

A Review of Space Needs Calculation Methodologies

October 31, 2019





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EXECUTIVE SUMMARY

The 2019 Legislature directed the Board of Governors to *review its space needs calculation methodology developed pursuant to s. 1013.31 to incorporate improvements, efficiencies or changes. Recommendations shall be submitted to the chairs of the House of Representatives and Senate appropriations committees by October 31, 2019 and every three years thereafter.*

To conduct this study, the Board of Governors reviewed its existing space needs calculation methodologies for the State University System (SUS), surveyed the 12 state universities to gather information on each university's policies and procedures for the assignment and usage of academic space, and visited five universities to gather information on each institution's academic space assignment procedures and current and projected academic space needs, and to tour academic facilities that are illustrative of specific space issues at each university. As a result of this work, the Board of Governors identified the following issues that impact the accuracy and efficiency of space need calculations and policies.

The Educational Plant Survey Process and the Current Space Needs Generation Formula

University facilities space planners and academic affairs leaders identified a number of significant issues relating to the Educational Plant Survey Process and the Current Space Needs Generation Formula. University representatives support an updated space calculation formula and process that will allow each institution to recognize and account for its distinctive mission as well as the unique role it maintains in its community, its region, and the state. The universities also believe that it would be beneficial to identify a unique space factor based on one's mission for inclusion in academic space calculations that occur during the educational plant survey.

Site visits confirmed that many universities are responding to the growing need for "active learning" space due to innovative teaching pedagogies that address how faculty are now delivering instruction and how students most effectively learn. University facilities and space management planners support efforts to review the existing space needs calculation methodology to work to produce greater efficiencies and additional flexibility for the institutions in the process.

Recommendation 1:

The State University System Facilities Space Planners, in consultation with the Board of Governors' Office of Finance and Facilities, should review the current space needs calculation methodology and funding formula to recommend an equitable policy and process to:

- Recognize and account for the critical components of an institution's mission.***
- Enable universities to identify one unique, institution-specific space factor for its space needs calculations.***
- Recognize and account for student support services facilities.***
- Consider new space needs calculation methodologies, including metrics for new buildings.***

The SUS Facilities Space Planners should consult with SUS Academic Affairs and Student Affairs leaders on issues of relevance.

Research Space

During university visits, academic affairs leaders described the growing demand for research space, particularly at institutions who have prioritized their research presence and have initiatives to rise in the national rankings of high quality universities. High quality research laboratory space and office space remain in demand, often due to the specific requirements of exemplary faculty being hired. University staff also emphasized the need to update the space needs methodology to account for the Preeminent State Research Universities Program.

The calculation of research space is complicated by the need for a clear demarcation of space between Educational and General (E&G) space and Contracts and Grants (C&G) space as it is common for academic space to be used to serve both the teaching and research missions of the university. The current space needs formula does not address Contracts and Grants (C & G) research space needs.

Recommendation 2:

The State University System Vice Presidents for Research should review the policies and procedures for the assignment, recognition, and accurate accounting of research space, research laboratory space, and research faculty office space, including Educational and General (E & G) research entities and Contracts and Grants (C & G) research entities, and make recommendations to improve the accuracy and efficiency of the SUS space needs calculation methodology. Where appropriate, these SUS leaders should identify best practices for the System.

The State University System: Greater Efficiencies

A variety of issues were discussed during university site visits relating to the supply of and demand for academic space in the State University System, alternatives for the calculation of space needs, and the need for greater flexibility and efficiency in the process. It is important that such distinctive issues be reviewed and recommendations made from a system-wide perspective.

Recommendation 3:

The Chancellor of the State University System should appoint a Space Task Force for the State University System to review university academic space needs and related facilities issues, recommend solutions to identified space problems, promote best practices for issues and conditions facing the institutions, and assist in the development of Board of Governors regulations relating to facilities and space needs. The Task Force should include representatives of the SUS Facilities Space Planners, Academic Affairs leadership, and other experts as needed. The Space Task Force should be coordinated by the Board's Office of Finance and Facilities.

I. INTRODUCTION

Laws of Florida Chapter 103

The 2019 Legislature directed the Board of Governors to: *review its space need calculation methodology developed pursuant to Section 1013.31, Florida Statutes, to incorporate improvements, efficiencies or changes. Recommendations shall be submitted to the chairs of the House of Representatives and Senate Appropriations Committees by October 31, 2019, and every three years thereafter.*

The Board of Governors last evaluated its space need calculation methodology in 2016 to assess the impact of online education on university facilities, with the Board making modifications to what had been a static formula approach. The change recognized that a “Dynamic Capital Planning Model” (DCPM) was needed that would provide flexibility to allow for shifts in pedagogy and respond to the ever increasing pressure to raise student graduation rates and improve student retention and employment outcomes.

To conduct this study, the Board of Governors:

- reviewed its existing space needs calculation methodologies for the 12 state universities;
- surveyed the 12 state universities to gather information on each university’s policies and procedures for the assignment and usage of academic space and to receive recommendations to improve and make more efficient the Board’s existing space need calculation methodology;
- conducted research on each state university’s current and projected enrollment growth plans as they relate to future demand for educational facilities;
- Board staff visited five representative universities to gather focused information on each university’s space calculation methodologies as well as current and projected academic space needs, and to tour academic facilities that are illustrative of specific space issues at each university.

SUS Enrollment Growth Considerations

At its March 2019 meeting, the Board of Governors’ Strategic Planning Committee reviewed university enrollment growth plans as well as critical factors associated with enrollment planning in the State University System (SUS).¹ The review indicated that if the 2018 growth goals are realized, it will translate to an additional 14,000 students in the SUS by 2021. (The SUS had 275,074 undergraduate and 65,821 graduate students in 2017.) In addition to these growth projections, the Committee received an update of the declining state funding for educational facilities and the critical need for facilities maintenance, renovation, and upgrade.

In further analysis, graphics were reviewed that displayed university graduation rate goals in relation to educational space capacity and found that only three of 10 institutions had graduation rates exceeding the Board’s four-year graduation rate goal of 50 percent and that only two of those three had adequate space capacity. The remaining institutions were below the graduation rate goal and had less than adequate space capacity. In light of these findings and in consideration of university accountability plan development, the Board stressed the need for universities, particularly universities that fall below the Board’s stated graduation goal, to emphasize quality and the improvement of performance metrics over enrollment growth.

¹ Excluding New College of Florida and Florida Polytechnic University

II. BOARD OF GOVERNORS SPACE NEEDS CALCULATION METHODOLOGY

The Context

Each state university is required to develop and maintain an accountability plan that reflects its distinctive mission and focuses on core strengths within the context of Board of Governors goals, as well as regional and statewide needs. The accountability plan, approved by the university board of trustees (UBOT), outlines each institution's strategic direction and top priorities as well as performance expectations and outcomes on institutional and system-wide goals. The "Strategy" section of each accountability plan includes an institutional mission statement, the identification of strengths, opportunities, and challenges, key initiatives and investments, and a Graduation Rate Improvement Plan. Enrollment projections and plans are also included in the plan and a section on "Metrics" displays how the institution is performing in key indicators.

The foundation for each state university's physical plant and academic space planning is a campus master plan, developed and adopted by the UBOT according to requirements established in Section 1013.30, Florida Statutes, and Board of Governors Regulation 21.202. The master plan is framed by the institution's accountability plan, academic mission, and goals and provides verification and planning for a comprehensive set of educational and infrastructure elements including buildings, land, utilities, transportation and roads, water usage, and open space. The master plan provides a road map for university development during a period of 10 to 20 years, and guides the Educational Plant Survey (EPS) that is conducted at a minimum of every five years to evaluate existing facilities and identify future space needs that will align with the institution's academic mission and strategic plan.

Educational Plant Survey

The state universities follow the requirements of Section 1013.31, Florida Statutes, which directs that "At least once every five years, each board (*university board of trustees*) shall arrange for an Educational Plant Survey, to aid in formulating plans for housing the educational program and student population, faculty, administrators, staff and auxiliary and ancillary services or the district or campus, including consideration of the local comprehensive plan." Although the universities could conduct their own survey, as a practical matter, the universities always request the assistance of the Board's Office of Finance and Facilities in conducting the EPS, who in turn requests the assistance of other universities in the survey process. This results in a team of facilities practitioners, led by Board Office staff, who conduct the EPS over the course of 1-2 weeks, depending on institution size. Unlike the public school districts or the Florida College System, the university EPS is conducted on site. The EPS team members do not receive any compensation; however, the Board Office does reimburse travel costs, which may not exceed the state travel limitations.

