

Minutes*

Senate Committee on Finance and Planning
Tuesday, March 4, 2003
2:15 - 4:00
238A Morrill Hall

- Present: Charles Speaks (chair), Jean Bauer, Stanley Bonnema, Charles Campbell, David Chapman, Tom Gilson, Gary Jahn, Thomas Klein, Joseph Konstan, Michael Korth, Kathleen O'Brien, Terry Roe, Sue Van Voorhis, Warren Warwick, Susan Carlson Weinberg, Michael Volna
- Absent: Prince Amattoe, Bruce Brorson, Tim Church, Robert Cudeck, Abu Jalal, Cynthia Jara, Brittny McCarthy Barnes, Tim Nantell, Daniel O'Connor, Richard Pfutzenreuter, Thomas Stinson
- Guests: Linda Woock (Office of the Controller); Vice President Carol Carrier, Senior Vice President Frank Cerra, Jackie Singer (Director of Retirement Programs); Professor Calvin Alexander (Geology and Geophysics), University Librarian Wendy Lougee, Associate Vice President Steven Spehn (Facilities Management)

[In these minutes: (1) financial system replacement; (2) budgets and benefits; (3) University policies on design, supervision, and acceptance of construction projects]

1. Financial System Replacement

Professor Speaks convened the meeting at 2:15 and turned to Mr. Volna to lead another discussion about replacement of the University's financial system.

Mr. Volna outlined to the Committee what had occurred since his last report. The evaluation of vendors finished in November; based on the rankings of the four vendors, there was a very clear difference among the four vendors. The steering committee agreed that the University would work only with PeopleSoft. He assured the Committee that there had been no conspiracy to favor PeopleSoft; they had not tried to stack the deck in any way. The vendors were ranked by a large group of people, with representatives from all Twin Cities colleges, two of the three coordinate campuses, and all business process areas; PeopleSoft clearly received the highest evaluations from the evaluators. Mr. Volna described the process that had been used to evaluate the vendors.

Nothing has been decided, Mr. Volna said; he has noted repeatedly that the budget situation makes it difficult for the University to move forward on a very expensive project. He has received approval, however, to begin negotiations with PeopleSoft with the understanding that there can be no final agreement; his instructions are to get the best price.

What he has proposed, Mr. Volna said, is that the University purchase the PeopleSoft financial system and put it on the shelf (normally a system like this is installed "at warp speed" in order to reduce

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as much as possible the cost of consultants). This would allow time to test the system with different charts of accounts and to identify the way in which the University could get the most out of the system. It would take 18-24 months to plan for implementation of the system; Associate Vice President Cawley believes that this process would save the money the University would have spent on consultants.

Does this mean the system would not need a lot of customization, Professor Roe asked? It indicates there will be a lot the University can use "out of the box," Mr. Volna said. The University will have to build an endowment system; PeopleSoft does not claim that their financial system has that capacity. They have also been told that the PeopleSoft financial system is much more robust than the other packages the University purchased earlier from PeopleSoft.

Professor Speaks asked what would happen if the current system, CUFS, were to go down before a new system were put in place, since the University does not have the source code for CUFS. Ms. Woock said that the University DOES have access to the CUFS source code for the high-risk areas of the system. The problem is that the operating system becomes incongruent with other University systems. The University does have on its staff one of the few people left, in a very large geographic area if not the country, who can deal with core coding issues in CUFS, which is a big advantage for the University. The University tests thoroughly any upgrades before they are installed. In terms of recent difficulties with CUFS, the vendor had never seen a problem like it before.

What mechanisms are in place so that if PeopleSoft goes out of business the University has access to the source code, Professor Konstan asked? And he expressed the hope that the University would not learn it has huge support costs after it gets a good deal on the initial cost of the new financial system. Mr. Volna said the University already has access to the source codes for the PeopleSoft systems it has purchased and he assumes it will also with the financial system. In terms of operating costs, they have done a five year analysis that includes the cost of two upgrades and believe it would be about \$25 million to purchase, implement, and support the system.

