

Minutes*

Senate Committee on Finance and Planning
Tuesday, December 1, 2009
2:00 – 3:45
238A Morrill Hall

Present: Russell Luepker (chair), Jon Binks, Sarah Chambers, David Chapman, Devin Driscoll, Steen Erikson, Lincoln Kallsen, Lyndel King, Joseph Konstan, Judith Martin, Kathleen O'Brien, Paul Olin, Michael Rollefson, Karen Seashore, Mandy Stahre, Warren Warwick, John Worden

Absent: Jennifer Dens, Kara Kersteter, Thomas Klein, Fred Morrison, Richard Pfitzenreuter, Gwen Rudney, Terry Roe, Thomas Stinson, Michael Volna, Aks Zaheer

Guests: Associate Vice President Michael Berthelsen, Bernadine Fiske (University Services)

[In these minutes: (1) light-rail transit; (2) facility conditions, utilization, and investments]

1. Light-Rail Transit (LRT)

Professor Luepker convened the meeting at 2:05 and welcomed Mr. Berthelsen and Ms. Fiske to discuss facilities issues, but turned first to Vice President O'Brien for an update on light-rail transit (LRT).

Vice President O'Brien noted that this Committee has discussed LRT many times over the last several years; the University is now at a sensitive point in negotiations with the Metropolitan Council. Last August the Council approved the environmental impact statement, which allowed work to start in downtown St. Paul. That action started the clock ticking, under state law: Within 30 days the University had to support the statement or take legal action to protect its interests (federal law allows 180 days). Because no agreement had been reached about mitigation sufficient to protect the University's research, the University filed suit.

At this point nothing is happening with the lawsuit. The Metropolitan Council has filed action to dismiss the lawsuit; that motion will be heard on December 10 in Hennepin County court, but there will likely be no decision until early in the year.

The University has used three sources of information to evaluate the protection needed for its research from electro-magnetic fields and vibration. One is a consultant's report from experts on light rail, another is a faculty committee chaired by Vice President Mulcahy that included faculty experts, and the third is a study of research universities around the country that have dealt with light-rail issues. (The University of Minnesota is not unique as a research university in having to deal with light rail.)

With respect to other issues—the pedestrian mall, traffic interchanges, land easement—there is agreement. The remaining debate is about mitigation—protection of University research labs and equipment. The faculty experts say there are technical solutions to the vibration and electro-magnetic interference problems. In terms of vibration, the University needs the LRT to meet specific performance standards and the LRT has to be built, tested, and corrected to meet these performance standards. In

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terms of electro-magnetic interference, the labs can function if they are outside a corridor approximately 100 feet wide on either side of the tracks. Most of the labs of concern are outside that corridor; those that are not will have to be moved or have protective equipment installed. The University has established a committee composed of associate deans and faculty to work with the faculty and the labs as construction takes place.

Will the Metropolitan Council agree to the standards of correction that the University seeks? Vice President O'Brien said it is likely it will agree to the testing but it is reticent about monitoring. The University believes monitoring is essential in order to keep the labs working and also to determine what happens if the standards are not met. If there is a documented exceedance of standards, remedies would be pursued, with consequences to ensure timely correction.

The Board of Regents is resolute in their protection of research at the University, Vice President O'Brien reported, and believes it is possible to both promote mass transit and protect the University's research.

Professor Chapman asked if the Metropolitan Council budget for the project includes funds for mitigation. It does, Ms. O'Brien said. Then what is the argument about, Professor Chapman asked? The Council does not have funds for monitoring, Ms. O'Brien said, and is hesitant to commit to the performance standards and the remedies for consequences.

Professor Seashore said that LRT has been a public-relations disaster for the University and that outside groups believe the University is making unreasonable demands. She is involved with transit-equity groups and the information the University has made available has not made a dent compared to what the Metropolitan Council is putting out. Is there a way the University can be more aggressive? There have been unanswered accusations in the press, and while the University could "win" on the scientific and technical arguments, it would still engender the public perception that the University does not care about poor people. University Relations needs to take this more seriously. The University's responses thus far have been measured, but at some point the gloves need to come off in the public arena. The lawsuit is being portrayed as a lawsuit against poor people.

