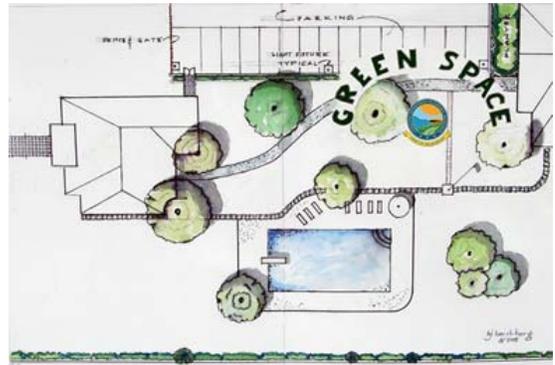


GreenSpace - Maple Grove, MN Headquarters of Great River Energy Designed by Perkins and Will Architects



BY HOWARD HERSHBERG



This is the Maple Grove, Minnesota headquarters of Great River Energy. The project was designed by Perkins and Will Architects. The project incorporates many sustainable design qualities and it was awarded LEED Platinum certification in September 2008.

Green and sustainable features in this design include:

- The new headquarters building uses fly-ash from one of GRE's two coal burning power plants for almost half of the cement in the 166,000 square foot building's concrete structural frame.

- For further sustainability the project incorporates a reused 97 foot diameter wind turbine which was originally installed in Holland. The wind turbine generates (in conjunction with a photovoltaic system) 15% of the GRE office power needs.
- Prior to the installation of the wind turbine the client and the architect studied wind maps and performed on-site wind analysis. A scale model of the project was also subjected to a wind tunnel analysis. Since this is an urban environment, computational fluid dynamic models of turbulence off of surrounding buildings were run to assure that the turbine would meet the design parameters of the project.
- The project met with resistance from the several city council members because they considered the wind turbine an eyesore that should be abandoned or placed elsewhere. Perkins and Will Architects had to educate the parties on the value of wind power to the project. In addition the architect did shadow drawings and models comparing the wind turbine to high rises and redwood trees. The project was allowed to proceed with the wind turbine and GRE's new headquarters is permitted and operational.





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