One problem is that the funding for the new system was a line item in the University's biennial request, which has now disappeared, Professor Speaks noted. Second, he asked, how well can they predict when it is that the CUFS system might go down irretrievably? Mr. Volna said they could not predict when it would happen; all they can do is try to be ready when it happens. If the administration agrees, the University will lock in a price on the new system and buy it; at the same time, they will identify funds already committed to projects that, if the PeopleSoft financial system were implemented, it could instead perform; those funds can be used to help pay for the new system.

If the University negotiates an acceptable price, finds the money to buy the system, test it over 18-24 months, and in the meantime CUFS goes down, could they implement it immediately, Professor Speaks asked? They could, Mr. Volna said.

This is a good situation for the University, Ms. VanVoorhis commented, because it is in the driver's seat. PeopleSoft WANTS the University's business and wants it to use all of the PeopleSoft systems. The University was not in the driver's seat in the earlier negotiations to purchase the systems. Mr. Volna agreed that the University will be in a better negotiating position. Professor Speaks reported that Acting Vice President David Hamilton had pushed very hard for evidence that CUFS could go down and seemed persuaded by the evidence presented by Mr. Cawley at the last meeting of the financial systems steering committee.

Professor Speaks thanked Mr. Volna and Ms. Wook for their report.

2. Budget and Benefits Matters

Professor Speaks welcomed Senior Vice President Cerra and Vice President Carrier to the meeting and accepted a motion to close the meeting, which was approved unanimously. The Committee then had a lengthy discussion with Drs. Carrier and Cerra about costs and comparisons of the University's employee benefits. No decisions have been made by the University, and after the presentations (which took up the entire 90 minutes allotted to them) the Committee agreed that it would take up these topics at its next meeting.

3. University Policies on Design, Supervision, and Acceptance of Construction Projects

Professor Speaks said that he had to leave the meeting and asked Professor Roe to serve as chair. Professor Roe welcomed Professor Calvin Alexander (Geology and Geophysics) and Associate Vice President Steven Spehn to the meeting to discuss construction issues. The issue was brought to the Committee by the Subcommittee on Twin Cities Facilities and Support Services; Professor Jahn, chair of the Subcommittee, opened the discussion with comments, as follows.

The annual report of the Subcommittee on Twin Cities Facilities and Support Services for 2001-02 noted that the subcommittee had discussed design and construction shortcomings in recently opened buildings on the Twin Cities campus. The members of the subcommittee believed this matter sufficiently troubling to continue discussion of it in 2002-03. Prof. E. Calvin Alexander, Jr. (Dept. of Geology & Geophysics) presented information pertaining in particular to the Minnesota Library Access Center/Andersen Library project at the subcommittee's September, 2002, meeting. Other members of the subcommittee have brought forward similar instances, especially relating to airflow and ventilation, in other new buildings (e.g., the Ecology building on the St. Paul campus, the Basic Sciences/Biomedical Engineering Building, and various others. At the subcommittee's November meeting there was further discussion of the MLAC project, and the subcommittee was told that the problems there were being energetically addressed. Even so the subcommittee concluded that the general question of the adequacy of the University's procedures for carrying out and supervising the design, construction, and acceptance of new buildings should be referred to the parent committee (the SCFP) for information. . . .

The subcommittee wishes to make it clear that our goal is not to draw the shortcomings of a particular project to the attention of SCFP. In fact, I, and I believe the subcommittee as well, feel assured that the problems at the MLAC are being energetically addressed. Rather, the subcommittee believes that the particular information it has received concerning MLAC/Andersen Library is illustrative of a more general concern about the adequacy of University procedures relating to design and construction of new buildings. As indicated above, most members of the subcommittee had anecdotes of their own about problems of various kinds in newly opened buildings. The last 8-10 years have seen a great deal of new construction and extensive remodeling on the Twin Cities campus, and it is only to be expected that the amount of new building and the number of shortcomings will be proportional. Even so, these problems have significant financial implications--the large overruns, or perhaps the gross underestimation, of

costs in the rebuilding of Coffman Union have most recently been in the news--and should be of concern to the SCFP.

