



March 7, 2012

Mr. Matthew Tucker
City of Madison Zoning Administrator
215 Martin Luther King Jr. Blvd
Rm. LL-100, Municipal Bldg
Madison, WI 53710

**RE: CONDITIONAL USE APPLICATION – Letter of Intent
 WEST CAMPUS COGENERATION FACILITY ADDITION
 AND CHILLER INSTALLATION
 515 Walnut Street
 University of Wisconsin-Madison**

Dear Mr. Tucker:

This is an application for a Conditional Use request for a proposed 42,500 gross square foot addition to the northwest corner of the West Campus Cogeneration Facility. The expansion will accommodate 6 additional chillers. Two of the six chillers will be installed in this phase with four chillers planned for the future. The West Campus Cogeneration Facility (parcel # 0709-153-0401-1) is located at 515 Walnut Street and is zoned R-5. This application is being submitted for Plan Commission action at their April 23, 2012 meeting. Construction of the improvements is scheduled to begin November 2012 and be completed in December 2014. All land is owned by the Board of Regents of the University of Wisconsin System.

Application Materials

Zoning Application
Plans (7 full size copies, 7 reduced size 11" x 17" copies, 1 letter size copy)
Letter of Intent (12 copies)
Legal Description

Project Participants

Owner: **State of Wisconsin**
 Agency: University of Wisconsin System
 Board of Regents
 Room 1860 Van Hise Hall
 1220 Linden Drive
 Madison, Wisconsin 53706

Owner's Contact: **University of Wisconsin – Madison**
 Facilities Planning and Management
 919 WARF Building
 610 Walnut Street
 Madison, Wisconsin 53726
 Phone: 608-263-3023
 Fax: 608-265-3139
 Attn: Gary Brown
 E-Mail: gbrown@fpm.wisc.edu

Facilities Planning & Management

9th Floor WARF Building 610 Walnut Street Madison, Wisconsin 53726-2397
(608) 263-3000 FAX (608) 265-3139 TTY (608) 265-5147

**Project Manager/
MEP Engineer:** **Affiliated Engineers, Inc.**
5802 Research Park Boulevard
Madison, Wisconsin 53719
Phone: 608-236-1249
Fax: 608-274-3674
Attn: Scott Moll
E-Mail: smoll@aeieng.com

Architect: **Potter Lawson, Inc.**
15 Ellis Potter Court
P.O. Box 44964 (53744-4964)
Madison, Wisconsin 53711
Phone: 608-274-2741
Fax: 608-274-3674
Attn: Jim Moravec
E-Mail: jimm@potterlawson.com

Civil Engineer: **Ayres Associates, Inc.**
1802 Pankratz Street
Madison, WI 53704
Phone: 608-443-1257
Fax: 608-443-1250
Attn: Kristine Anderson
E-Mail: andersonk@ayresassociates.com

Landscape Architect: **JSD Professional Services, Inc.**
161 Horizon Drive, Suite 101
Verona, Wisconsin 53593
Phone: 608-848-5060
Fax: 608-848-2255
Attn: Mike Schmeltzer
E-Mail: mike.schmeltzer@jsdinc.com

Building Use, Area, and Occupancy

Project Background:

UW-Madison currently owns and operates two central heating/cooling plants, the Charter Street Heating Plant (CSHP) and the Walnut Street Heating Plant (WSHP). UW-Madison also shares ownership of the West Campus Cogeneration Facility (WCCF) with Madison Gas & Electric. The current chilled water load on campus is approximately 62,000 tons and is estimated to be about 107,000 tons by 2035 based on the current projected growth of university facilities. Presently, the combined chilled water maximum capacity of all three plants is approximately 66,000 tons and the forecasted campus cooling loads are expected to exceed campus chiller capacity in 2013. The original WCCF design designated a site for future expansion of the plant, provided a plan to install additional chillers, and included provisions for connections to the existing campus chilled water distribution system. The original WCCF was approved under an order by the Public Service Commission and therefore did not require city of Madison zoning approval. A Memorial Of Understanding was signed by UW-Madison, MG&E and the Regent Neighborhood Association concerning the development and operation of the WCCF.