Mr. Driscoll said that as someone who lives along the LRT corridor and would use it, he would like to see the project completed. He agreed with Professor Seashore and said that this is the first time since he's been at the University that he has heard the University's position explained in a reasonable way and had not been talked down to. He said he understood that the University has reached out to graduate students in the affected labs and said it would be a good idea to have them talk about the effects of LRT on their research. Vice President O'Brien said there have been about two dozen people working on the issues over the last few years and they have been collecting information from people in the labs.

Mr. Erikson asked if there has been any examination of the cost of mitigation if there are unwanted effects after initial mitigation has been done. What would it cost to move the research? Those specifics would be interesting for the public to know. Mr. Driscoll added that knowing such figures would help him better understand the University's position, both as a Committee member and a member of the community. They have presented some stories, Vice President O'Brien said; there are 80 labs in 17 buildings with highly-sensitive equipment. The fields of research in these labs are in three broad categories: health-related (treatments and cures), renewable energy, and eco-nanotechnology. That research is not solely the University's; there are other research institutions and about 160 businesses involved in much of it. Washington Avenue truly is Minnesota's research corridor. She said she can ask Vice President Mulcahy to bring some of the stories to the Committee, if it wishes. Bring them to the

media as well, Mr. Erikson suggested; the public needs to know that the University's concerns are valid and that the research has broad and important implications.

Professor Olin asked if the tracks would be fenced for safety reasons. There will be hedges with a metal fence 42 inches high so people do not run through them, Vice President O'Brien explained.

Ms. Stahre asked if the Washington Avenue Bridge can handle LRT trains, a concern given that there has already been one bridge collapse in the Twin Cities. Does the University own the bridge? It does not, Ms. O'Brien said; Hennepin County owns it and will retain ownership, although the University maintains the pedestrian deck. The bridge will be one-half open during construction (one side and then the other), including the pedestrian deck. The bridge will be strengthened to accommodate LRT trains.

Professor Konstan suggested that the Committee consider how the University manages public relations risks as a future agenda item. He reflected that it seemed that earlier in the process the University had to make decisions about whether to "move forward" on this project trusting that important issues would be solved later versus appearing too obstructionist. As the project gains momentum, though, it becomes too easy to be seen as "in the way" and to get run over in the process. He thought it would be helpful to hear from University Relations as well as the University's risk management people on how (and where in the chain of authority) decisions are made about where to expend the University's political capital and good will. He said he meant such a discussion to start with LRT, but to understand it more generally (since it is a similar issue with Stadium, labor relations, etc.). His concern, he said, is that there may not be someone "in the loop" who is actually both watching out for the risk to the University and knowledgeable about how those risks play out in public relations.

Vice President O'Brien noted the University's Board of Regents 2001 resolution has guided the University's policy position: first, the preferred route is the northern alignment; second, if the CCLRT line was on Washington Avenue through the campus it be underground; and third, if the CCLRT alignment moves to at-grade on Washington Avenue, that traffic be removed.

2. Facility Conditions, Utilization, and Investments

Professor Luepker turned now to Mr. Berthelsen and Ms. Fiske, who had provided the Committee with a 55-page handout on facilities. The focus of this discussion is on the Twin Cities campus, he noted, but it has relevance for all of the campuses.

Mr. Berthelsen distributed copies of a short version of the handout and noted first that they have posed a number of policy questions on which they would like to receive advice from the Committee.

