Physical Plant Assessment Workgroup

Preliminary Recommendations
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H. Summary

Flowchart of Proposed Methodology for Allocation of Physical Plant Costs

Definitions
A. Goal

The Physical Plant Assessment Workgroup was convened in summer 1999 with the charge to develop and recommend a methodology to allocate physical plant costs to academic units and academic support units who currently do not directly pay for their physical plant costs. This methodology would be implemented with the planned phased-in implementation of budget restructuring beginning with pilots in FY 2001. The recommendations presented here address the issues of methodology, policy, data needs and implementation. Definitions of key terms are given at the end of this document.

The Workgroup has agreed that, in our opinion, the two most significant physical plant issues facing the university are the funding of deferred maintenance and demand exceeding supply for quality space. However, both the current system and proposed system in budget restructuring of managing and allocating space do not, and are not intended to directly address these issues. In addition, the allocation of physical plant costs may not result in significant cost savings. However, it will result in fully costing physical plant expenses for colleges.

B. Background

In *University Goals and Resource Allocation*, the recommendation is made to allocate quasi-variable costs to the benefiting units. Three cost categories are identified: student services, research administration and physical plant. These categories are viewed as having fixed costs but under some degree of influence and control of the benefiting units. In budget restructuring, those central costs not allocated to colleges directly are recovered by assessing a flat tax on each college's general fund resources (state instructional subsidy, tuition, and indirect cost recovery). It is proposed that academic units would be billed for the portion of the physical plant costs directly related to the amount of space used and services provided (utilities, maintenance and custodial). Physical plant related costs for administration, central classrooms, environmental compliance and space used by academic support units would be included as part of the flat tax. (See Definitions for description of academic support units). Those units directly billed now for physical plant costs (e.g. hospitals, auxiliaries) would continue to be directly billed in budget restructuring. Those areas that currently receive a physical plant assessment but are not part of a college would continue to receive a physical plant assessment. Those areas that are part of a college would have their physical plant assessment folded into the overall physical plant charge for the college.

The Base Budget Scenario provides one way of looking at the allocation of the university's general funds budget for FY 1996 through FY 1999. In the Base Budget Scenario, each academic unit is allocated physical plant costs for the space assigned to them and services provided to that space, based on the currently available data maintained by Facilities Planning. The methodology is similar to our recommendations.
C. Overview of Current System

Currently, with the exception of those units receiving a physical plant assessment or paying directly for their physical plant costs, space is essentially "free" for both academic units and academic support units. No incentive exists now to negotiate for available space (i.e. give back unused space) or to manage space costs. However, moving forward in the future, this will change even if we were not proceeding toward the implementation of budget restructuring. University-wide, new space (i.e., a net increase in total square feet) will not receive POM (plant operations and maintenance) funding through subsidy from the Board of Regents.

Earnings units and auxiliaries are currently charged a physical plant assessment. However, we have identified some inequities in the current system:

- Not all earnings units/auxiliaries are charged a physical plant assessment.
- The original threshold for charging a physical plant assessment to earnings units was that an earnings unit had at least $100,000 a year in revenue. This threshold has not been reviewed recently so some units may be over this threshold but are not being charged a physical plant assessment.
- Level of service factors are included in the physical plant assessment, but the current accuracy of those factors has not been reviewed recently.
- The three Health Sciences clinics (Veterinary Medicine, Optometry and Dentistry) are currently included in the physical plant assessment. However, the physical plant assessment is charged at a reduced rate to reflect the teaching laboratory component of their operation.

D. Methodology Recommendations

Any new methodology must meet three criteria. It should be equitable, easy to understand and administer, and provide incentives to change behavior in a positive direction. Attachment 1 displays the details of the recommended methodology.

**Recommendation 1** - Physical plant costs should be grouped in four cost pools: Utilities, Maintenance, Custodial, and All Other. The details of the components of each cost pool are shown in Attachment 1.

**Recommendation 2** - The allocation mechanism used to allocate physical plant costs by cost pool should be based on a campus-wide average cost per assignable square foot (ASF).
Discussion of Recommendation 2

- An average cost for utilities per ASF would be calculated by dividing total utilities costs by total assignable square feet receiving utilities. The Custodial and Maintenance costs per ASF would be derived in the same way. The All Other cost pool would have an average cost per ASF based on total ASF. This allocation mechanism allocates a campus-wide average cost across all units. It is not an actual cost by unit or building. This is similar to the way benefit costs are now allocated to units.

- Although the Workgroup recommends using a campus-wide average cost, we would like to stress that it is the best alternative from the available options. Campus-wide average costs act only as a rough proxy for actual costs by building. For example, because a portion of the buildings on campus are either unmetered or share meters with other buildings, the usage of utilities cannot be measured for these buildings at this time. The most appropriate method would be to charge colleges for the services they actually use rather than applying an average cost. However, due to current limitations, that is not possible.