The current EPS process has several benefits, including a consistent approach to the EPS, minimal costs to the State of Florida, and an informal "reality check" of actual conditions in the field by the Board Office staff. Potential points of improvement to the current EPS process are noted later in the report.

The EPS Team's two primary outcomes are: 1) Inventory Validation, and 2) Needs Assessment. The initial component of the survey process is the *Inventory Validation* whereby all facilities and educational sites are visited and reviewed by the survey team to either confirm or correct data in the existing computerized Physical Facilities Space Database maintained by the Board staff, which includes technical information on all university physical plants down to the room level. The EPS Team validates the educational plant inventory by physically walking all new educational space constructed in the last five years, and confirming that the room classification and square footage is consistent with national reporting standards. The Team also walks a sample of existing buildings to validate changes in space classification and further assesses any facilities which the university has identified for potential demolition. The EPS Team also visits new non-educational spaces, such as student housing and parking, to verify that projects authorized by the Board of Governors have been completed as approved. An overview of the Board's Space Needs Generation Formula appears in Appendix A.

Projected student enrollment is currently the single most important variable in determining additional educational facility requirements for each university. The educational plant survey uses the five year, full-time-equivalent student enrollment projections based on each university's approved Accountability Plan that is annually submitted to the Board of Governors.

Following its comprehensive review of all existing and proposed university facilities, the survey team conducts the needs assessment and makes recommendations for site acquisition, remodeling, renovation, demolition, and new construction for designated facilities and sites. The university prepares a written report of the findings and the recommendations of the survey team for review and approval by the university board of trustees. After approval by the university board, the university submits the official copy of the report to the Chancellor for formal approval by the Board of Governors.

III. SURVEY QUESTIONNAIRE ON SPACE NEEDS CALCULATION METHODOLOGIES

To gather information on each state university's policies and procedures for the assignment and usage of academic space, Board staff developed a formal questionnaire that was completed by the 12 SUS institutions. See Appendix B. The institutions also were provided the opportunity to make recommendations to improve and make more efficient the Board of Governor's existing space need calculation methodology. Questionnaire responses are summarized below.

➤ *Do board of trustees or institution policies exist relating to space assignment and usage?*

Universities operate under regulations and policies on the allocation, assignment, and utilization of space that comply with Board of Governors regulations. UBOT regulations outline procedures, roles, and responsibilities to utilize and maintain academic space, request space, and change the functionality of space. Most universities maintain a campus-wide Space Committee whose focus is to align the utilization of space with the institution's mission and strategic goals. At most universities, the committee's work is guided by the university provost. The university registrar typically maintains oversight of general classroom space and similar but distinctive procedures are in place for research space.

- *Should Board of Governors regulations specify space management policies and procedures, including metrics and benchmarks, which will optimize the use of instructional and research space and promote efficiency in the SUS?*

All respondents stated that each university should be able to establish space management policies and procedures that address its unique mission, strategic goals, specific academic program offerings, and distinctive academic space. It is felt that metrics and benchmarks should enable an institution to recognize its uniqueness. One respondent recommended that the existing State Requirements for Educational Facilities (SREF), established in 2014, should be reviewed and updated prior to a system-wide consideration of metrics and benchmarks.

- *Should the Board of Governors adopt a policy allowing each university to establish unique space factors, based on mission?*

A majority of respondents are in support of an updated space calculation formula and process that recognizes the unique mission of each university, including differences in university size, pedagogy, infrastructure, academic program delivery, and student demand for classes. It was stated that existing space categories may be either too excessive or too restrictive and may forestall an institution's efforts to be more efficient and more productive. However, three respondents recommended the continued use of the existing, standard factors. Two respondents recommended that each university should be able to identify one, unique space factor for its space calculations that will advance its efforts to meet its strategic goals and improve performance metrics established by the Board of Governors.

- *Describe any technological tools that are used to monitor the use of academic space.*

Universities report the use of an array of space management software programs to support their academic space assignment and utilization efforts. A representative sample of systems include: Archibus – a master space database that centralizes data, planning, and operations. It tracks room vacancies, personnel locations, and duplicate room assignments both to optimize daily performance and needs forecasting.

Ad Astra – software that optimizes class scheduling and availability to manage faculty and space resources.

CollegeNet 25Live – an event calendaring, scheduling, and publishing system for managing classrooms and campus space.

CourseLeaf Section Scheduler (CLSS) – streamlines course scheduling by enabling departments to input, edit, validate, approve, and update course offerings.

Facility & Asset Management (FAMIS) – a space planning database that provides up-to-date space information across the university, including facilities maintenance, space planning, and energy management.

Space Tracking & Reporting System (STARS) – a data management system developed at the University of Florida that tracks all university owned, leased or used space.

- *Describe challenges that exist at your university in the assignment of space and efforts to optimize space usage.*

All universities identified challenges with providing sufficient, high quality academic space and there is an ongoing demand at most institutions and competition among colleges, departments, and faculty for space. Respondents expressed concern with a continuing deficit of space, including classroom space, research space, teaching lab space, office space, and student study and collaborative space. Specific campus issues include the following:

- A critical shortage of teaching lab space.
- Lack of research space.
- Insufficient large capacity classrooms.
- Older buildings/facilities, with poor quality and unsuitable, inefficient classroom space.
- Lack of adequate office space as new academic programs are established and additional faculty are hired.
- Lack of flexible instructional space needed for emerging pedagogies, new instructional technologies, “active learning” initiatives, and distinctive class offerings.
- Increasing demand for work and study space, as well as collaborative learning space for students and for advising and tutoring space for faculty-student interactions.
- Ongoing backlog of deferred maintenance needs and lack of funding to renovate, re-purpose, or refresh academic space.

➤ *Briefly describe the process for the assignment of Educational and General (E & G) space at your university.*

The allocation and assignment of E & G space is typically controlled by the university provost, in close collaboration with division vice presidents, deans, and department heads. A provost may delegate authority for space assignment to college deans and department heads and generally the day-to-day management of assigned space occurs at the college or department level. Most universities utilize a space committee, consisting of academic and facilities representatives, to consider requests for additional space, to reallocate or repurpose space, or to resolve competing space issues. The university registrar typically manages general classroom space in order to maximize the utilization of the space. At universities with a significant research presence, the vice president for research oversees research space allocation and utilization.

➤ *How should the Educational Plant Survey (EPS) be utilized to more effectively determine the adequacy of quality E & G space for current and projected student needs?*

Respondents stated that the EPS needs to be updated and offered the following recommendations:

- Instead of a five-year survey cycle, the EPS should be conducted on demand, when needed. In light of the rapid pace of higher education, the EPS should be more dynamic to allow for “real time” changes.
- The EPS and formula factors should consider each university’s specific mission, existing facilities, space challenges, and projected needs. The survey should recognize the distinctive academic programs and pedagogical methods offered at the university.
- The EPS should recognize the quality, suitability, and effectiveness of space.
- The EPS should consider headcount enrollment in addition to FTE enrollment.
- The EPS should be utilized to identify unsatisfactory space and space limitations that are impacting instructional and research activities.
- The space validation process in the EPS should be expanded to include the validation of unsatisfactory space as well as new space.
- University space needs calculations should emanate from and relate to the institution’s Strategic Plan and Accountability Plan.

- *Describe how the Educational Plant Survey findings are reflected in your university's Accountability Plan in relation to the goals of the university.*

In general, respondents stated that the EPS process does not currently link to a university accountability plan and its strategic goals and mission priorities. Further, the EPS does not directly address the major Board of Governors goals of student success, programmatic quality, and research enhancement.

Increasingly, however, universities are using their campus master plan and accountability plan to drive decisions on academic space allocations, utilization, and planning to respond to the Board's performance metrics. One university explained how the EPS informs its accountability plan by targeting enrollment growth, particularly for programs of strategic emphasis, and by providing direction for growth in research initiatives. Another respondent recognized that the institution's planning documents make the critical link between campus facilities and space and student success and provide support for using the EPS to prioritize and plan for facilities renovations and expansion.

- *Should the SUS adopt the national standard for measuring FTE for the Educational Plant Survey?*

Universities are supportive of transitioning to the national FTE definition as it would follow the use of the national standard for the inventory and classification of space and would provide consistency across all Board of Governors data submission requirements. Further, the change will improve opportunities for benchmarking with peer universities in other states.

