

**TOPIC:                   MASTER PLAN REVIEW – UNIVERSITY OF COLORADO AT BOULDER**

**PREPARED BY:       DANIEL KRUG, DIRECTOR OF CAPITAL ASSETS AND COMPLIANCE**

**I.       SUMMARY**

Every ten years institutions are required to update and revise their Master Plans. This is a long and intensive process that often takes multiple years to complete. After Governing Boards approve the plans, they are submitted to the Colorado Commission on Higher Education (CCHE) for review and approval. The end product is both a snapshot of where the campus currently operates and a plan for where they want to go. Specifically it outlines institutional goals, campus settings, needs, use plans, and implementation plans.

The Board of Regents approved the Master Plan for the University of Colorado at Boulder (UCB) in September 2011. The plan was submitted for CCHE review in October 2011. The CCHE Capital Assets Sub-Committee has reviewed the plan and received a presentation in November 2011.

**II.       BACKGROUND**

The 2000-2010 Master Plan for the University of Colorado at Boulder (UCB) was approved by the Board of Regents in August 2000. That plan was presented for CCHE review at the October 2000 CCHE meeting. During the November 2000 meeting the CCHE had significant reservations and questions regarding the plan. These concerns were not settled and the Master Plan was not approved by the CCHE until March 2001.

The 2010-2020 UCB Master Plan will provide comprehensive guidelines for the future physical development of the campus. The plan provides the facilities response to the strategic plan goals outlines in *Flagship 2030: Service Colorado, Engaged in the World*, approved by the Board of Regents in November 2007. Consensus building for the campus master plan began in fall 2008 with a *Flagship 2030* facilities task force. In 2009, eight master planning task forces were formed by the campus to include faculty, staff, and students working in concert with representatives from the city, county, Chamber of Commerce, Boulder Valley School District as well as a variety of experts. Task force recommendations and reports are provided on the UCB Master Plan website.

In January 2010 the focus shifted from consensus building to goal setting. Analyses completed at this time included space needs, capital facilities planning infrastructure and utilities, flood mitigation transportation planning, and micro-master planning for the East Campus and the UCB owned land north of Boulder Creek and west of Folsom Avenue.

The draft Master Plan was released in early 2011 and was followed by presentations and meetings to campus and community groups, including: the Dean's Council, Boulder Faculty Assembly, Student Government; City Planning Board, Boulder City Council, and the Chamber of Commerce.

The Master Plan was approved by UCB leadership and forwarded to the Board of Regents in August 2011. The Regents approved the Master Plan in September 2011 and it was forwarded to DHE and CCHE for review in October 2011.

### **III. STAFF ANALYSIS**

#### **Mission**

The mission of UCB is defined in statute as “a comprehensive graduate research university with selective admissions standards. The Boulder campus...shall offer a comprehensive array of undergraduate, master's and doctoral degree programs” (C.R.S. §23-20-101(1)(a)).

#### **Goals and initiatives**

The UCB strategic *Flagship 2030* plan established a core vision for the campus: “the University of Colorado Boulder will become a leading model of the ‘new flagship university’ for the 21<sup>st</sup> century – by redefining learning and discovery in a global context and setting new standards in education, research scholarship, and creative work that will benefit Colorado and the world.” To achieve the vision six central themes emerged:

- Creating an environment that is intellectually inspiring, academically challenging, welcoming, supportive, and conducive to positive personal growth;
- Creating a campus that is a dynamic global force for ideas and knowledge;
- Exemplifying diversity, intercultural understanding, and community engagement;
- Promoting Colorado as a global crossroads of ideas and discovery;
- Providing students with a foundation of knowledge that will help them reach full potential;
- Creating an agile organization supported by effective leadership, sound financial and operational models, and well-maintained, state-of-the-art infrastructure.

Planners referenced the *Flagship 2030* two-pronged approach of “core initiatives” and “flagship initiatives” for the Master Plan. The Master Plan considers eight core initiatives including:

- Enhancing education and scholarship;
- Fostering research excellence;
- Enhancing graduate education;
- Ensuring access;
- Supporting the mission;
- Investing in the tools for success;

- Learning for a diverse world;
- Serving Colorado, the community, and graduates.

