

Meeting Minutes – March 27, 2018- 2:00pm-4:00pm

Location: SB Harbor Room

Members Present: Chuck Haines, Ann Jensen Adams, Margaret Klawunn, Martin Shumaker, Patricia Fumerton, David Paul, Pierre Wiltzius, Henning Bohn, David Marshall

Members Absent: Hieu Le, Joel Michaelsen, Beverly Colgate, Joe Incandela, Rod Alferness, David Stamps, Richard Watts

Alternates Present: Frank Castanha

I. Announcements (none)

II. Minutes

The minutes from February 27, 2018 were approved without comment.

III. Consent Item (none)

IV. Action Items (none)

V. Discussion Items

A. Capital Needs Presentation: Bren School of Environmental Science & Management

Dean Steven Gaines gave a slide presentation on the division that focused on Bren's space challenges. He introduced a concept to co-locate environmental research entities in one new building to include the Bren School, Environmental Studies (ES), Earth Research Institute (ERI) and the Natural Reserve System (NRS). The goal would be to create a state-of-the-art space for collaborative research and teaching. Objectives would be to bring together UCSB strengths in research and teaching, to foster collaborative, interdisciplinary, and intellectual exchange.

Programs of the Bren School include a professional masters and PhD. The school consists of 25 faculty, approximately 40 researchers and postdoctoral students, 19 staff, 166 MESM students, 55 PhD students, and 1,228 alumni. The space needs of the program result from growing cross-campus research centers, growth of faculty & staff and the new Master of Environmental Data Science (MEDS) program. MEDS requires new space to accommodate 65 students within five years.

Bren School and Environmental Studies are currently collocated in Bren Hall, a Triple LEED Platinum Laboratory building completed in 2002. Dean Gaines explained how Bren's significant growth has created space shortages exacerbated by ES's similar predicament. The two programs have been collaborating on a long-term solution of co-occupancy to stimulate a closer relationship between these environmentally focused entities while addressing their individual long-term space needs. Through the course of this exercise, Bren and Environmental Studies decided to include Earth Research Institute and the Natural Reserve System. Faculty and staff from the four groups have been meeting over the last 6 months to discuss how to share research and educational facilities in a way that will stimulate a variety of collaborative interactions with other environmental researchers and organizations on campus.

In addition to the four building cohabitants, anticipated partnerships include: Communication, Computer Science, Earth Science, EEMB, Economics, Geography, Institute for Energy Efficiency, IGPMS, Interdisciplinary Humanities Center, Political Science, Mechanical Engineering, NCEAS, Statistics and Applied Probability, Technology Management Program, among others.

Dean Gaines included in his presentation a report on the Department of Environmental Studies (ES). The undergraduate program, established in 1970, consists of faculty (9.2 FTE), 5 staff, and over 20 lecturers. Approximately 1,000 undergraduate students have majors in ES. The program employs 55-60 TAs per year, and approximately 7,000 alumni. As student enrollment grows, Bren anticipates growth in faculty FTE who will require office space. Space for visiting scholars, grad students and post docs, lecturers and TAs is also lacking. ES must further ac-

commodate increased DSP needs as well as the Center for Undergraduate Environmental Leadership, Global Environmental Justice Project, and the Energy Transformation Initiative. Environmental Studies anticipates growth in staff, a need for an environmental chemistry, teaching lab, and a computing lab.

Dean Gaines also spoke about the Earth Research Institute (ERI) and the Natural Reserve System. Areas of research include Natural Hazards, Human Impacts, Earth System Science, and Earth Evolution. ERI was established in 2010 via a merger of the Institute for Crustal Studies (ICS) and the Institute for Computational Earth System Science (ICESS). It supports the Cheadle Center for Biodiversity and Ecological Restoration (CCBER), the Center for Environmental Implications of Nanotechnology (CEIN), and over 70 research groups. Extramural funding has doubled in the last five years. Year-to-date awards currently total over \$13M. ERI requires office space, meeting and conference space for staff, professional researchers, post-doctoral fellows, and lab space to support professional researchers and centers. ERI also requires space for its Environmental Analytics Lab, including shared-use equipment to facilitate collaborations. The Natural Reserve System that manages 39 reserves UC system-wide including 53,000 acres for UCSB. It employs 40 staff and 30 participating faculty from UCSB from Bren, ES EEMB, Geography, Engineering, History, Anthropology, Art, and CCS. Forty-five percent of the system's use serves the campus' researchers and students. Significant support comes from philanthropy and grants. NRS requires a shared reserve directors' office and support space for the development staff and student assistants. La Kretz Center for Research at Sedgwick Reserve requires a home base for which Natural Reserve System's space will perform.

To a question about funding, Dean Gaines expressed confidence that the collaborative advantages of the building might foster multiple sources of capital. To questions about space efficiencies, he made the point that space would be shared among the four groups occupying the building. The project may consider opportunities to add lab space upon further planning and site analysis. The committee expressed concern for the loss of parking spaces and a need to consider other alternatives besides biking. In conclusion, staff confirmed a plan to revisit the project for inclusion in the Campus Capital Financial Plan this year.

B. Capital Needs Presentation: Division of Mathematical, Life and Physical Sciences

Pierre Wiltzius, Dean of Mathematical, Life, and Physical Sciences (MLPS) gave of presentation on the capital needs of the division. The organization is comprised of 13 academic units. The largest four include Chemistry, EEMB, Physics, and MCDB. MLPS employs 258 Permanent Allocated Faculty (FTE). At 9,266 undergraduate majors, the program has grown 93% in the last 10 years. Additionally the division includes 751 graduate student majors, 244 research supports staff and 125 Academic Support Staff FTE.