- *Should the SUS adopt the national standard definition of "Unsatisfactory" Space and exclude such space from the inventory of "Satisfactory" space?*

All universities support the use of the national definition of unsatisfactory space and the deduction of such space from the space inventory in order to provide a more accurate and complete picture of the condition and appropriateness of an institution's academic space.

Additionally, it is felt that the more direct alignment of SUS data with national standards will facilitate both campus planning and national benchmarking. Supportive recommendations include:

- Add a "room or space condition" category to the EPS to allow for the analysis of the condition of specific rooms within a building.
- Implement a "Facility Condition Index" as defined by the National Association of College and University Business Officers (NACUBO).

- *Should the SUS adopt the national "Suitability" criteria for buildings, and allow institutions to optionally record the Suitability of space as a data point?*

A majority of respondents support the use of a "suitability" designation as it would result in greater accuracy in the evaluation of building and classroom space. The designation would be particularly useful for older buildings as space is now increasingly evaluated in relation to suitability for emerging pedagogies and new technologies and could facilitate efforts to link academic space to student success initiatives. It would be most beneficial if individual rooms could be evaluated with this designation. Concern was expressed, however, that the suitability designation may be inconsistently applied across the SUS and that it may be more appropriate as a campus level determination.

- *Provide recommendations regarding the current space needs calculation methodology to make the process more accurate, efficient, and meaningful.*

A compilation of university responses to this question appears in Appendix C.

IV. UNIVERSITY SITE VISITS

Board of Governors staff visited five universities to gather information on each university's space calculation methodologies as well as current and projected academic space needs. Site visits were conducted at Florida Atlantic University, Florida Gulf Coast University, Florida State University, the University of Florida, and the University of West Florida. At each campus, meetings were held with academic affairs leadership, facilities and space data management leadership and, where applicable, research leadership to review the institution's space usage, academic space assignment process, and critical space needs issues on the campus. In addition, a strategic tour of facilities was conducted during each campus visit. A list of campus interview participants appears in Appendix D.

A. Florida Atlantic University Visit

Florida Atlantic University (FAU) is a comprehensive, research university with campuses and sites covering 100 miles of the highly populated and growing region of the southeast and central coast of Florida. FAU offers over 190 undergraduate and graduate degree programs to more than 30,000 students and is the home of nationally recognized research centers.

FAU states that its mission is “*a multi-campus public research university that pursues excellence in its missions of research, scholarship, creative activity, teaching, and active engagement with its communities.*” In its Strategic Plan for 2015-2025, FAU directly addresses its educational facilities and expresses its intention to “*build on its sense of place to enhance its physical spaces and develop competitive facilities.*” To implement its strategic plan, FAU will be developing a comprehensive plan for each campus that will guide the decisions on where to locate the university's research, teaching, residential, athletic, and recreational priorities and programs. Specific plans are to:

- Integrate the following into a comprehensive plan: programmatic needs, exterior architecture, branding, landscaping, utility planning, roadways, parking, security, technology, and building conditions.
- Conduct a space survey to determine current utilization and how physical resources should be used to best support student life, academics, and scholarship providing for university growth by campus locations.
- Build and renovate buildings and exterior spaces based on strategic priorities—identifying those project priorities in the annual Capital Improvement Plan (CIP) and strategically using private and Public Education Capital Outlay (PECO) dollars according to the following ranking of need: (1) life safety, (2) maintenance and repairs, (3) lab and instructional needs, and (4) aesthetic improvements.
- Maintain the University's green-space and other exterior spaces that promote a campus experience that is safe and aesthetically appealing.
- Develop an institution-wide safety and security plan to enhance campus environments and enrich the academic experience.
- Enhance technology infrastructure to promote research and education; and
- Partner with the private sector to expand the university's academic mission and student life.

2015 Educational Plant Survey

An educational plant survey was conducted at Florida Atlantic University in the fall of 2015 to examine data on existing facilities and review projections of future needs based on anticipated university growth. The survey process is comprised of two main components: the facilities inventory validation component and the needs assessment component. Survey recommended projects proposed by FAU included site acquisition, site improvements, renovation, remodeling, and new construction.

Survey team recommendations addressed FAU's formulation of its five-year plans to meet the educational facilities needs of its campus community (students, faculty, staff, auxiliary and ancillary services). In addition to standard university-wide recommendations, the 2015 survey recommendations specifically supported:

- the continuation of FAU's utilities infrastructure and landscaping and site improvements consistent with its adopted Campus Master Plan.
- renovation and remodeling projects at six buildings and sites.
- four new, major construction projects.
- demolition of three facilities.

In July 2019, Board staff visited FAU to meet with academic affairs leadership and with facilities and space management leadership to review the institution's space usage, academic space assignment process, and critical space needs issues on the campus. In addition, a strategic tour of facilities was conducted.

During interviews, FAU academic affairs staff confirmed that the university is emphasizing its four research institutes at its distinctive campuses and that FAU continues to gain national recognition for specific priority programs. The FAU Board of Trustees and administration are focused on student success and performance outcomes and not focused on campus and enrollment growth.

As a part of its master planning process, FAU conducted a space utilization study in 2017 and will be revisiting this process during the coming year. FAU continues to be proactive in planning for the academic program based on student demand for classes and available academic space. A new class schedule was built in 2015 that responded to these factors within a hierarchy of space needs. The university and this planning process has had to be responsive to a significant increase in weekend utilization, an increase in summer enrollment, and an increase in graduation rates.

Research is a priority as research faculty are continually being recruited and hired. The newly recruited faculty are primarily supported by contract and grant funding. Academic space is sufficient but quality research space is needed. The high cost of research space is a challenge, however, and the university continues to identify and retrofit academic space for dedicated research activities. The focus is now on the renovation of existing space in order to provide the technology that is needed. In particular, additional teaching lab space is needed in order to address and reflect new educational innovations and there is an increasing demand for "active learning" classrooms. Funding for these initiatives remains a problem.

A campus tour of selected buildings and classrooms confirmed the need for classroom refreshing and remodeling as academic course delivery is being hampered by classrooms and lab space in poor or inadequate condition.

In supplemental information submitted to Board staff, FAU highlighted that it has established four interdisciplinary pillars to serve as research institutes: a) healthy aging, b) neuroscience, c) ocean science and engineering / environmental sciences, and d) sensing and smart systems. These strategic plan pillars are driving increased emphasis on research, faculty hiring, and decisions on the allocation of space to accommodate growth in these four areas of emphasis. FAU also emphasized its efforts to prioritize student success by reconfiguring its course scheduling model, increasing the availability of high demand classes, and focusing on academic space utilization and efficiency.

B. Florida Gulf Coast University Visit

Florida Gulf Coast University (FGCU) is a comprehensive university serving the growing Southwest Florida region. FGCU operates an 800-acre main campus, with eight special purpose educational sites in Southwest Florida. FGCU serves 15,000 students and offers more than 90 undergraduate and graduate degree programs that have strategic importance to the region and the state, including science, technology, engineering, and mathematics (STEM) disciplines, as well as health professions, business, and marine and environmental sciences. In the past few years, FGCU has taken a leadership role in the investigation of water quality in Southwest Florida and in research related to the growth of blue-green algae and red tide in the state's existing and contiguous waters.

FGCU firmly expresses that Student Success is at the center of all university endeavors and is committed to forging partnerships and being responsive to the needs of Southwest Florida. The FGCU Strategic Plan for 2017-2022 identifies five pillars that will guide and focus its energies and resources during the period:

- Student Success
- Academic Excellence
- Entrepreneurship
- Health Sciences
- Community Engagement

FGCU has also prioritized narrowly-focused research initiatives that are designed to meet the needs of Southwest Florida, particularly water resources and marine and environmental sciences.

2017 Educational Plant Survey

An educational plant survey was conducted at Florida Gulf Coast University in 2017 to examine data on existing facilities and review projections of future needs based on anticipated university growth. Projects proposed by FGCU included site acquisition, site improvements, renovation, remodeling, and new construction. Survey team recommendations addressed FGCU's formulation of its five-year plans to meet the educational facilities needs of its campus community (students, faculty, staff, auxiliary and ancillary services). In addition to standard university-wide recommendations, the 2017 survey recommendations specifically supported:

- expansion of the central energy plant.
- one major new construction project.
- one continuing construction project (partial funding received).

In August 2019, Board staff visited FGCU to meet with academic affairs leadership and with facilities and space management leadership to review the institution's space usage, academic space assignment process, and critical space needs issues on the campus. In addition, a strategic tour of facilities was conducted.