1. To maximize energy savings, the U would need to be willing to set operational boundaries for space use. The largest drivers of energy are hours of operation and being able to predictably *turn buildings down* when unoccupied. To do so would impact the environment or possible operation of select buildings with one or a few users. Is the U ready to implement such changes?
2. We know that single purpose buildings (examples: labs, classrooms, offices) are both cheaper to build and to operate. However, this would require some adjustments to current practice. Is the U ready for such changes?
3. If the U has less space with the same program, it would need to schedule its classes and events more intensely. With the advantage of technology to see all spaces, it is possible to centrally

schedule. This would mean giving up some control of space assignments. Is the U ready for such a change?

4. Technology advancements have made it possible to change space assignments and utilization. Is the U ready to reduce its fixed office space and move toward more remote office work and generic office space for faculty and staff while on campus?

5. What suggestions do you have on how we can reduce recurring and necessary costs to maintain buildings so that more funding is available for programs?

Mr. Berthelsen said he agreed with Vice President O'Brien's oft-quoted observation that if the University were building from scratch, it would not build the facilities it now has. The Twin Cities campus now has about 24 million gross square feet (up about one million GSF with the addition of the TCF Bank Stadium and Medical Bio . During the decade 1999-2009, the campus added about 2.2 million GSF, many of them more technical spaces (i.e., it was not a like-for-like replacement/increase). As they consider the buildings on the campus, some the University would not have and some it cannot afford. In that context, they in Facilities Management consider three questions:

- how to provide and support facilities
- how to make them sustainable
- how to make facilities efficient? (the cheapest square foot is the one the University doesn't build).

This is a large, diverse, old, complex campus with diverse needs, he concluded.

To that point, Mr. Berthelsen next noted a table breaking down space utilization by category. Research space is significantly more expensive than mixed, office, or warehouse space. With about 24 million GSF on the Twin Cities campus that has about a \$7 billion replacement value, there should be a 2-3% annual investment, or approximately \$160 million; they have spent about \$83 million per year for the last several years.

One of the questions posed to them, Mr. Berthelsen recalled, was how facilities conditions are affected by the building code. Small improvements can trigger major issues. Any project has a programmatic piece and a facilities piece and must think about both.

The questions posed to the Committee ask what it will take to reduce the University's fixed costs in facilities. Question #1 is related to building use: If one person wants to come into a building over the holidays, should they turn on all the building systems? Professor Luepker pointed out that (1) the University is facing a fiscal crisis, and (2) everyone is concerned about the environment, energy use, and the carbon footprint. All of this is related to behavior; the Committee reflects the faculty and staff and it is being asked if there are important things to do.

One Committee member observed that the President and Board of Regents have talked about the need for significant changes in the way the University does business. Part of that may be the way faculty, staff, and students understand their responsibilities to buildings. If the policy is to keep buildings open because someone MIGHT show up, the policy should be changed (except for buildings with animals, etc.). The University should say that if someone chooses to come in on a holiday, his or her office will not be heated.

Professor Seashore related that she took a sabbatical in The Netherlands a few years ago. The university's buildings were locked on the weekends; she got used to it. People have habitual behaviors

that are easy to change; she got used to taking her books home for the weekend. People will grumble. Is this a policy question or has the decision already been made—and the Committee is making itself feel good by talking about it? Vice President O'Brien reported that the Carlson School has set hours of operation for its buildings but they have not had discussions with other units. Professor Seashore related that she works in a mixed-use building and she teaches on Saturdays. She likes teaching in her own building, and gets mildly irritated when she cannot—but only mildly.

Mr. Erikson said that this is an emergency; is it time to enforce a decision by decree and not have more discussion? One sees signs all over that "it all adds up" but there has not been a lot of advertisement beyond posters and stickers. Is there a more efficient way to get information about indicating there is a serious problem? Could stimulus funds be invested in automatic switches so that lights go on when one walks into a room and off when one leaves? What is the payback? That depends on the room, Mr. Berthelsen replied, and said that the stimulus funds they have received are being used for energy-efficiency improvements.