Flagship initiatives were referenced for long-term aspirations that will distinguish UCB among public research institutions:

- Creation of facilities to support Residential Colleges – a multi-year residential academic experience for every entering student;
- Customized learning – provide mentoring, individualized advising, and career counseling;
- Experiential learning – includes research or creative projects with faculty, study abroad, honors or senior thesis projects, and more;
- Colorado’s Research Diamond – a collaborative enterprise among regional universities, businesses, government, and federal laboratories to draw on existing strengths to develop new technologies, patents, and intellectual properties;
- Transcending traditional academic boundaries – strength advocacy, support, recognition, and financial incentives for faculty and students who engage in interdisciplinary work;
- Building a global crossroads – establish a center to address specific global issues facing government, business, industry, communities, the state and society;
- Creating university villages – working in collaboration with the community, mixed-use, education-related spaces that meet the needs of the university, community, and state;
- Alternative degree tracks – provide greater emphasis on the master’s degree as a primary track of study;
- Year-round learning; making enterprise work – examine changing the UCB academic calendar to a three-semester, year-round schedule.

Six goals were retained from the 2000-2010 Master Plan, including:

- Provide high quality facilities;
- Preserve and enhance campus beauty;
- Acquire and use land wisely;
- Ensure a sufficient, pleasing and safe campus;
- Ensure transportation access;
- Provide additional housing.

Goals incorporated from the *Flagship 2030* plan include:

- Create university villages and residential colleges;
- Develop sustainable facilities;
- Reduce the relevance of distance;
- Engage the university in the community.

Additional goals specific to the ten-year master planning timeline include:

- Accommodate projected overall growth in student enrollment of 9 to 11 percent;
- Facilitate increased graduate enrollment;
- Utilize the ten-minute class change zone for evaluating building sites;

- Address family housing and flood issues north of Boulder Creek;
- Address the need for affordable faculty and staff housing.

## **Sustainability**

The Master Plan reflects a balance of preservation and growth. Preservation is envisioned using a combination of significant renovation, restoration, and renewal of existing buildings. The plan continues the aesthetic appearance on Main Campus, while providing a more flexible approach to the emerging architecture of East Campus. The plan assumes a modest increase in enrollment and moistest increase in research within limited new construction on Main Campus. Significant facilities growth is anticipated on East Campus, primarily focusing on new science facilities. Moderate growth along planned lines is expected on the Williams Village residence zone.

Key points from the Master Plan:

- *Smart Growth* – UCB wants to focus on improving space utilization of existing buildings, before constructing new ones. The Boulder campus recently created a Space Management Advisory Committee to oversee space allocation, maximization of space utilization, as well as develop space standards.
- *Sustainable Buildings* – Campuses have a significant impact on the built and natural environment and are under increasing pressure from governments, students, and community members to carefully mitigate their environmental footprint. Campus development initiatives factor in economic and social needs of surrounding neighborhoods and include design elements that contribute to environmental health as well as architectural aesthetics.
- *Zero-Waste* – The Boulder community is actively pursuing zero waste operations, defined as a 90 percent diversion of municipal solid waste. The City of Boulder has committed to achieving the goal of 85 percent diversion by 2017 and the county has committed a goal of beyond 90 percent levels by 2025.
- *Transportation* – Transportation and particularly alternative modes of transportation are critical to the success of future development of the campus. The Campus Master Plan adopts multiple goals from the Sustainability Task Force, including:
  - Move toward increased transportation fuels derived from renewable resources;
  - Increase the number of passenger miles per vehicle mile traveled;
  - Reverse the growth in the average length of trips taken;
  - Work to reduce the growth in the number of trips taken while retaining the current modal hierarchy of pedestrians, bicycles and skateboards, transit, car share/carpool, and single occupancy vehicles.