During interviews, FGCU academic affairs and facilities staff reviewed the university's growth issues and highlighted the critical need of space for classrooms, teaching labs, offices, study and collaborative work space, and student activity space. The current and projected demand for space is exacerbated by the fact that approximately one-half of the campus land (432 acres) has been designated by the state as environmentally sensitive, conservation land. As a result, the designated property cannot be utilized by the university for academic and student support facilities.

FGCU has been identified as the university with the highest space utilization in the SUS, while being the third smallest institution with respect to academic space. Administrators report that the campus is considered to be 93 percent built-out. However, considering almost all of the remaining developable land is in our eastern core and used for temporary recreation fields and temporary parking, the campus is currently more than 99% built-out. Future academic buildings will eventually displace these two temporary facilities. Additionally, the university has increased its use of modular buildings on the campus perimeter to house non-academic, support services.

The university board of trustees has established a goal to increase Student Success and this strategic point of emphasis is driving the administration in ongoing decisions on academic program planning and delivery. The designation of the center of campus as the academic core campus has provided focus on and prioritized space availability and space needs. University space policies emphasize that there is no ownership of academic space by colleges and departments and the term "non-dedicated, dedicated" space is often used in space allocation decisions. Facilities and academic space decisions have included:

- Scheduling classes in non-academic spaces.
- Relocating non-essential administrative services outside of the academic core in modular buildings to facilitate the consolidation of student support services into a "One-Stop Shop" in the academic core campus.
- Converting general use space (conference rooms, closets, etc.) into office space, teaching lab space, and study space.
- Utilizing one unified scheduling software program for a university-wide space reservation and class scheduling system.
- Piloting innovative course delivery to increase flexibility and efficiency:
 - Ongoing expansion of class schedules: evenings and weekends;
 - Hybrid classes and online course offerings;
 - Accelerated academic terms;
 - Distinctive non-traditional semester blocks;
 - Additional summer course offerings;
 - Class delivery in residence halls and multi-purpose rooms;
 - Lecture capture technologies.

Administrators report that there is a significant deficit of campus space for student support services, including study space and student activity space. The university student union provides about one-half of the needed space for student activity needs and there continues to be a high demand for space for student organization activities, student study and class collaboration activities, and general student gatherings. As a result, when possible, academic classrooms and teaching labs are scheduled for extra-curricular student activities after normal class hours.

An extensive tour of campus facilities highlighted efforts to further develop the academic core campus and, when possible, position non-academic support services in modular facilities at the perimeter of the main campus. Modular buildings will house Student Health Services, Human Resources, Procurement, and the Controller's Office. The three distinctive "villages" were visited (West Lake Village, North Lake Village, and West Village) and the unique features, programs, and services were identified at each location. High quality educational facilities were observed at the Sugden Resort and Hospitality Management building as were renovations in Alico Arena to upgrade study/tutoring space for student athletes. Throughout the campus tour, the ongoing and proactive efforts to increase the flexibility of available space and to identify additional campus space to meet student demands for study and meeting space were noted.

C. Florida State University Visit

Florida State University (FSU) is a preeminent research university serving Florida and extending its reach out to the United States and globally with more than 300 undergraduate, graduate, and professional degree programs to over 41,000 students. FSU owns or leases 21 sites and includes four distinctive campuses: Main Campus, Panama City Campus, Ringling Cultural Center, and the College of Medicine's Immokalee Clinic. FSU has maintained the unique balance of providing high quality, nationally recognized programs in the arts and in the sciences while emphasizing interdisciplinary institutes and centers, national research laboratories, impactful entrepreneurship initiatives, and celebrated programs in the fine and performing arts.

In its Strategic Plan 2017-2022, the FSU mission is to "*preserve, expand, and disseminate knowledge in the sciences, technology, arts, humanities, and professions, while embracing a philosophy of learning strongly rooted in the traditions of the liberal arts.*" FSU identifies six strategic goals:

- Deepening our Distinctive Commitment to Continuous Innovation.
- Amplifying Excellence Across Our Academic and Research Programs.
- Realizing the Full Potential of Diversity and Inclusion.
- Ensuring Student Success on Campus and Beyond.
- Preparing our Graduates for 21st-Century Careers.
- Investing Strategically in Our Institution and Reputation.

2017 Educational Plant Survey

An educational plant survey was conducted at Florida State University in the fall of 2017 to examine data on existing facilities and review projections of future needs based on anticipated university growth. Projects proposed by FSU included site acquisition, site improvements, renovation, remodeling, and new construction. Survey team recommendations addressed FSU's formulation of its five-year plans to meet the educational facilities needs of its campus community (students, faculty, staff, auxiliary and ancillary services). In addition to standard university-wide recommendations, the 2017 survey recommendations specifically supported:

- Five renovation and remodeling projects in buildings or research lab spaces.
- One new building construction project (and one project based on an exception procedure).
- Seven demolition projects.
- One continuing construction project (partial funding received).
- Three construction projects (not survey recommended; partial funding received).

In August 2019, Board staff visited FSU to meet with academic affairs leadership and with facilities and space management leadership to review the institution's space usage, academic space assignment process, and critical space needs issues on the campus. In addition, a strategic tour of facilities was conducted.

During interviews, FSU academic affairs staff emphasized Student Success as a top priority of the board of trustees and university leadership. All decisions about the management and design of space are made based on the implementation of student success initiatives and it is believed that this priority is driving the university's rise in national rankings as well as the post-graduate success of its students.

FSU has implemented smaller classrooms, with approximately 50% of classes having less than 20 students. Active learning classrooms as well as smaller class sizes have improved the professor to student relationship and has increased the learning capabilities of the diverse student body, ultimately improving student outcomes. The renewed emphasis on student success has resulted in an increased demand for these types of academic spaces. With this university-wide focus, FSU has been working to develop and refine a space utilization study which should be finalized in September 2019.

University administrators emphasized that, as a R1-level research university, teaching students how to conduct research is crucial, as students learn from engaging in research in their chosen discipline. At FSU, undergraduate students can begin research activities in their freshman year and continue through their senior year. Research can be conducted with professors and graduate students resulting in important discoveries while developing post-graduate, career-ready, and highly sought-after skills. As a result of the emphasis on undergraduate student research, the campus has a critical and increasing demand for research and teaching lab space.

A campus tour of selected academic buildings confirmed the need for repairs, renovations, or upgrading of certain buildings, as teaching and research is being impeded by the poor condition of classrooms and labs in some buildings, particularly older buildings. It was confirmed that FSU's renowned and specialized fine arts program and major research programs result in a limitation of room use by other disciplines or for general purpose use in these buildings. Additionally, many of the FSU academic buildings were built and furnished for traditional course delivery and are not well-suited for how faculty are currently delivering instruction and for how students now tend to learn. While, FSU strives to optimize the use of space, due to the age of many buildings, code requirements, ADA, and safety challenges exist.

Supplemental information submitted to the Board staff confirmed that FSU continues to be diligent in efforts to optimize its academic space by implementing a variety of innovative space utilization policies and procedures. Administrators have emphasized that its commitment to become a top-ranked national university and its student success initiatives are driving decisions about the deployment, management, and design of academic space. They further stated that the university's facilities space needs are influenced by the university's desire to continue to be a dynamic residential campus and referenced the course-taking patterns and academic support needs of both residential and online students.

Academic affairs leaders confirmed that there is academic space on campus that is in need of refreshing or retrofitting in order to meet the pedagogical needs of innovative faculty and high-achieving students. Such space is often underutilized and needs to be renovated to allow for active learning, reduced course sizes (e.g., creating courses with fewer than 20 students), and other forms of academic engagement. Moreover, research labs must be designed to allow for increased numbers of student researchers.

FSU emphasizes its critical role as a research university that has placed an increasing demand for research space, including classrooms, laboratories, and studios. High quality research faculty require modernized space and equipment. Additionally, there is a constant need for instructional, practice, and research space to provide for the unique demands of FSU's internationally recognized programs in the arts (music, film, dance, theater).

D. University of Florida Visit

The University of Florida (UF) is a preeminent state research university enrolling 51,000 students in over 300 undergraduate and graduate degree programs in 16 colleges and 200 research, service, and education centers and institutes. UF has a 2,000-acre campus and more than 1,000 buildings and includes over 170 buildings with classrooms and laboratories. As a member of the Association of American Universities (AAU), UF has achieved in numerous national and state academic performance indicators and aspires to become a top five U.S. public research university.