- The Workgroup discussed using ASF versus gross square feet (GSF) as an allocation mechanism. To allocate physical plant costs, it was decided to use ASF.
  - ASF is easy to understand, calculate, and implement, and is consistent with the current research indirect cost allocation methodology. Since departmental space is assigned on a room-by-room basis, it is a simple task to compute the square footage for a department.
  - Allocating costs based on GSF would be more complex. For those buildings occupied by more than one department, determining departmental areas would require the calculation and use of ASF to GSF ratios for each of the associated buildings and departments. This would make it more difficult and complex for units to evaluate their own data.
  - An inherent tension exists between using ASF versus GSF. Using GSF rewards building efficiency; that is, a building with a high ASF/GSF ratio would have more “usable” space (ASF) per billed square foot. Using ASF places no premium on occupying a “spacious” building, one with large public areas (i.e., a low ASF/GSF ratio).

Recommendation #3 - For initial implementation of the allocation of physical plant costs, a level of service factor should not be included. This recommendation should be re-evaluated within three years after the implementation of budget restructuring.

Discussion of Recommendation #3

The Workgroup had a significant discussion as to whether or not to apply level of service factors by building within each cost pool. Even though including a level of service factor may be fairer to all, it also is seen as significantly increasing the level of complexity of the methodology and leading to constant and recurring discussion on the definition of
levels of service. In addition to the level of service factor, the Workgroup discussed applying different rates to different types of space (e.g., offices, labs, classrooms, barns, warehouses). Again, although this would improve the fairness and accuracy of allocating costs, it is seen as significantly increasing the complexity of the methodology.

The level of service factor is discussed below for each cost pool.

- For utilities, three factors are related to the level of service - varying level of utilities by building, the efficiency of a building, and the ability to meter an individual building. For example, building A from College A may receive significantly more utilities (ex: laboratory space and equipment requiring high electrical usage) versus building B from College B (a barn with limited heating and electricity for lights). Some buildings are more energy efficient than other buildings; however, units have little control over this.

- For custodial services, three factors are related to the level of service - the provider of the service, the quality of the service itself, and the needs of individual colleges. Currently, custodial services are provided by employees from several different units. Also, the perception exists that the quality of custodial service varies within providers and between providers. Colleges and academic support units have differing needs in custodial services. Some areas require a higher level of service than other area. For example, the health sciences clinics have specific cleanliness standards that must be met for accreditation purposes and operating standards. These higher standards should be provided as part of the base budget. Other areas may require higher levels for service for aesthetic reasons. Those areas should pay an additional cost for higher levels of service.

- For maintenance services, levels of service or usage may vary yearly, but over time, the usage of maintenance services should even out among most units. So level of maintenance service is not a significant issue over time. Units may not have a choice of whether they are in a low or high maintenance building, so some inherent inequity would exist if level of service factors were imposed.

**Recommendation #4** - The feasibility of metering all buildings should be examined. All new buildings are metered. The cost required to meter all buildings should be estimated. Moving in the direction of metering buildings individually would help to produce a more accurate cost per building rather than relying on a campus-wide average cost. This would also assist College efforts to manage their resources more effectively, and would enable them to exert some influence and control over the costs they incur. It would also significantly reduce or eliminate the need to allocate a large portion of the utilities costs.

**Recommendation #5** - The expenses for grounds (including landscaping and snow removal) should not be a part of the physical plant allocations. The expenses for grounds should be part of the flat tax.
Discussion of Recommendation #5
Grounds expenses should be considered part of a common good. Allocating these costs based on an allocation mechanism such as ASF does not seem appropriate. For example, snow removal can be seen as a public safety requirement. However, if a unit requests a higher level of landscaping services in order to significantly enhance the aesthetic quality of the exterior of a building, that request should be addressed separately.

Recommendation #6 - The overhead rate of 5.9% in FY1999 that is charged to auxiliaries/earnings units should be examined to ensure consistency with the allocation of physical plant expenses. The assumption is made that this overhead charge will continue under budget restructuring.

E. Policy Issues

Funding of Current Space

Going forward with both budget re-basing and budget restructuring, it is assumed that colleges will be funded in the establishment of their base budget for the space they now occupy. No college will have their annual base budget re-based downward due to their allocated historical physical plant expenses in the base budget scenario. However, going forward into the future, the funding of net increases and decreases in a college's space will be the responsibility of that college. The potential problem this presents is that those units who may now be "underspaced" will not initially receive the resources in their budget to remedy this issue. Those units who are "overspaced" will have the resources to maintain their current space. Those who acquired space pre-budget restructuring essentially have their space funded centrally. Those who acquire space after budget restructuring is implemented must fund it themselves.