MLPS has programs in eight buildings. The average age of those structures is 50 years. Aging facilities and a lack of state funding contributes to MLPS's continued shortage of proper instruction and research space. The last state-funded, major capital project completed for the division was a renovation of Noble Hall in 2008. Currently four departments have space deficits in excess of 10,000 ASF.

Leading-edge research programs in Physics, MCDB, EEMB, Earth Sciences, and Chemistry are challenged by the functional limitations inherent to old buildings. Poor building conditions are most problematic in Marine Biotech, BIO II, Broida Hall, Chemistry/Biochemistry Building, Webb and Woodhouse. Photos of conditions in need of repair indicated a corroded electrical panel, a leaking floor drain, an improvised lab air filter, and surface mold on air ducts.

Dean Wiltzius shared MLPS' space figures by division and department. Of the total 544,010 ASF of the division, 52% belongs to labs, 36% to office space, and 9% to student space. A slide identified institutional and research space standards for office spaces and research lab space, and a subsequent table illustrated space and capital needs data (by current allocation and projected to the year 2026) as calculated using a space model developed by UC San Diego. The model indicated that Environmental Studies, Mathematics, and Statistics all suffer unmet needs. Collectively, their deficiencies range from between 62% and 140% today and growing to between 75% and 158% by the year 2026.

The top challenges for MLPS facilities are building age, continued deterioration of building infrastructure and deferred maintenance backlog of an estimated at \$324M—more than 50% of

campus DM total. The lack of ‘quality’ space impacts new hiring; the lack of proper active-learning and teaching labs impacts teaching, and inadequate capital budgets impact needed renovations.

Dean Wiltzius shared a list of MLPS capital needs that included: the New Physics Building, BIO II Renewal, Vivarium, GPMS, QBIO, Brain/Neuroscience Building, Environmental Studies/Bren/ERI/NRS Building, Phelps Hall Renewal (Geography labs), Math and Stats (Ellison Hall Renewal), Webb Hall Addition (Earth Science), Marine Bio Tech Renewal, and a renewal of the Chemistry/Biochemistry Building. He noted that Webb Hall poses a particular challenge that campus has recognized for some time. There was a plan to expand Webb Hall to the Cloud Lab and provide MLPS over 10,000 ASF of additional space for graduate student offices, classrooms and seminar rooms, and office and lab facilities for new faculty at a fraction of the cost for a new building. Though CPC recommended approval of the project in 1999 and added it to the campus list of state-funded, eligible projects, the state has not pursued public financing (e.g., Higher Education Bonds/General Obligations Bonds) for UC’s capital program since 2006.

Multiple departments within MLPS suffer from lack of adequate teaching labs and classrooms, both in quality and quantity. The conventional lecture classrooms of today are outdated, lacking in number, and uninspiring to the next generation of STEM students. Research has shown that modes of teaching that incorporate ‘active learning’ environments improve student academic success. Dean Wiltzius shared BioSci III and the MIT Active Learning Classroom as examples.

The cost to renovate existing laboratories for new faculty hires create financial burden. In eight examples given, the cost was between \$1M and \$5.7M. Since 2010, MLPS’ renovation costs are roughly \$21M. Major projects currently in planning or recently completed include: Trace Metal Lab in Webb Hall, Fly Neuroscience Lab – BIO II, Psychology and Brain Sciences Graduate Student Building, New ICP Mass Spectrometer Facility – Cloud Lab Building, and New Physics Building. Elements include additional labs & support spaces, a lecture hall, a seminar

Room, 60 faculty offices, 30 post doctorate offices, grad student offices, meeting rooms, commons areas, a video conference room area, and a student study area at a net total of approximately 64,000 ASF.

EVC David Marshall raised a question regarding a trend seen at other UC campuses for generic laboratory buildings. Do the needs of MLPS lend themselves to this approach? One thought would be new construction to accommodate research labs and renovation of existing labs for instructional purposes. Dean Wiltzius was amenable to the idea with the caveat that certain disciplines will always require highly specialized functionality.

With regard to classroom convertibility, Dean Wiltzius stated less than a handful could be converted to more active learning environments as was exemplified with the Bio Science III remodel. Staff noted that the new Classroom Building will consider the need for these types of spaces. Additionally, campus lacks mid-size lectures halls. There is need for both types of learning environments. In regard to a question about the UC San Diego space model, staff explained how the model was a response to the old, circa 1980s CPEC space standards that were universally disdained as obsolete. Similar to UCSD, campus space planning philosophy seeks to define space needs according to functional requirements as opposed CPEC. In recent years, CPEC has finally fallen out of favor and is no longer used the state's standard for justifying space needs.

Dean Wiltzius clarified the prioritization of capital needs for new buildings and renewals for MLPS. Once campus identifies state funds, the division can be more decisive. He mentioned renovations to Webb Hall as a pressing need.

VI. Information & Follow-up Items

A. Status Report: Special Projects Subcommittee (*B. Colgate*)

No report

B. Status Report: Design Review Committee (*J. Michaelson*)

No report

C. Status Report: Faculty & Staff Housing (*J. Michaelson*)

No report

D. Status Report: Student Housing (*R. Watts*)

No report

E. Follow up Items:

- 1) The committee will hear the capital needs presentation of Graduate Division.
- 2) The UCen project is moving forward with a town hall meeting April 12 to present the \$48M proposed renovation. It will include explanation by the architect and use of a 3D animation to illustrate the transformation between existing and proposed. The cost of the project to students is based on a graduated fee. Should the project pass referendum, the cost will culminate in a \$300 fee per year once the new building is occupied.
Status Report: Major Capital Projects (*attached*)

II. Correspondence

Meeting adjourned at 3:16p.m.

Minutes taken by Carolyn Franco, Office of Budget & Planning