In its Strategic Plan, UF has identified seven goals:

- An exceptional academic environment that reflects the breadth of thought essential for preeminence, achieved by a community of students, faculty, and staff who have diverse experiences and backgrounds.
- An outstanding and accessible education that prepares students for work, citizenship and life.
- Faculty recognized as preeminent by their students and peers.
- Growth in research and scholarship that enhances fundamental knowledge and improves the lives of the world's citizens.

- A strengthened public engagement of the university's programs with local, national and international communities.
- Alumni who are successful in their careers and in life and who are proud to be graduates of the University of Florida.
- A physical infrastructure and efficient administration and support structure that enable preeminence.

In addressing the UF physical infrastructure, the strategic plan calls for *“a campus with updated facilities, including modern research laboratories; classrooms to support state-of-the-art teaching and learning; contemporary residence halls; and high-quality technology infrastructure.”*

2019 Educational Plant Survey

An educational plant survey was conducted at the University of Florida in the spring of 2019 to examine data on existing facilities and review projections of future needs based on anticipated university growth. Projects proposed by UF included site acquisition, site improvements, renovation, remodeling, and new construction. Survey team recommendations addressed UF's formulation of its five-year plans to meet the educational facilities needs of its campus community (students, faculty, staff, auxiliary and ancillary services). In addition to standard university-wide recommendations, the 2019 survey recommendations specifically supported:

- major renovation projects at two facilities.
- one continuing construction project (partial funding received).
- four new major construction projects (two not based on Form B calculation).
- five major demolition projects.

In August 2019, board staff visited UF to meet with academic affairs leadership and with facilities and space management leadership to review the institution's space usage, academic space assignment process, and critical space needs issues on the campus. In addition, a strategic tour of facilities was conducted.

During interviews, UF academic affairs leaders affirmed that the commitment of the UF Board of Trustees and administration is to continue to advance its research mission and prioritize its preeminence as the leading research institution in the state and one of the highest rated public universities in the U.S. The university's current focus is to fulfill its Faculty 500 initiative and complete the hiring of 500 new faculty members. UF recruits faculty members from public and private universities throughout the US and world. Both undergraduate and graduate enrollment growth is highly controlled and enrollments at both levels remain constant.

A significant challenge is to provide sufficient, high quality, up-to-date research lab space and office space for the exemplary faculty coming to UF. Both research lab space and office space remain in high demand. At UF, academic space is a commodity and is managed on a competitive basis. Research space for faculty is assigned according to funding that is brought in by the faculty member. Individual colleges have a base allocation of research and classroom space and are able to manage the day-to-day operations of the space. Additionally, to increase efficiencies, UF maintains a central computing core program and faculty are able to purchase computing time on the campus system.

The Space Tracking & Reporting System (STARS) is a space data management system that has been developed by the university. STARS is a very sophisticated and comprehensive space management system and UF has enabled two state universities (FGCU and UWF) to utilize the system. New space management guidelines have been developed to support the space data system and are being implemented throughout the campus.

The UF Provost's Office leads a monthly meeting of academic and facilities leadership to review issues of academic and research space, classroom supply and demand, and unique space issues that arise. Academic and research space availability and adequacy in the university's older building are critical issues relating to whether to re-purpose, renovate, or demolish the facilities.

The provost's office maintains a plan to refresh classroom space within a five-year cycle. Student technology fee revenue is also used to upgrade classrooms with instructional technology. Major renovation work remains a challenge due to the constant demand for academic space.

A unique space issue at UF is to address the academic and research space needs in the university's vast Institute of Food and Agricultural Sciences (IFAS) that is a federal-state-county partnership that provides instruction, research, and extension services in agriculture, natural resources, and the life sciences. In addition to Extension offices in each of Florida's 67 counties, IFAS has 1,249 buildings, more than 3.6 million gross square feet, and 27,279 acres throughout the state, including facilities on the University of Florida campus. IFAS administrators report that the quality of much of the teaching space is outdated and in need of renovation and the research space in IFAS facilities remains uneven in its quality and adequacy.

In a general discussion with UF academic and facilities staff, it was expressed that the existing factors in the space needs formula used in the educational plant survey have not kept pace with how academic space is now being utilized, i.e., how faculty are now delivering instruction and conducting research, and how students learn. More specifically, the increase in the assignment of research space at many state universities is not recognized in the existing space needs calculations.

E. University of West Florida Visit

The University of West Florida (UWF) serves the western and panhandle region of Florida at its 1,600-acre campus. UWF now enrolls over 13,000 students in over 70 undergraduate and graduate degree programs and maintains nationally recognized research centers, including the Archaeology Institute, Center for Environmental Diagnostics and Bioremediation, Haas Center for Business Research and Economic Development, and the Small Business Development Center. UWF was established in 1963 as an upper division institution and opened in 1967. Lower division programs were established in 1983 and UWF now has multiple instructional sites throughout the western panhandle region of Florida.

In its Strategic Plan 2017-2022, UWF identifies five Strategic Directions:

- Learner Centered and Focused.
- Personnel Investment and Engagement.
- Academic Programming, Scholarship, and Research.
- Community and Economic Engagement.
- Infrastructure.

In addressing its infrastructure, UWF intends to promote its facilities as desirable destinations for educational, cultural, professional, and personal activities and to invest in and steward the university's natural, technical, intellectual, and physical infrastructure.

2016-17 Educational Plant Survey

An educational plant survey was conducted at the University of West Florida in 2016-17 to examine data on existing facilities and review projections of future needs based on anticipated university growth. Projects proposed by UWF included site acquisition, site improvements, renovation, remodeling, and new construction. Survey team recommendations addressed UWF's formulation of its five-year plan to meet the educational facilities needs of its campus community (students, faculty, staff, auxiliary and ancillary services). In addition to standard university-wide recommendations, the 2017 survey recommendations specifically supported:

- one major infrastructure project (utility plant).
- one renovation project.
- four new construction projects.
- seven demolition projects.

In August 2019, Board staff visited UWF to meet with academic affairs leadership and with facilities and space management leadership to review the institution's space usage, academic space assignment process, and critical space needs issues on the campus. In addition, a strategic tour of facilities was conducted.

During interviews, academic affairs leaders affirmed that the campus will not need additional classroom space through 2025, depending on its continued ability to provide suitable and appropriate space for teaching and learning. The UWF Provost Office has recently completed a study of academic space needs and classroom utilization. The review of overbuilt space and underbuilt space found an imbalance of classroom size and utility as well as a specific lack of appropriate research space, study space, and office space. More importantly, the study found that many existing classrooms are not suitable for effective teaching and learning, i.e., how faculty are now delivering instruction and how students learn. UWF staff recognizes that there is a renewed need to evaluate classroom space from a learning perspective as the current space is not meeting current instructional needs. Following approval by the UWF Board of Trustees, the study findings will be implemented during the coming year.

There are 62 general purpose classrooms on the main campus and the university facilities office strives to maintain and improve these academic spaces. Facilities staff stated that most classrooms contain consistent instructional technology due to the use of student technology fees and the ongoing plans to refresh classrooms. The facilities office regularly reviews classroom capacity, usage, and needs. There is a significant need for greater flexibility in teaching spaces as currently there is insufficient large capacity instructional space, particularly for the general education courses in mathematics and the sciences and for the large nursing cohorts.

UWF staff stated that there is an ongoing program to remediate campus facilities for ADA compliance. A critical issue is that many of the older buildings on campus are of poor quality which limits their instructional effectiveness due to antiquated classroom furnishings and design. Significant repairs and renovations are needed in a number of older buildings and classrooms and there are existing situations of water intrusion, inadequate heating and cooling systems, roof maintenance, and fire mitigation needs. A Facilities Planning Advisory Committee meets quarterly to prioritize and consider maintenance needs and facilities upgrades. Staff reports, however, that due to lack of funds there is no current proactive plan to refresh classrooms and the committee tends to react and respond to the most urgent facilities needs.

A campus walking tour confirmed that there are existing conditions in certain older buildings that are of poor quality and are likely affecting teaching and learning effectiveness. In these older buildings, inadequate student space for private advising, tutoring, and collaborative learning and study was observed. Concurrently, however, there are colleges and programs that are implementing innovative uses of available academic space via retrofitting, re-purposing and refreshing the space.

In supplemental information submitted to Board staff, UWF emphasized a need to implement “suitability” criteria to evaluate buildings and classrooms to determine if the space adequately supports current and emerging methods of teaching and learning. More importantly, UWF has numerous structural concerns in some facilities with serious and substantial maintenance issues.