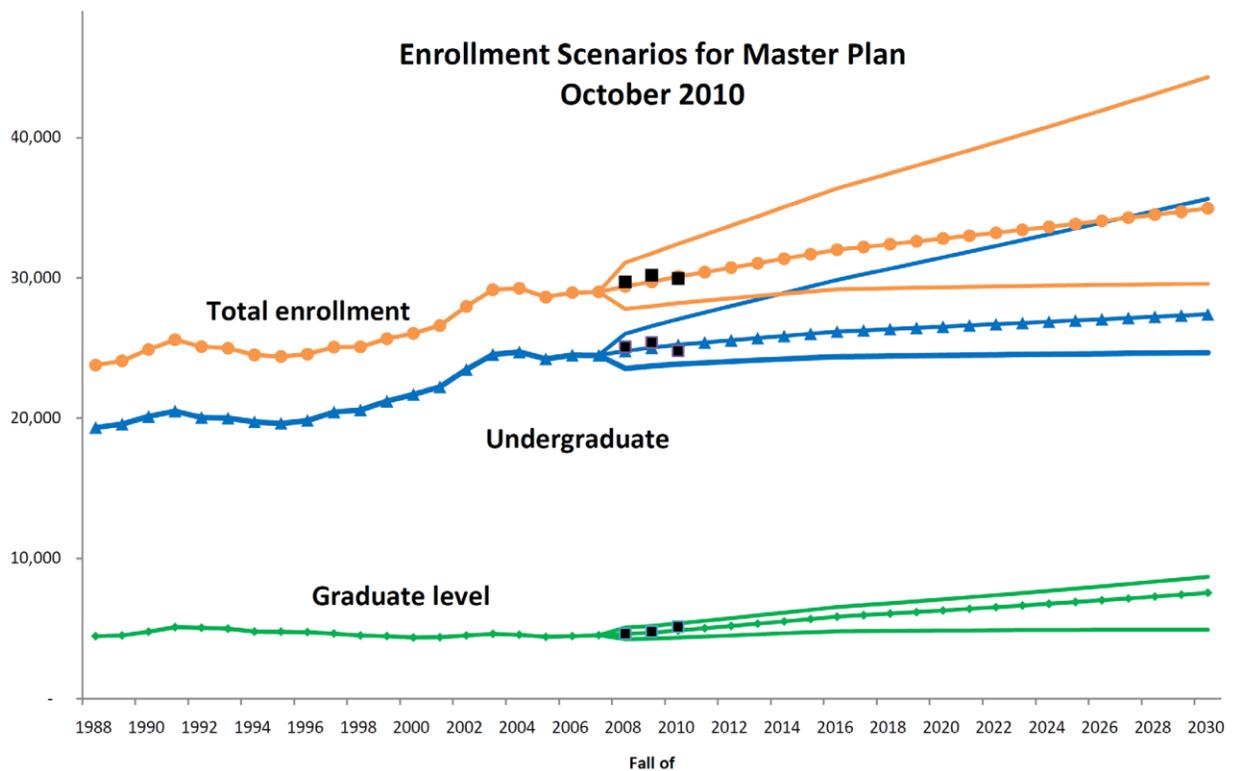
## **Enrollment**

Student enrollment is the principal basis for determining the educational facilities needs identified within this decade-long plan. UCB is committed to accommodating the educational needs of Colorado students while providing undergraduate, graduate, and professional education of the highest quality. Campus scenarios for the future take into account projected growth in the

number of Colorado high school graduates. The *Flagship 2030* plan established a commitment to enroll approximately 5 percent of Colorado high school graduate annually (in line with historical trends). Campus enrollment will be impacted by additional factors. Planned facilities will seek to accommodate approximately 33,000 students by the year 2020, or approximately 2,800 more than in the fall 2010 semester. Further UCB has a goal of increasing from 1,200 international students to 3,000 by 2016, and maintaining an 80/20 percent ration of undergraduate to graduate level students.

Predictions take into account the behaviors of high school graduates, transfers, new graduate level students, and their families; the state, with policies on funding, tuition, aid, and admissions; the public, with reactions to CU and to state policies; and the institution itself, with admittance rates, financial aid, recruiting, and capacity limits. Additional factors may influence enrollment in the ten-year time horizon. The university's president recently announced guaranteed admission to one of CU's three campuses, to any student requesting transfer from any of Colorado's 13 community colleges, to any arts and sciences program, if they have completed 30 semester hours and earned at least a 2.7 grade-point average. A total of 135,000 students are currently enrolled in the state's community colleges.

Three scenarios are shown: midpoint, high, and low.



Headcount enrollment of degree and licensure-seeking students with state reportable hours.  
 Based on Flagship 2030 enrollment scenarios, with 900 students added to total by 2016 from international initiatives developed after Flagship 2030. Solid lines are error ranges. Black squares are actuals.  
 PBA: L:\ir\emgt\data\lib. EnrollmentScenarios201010.xls. Posted at <http://www.colorado.edu/pba/records/enrlproj.htm>

## **Research**

Expanding campus research is an additional driver for the expansion of facilities. Between 2001 and 2010 the annual research awards grew approximately 62 percent. With increasingly integrated teaching/research activity a continued strong growth is expected. Between 2004 and 2008 UCB accounted for \$1.29 billion in research expenditures, and UCB is preparing for an annual growth rate of approximately 3 percent. Such growth is expected to focus the development of East Campus.