Classroom Pool Space

In budget restructuring modeling, classroom pool space is assigned centrally under OAA and the cost of the space is included in the flat tax. This could lead to an unintended consequence that creates an advantage for colleges to use as much classroom pool space as possible to avoid incurring the allocation of physical plant costs for space assigned to them. It also disadvantages colleges who require specialized classrooms for instruction that cannot use classroom pool space. However, at this time, setting up a mechanism to charge individual units for classroom pool space would significantly increase the complexity and administrative costs associated with the allocation of physical plant expenses.

Earnings Space

In general, currently, space used for earnings operations is not directly identified in the central database maintained by Facilities Planning. Space for auxiliaries is separately identified. In addition, some earnings operations receive a reduced physical plant assessment due to the educational component of their operation. In budget restructuring,
colleges will be charged for all of their space regardless of function. It will be at the
discretion of the dean of each college to determine the amount to be paid by individual
earnings operations within colleges. RPIA should be informed of all decisions to charge
individual earnings operations for physical plant charges to ensure compliance with A-21
and the University's DS-2 agreement.

Sponsored Research Space

All space assigned to an academic unit will be assigned a space charge. This includes
departmental and sponsored research space. It is our understanding that preliminary
recommendations are being developed by the Research Commission Implementation
Steering Committee regarding the research related fiscal issues, in particular the
distribution of indirect cost recovery to the benefiting units. The Workgroup strongly
recommends distributing the facilities portion of indirect cost recovery directly to the
appropriate units and in turn, allocating the physical plant costs for the sponsored
research space to those units.

If under budget restructuring, indirect cost recovery is returned to the college, there will
be competing pressures to improperly categorize research space. Pressure may result to
improperly categorize space as "sponsored research" to increase the indirect cost
recoveries to the university. However, this will likely be countered by the desire of the
principal investigators to keep indirect costs as low as possible. Facilities Planning and
Accounting (indirect cost function) should provide direction and monitor results to be
certain the University is in compliance with all applicable regulations.

University Space Rentals

Currently, some units occupy space for which the university pays rent. The amount paid
per square foot could be significantly different from the campus-wide average cost. In
addition, a unit may not have a choice as to whether or not they rent space. If the unit is
an academic support unit whose physical plant costs are recovered through the uniform
assessment, very high space rental costs would be passed along to the colleges through an
increase in the uniform assessment. The feasibility of including rental space in the
database for assignable square feet and charging it out at the average cost should be
considered. This should be done based on a real need for the rental space rather than
aesthetic reasons for perceived higher quality rental space.

Impact on Providers of Services

In the future, when colleges are paying for their physical plant expenses, it is recognized
that, in all likelihood, providers of services, particularly custodial services, will have
increased pressure to provide high quality services. Going forward, it will be important to
ensure that high quality services are provided to all users.
Increased Administrative Costs

The Workgroup believes that increased administrative costs, both centrally and in the colleges, will most likely result from the allocation of physical plant expenses. It is possible that these increased administrative expenses could be significant. Although increased administrative costs should not be the primary reason to proceed or not proceed with the allocation of physical plant expenses, it is important that both central administration and colleges assess and quantify the administrative impact of the allocation of physical plant expenses on their areas. The administrative costs in total may actually be more that any cost savings that could result from the allocation of physical plant costs.

Consistency with Indirect Cost Rate Calculation

A comparison was done comparing the current indirect cost rate calculation to the proposed physical plant methodology. Although the comparison identifies many similarities, several differences exist including the use of annual rate in the physical plant calculation compared to historical actual costs for the indirect cost rate. The indirect cost rate calculation must comply with the Federal government's OMB Circular A-21: Cost Principles for Educational Institutions and the University's Disclosure Statement (CASB DS-2). Although it is not required that both methodologies are the same, the physical plant methodology should be consistent and similar to the indirect cost rate methodology.

F. Recommendations on Data Needs

Recommendation #7 - All units, particularly colleges, will be given the opportunity to review their current space assignments and service provided (custodial, maintenance and utilities) and make adjustments as needed. This review should be completed before the implementation of the allocation of physical plant costs.

Discussion of Recommendation #7

Colleges need to have accurate and timely data in order to effectively manage their physical plant costs. It is perceived that the current space data contains some inaccuracies. Thus, it is recommended that before proceeding with implementation that all units, particularly colleges, be given the opportunity to review the current data. Due to the enormity of this effort, it is anticipated that this could take up to a year to complete. This type of review could be done in two ways: a self-reported audit by units or a complete physical audit. A self-reported audit could potentially contain more inaccuracies than a complete physical audit, but a complete physical audit would be very labor-intensive, costly and time consuming. It is recommended that this effort be coordinated and managed by RPIA and Facilities Planning.