The provost’s office has prioritized strategic academic space planning and more efficient space utilization and plans to focus on the following institutional issues:

- increasing the number of large classrooms.
- creating more research laboratory space for students and faculty.
- providing additional and flexible space for advising, tutoring, and collaborative learning and study.
- collecting information and perspectives about the impacts of the university’s online programs on physical space.
- remodeling Building #54 (fire mitigation) to address the university’s need for a large assembly space on campus to host a multiplicity of academic and community events.

V. ISSUES AND RECOMMENDATIONS

Following the review of university administrator interviews and facilities tours, survey questionnaire results, and research on issues of academic space needs calculation methodologies, the Board of Governors has identified the following issues that impact the accuracy and efficiency of space need calculations and policies.

A. The Educational Plant Survey Process and the Current Space Needs Generation Formula

University representatives, including academic affairs leaders, facilities space planners, and space data management staff, identified a number of significant issues relating to the Educational Plant Survey Process and the Current Space Needs Generation Formula. A majority of the university representatives support an updated space calculation formula and process that will allow each university to recognize and account for its distinctive mission as well as the unique role it maintains in its community, its region, and the state. It is felt that the educational priorities and special nature of each university should be considered when evaluating and determining space needs in specific categories and that the space needs factors should be able to correlate with the institution's mission. More specifically, there are requests for a process that will account for institution size, age of facilities and infrastructure, academic program mix, space suitability, clientele, and plans for growth. This approach would correlate with the Board of Governors Performance Funding Model as one of the four guiding principles of the Model is to “acknowledge the unique mission” of each of the universities.

In related discussions on institution mission, it was recommended that it would be beneficial to allow each institution to identify a unique space factor based on its mission for incorporation in space needs calculations that occur during the educational plant survey. All universities have distinctive academic space that may not be recognized in the current process and the ability of an institution to identify one supplemental space factor for its space calculations may advance its efforts to meet its strategic goals and raise its performance funding metrics. This approach would correlate with the Board's performance funding model that provides unique “CHOICE” metrics for the process (Metric # 9 – Board of Governors choice; Metric #10 – Board of Trustees choice).

A recurring theme during campus visits was concern related to the growing disconnect between existing, traditional academic facilities and the growing need for “active learning” space due to new and innovative teaching and learning pedagogies that are resulting from how faculty are now delivering instruction and how students most effectively learn. Many universities, particularly the campuses with older buildings, are recognizing the need to refresh, renovate, and retrofit older classrooms to meet the needs of their faculty and students for interactive, participatory instructional space. This is particularly relevant for universities who have identified “student success” as a priority goal. These institutions are implementing new and expanded student support programs and services and are working to redesign classrooms with technological advances and greater space flexibility in order to increase the utilization of their academic space.

The growing focus on student support services has also been identified as an issue in discussions on the current space needs calculation methodology as student services facilities are not recognized in the current formula. As the universities continue to respond to the increasing demand for student support services by adding new or re-purposed space, it will be important to recognize and account for this space in space need calculations.

During interviews with university facilities and space management planners, there were discussions on how the space needs calculation methodology could evolve and be updated to produce greater efficiencies and additional flexibility for the institutions. Suggestions included new methods to evaluate and calculate academic space, particularly for new buildings. One university suggested the identification of specific building metrics that could facilitate space needs calculations and provide an additional measure of return on investment (ROI) for a proposed building. System-wide efforts to introduce greater efficiency and additional flexibility into the process would be worthwhile.

Recommendation 1:

The State University System Facilities Space Planners, in consultation with the Board of Governors' Office of Finance and Facilities, should review the current space needs calculation methodology and funding formula to recommend an equitable policy and process to:

- A. Recognize and account for the critical components of an institution's mission.***
- B. Enable universities to identify one unique, institution-specific space factor for its space needs calculations.***
- C. Recognize and account for student support services facilities.***
- D. Consider new space needs calculation methodologies, including metrics for new buildings.***

The SUS Facilities Space Planners should consult with SUS Academic Affairs and Student Affairs leaders on issues of relevance.

B. Research Space

University representatives identified a number of issues relating to the recognition and assignment of research space. Research space need is a methodology category unique to the State University System; neither the K-12 System nor the Florida College System recognizes a dedicated research space category. Research space is primarily composed of laboratory space and office space for the faculty conducting the research. For health related research, this may also include clinical space.

Universities with research as a primary or emerging mission, particularly the System's three preeminent research universities, provided input on the need to more accurately recognize and account for research space in the space needs calculation methodology. The vice presidents for research at these universities described the growing demand for research space, particularly at institutions who have prioritized a greater research presence and have ongoing initiatives to rise in the national rankings of high quality universities. An expanding research presence involves the ongoing recruitment and employment of exemplary faculty who require high quality research and laboratory space, often with specific requirements for equipment, technology and additional space for graduate students. Further, the sciences, engineering, and some professional disciplines typically will require unique research space needs for the specific discipline. Due to these significant and ongoing challenges for research universities, both high quality research laboratory space and office space remain in high demand.

University representatives were consistent in reporting that there is a disconnect between the current Board space needs calculation methodology, which is FTE enrollment based, and the increasing demand for research space based upon the steady growth in research funding (total R&D expenditures for the most recent reporting period stood at \$2.32 billion, compared to a \$1.68 billion baseline).

University staff also pointed out that the space needs calculation methodology has not been modified to account for the Preeminent State Research Universities Program, which is a collaborative program between the Board of Governors and the Legislature, established pursuant to Section 1001.7065 Florida Statutes. This program provides additional E&G funding to elevate the academic and research preeminence of Florida's highest performing state research universities. For 2019, the Board evaluated the statutory metrics for five universities, FIU, FSU, UCF, UF and USF Tampa and determined that UF, FSU and USF Tampa qualified for preeminence, meeting at least 11 of the possible 12 metrics. FIU and UCF met eight of the 12 metrics. Four of the 12 metrics are entirely research-based (Total Annual Research Expenditures; Total Annual Research Expenditures; National Ranking in Research Expenditures and Patents Awarded), and other metrics are highly influenced by a focus on research.

While the mission of the State University System is to provide undergraduate and graduate education, research, and public service, the space needs calculation methodology is restricted to a determination of educational needs only. The calculation of research space need is complicated by the need for a clear demarcation of space between Educational and General (E&G) space and Contracts and Grants (C&G) space, when the reality is that it is common for faculty to engage in both teaching and research activities, and for labs to be used to serve both the teaching and research mission of the university. The current space needs formula does recognize the need for a limited amount of laboratory space for instructional purposes, consistent with a policy that PECO space is to be restricted to Educational and General (E & G) purposes; it does not, however, address Contracts and Grants (C & G) space needs.

Recommendation 2:

The State University System Vice Presidents for Research should review the policies and procedures for the assignment, recognition, and accurate accounting of research space, research laboratory space, and research faculty office space, including Educational and General (E & G) research entities and Contracts and Grants (C & G) research entities, and make recommendations to improve the accuracy and efficiency of the SUS space needs calculation methodology. Where appropriate, these SUS leaders should identify best practices for the System.

C. The State University System: Greater Efficiencies

A variety of issues were discussed during university site visits relating to the supply of and demand for academic space in the State University System, alternatives for the calculation of space needs, and the need for greater efficiencies. A few of the major issues and topics are summarized below.

University Planning: Making Connections

The primary state university planning documents are the University Strategic Plan, Accountability Plan, and Campus Master Plan. The documents have gained in importance and value in recent years due to renewed emphasis and oversight by the Board of Governors. Each university's Educational Plant Survey, however, appears to have become disconnected from the other key university planning documents. Since the original intent was that these planning tools would work in harmony, this

disconnect may result in a less efficient planning process, particularly in regard to educational facilities and space needs.

Space Management Systems

A variety of space management systems and software are used by the 12 universities to manage and support facilities and academic space utilization decisions, including space assignment, scheduling, and tracking. There may be merit in investigating a “shared services” strategy for the SUS and consider the implementation of one, centralized space management system for the SUS. If feasible, the latest and most efficient technology could be leveraged, coordination enhanced among the institutions, and savings in operation and maintenance costs achieved.

Distinctive Educational Entities

A number of distinctive educational entities exist within the State University System that provide a wide range of educational opportunities for Florida’s citizens and have significant impacts on the state’s workforce and economy. These entities, including the University of Florida’s Institute of Food and Agricultural Sciences (IFAS), Centers and Institutes (531), Centers of Excellence (11), professional development (laboratory) K-12 schools (4), and numerous professional schools in specific professions, tend to operate with individualized policies and procedures regarding facilities planning and the calculation of academic space needs. Testimony has been received that at some entities these procedures are outdated, incomplete, and/or insufficient to recognize and support funding requests for space needs using the existing methodologies.

