panel, Light Sensors and Occupancy Sensors.

Pioneer School of Expeditionary Learning – Fort Collins, CO **2004**
Middle School and High School

Served as Electrical Designer and LEED Consultant under Merit Electric, Inc.

26,333 sq.ft. school that is a LEED Registered Silver Project, and was built on extremely tight budget. Through various integrated design strategies developed early in the design process, as well as detailed energy analysis, the school completed construction, meeting the energy efficiency and sustainability goals set forth by the design team. This truly green project features a hydronic in-floor radiant heating served by a high-efficiency boiler system with future solar assist, lighting controls in all classrooms and non-occupied spaces, high efficiency site irrigation and indoor plumbing, sustainable materials, construction waste management diversion rate of over 75% and an extremely efficient envelope including Structurally Insulated Panels, Insulated Concrete Forms and low-e glass. The design and construction team educated the students and teachers on the sustainable practices implemented in the school, as well as built interpretive exhibits for future generations.

New Belgium Brewing Company, Inc. – Fort Collins, CO **2004**
LEED-EB Pilot Program Certification

Serving as LEED Consultant

Currently leading New Belgium Brewing Company through the certification process of the LEED Rating system for Existing Buildings Pilot Program. The project has been registered and is the final documentation stages for certification. Working with several New Belgium engineers to overcome complications of certifying a large manufacturing facility under the LEED for Existing Buildings program.

Atrix Laboratories – Fort Collins, CO **2003**
Pharmaceutical Lab and Production Area Addition

Served as Electrical Designer under Merit Electric, Inc.

37,540 sq.ft. addition to the existing Atrix building was a challenging design-build project that took extreme coordination with the other trades involved, which was lead by Merit Electric. The building consisted of warehouse, clean room areas, ranging from 100 to 100, classifications, as well as a Class 1, Division 1 clean room. There was an extensive HVAC package, a second service added for the addition, with two emergency generators, UPS backup, and extensive process equipment. Green features included efficient lighting, and lighting controls, and high efficiency transformers.

Edora Pool and Ice Center – Fort Collins, CO

2002

Ice Arena Addition

Served as Electrical Designer under Merit Electric, Inc.

30,475 sq.ft. addition to the existing EPIC building, which houses a natatorium, ice rink and offices. Project was a green project with energy efficient lighting fixtures replacing the standard high bays, lighting controls, new technologies in energy efficient ice rinks, and high efficiency transformers. This was a city project that will set marks for other city projects to meet, as well as set a goal for the existing building to be upgraded with these new technologies.

New Belgium Brewing Company, Inc. – Fort Collins, CO

2002

Brewhaus Addition

Served as Electrical Designer under Merit Electric, Inc.

20,488 sq.ft. addition to an existing brewery. Project was a very green project with natural cooling and heating, heat recovery, daylight harvesting, energy efficient lighting fixtures, and lighting controls. Project included a co-generation plant, which runs in parallel with the grid utility service, and is powered from the methane gas produced at the New Belgium Water Process Treatment Plant. This state of the art brewery is modeled after European standards in both sustainability and the high quality of brewing standards.

New Belgium Brewing Company, Inc. – Fort Collins, CO

2001

Water Process Treatment Plant

Served as Electrical Designer under Merit Electric, Inc.

3,065 sq. ft. operations building, including over 200,000sq.ft. of site work through various water treatment ponds. Ponds create methane gas, which is piped over 2,000 feet back to the brewery for use in a methane powered generator. Project included a back up 125kW generator for the Water Process Treatment Plant itself. Green features included the co-generation of electricity from the methane gases, green roof, efficient lighting fixtures, and lighting controls, as well as the main purpose of the project, which was to treat the brewery's waste water on site.

Flextronics International – Longmont, CO

2000

Manufacturing Facility

Served as Electrical Designer under Merit Electric, Inc.

124,000sq/ft manufacturing and office building where computer circuit boards and other electronics are manufactured. Points of interest in this project were the trench system used to power the manufacturing area to eliminate the sight of power poles, an ESD grounding floor throughout the manufacturing area, and a vault system to interconnect the future campus that the customer has proposed.