Ms. Stahre commented that in her building, WBOB, the lights go off at 9:30 and they are not on the weekends, even though she is still there working. WBOB is a high-tech building, Professor Luepker agreed, where everything is shut off when the building is not open but one can request lights in one's area from the guards on weekends.

Mr. Driscoll asked if it is possible to draw a distinction between (1) turning down the thermostat and turning off the lights, and (2) limiting access entirely. He said that he needs access to the technology in the Humphrey Institute on weekends, and while it is worthwhile to turn down lights and temperature, he would be troubled if access were limited.

Professor Konstan said that in his department, it is not a viable option to go to low power; the University needs to enable local decisions. Some numbers are false economies; looking at the per-square-foot cost for space, his department would gladly pay for two additional conference rooms because otherwise faculty and staff waste time trying to schedule meetings. What is lacking is the flexibility to grow and shrink where needed. How many grants will the University miss because it saved \$10,000 on building costs—but missed \$300,000 in indirect-cost funds because of a grant not obtained? Systems should be engineered to make an informed decision easy, but the model is built around colleges making decisions. The decisions should not be central; they should be up to the deans and department heads.

Mr. Rollefson asked about standards for research and lab space. A building constructed for a University program by an outside group used different standards from the University when it came to air-exchange rates (although the standards were ones used by a major health-care provider). When University staff inspected the building, the air exchange rates were found to be deficient and so the building design had to be changed. The utility bills skyrocketed and the net operating cost to the organization was hundreds of thousands of dollars higher than it would have been with the original plans. If one extrapolates that to the entire University, it must be millions of dollars. Is that money that need not be spent? On one university campus (not Minnesota), 80% of energy costs are related to labs. The University's costs are not quite that dramatic, but labs and air-changers are high on the list of expenses. Why the high standard? Because the University cannot be assured there will be reliable operation of labs in the safest way. So they build to a standard that assumes everyone will do the wrong thing all the time and that they will be there all the time. The question is how to support lab programs, safely and efficiently. One can look at air-exchange levels, the chemicals present, and so on, that would allow different standards, but there are cultural factors to deal with. They look for ways to save the next million dollars.

Professor Seashore said she agreed with Professor Konstan: One size will not fit all because there are too many crazy spaces on the campus. But if decisions are pushed too far, they are harder to make. The Humphrey Institute is not easy to close; other buildings can be considered for closing outside of business hours. The parameters could be set centrally and units then allowed to make decisions. In her building, the lights are left on over the weekend so one student can work. Mr. Erikson said that the lighting needed for one person could be limited to the person's office and minimal passageway lighting, and while there are exceptions (e.g., spaces with animals), he surmised that the vast majority of the campus space could be shut down on weekends.

Professor Warwick commented that there had been no talk about the libraries. There have been changes this fall, Mr. Berthelsen responded. The OIT computer lab in Walter is no longer operated 24/7 because of limited use. In addition, University Libraries and Facilities Management are working hard to identify and implement a variety of energy conservation projects including lighting and HVAC systems. They are also working with classrooms and have set a goal that only 7 buildings will be open for Saturday classes, rather than all 55 buildings with classrooms. It would allow them to work with food services to provide service if the classes on Saturday were concentrated in 7 buildings.

Ms. King said that faculty members may not realize the privilege they have of setting their own working hours; most people have a certain time they are to work. The rest of the world does not understand that practice and faculty members have led a privileged life in being able to set their hours based on their own predilections. Maybe that same discretion can't continue in the future. Professor Luepker pointed out that Facilities Management is not asking if it can lock all the buildings, it is asking if it can turn off the lights and turn down the temperature. Ms. King is correct, he said.

Question #2 is about single-purpose buildings and classrooms. The campus has only one or two classroom buildings. The rationale for this question is that buildings like Molecular and Cellular Biology and Hasselmo Hall require very different mechanical systems; those for labs are very different for what is needed for common spaces, so very complex systems are needed for mixed-use buildings; those systems are less efficient and also less flexible in accommodating programs that grow or shrink. If an office building is only an office building, or a classroom building only a classroom building, the facilities support required is dramatically different and can change the way they operate, Mr. Berthelsen said.