Critical Deferred Maintenance Needs

Deferred maintenance needs in the State University System has been calculated at approximately \$1 Billion. In many cases, the aged and outdated condition of significant amounts of university space is impacting the effective and efficient delivery of academic programs and services.

With the passage of Senate Bill 190 by the 2019 Legislature, the universities have been given flexibility to use existing financial reserves to address identified maintenance needs. It will take time to determine if this new model will be more or less effective than the previous paradigm, which assumed that state university facilities maintenance was the responsibility of the state, not the institution.

Responding to a related question, it is felt that the decline in the state’s Public Education Capital Outlay (PECO) funding program will not diminish the utility of each university’s educational plant survey as the survey will remain a valuable space needs assessment and planning tool, particularly for the implementation of the new PECO points system enacted by the Legislature.

Condition and Suitability of Existing (older) Space

Ten of the 12 state universities have academic space that is fifty plus years old or older and a few institutions have space over 100 years old. The current educational plant survey does not effectively recognize that sub-standard space should not be recognized as “satisfactory” space simply because the space is usable and does not endanger the health and safety of the occupants. Likewise, there is space that is in acceptable condition, but was not designed for its current use. (For example, a small storage space being converted into a faculty office.)

For these and related issues, a System-wide review is warranted.

Recommendation 3:

The Chancellor of the State University System should appoint a Space Task Force for the State University System to review university academic space needs and related facilities issues, recommend solutions to identified space problems, promote best practices for issues and conditions facing the institutions, and assist in the development of Board of Governors regulations relating to facilities and space needs. The Task Force should include representatives of the SUS Facilities Space Planners, Academic Affairs leadership, and other experts as needed. The Space Task Force should be coordinated by the Board's Office of Finance and Facilities.

APPENDIX A

State University System Space Needs Generation Formula

The space needs generation formula uses three types of information to determine unmet space needs for Educational Facilities¹:

1. Projected enrollment from the Accountability Plan
2. Space standards, establishing the minimum net square feet per FTE per category of educational space
3. Existing facilities inventory in net square feet by standardized category

Enrollment is based on student credit hours, with 40 credit hours equal to 1 Full Time Equivalent FTE. The formula recognizes space requirements based on academic program offerings, student level, and research programs.

Space Standards

Nine space categories of assignable educational space have established minimum space needs, and are recognized within the formula. The net square feet standards for the nine categories of assignable space are:

Space Category	Net Square Feet Standard
Classroom	9
Teaching Lab	11.25
Research Lab	18.75
Teaching Gymnasium	4.5
Study	13.5
Instructional Media	3
Auditorium/Exhibition	2.25
Campus Support Services	4.2375
Office	22.5
Total in NASF	88.9875

$$\text{FORMULA NEED IN NET ASSIGNABLE SQUARE FEET}^2 \\ (\text{FTE} \times 88.9875) - \text{Inventory} = \text{Unmet Space Need in NASF}$$

¹ Educational facilities are those that support the Educational and General mission of the university; examples of non-E&G functions would include Housing, Parking, Athletics and Contracts and Grants Research Space. The State University System does not use PECO funds for non-E&G functions.

² State University System space is measured in Net Assignable Square Feet ("NASF")

APPENDIX B

Survey on Academic Space Needs Calculation Methodologies

2019 Survey

The 2019 Legislature directed the Board of Governors to: *review its space need calculation methodology developed pursuant to section 1013.31, Florida Statutes, to incorporate improvements, efficiencies, or changes.* To assist the Board in this work, please respond to the following questions:

Policy / Efficiency Questions

1. *Do board of trustees or institution policies exist relating to space assignment and usage? Are there institution goals relating to optimizing the use of space? If Yes, provide a brief description.*
2. *Should Board of Governors regulations specify space management policies and procedures, including metrics and benchmarks, that will optimize the use of instructional and research space and promote efficiency in the SUS? Explain your answer.*
3. *Each SUS institution is currently assigned the same space need factor for each of the nine (9) E&G space categories, regardless of mission. Should the Board of Governors adopt a policy allowing each university to establish unique space factors, based on mission? Explain your answer.*
4. *Describe any technological tools that are used to monitor the use of academic space.*
5. *Describe challenges that exist at your university in the assignment of space and efforts to optimize space usage.*

Process / Educational Plant Survey Questions

6. *In the assignment of E & G space at your university, what is the role of:*
 - a. *the university provost?*
 - b. *The college/division deans?*
 - c. *The department heads?**Briefly describe the process.*
7. *The Educational Plant Survey:*
 - a. *How should the Educational Plant Survey be utilized to more effectively determine the adequacy of quality E & G space for current and projected student needs?*
 - b. *Describe how the Educational Plant Survey findings are reflected in your university's Accountability Plan in relation to the goals of the university.*
 - c. *Should the SUS adopt the national standard for measuring FTE for the Educational Plant Survey? (This would result in increasing the space need formula by 25%)? Explain your answer.*

National Standards and Definitions

NOTE: Definitional references below are taken from the 2006 edition of the *“Postsecondary Education Facilities Inventory and Classification (FICM) Manual.”* See attached section.

8. *Should the SUS adopt the national standard definition of “Unsatisfactory” Space and exclude such space from the inventory of “Satisfactory” space? Explain your answer.*
9. *Should the SUS adopt the national “Suitability” criteria for buildings, and allow institutions to optionally record the Suitability of space as a data point? Explain answer.*

Space Needs Calculation Methodology

10. *You are invited to provide recommendations regarding the current space needs calculation methodology to make the process more accurate, efficient, and meaningful.*

APPENDIX C

Recommendations Regarding Space Needs Calculation Methodologies

Below is a compilation of recommendations on the current space needs calculation methodology submitted by university survey respondents:

- The Educational Plant Survey process can be made more meaningful by having the survey team assess quality of space rather than looking solely at calculated formulas, which would include an evaluation of the suitability of space.
- The Board Office should provide information to university facilities staff on how the space need factors are determined for each University.
- Each University is unique in its age, the community it serves, and its mission. The current generic space needs calculation methodology is not ideal as there is misalignment between space needs and the Educational Plant Survey, Form-B space allocations. The customization of the space needs formula is needed to adapt to the needs of a University. For greater clarity, the Educational Plant Survey process should include consideration for the university's ideal distribution of space in the nine space categories.
- Revision of Form B is recommended to allow each university to select and modify their space needs in one of the 9 Space Categories to facilitate meeting strategic goals that may be dependent on space for success. The university would then reduce other categories accordingly, thus not increasing the total space needs for the university.
- Enhancement of the online EPS system is needed so it could be updated and adjusted quickly to create a "Spot Survey" when needed.
- Greater flexibility is needed so that institutions can request projects in the CIP document without requiring a supplemental survey each time the list of projects changes. We believe a standard recommendation could replace section 4) of Form "B", "CIP Projects." The CIP could add a data point to track the effects of adding a project to offset survey generated space needs. Consistent with current practice, every 5-year update of the Education Plant Survey would continue to validate projects added to the inventory since the previous survey cycle.
- Allowances need to be made for universities that are early in their development as a newer university has little capacity to modify existing space to meet growing needs.
- EPS Factors for office and research space should be adjusted for specialized STEM schools, especially during the first ten years or so. Insufficient and inadequate office space makes it difficult to recruit top tier faculty and difficult for those faculty who are hired to perform at the top of their professions.
- Formula Factors cannot be one size fits all without penalizing some universities. The focus and special nature of the university should be considered when determining space needs in the various categories. For instance, an engineering school will have need for a greater amount of research and research related space per student and faculty. The specialized nature of an engineering school makes it much more difficult to repurpose much of the space.
- FTE calculations for the Education Plant Survey should conform to IPEDS (30 for undergraduate FTE and 24 for graduate FTE).
- Teaching Labs need to be adjusted for the distinctive disciplines. While sciences can share teaching labs, the fine arts cannot.
- Research Labs need to be adjusted for discipline and include a specific definition of how a research lab is being used.