Professor Alexander then presented a series of slides to the Committee. He began by noting that there are a number of University buildings with design problems, including Riverbend Commons/ the East River Road Garage ("unanticipated: ground water flooding), Williamson Hall bookstore (rising groundwater levels flooding the lower levels and threatening the air conditioning systems), Civil and Mineral Engineering (ongoing challenges with groundwater management; the natural groundwater level is above the bottom of the building; there are mounting expenses; there is crystal wedging shotcrete failure), the Basic Sciences building (air-handling ducts under-designed by about 50%; the current ducts cannot handle the air-conditioning load without unacceptable noise), Magrath Library (problems with rising groundwater), and the Ecology Building (major design mistakes; lab vent duct work under-designed with cost overruns; health and safety issues). While most of his comments will focus on the Minnesota Library Access Center (Andersen Library, on the west bank), he said, his examples come from MLAC because that is the situation with which he is most familiar; the problems, however, are common to buildings at the University. He said the goal is "to identify the problems so that their underlying causes can be identified and hopefully corrected."

The problems with MLAC include an external flooding threat from the Mississippi River and from surface runoff, contaminated groundwater inflows raising health and safety issues, under-design of humidity control--which contributes to mold growth, and shotcrete failure in the portal area, which includes a lack of inspection of contractor work and crystal growth and wedging. Professor Alexander explained the problem of the flooding (the caverns are below the 50-year flood plain, flood water may back into the caverns through storm sewers/other tunnels, thunderstorms can overwhelm local surface drainage and flood through several openings, and internal pipe failures can cause floods--a pressurized main sewer line runs through the portal area) and said that the management challenge is to retain an institutional memory of infrequent events. It is difficult to maintain the appropriate level of vigilance and knowledge for events that only occur perhaps every ten years, he said, and maintenance of emergency and backup equipment unused for decades is especially difficult in tight budget times.

Professor Alexander also explained the problem of contaminated groundwater in MLAC. The caverns were built under and down-gradient from contaminated groundwater; the groundwater travels through joints and bedding planes in the limestone to emerge in the bottom of joints in the ceilings of the caverns. These leaks of contaminated groundwater produce stalactite-looking growths and lead to air quality problems, causing health and safety management issues and contributing to mold problems. A horizontal well has been installed (which has won awards for innovative management of groundwater problems), but until the contamination source is removed and there will be a continuing threat to the caverns and continuing expenses.

Humidity and temperature variations have also been a problem. Stable humidity and temperature were part of the major design criteria for MLAC; humidity control systems were under-designed by about a factor of three, Professor Alexander said. Over the course of the last two years or so, the monitoring of temperature and humidity showed substantial swings but were gradually brought under control in 2001--but the humidity was uncontrolled during half the year in 2002, as the system apparently was not able to control the humidity from May through November. The system is currently being retrofitted but is not now maintaining a stable humidity level. Professor Alexander presented several graphs which demonstrated the variations in temperature and humidity over time.

Finally, Professor Alexander demonstrated the problem with the "shotcrete" sprayed onto the ceiling of the portals to MLAC ("shotcrete" is sprayed concrete). Large sections of the material is detaching and falling down. These appear to be caused by under-specification application of shotcrete and by crystal wedging, which is induced by the growth of magnesium sulfate hydrates. Similar shotcrete failures are showing up in the Civil and Mineral Engineering Building and in the steam tunnels around CME. Several slides were presented with pictures of the deterioration. Professor Alexander showed the Committee a slide with a quotation from the architect/engineer for MLAC, in which the individual points out that architects are not responsible for the failure of contractors to carry out the work in accordance with contract documents, a provision that has been a part of such agreements for "at least 100 years." "In almost every case, the Owner [the University] does not have the resources to pay for this kind of detailed inspection of every element of construction that could reveal such construction deficiencies." The contractual arrangements with the architect/engineer "codifies the simple fact that the design professional is not a party to the contract for construction, which is an agreement between the Owner and the Contractor, who are each responsible for their own contract performance." The conclusion Professor Alexander drew is that "much of the contract work in building construction at the University is not inspected."

There are four challenges to be met, Professor Alexander said. First, "the maintenance of individual memory and expertise for events whose recurrence interval is decades or [for buildings] which were constructed decades ago." Second, "no one appears to be responsible for trending the environmental data in the University buildings. No one is extracting from those data streams useful management information on the buildings' performance. It is too difficult to obtain information that is--or should be--routinely generated." Third, "no one appears to be responsible for inspecting some subcontractors' work during the construction of University of Minnesota buildings. Completion reports are incomplete." Finally, "no one appears to be looking at the cumulative impact of new construction on the existing campus infrastructure or at issues resulting from climate change, etc."