Is it mainly a question of labs, Professor Luepker asked? Faculty members all want their office and graduate-student offices by their labs. It is, Mr. Berthelsen said, and they saw that in Hasselmo Hall. Faculty time is valuable and not a lot of it should be spent in transit, but whenever there are labs in the middle of everything else in a building, it becomes a very expensive building to operate.

The key is not faculty efficiency and walking to buildings, Professor Konstan said, it is the collaboration and interaction opportunities. Those drop off if labs or offices are on another floor; one wants graduate students close. He said he could see large classrooms separated and some faculty might even want them separated, but they would want small seminar rooms local. It would be useful to hear from an expert talk about how proximity and people flow affect productivity. He said he has taught in WBOB, which is a 25-minute walk for him; the walk is not bad but he doesn't see students again until the next time the class meets. That is acceptable in some classes, but it would be harmful in 8XXX classes. Vice President O'Brien said that as they program buildings, architects and others do look at the factors Professor Konstan mentioned. She said she needed to leave the meeting but expressed appreciation for the Committee's interest in the questions and said they would appreciate receiving its advice.

Mr. Erikson said that in many programs, proximity makes sense because it engenders community. But there are other activities where single-purpose buildings would make sense.

These points need to be kept in mind when a new building is built or a building is remodeled, Professor Luepker commented. Everyone wants associates who work with them nearby.

Question #3 (If the U has less space with the same program, it would need to schedule its classes and events more intensely. With the advantage of technology to see all spaces, it is possible to centrally schedule. This would mean giving up some control of space assignments. Is the U ready for such a change?) Mr. Berthelsen said that Mr. Todd and the Office of Classroom Management have done a good job of familiarizing the campus with information about classrooms and have made progress on tracking their use, even those that the Office of Classroom Management does not schedule. Even in the summer they try to use space so that it generates the dollars necessary to cover its operating costs. Should things be done differently, Mr. Berthelsen asked? There is a need to balance all central control against flexibility in scheduling.

Professor Luepker noted that it might be a question of central scheduling versus departments that see classrooms as their own. Mr. Todd reported that there are 300 centrally-scheduled classrooms; the department classrooms are typically smaller. In terms of use, during peak hours centrally-scheduled classrooms are ~72% occupied while department classrooms are ~38% occupied.

Professor Seashore said she is in a building with very few classrooms, but the College of Education and Human Development is spread over 17 buildings, so one is always teaching in another building. More important is what the furniture in the classroom is like. A study of TEL classes discovered that what students in TEL classes liked the most was the round tables. People choose classrooms because they know what furniture is in them; she cannot use a room with tables fixed to the floor for some of her classes because she has students gather in circles for group discussions.

Mr. Erikson commented that the Office of Classroom Management does a great job and has gotten better and better over time and he said he wished more of the department classrooms were centrally-scheduled. Professor Konstan said he also has had only positive experiences with the office. If the University is to live by its business model, colleges receive tuition; if a college/department believes it will generate more tuition if a class is offered at 9:00 rather than 3:00, it should be able to do so. If classrooms are a scarce resource, the college can be charged more for classrooms at peak times or students can be required to pay differential tuition for classes at peak times. Departments could face differential fees if more than a certain percentage of its classes are offered during peak times. If units want to do so, they can pay the fee.

Mr. Driscoll said he was opposed to differential tuition. As for the use of classrooms for other events to bring in money, the Humphrey Institute is in some ways a hotel conference center and its activities can infringe on the ability of people to do their academic work. That situation can be frustrating for students who are paying tuition to the college but who are unable to use the college's space. Mr. Berthelsen said a number of units want buildings with atria in them because they want to be able to host events. How many atria does the campus need? Who should manage them? It would help if a central office organized them in order to accommodate large groups, and they are making progress in summer scheduling. It would help if units did not think "mine" or "ours," he said, so that there did not need to be an atrium in every building. Mr. Driscoll observed that the Humphrey Institute has a beautiful atrium—while all the classrooms are in windowless underground space.