Project Description:

The West Campus Cogeneration Facility is located in the southeast corner of Walnut Street and Linden Drive. The site is zoned R-5, general residential. The WCCF Addition and Chiller Installation project includes construction of a 42,500 GSF addition to the northwest corner of the existing West Campus Cogeneration Facility. The addition will be a steel framed structure that will tie into the north and west faces of the existing facility. The building façade and exterior concepts will be consistent with the architecture of the existing building.

The building addition will be sized to handle a total chilled water capacity expansion of 30,000 tons though only 10,000 tons will be installed in this initial phase. New chilled water distribution piping will extend underground from the north face of the new addition to the north and east along Linden Drive and north between the existing campus greenhouses and Biotron Facility to existing connections just south of Observatory Drive. The piping will be sized to handle the full 30,000 ton build-out capacity of the plant addition.

Makeup water for the cooling towers will be extended from the existing lake water piping in Linden Drive, with City of Madison Water Utility domestic water as the backup water source. A new sanitary sewer system will route to existing sanitary utilities within the street. Building and site stormwater will route to existing private (UW) stormwater utilities within the street.

No new employees will be needed for the addition so there will be no traffic or parking impacts. Lighting and signage for the new facility will be in conformance with Campus standards. All maintenance will be performed by UW Facilities Staff including trash and recycling removal.

Noise

A Memorandum of Understanding between the Regent Neighborhood Association, Inc. and the UW/DOA and MGE dated June 3, 2003, established six noise monitoring locations in the area surrounding the WCCF and established a goal of no increase in perceptible noise at those locations generated by the energy facility during its operation. Ambient noise studies at these locations were conducted in 2003 (pre-WCCF construction), 2005 (post-WCCF construction) and in winter 2011 to establish the latest baseline conditions for the project at various stages. A 2012 noise study by Wise Associates indicates the current existing background noise levels at some of the noise receptors are above the MOU standards without WCCF operations. While this project may contribute to an increase in ambient noise levels at the nearest receptor across Walnut Street, no increase is expected at the more remote receptor locations in the Regent neighborhood above the current sound levels.

Sound attenuation devices will be incorporated into the design. This may include shrouds on the equipment, screens around the cooling towers or absorptive measures near exterior penetrations like louvers and dampers and the use of large fans on the roof of the addition to direct sound vertically instead of horizontally. The plant expansion and equipment will contain additional or different noise attenuation devices compared to the original plant construction to adequately comply with the noise reduction requirements.

Air

The existing WCCF has an air permit that regulates air emissions from the existing two exhaust stacks and three cooling towers. As part of the permitting process, MGE implemented best available control technology (BACT) to limit the facility's air emissions. Extensive modeling was performed as part of the original permitting process to ensure that emissions from the facility met National Ambient Air Quality Standards and requirements established in the MOU discussed above. The existing facility has obtained and met all permitting requirements to date.

The proposed expansion includes two new cooling towers to be constructed in phases. The cooling towers will be the only source of new air emissions for the project and are subject to particulate matter emissions standards. Calculations completed for the new towers show the estimated emission increase will likely not trigger the need for an air quality construction permit from the Wisconsin Department of Natural Resources (WDNR). However, the design team is coordinating with WDNR for these aspects.

Hours of Operation

WCCF is operational 24 hours a day, 7 days a week. All maintenance inside and around the site of the facility, including snow removal, will be provided by the UW-Madison Facilities Planning & Management staff or under contract by WCCF. Trash removal is also handled by campus facilities staff.

Project Schedule:

Start Construction:	November 2012
Substantial completion:	December 2014

The project was presented to the City of Madison Development Assistance Team on February 16, 2012 and to the Joint West Campus Area Committee for informational purposes on January 26, 2012.

Legal Description of Site - See attached.

Please contact me at 608-263-3023 if you have any questions or need further information.

Thank you,

A handwritten signature in cursive script that reads "Gary A. Brown". The signature is written in black ink and is positioned above the printed name and title.

Gary A. Brown, FASLA
Director, Campus Planning & Landscape Architecture
Facilities Planning & Management, University of Wisconsin-Madison

cc: John Harrod, UW-Madison FP&M Project Manager Alder Shiva Bidar-Sielaff, District 5
Mark Zaccagnino, DOA/DSF Project Manager