Professor Roe asked Ms. Lougee if she had any comments. She said she had nothing to add but that much is in process to clean up the situation in MLAC. There has been some mold growth in the collections but they are being cleaned up before being put into storage. As a temporary measure a net is being installed over the shotcrete, Mr. Spehn reported and for the long-term they are evaluation what is causing the conditions that makes it detach and fall. This is costing hundreds of thousands of dollars, Professor Alexander pointed out, and is only stopgap.

Vice President O'Brien thanked Professor Alexander for his thoughtful analysis, which confirms his recommendations that these are important matters for the University to act on. The University has building records, but that does not mean there has been appropriate reporting, monitoring, or action. Those steps must be part of the follow-through. She said her office is aware of the lack of inspections and the quality assurance problems and it is in the design and construction services workplan to address them. She has established a new unit in University Services, Capital Planning and Project Management. In addition, she has appointed a panel of volunteers from the private sector who are advising the University on its design and construction process.

Professor Roe noted that with respect to the circulation problems with the biology building in St. Paul, there is probably no recourse with the prime contract this long after the building was constructed. Ms. O'Brien said that questions are why a building was under-engineered and under-designed. More

specifically, Professor Korth said, what is the liability of the design team and the construction company and what is the term of the warranty? Ms. O'Brien said one would need to look at individual contracts, which prompted Professor Korth to ask, in some disbelief, whether there was not a standard.

In addition to the questions about the construction process, Professor Bauer said, there may be University liability if there are staff working in environments that may pose health problems. Ms. O'Brien agreed. Ms. VanVoorhis said the problem is that the burden of proof is on the employee; the University has a lot of records that can be used to document problems. A related question, she said, is how many millions of dollars will the University spend on a building before deciding to get rid of it? There is a mothballed building on the St. Paul campus, Ms. O'Brien observed.

Professor Alexander said the critical issue is that there is no documentation; even if people complain for years, they don't put anything in writing because they love the University, dedicate their lives to it, and do not want to say something bad about it, so no information gets up the chain.

Professor Alexander asked about the facilities and construction expert panel; does it include people who teach and do research in the buildings? It is a group of people she enlisted to help restructure the design and construction functions at the University, Ms. O'Brien said, and it includes Professor Julia Robinson from the College of Architecture and Landscape Architecture. But it consists primarily of senior executive or retired managers from the private sectors who are volunteering their service to the University. She agreed that using internal University people will be important as well; the committee is only one source of information.

Professor Campbell recalled that at one time the University had a deferred-maintenance bill of nearly \$1 billion; what would it cost to remediate all of these kinds of problems, he asked Professor Alexander. Professor Alexander said he had no idea; he has seen little pieces of the problem in a couple of buildings; his colleagues have seen little pieces in other buildings. He expressed doubt that anyone on the campus knows the total problem. Professor Jahn said he believed there are records but they are just not organized. The Subcommittee has a strong recommendation to this Committee that it recommend to the administration it normalize this kind of record-keeping.

Professor Campbell said he found very disturbing the architect's comment that the University does not have and cannot afford to have adequate inspection of contractor work. Professor Campbell said he found very disturbing the architect's comment that the University does not have and cannot afford to have adequate inspection of contractor work. That may just be posturing on the part of a vendor, Mr. Klein said; the Committee needs to hear from Mr. Spehn and Ms. O'Brien. It is important that the Committee understand if what it is seeing in the presentation is a systemic problem, a series of unpleasant isolated incidents, or a management problem, and the Committee needs to know if the proper attention has now been focused on it. The Committee would like to hear an assessment of the direction in which the University is moving to respond to insights like those presented by Professor Alexander.

Vice President O'Brien said that the issues Professor Alexander raises documents the issues that were raised in audits last fall: a lack of inspections and oversight in University construction projects, the need for systematic solutions, and more attention to detail. She noted that she has announced a reorganization in University Services to move capital projects out of Facilities Management so the latter can concentrate on the operation and maintenance of existing buildings (which costs \$120 million per