There was discussion of usage rates for classrooms. Professor Konstan said it is very difficult to track the use of conference rooms because they have a lot of unscheduled use. Locally-controlled classrooms are used a lot more than the formal schedule suggests. Professor Luepker agreed that there is need for more data, which would allow more rationale in the system and better use of the spaces that exist. Professor Seashore asked if it is possible to create a system allowing a department "first dibs" on a classroom, after which it went into the central pool. That could help alleviate the demands during the 10:00-2:00 period. Mr. Todd said that at a number of institutions, a department must reach a certain threshold in the use of department space before it is allowed access to centrally-scheduled space. Professor Luepker said there is a sense that current space is not adequately used, and there could be technological ways to improve usage that would not undermine lifestyles.

In terms of Question #4 (Technology advancements have made it possible to change space assignments and utilization. Is the U ready to reduce its fixed office space and move toward more remote office work and generic office space for faculty and staff while on campus?), the second part, Professor Luepker related the story of a colleague who went to work for a large private-sector corporation as a vice president. He had a basket that was stored in his building and used any open office that was available. That is the way the world is going, Professor Luepker commented, but the University has a lot of doors.

Mr. Berthelsen said that sometimes during tours, it seems that some space is empty (which is usually for good reasons—people are on sabbaticals, or out teaching, or in their lab). How much of the space is actually occupied, Mr. Erikson asked? Of the 24 million GSF, Mr. Berthelsen said, the database indicates a very high percentage of space is assigned; there are not empty floors around the campus. (And where there are empty spaces, it is usually because it is awaiting the expenditure of funds on such things as sprinklers, etc.) In terms of assigned space versus space actually used, the latter number is lower.

Space is heavily fought over because there is a sufficient scarcity of it at the local level, Professor Konstan commented. If a department does not need the space today, it must appear to be using it or it won't be there when the department needs it in the future. This is a real problem in some cases. Offices were built with the model of the individual faculty member in mind, but it could be more efficient to have suites with smaller offices and shared common space (and ideally staff). That would be more pleasant and productive and better than built offices with long hallways. There are status considerations that must be taken into account, but the University needs to explore new ways that people work together. If a department wants to maintain its integrity in space, that is difficult, Mr. Berthelsen said, but if departments can be commingled, it becomes easier. The question is how to start moving to more flexible space that can be reconfigured. That is a generational decision, and it is very expensive to do unless the plan already was to do it. The hurdles one must jump through to hire six faculty members who need 1000 feet of lab space are tremendous, Professor Konstan said, and there is no "Office of Space" that could give it to him. There is an office of space management, Mr. Berthelsen said, that tracks usage, but it does not have the power to assign space. He agreed with Professor Konstan: No one wants to give up space because they do not want to lose it—and if one promises to give it back, no one believes that will happen.

The University operates with a very decentralized model, Ms. King observed, which is what makes it such an attractive place. For each decision, Mr. Berthelsen said, there is the challenge: centralized or decentralized? They know that there must be changes to address costs, but they do not have the answers, they have options.

Professor Luepker said that everyone needs to start thinking about these issues, and people may not have all the individualistic choices they've had in the past because the University cannot afford them.

Ms. King asked a specific question: She has heard that it does NOT save money when one turns off a computer. Is that true? Mr. Berthelsen said it does save money when a computer is off. The vast majority of the money is saved when a computer is simply put on standby; the concern that many people have is with upgrades that are installed automatically at night. The "sleep" mode allows that to happen.

Professor Luepker thanked everyone for attending and adjourned the meeting at 3:55.

-- Gary Engstrand

University of Minnesota