

Board Meeting  
December 2, 2011

## ROLL CALL

### EMPLOY ARCHITECT/ENGINEER FOR UTILITIES MASTER PLAN, CHICAGO

**Action:** Approve Employment of Architect/Engineer for Utilities Master Plan

**Funding:** Institutional Funds Operating Budget

In March 2011, the Board approved the Utilities Master Plan project for the Chicago campus which is a \$15.0 million project. The Utilities Master Plan is intended to provide a comprehensive plan regarding short- and long-term projects to resolve utility asset configuration, operation, and management. The plan will provide a recommendation for the optimal level of service to be provided by campus utility assets, a condition assessment of existing utility assets, and a detailed capital plan. In addition, the plan will offer recommendations of best practices regarding the management, operation, and maintenance of utility assets and associated programs, as well as, provide specific recommendations for achieving energy efficiency and energy reduction goals.

Among the tasks of the Utilities Master Plan are:

1. Identify and document immediate shortfalls that require remediation in order to enhance safety, reliability, and energy efficiency and ensure compliance with regulatory requirements.
2. Provide a report documenting the recommended optimal level of service to be provided by campus utility assets and distribution systems to meet customer requirements for the next

five, ten, fifteen years, and beyond, positioning the assets and staff to accommodate continued growth in alignment with the UIC Campus Master Plan.

3. Provide a detailed plan and specific recommendations for establishing a robust framework for the Chicago campus to respond quickly and efficiently to emergency situations and service disruptions.
4. Provide expedient professional services required to assist the Chicago campus in responding to, mitigating the effects of, recovering from, and preventing future service disruptions and/or outages.
5. Provide professional services required to assist the Chicago campus in implementing energy performance contracts that include campus facilities and the central utilities plants.
6. Analyze and make recommendations for balancing the East Side and West Side chilled water distribution systems ensuring individual building designed load requirements are satisfied, with consideration given to energy efficiency.
7. Provide detailed inspection of East Side and West Side utility assets and distribution systems, procedures, and maintenance practices to determine current material condition.
8. Provide detailed plan of material condition improvement and construction to meet the optimal level of service identified in Phase 1 for the East Side and West Side for the next five, ten, and fifteen years. The detailed plan shall include a timeline, conceptual designs, schedule of activities required to meet identified goals, and budgetary requirements of such, including capital costs and justifications.
9. Provide detailed plan of organizational structure of utility production and maintenance personnel, as well as management staffing. Provide industry comparisons and best practices considered, and present data used to develop recommendations.
10. Provide preventative maintenance program for all campus utility assets and distribution systems. Provide schedule and

standard work order layout for all identified preventative maintenance tasks. Provide data to support task frequency.

11. Identify existing needs, problems, and constraints of utility (electric, chilled water, steam, high temperature hot water, natural gas, water, and compressed air) metering for the East and West Sides through evaluation and investigation of current administrative and field procedures for utility-related services to campus buildings and customer buildings.
12. Identify and recommend implementation of technology improvements and upgrades in the areas of utility and energy production, distribution, storage, metering, automation, optimization, use and reporting to support the development of a smart energy campus that continuously monitors and adjusts energy use to ensure overall needs are met in the most reliable, efficient, and cost-effective manner.
13. Provide energy efficiency guidelines for new building construction, existing building renovation, and building operations.
14. Provide recommendations for modification or upgrade of energy systems within existing campus facilities and define comprehensive design guidelines to be followed for projects that will renovate existing or build new facilities on campus.
15. Define, recommend, and articulate appropriate and measurable energy reduction targets for the next five, ten, and twenty years.
16. Provide specific recommendations for reducing energy consumption and optimizing the use of energy in campus buildings. At a minimum, provide building and project specific analysis of cost/benefit data, and recommend specific, prioritized projects that would reduce energy consumption.

The Utilities Master Plan will identify and document immediate shortfalls that require remediation in order to enhance safety, reliability, energy efficiency, and insure compliance with regulatory requirements. The Utilities Master Plan will include the preparation of bid documents required to correct these immediate shortfalls. Specific

projects might include the replacement of decommissioned boilers with dual-fuel boilers in order to meet Illinois Department of Public Health requirements or the addition of chillers to provide adequate cooling capacity and safe building environments.

An objective of this project is to initiate immediate improvements to the utility assets. It will also ensure service to the campus, in compliance with all federal, State, and local regulatory requirements, and in an efficient manner that allows for the implementation of significant energy reduction measures.

In order for the project to proceed, it is necessary to employ an architect/engineer for the required professional services. The selection of the architect/engineer for this project was in accordance with the requirements and provisions of Public Act 87-673 (Architectural, Engineering and Land Surveying Qualifications-Based Selection Act).<sup>1</sup>

Accordingly, the Vice President, University of Illinois and Chancellor, University of Illinois at Chicago with the concurrence of the appropriate administrative officers recommends that Knight E/A, Inc., Chicago, IL, be employed for the professional services required for this project. The firm's fees for this project will not exceed a fee of \$2,500,000 including reimbursables.

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<sup>1</sup>A selection committee consisting of Jeff Barrie (Utilities Department); Clarence Bridges (Facilities Management); Waleed D'Keidek (Office for Capital Programs); Mark Donovan (Office of the Vice Chancellor for Administrative Services); John Hiltcher (Office for Capital Programs); Fernando Howell (Facility and Space Planning); Michael Landek (Office of the Vice Chancellor for Student Affairs); and Robert Roman (Utilities--University Administration) interviewed and ranked as most qualified the following firms: Affiliated Engineers, Inc., Chicago, IL; Knight E/A, Inc., Chicago, IL; and Stanley Consultants, Inc., Chicago, IL. The committee recommends Knight E/A, Inc., Chicago, IL, as best meeting the criteria for the project.

The Board action recommended in this item complies in all material respects with applicable State and federal laws, University of Illinois *Statutes*, *The General Rules Concerning University Organization and Procedure*, and the Board of Trustees policies and directives.

Funds for this project are available from the institutional funds operating budget of the Chicago campus.

The President of the University concurs.