## **Housing**

The demand for affordable and proximate housing impacts students, faculty, and staff. The Williams Village zone continues to maintain conceptual housing plans for faculty, staff, and graduate student housing adjacent to the Chancellor's residence, however an adequate funding stream has not been identified to repay necessary bonds when rental units are typically provided at 80 percent of market value. The demand for family housing is also expected to increase as the *Flagship 2030* plan identified a goal of hiring an additional 300 tenure and tenure-track faculty between 2007 and 2020.

Expectations are that the freshman live-in rule will be retaining and potentially expanded for the ten year period under the Master Plan. The live-in rule in conjunction with increasing freshman enrollments has limited the number of upper division students in Main Campus residence halls. UCB Housing and Dining Services has set a goal to increase the number of upper division student utilizing campus housing from 5 percent to 20 percent. With the 2011 addition of approximately 1,000 new beds on Main Campus and Williams Village there remains an unmet need of over 400 beds.

## **Facilities and needs**

The CCHE space utilization guidelines were repealed in 2006, however the guidelines remain available for institutions as a point of reference and general information. Additional approaches include benchmarking against peer institutions.

Independent consultants found that facilities needs are partially driven by the fact that UCB has 50 to 55 percent less space than peers. This calculation excludes housing, which would further increase the space deficit. The campus lags behind national peers with: 36 percent less space per full-time faculty; 39 percent less space per average student; existing overall space deficit of nearly 2 million assignable square feet (asf); and a project 3.5 million asf by 2020. Campus classroom and teaching space utilization rates are among the county.

## **Main Campus**

The Main Campus has no substantial undeveloped acreage remaining. The useable real estate has

been developed with buildings, parking lots, and improved open space. Development on the Main Campus will require removal and replacement of space in major redevelopment efforts or strategic infill developments that will meet the needs of existing programs. The limits and pace of redevelopment will depend on the amount of infrastructure improvements needed for the proposed project.

There are 41 acres on the Main Campus designated as developable areas. Approximately half (20 acres) of the developable sites are reserved for existing program expansion of adjoining uses. The remaining sites (21 acres) are potential building sites that could be considered for new programs, replacement programs, or expansion sites for existing programs. Another 26 acres are proposed redevelopment sites where wholesale removal of existing buildings would be undertaken with the goal of increasing density by at least 50 percent.

Many of these sites are surface parking lots that may require replacement of spaces in structured parking. There are two locations likely for above-grade parking structures: north of Franklin Field and next to the Regent Autopark. Additional parking under buildings may be considered if the development on that site has a public function. All these sites for parking are long-term potential parking facilities. The strategy during the 10-year period will be to develop remote parking lots and focus on transportation demand management strategies.

There are substantial areas for redevelopment on the Main Campus. These are primarily housing areas. Family housing facilities north of Boulder Creek are largely 40 to 70 years old and have not received any major renovations. Redevelopment will also occur in the Quad area east of Farrand Hall to increase density and at Kittredge Commons, now obsolete, to increase the number of beds. Additional development on natural areas or remaining recreation and green spaces that are needed for student life are inappropriate, as such development could compromise both safety and campus qualities. Open space may be moved and shaped to accommodate development but the overall loss of open space shall be avoided.

#### *Planned projects*

The Main Campus will continue to see new construction but at a slower pace than the previous planning period. There are 20 new projects, major additions, or parking structures proposed. Most of the new construction on the Main Campus is focused on auxiliary enterprise functions such as the utility generation, the Student Recreation Center, residence halls, and family housing. Academic projects involve additions to the Engineering Center, Duane Physical Science Complex, and Norlin Library as well as a new Performing Arts Center.

In addition, 14 major renovations and capital renewal projects are planned, which highlights the university's desire to improve its existing facilities. Capital renewal renovation to Ketchum Arts and Sciences, Helms Arts and Sciences, Guggenheim Geography, Education, Clare Small Arts and Sciences, and McKenna Languages are proposed. Programmatic renovations of Ekeley Chemistry, Cristol Chemistry and Biochemistry, and the Fleming Building are likely to support

change in mission for these facilities. Housing renovations will continue to be made to modernize facilities.