Recommendation #8 - The data needs for physical plant information should be incorporated into the development of management data for budget restructuring that is being overseen by RPIA. Colleges and academic support units should be consulted during this development process to ensure their needs will be met. The data should be
made readily available to all units, preferably via the web. RPIA and Facilities Planning should make the raw data available for those who desire it. In addition, a usable management information report should be developed by RPIA, in consultation with the colleges and academic units.

G. Recommendations on Implementation

Recommendation #9 - The allocation of physical plant costs to all units should be tracked on a shadow budget basis beginning with FY 2001.

Recommendation #10 - At least one college should be a pilot for the allocation of physical plant expenses in FY 2001.

Discussion of Recommendations 9 and 10
It is currently planned to implement budget restructuring in phases. In FY 2001, several colleges will be pilots for budget restructuring. Many of the details of how the pilots will operate are still under development. The pilot college selected should have space encompassing a variety of functions (i.e. earnings, research, administrative and instructional) spanning more than one building. The pilot should also simultaneously include the distribution of indirect cost recovery to the pilot college, assuming space costs for research space will be allocated to the colleges.

Recommendation #11 - The methodology for the calculation of the physical plant assessment for earnings units should be revised for FY 2001 to conform to the methodology recommended in this document. During the Winter Quarter 2000, RPIA should do modeling for FY 2001 under the new methodology to determine the projected assessments. If the total projected assessment significantly increases or decreases or if the projected assessment by area significantly increases or decreases, we recommend that the assessment be phased in so as not to unduly burden either the total general funds budget or an individual unit's budget.

H. Summary

The proposed allocation of physical plant expenses in budget restructuring is a complex issue. The Workgroup has addressed through these recommendations the methodology, and more importantly, the many policy issues and decisions that must be made prior to the implementation of budget restructuring regarding physical plant costs. These costs comprise a significant portion of the university's general funds budget. Therefore, the treatment of these costs will have a major impact both on the colleges and central administration under budget restructuring.
Definitions

**Academic Support Units** - In Budget Restructuring, academic support units are areas in central administration funded either wholly or partly through present budget allocation (i.e. general funds). Examples include University Libraries, Office of Academic Affairs, Business and Finance, and Office of Research.

**Assignable Square Feet** - The assignable square feet (ASF) in a building is the area available for assignment to a particular occupant. It is the straightforward area one would obtain measuring the distances inside the walls of a room. ASF does not include general building service space such as custodial, mechanical, and toilet rooms, nor circulation areas such as hallways, lobbies, stairs, and elevators. The ASF value is stored for each room in the space inventory system maintained centrally by Facilities Planning.

**Auxiliaries** - Units defined as auxiliaries include Athletics, Residence and Dining, Fawcett Center, Traffic and Parking, Bookstores, Property Management, Student Union, and hospitals.

**Base Budget Scenario** - The historical model of the university's general funds budget that employs the concepts of budget restructuring addressed in *University Goals and Resource Allocation*.

**Central Relocation** - Funds maintained by Facilities Planning to fund "forced moves" by units.

**Earnings Units** - Units defined as ledger three accounts (excluding Auxiliaries) above. They are University entities that earn revenue from the sale of goods or services. This revenue is usually their sole source of support. All their expenses are paid from their revenue.

**Facilities Reserve** - Funds budgeted for POM costs for new facilities. These costs should diminish with the allocation of physical plant costs to units.

**Function code** - The Board of Regents classifies space according to function. Function includes sponsored research, departmental research, auxiliaries, instruction and support, general administration, public service, general service, libraries, medical, and student services.

**Gross Square Feet** - The gross square feet (GSF) is a single value recorded for each building. It represents the total area within the outside faces of the building walls. This includes structural areas, building service space, and the total assignable area (ASF).

**Insurance** - For the allocation of physical plant costs, only property insurance is included. Other insurance types such as auto insurance should not be part of the physical plant cost pools.
Uniform Assessment (flat tax) - The method in budget restructuring to recover the costs of central administration that are not recovered through allocated costs to the academic units. Costs allocated to the colleges include student services, central physical plant, fee waivers and research administration. In the historical modeling of the Base Budget Scenario, the uniform assessment is calculated as a percentage of a college's resources including instructional subsidy, tuition, and indirect cost recovery. The uniform assessment is about 20% of those resources. A further discussion of the uniform assessment is provided in University Goals and Resource Allocation.

University Space Rental - Rent paid by the University to acquire additional space to meet space demands.