- Offices should be based on position/employee FTE and not on student FTE. Assigning office space base on student FTE assumes that an employee to student ratio is consistent and appropriate across all academic disciplines and all institutions.
- Auditorium/Exhibition space needs to be adjusted for the fine arts disciplines as performances and the exhibition of work are part of the program and required for graduation.
- The distance learning deduction should not apply (or should be adjusted) because faculty who deliver instruction via distance learning require office and access to campus resources.
- Instructional Media – this category should include all technology required to support classrooms and teaching labs and pulled out of the service areas category. All distance learning areas for development, production, and broadcast should be in this category, thus the basis for this category should include online FTE.
- Prorating spaces may help in the accuracy of some space categories. While space is coded based on how the space is used the majority of the time, how do you capture the rooms (such as music) where a professor's office becomes a teaching lab half the day? (Giving rooms two numbers causes confusion to the students and first responders when trying to locate the rooms.)
- The current space model is identifying maximum usable capacity. However, increasing capacity utilization within an individual room often goes directly against the university's stated goals for student success. The pedagogical shift to smaller, interactive, and participatory instruction has created situations where more space is needed to teach the same number of students. These classes may require the square footage necessary for 45 students to teach 20 students in an interactive setting.
- Even when New College's enrollment grows to 1200 FTE (about a 50% increase) as endorsed by the BOG and Legislature, it will continue to be small in comparison to the rest of the SUS. NCF is most appreciative that the BOG recognizes this and treats the College's needs as an exception to the space formula calculations. We hope that is the case in the future as revisions to the methodology are considered.
- We do not recommend correcting the current space needs methodology, but rather distributing PECO funding based on the results of the calculations. All institutions should have an equal chance at securing PECO funding based on the BOG's objectives. The metrics should be appropriate. The proposed PECO Points system favors smaller universities, whose campuses have fewer deferred maintenance projects, more economical renovations with lesser research activity, and construction projects that would benefit a larger portion of their student population based on a substantial increase in the percentage of space needs being met. Whereas, the university with the largest space needs is least likely to be funded through the new calculation method because it will have a lesser effect on reducing their exorbitant space deficit, which seems totally backward. A further recommendation is that once a new space needs calculation methodology is adopted and put into practice that it be followed consistently.
- The calculation methodology needs to have a base number with factors that correlate with the university's mission. The numbers need to take more details into account besides just student FTE or allow universities to exclude spaces that are not based on student FTE. Offices like the Provost, Facilities Operations, Librarian, etc. are not hired based on FTE, and their spaces/support spaces should not be included in the space category totals unless space factors accurately account the institutional mission.
Additionally, offices that solely support researchers and do not have any student involvement should not be included in the total square footage of the space categories.
- The space factors need to be recalculated as there are a plethora of reasons why the factors are too small:

- Building codes were not taken into consideration when the factors were created. We cannot increase the capacity of classrooms arbitrarily to meet the needs of the university. Fire codes and life safety plans must be taken into consideration when setting capacities on classrooms and other spaces.
- ADA codes were not taken into consideration when the factors were created. Each aisle in a classroom needs to have enough space for a wheelchair to move, more circulation space means less assignable space, which means less students.
- Teaching and learning have evolved at a rapid pace. The standard classroom environments that were common just a decade ago are no longer suited to today's needs. Successful classrooms include a dynamic teaching environment. These modern classrooms require increased square footage per student which must be taken into account in an evolving space needs calculation.
- Calculation specifics: It is not possible to make specific recommendations until several questions are answered.
 - 1) Is the Space Needs Calculation intended to be holistic?
 - 2) What space is covered in the calculation? i.e. all university space? Main campus E&G only? Sponsored research (C&G) space, both office and labs?
 - 3) Is projected student FTE still an appropriate multiplier to determine need? We suggest it is not. If not, how is future need determined?
 - 4) A standard academic space factor may be acceptable for teaching space as currently implemented in the DCP model. All other space categories, Office, Research, etc. need to be more dynamic based on approved mission.
- Building Metrics - A standard collection of metrics or indicators could be developed that indicates ROI on a proposed building. They can go in several categories:
 - Student success
 - Research
 - Outreach and tech transfer
 - Clinical and other service activities
 - Growth in faculty, staff and/or students.
- Under Student Success there could be metrics like:
 - Improves retention and graduation rates
 - Accommodates swings in student interest from business to engineering (e.g.)
 - Addresses student activity/health/advising needs.
- Space needs calculation should be specific to each University mission, allowing for respective growth as needed (actual and projected). Also growth respective to not just enrollment but also academic programs. Formula itself may need to be reworked to take all things into consideration.
- Consider using headcount for one or more space need factors. For example, headcount would be used for 110-coded classrooms. Two "heads" totaling 1.0 FTE would need two classroom seats/stations. However, maintaining the application of FTE for graduate students in research laboratories, rather than headcounts, would reduce space needs from being overestimated and then the space becoming underutilized.
- Reconsider the level of the FTE space factor to "Instructional Media." Technology has changed media production so that workstations in "Study Facilities" or in faculty offices support instructional media, likely resulting in physical spaces for "Instructional Media" becoming overbuilt.

APPENDIX D

Campus Interview Participants

Florida Atlantic University

- Jason Ball, Associate Provost and CIO
- James Capp, Assistant Provost, Academic Operations & Planning
- Dan Flynn, Vice President for Research
- Brian Hodge, University Registrar
- Russ Ivy, Associate Provost and Professor
- Geoffrey Johnson, Director of Academic Planning
- Linda Johnson, Associate Dean of Arts & Letters
- Stacy Volnick, Vice President, Administrative Affairs (CAO)
- Azita Dashtaki, Administrative Affairs, Director of Budgeting & Planning
- Numa Rais, Director, Design & Construction Services
- Corina Mavrodin, Coordinator, DCS-Space Utilization & Analysis

Florida Gulf Coast University

- James Llorens – Interim Provost and Vice President for Academic Affairs
- Paul Snyder - Senior Associate Provost and Associate Vice President for Planning and Institutional Performance
- Tom Mayo – Director, Facilities Planning
- Eric Balmer – Director, Campus Reservations
- Krystie Corbitt – Coordinator, Space Inventory
- Sue Meyers – Assistant Registrar, Scheduling
- James Cousins - ACE Fellow

Florida State University

- Dennis Bailey, Senior Associate Vice President for Facilities
- Mark Bertolami, Director, Planning & Space Management
- Rick Burnette, Associate Vice President for Academic Affairs, Metrics, Analytics and Institutional Data
- Paul Harlacher, Assistant Vice President for Academic Affairs, Budget & Finance
- Jeremy Johnson, Associate Registrar, Office of Admissions
- Michael Lake, University Chief Budget Officer
- Sally McRorie, Provost & Executive Vice President for Academic Affairs
- Lori Pinkerton, Space Management Analyst, Facilities Planning
- Bill Sweeney, Special Projects, Office of the Provost
- Jarrett Terry, Assistant Vice President for Academic Affairs, Centers and Institutes, Community and Economic Engagement
- Michael Williams, Associate Vice President for Finance & Administration
- Gary Ostrander, Vice President for Research
- Kathleen Daly, Associate Vice President, Government Relations
- Joe O'Shea, Assistant Provost, Student Success

University of Florida

- Joseph Glover, Provost and Senior Vice President for Academic Affairs
- Curtis Reynolds, Vice President for Business Affairs
- David Norton, Vice President for Research
- Frank Phillips, Director, Business Affairs, Technical Services
- Linda Collins, Governmental Relations Manager
- Cheryl Gater, Assistant Provost and Director, Academic Program Oversight
- Kevin Heinicka, Director, Facilities Planning, IFAS
- Margaret Fields, Associate Dean, College of Liberal Arts and Sciences

University of West Florida

- Kimberly McCorkle, Vice Provost, Academic Affairs
- Robert Dugan, Special Assistant to the Provost, Dean Emeritus
- Bob Shaw, Assistant Dean, College of Education & Professional Studies
- Dennis Seabert, Dean, Usha Kundu, MD College of Health
- Jaromy Kuhl, Interim Dean, Hal Marcus College of Science & Engineering
- Steve Brown, Dean, College of Arts, Social Sciences & Humanities
- Stephanie Clark, Dean of Libraries
- Melinda Bowers, Associate Vice President of Administration, Facilities Management Director, Emerald Coast Academic Affairs
- Robin Anderson, Assistant Director, Facilities Planning & Construction
- Mel Manor, Director, Facilities Planning & Construction
- Jerre Brisky, Director, Center for Fine & Performing Arts
- Mohamed Kahbou, Associate Dean, Hal Marcus College of Science & Engineering
- Angie Blackburn, Interim Chairperson, School of Nursing

Office of the Board of Governors

- Chris Kinsley, Assistant Vice Chancellor, Finance and Facilities
- Jon Rogers, Assistant Vice Chancellor, Special Projects
- Ken Ogletree, Senior Architect
- Kristine Azzato, Facilities Planner
- Chrissy Rojas, Budget Analyst



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