### **East Campus**

The East Campus has the largest development potential of the three developed campuses. Consistent with the previous master plan, the East Campus will become the main focus of development during the planning period and beyond. Originally designed as a low-density, suburban office park, it is now envisioned as a full university campus, with higher density buildings, a broad mix of programs, and a hierarchy of organized open spaces.

The higher density goal targets an ultimate build out of 4 million gross square feet over the next 40 years. This is an increase from the 1.6 million GSF originally planned in the Research Park and the 400,000 GSF of existing family housing and administrative space elsewhere on the East Campus. In total, there are 69 acres of developable area located on the East Campus.

#### *Planned projects*

The East Campus will see new academic and research building development, primarily in the sciences. The existing campus is composed of four main users: family housing; general university administrative and research space located north of Boulder Creek; Intercollegiate Athletics facilities; and the CU Research Park. The Research Park is planned around a series of lease pods, which are being re-planned into a new arrangement in alignment with new density requirements and the desire to make it one integrated science campus. New buildings that are proposed include the completion of the academic wing of the Caruthers Biotechnology Building, a Chemistry and Life Sciences Building, Geosciences Addition to the McAllister Center, an addition to the LASP Space Technology Center, and several other new unspecified buildings for academic and research uses.

### **Williams Village**

The Williams Village campus is perceived as a residential campus for both student housing and faculty and staff. The east side of Bear Canyon Creek remains largely undeveloped with approximately 19 acres that have been designated for future faculty/staff/family housing development. On the west side of Bear Canyon Creek, 8 acres remain to be developed for student housing, support facilities such as dining, residential college facilities, recreation, and parking.

#### *Planned projects*

Additional student housing is planned for Williams Village. The final residence hall building may be constructed along with a new dining center that would be a scaled-down version of the Center for Community. Faculty, staff, and family housing may be constructed east of Bear Canyon Creek.

## **South Campus**

A conceptual land use assessment conducted by the university that was published in January 2002 defined the potential development area of the CU-Boulder South property. Of the 310 acres owned by the university, 81.50 acres are in natural areas that are unsuitable for development. Another 10.40 acres are in ponds for irrigation or exposed groundwater. Another 49.19 acres are needed for potential flood storage on site to protect any on-site development, but which might be developed for recreation or athletics facilities. This results in a net of 165.23 acres that could be developed of which 32 acres could be expanded flood control storage to protect the community downstream.

CU-Boulder South continues to be studied jointly by the City of Boulder, Boulder County, and the university regarding flood potential and mitigation. No development of CU-Boulder South is planned during the 10-year period. The university will work cooperatively with the other governmental agencies on any flood mitigation strategies that might be developed.

### *Planned projects*

The largest unmet needs for land are recreation fields to accommodate student demand, and intercollegiate athletics practice and competition fields for sports other than football. Development of the property for these uses may occur, depending on the outcome of ongoing studies of the South Boulder Creek floodplain being conducted by the City of Boulder and Boulder County. Infrastructure development, including potentially a large-scale photovoltaic array, may lead recreation and athletics uses.

## **North of Boulder Creek**

Much of the existing development is subject to long term redevelopment potential. The area north of Boulder Creek is at the end of its useful life and will ultimately be replaced. The administrative and service area located on the north side of Boulder Creek is largely in the flood plain and redevelopment would require careful consideration of the substantial risk.

### *Planned projects*

UCB has identified the area north of Boulder Creek as an area appropriate for redevelopment. The North of Boulder Creek Framework Plan sets an overall framework for the mixed-use redevelopment of this area. At full development, there is the potential for 1,500 apartment style living units, 270,000 GSF of academic or community space, and over 15 acres of recreation and athletics fields. The redevelopment of the site would utilize existing infrastructure systems and relieve pressure to develop South Campus in the foreseeable future.

## **IV. STAFF RECOMMENDATION**

**The Commission gives full and unconditional approval to the Master Plan for the University of Colorado at Boulder.**

**V. STATUTORY AUTHORITY**

C.R.S. §23-1-106 (3)

**ATTACHMENT A: Questions and Answers on the Master Plan**