



**Program Plan
for the
Business School Building**

University of Colorado at Denver and Health Sciences Center
October 25, 2007

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Program Plan for the Business School Building

I. Overview

a. Executive Summary

From its inception, the Business School at the University of Colorado at Denver and Health Sciences Center (UCDHSC) has focused on providing working professionals with graduate and undergraduate education. The School of Business features the largest graduate school of business in the region, with over 1,000 graduate students. In addition to the many areas of concentration available in its traditional degree programs, the affiliate partners of the Business School (The Executive MBA Program, The 11-Month MBA Program, and the Bard Center for Entrepreneurship) offer non-traditional formats for business education.

The existing programs of the Business School are expected to see continued growth, and there is no room within their existing inventory of space for expansion. In addition, the Business School will soon be launching three new programs-*Bioentrepreneurship*, *Sports and Entertainment Management*, and *Global Energy Management*- in response to the following trends in business education:

- Globally Interdependent Economy
- New Information Technologies
- Managing for Sustainability
- Importance of Innovation and Entrepreneurship

A new building is needed to accommodate growth, but is also needed to bring the Business School together in one location. The Business School is currently spread over six different physical locations, one of which collectively encompasses the many classrooms being used by the Business School on the Auraria Campus. This alignment makes it difficult for the school to create a strong, clear identity. This new building will greatly enhance the student experience, by providing a central point where students can learn and create in ways both formal and informal. The Business School building will also enhance the visibility of the school within the external communities and encourage members of the business community and Business School alumni to mentor, teach, and recruit.

This document outlines the vision for a 120,000 square foot Business School for UCDHSC, to be located on the Auraria Campus near the intersection of Speer Boulevard and Larimer Street. This location lies within the newly appointed UCDHSC “neighborhood”, at the convergence of a major campus gateway, and within walking distance to 14th Street, an area of downtown undergoing a major transformation. The building will consolidate all of the many existing locations of the Business School, and will feature dedicated classrooms designed for business education as well as signature spaces including a trading room, breakout rooms and executive case study rooms.

This building is projected to cost \$42,000,000, including \$15,000,000 in cash funds (donations and sponsorships) and a \$27,000,000 request for state funding. Assuming the necessary funding is made available, design of the building would begin in 2008, with completion and occupancy expected to occur in July of 2011.

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b. Description of Academic Program

The Business School Building will house only the UCDHSC Business School and its affiliated programs. A description of the Business School follows. More detailed information is included in the Business School View Book, attached as Appendix A.

i. Mission of the Business School

Today's global business environment of rapid change, accelerating innovation and intense competition calls for a dynamic form of leadership and skill from business professionals. Emerging and mid-sized businesses form the core of the new economy in the West and require leaders who can transform ideas into action, quickly resolve problems, anticipate future challenges and opportunities and know how to partner. To thrive in this fast changing world, business professionals need to be entrepreneurial, innovative and adaptive, and possess a global mindset. Today's graduates will face a more competitive world with more customers, collaborators, and partners. It is a world that demands agility, innovation and entrepreneurship.

The Mission of the Business School is the following:

“Our mission at the Business School is to empower graduates to succeed in this changing global economy. We do this by creating and disseminating knowledge of value. We work in partnership with businesses in the community and around the world.”

The Business School fulfills this mission in the following ways:

“We have strong collaborative partnerships with the business community in the major industry sectors of the region including bioscience, energy, financial services, information technology and sports/entertainment. We provide programs, events, research, interns and employees. Businesses also sponsor professorships, scholarships and events.”

“We create and disseminate knowledge of value to academic and business communities. We focus on knowledge that is current and relevant to students, alumni, colleagues and the business community.”

“We empower graduates to succeed in a changing global economy. Through research, teaching and experience our graduates are prepared with the knowledge, skills and behaviors required in business. Our graduates flourish in global environments, understand global commerce, appreciate cultural diversity and foster a sustainable environment.”

ii. Vision of the Business School

The vision for the UCDHSC Business School is the following:

Transform Business Education for the 21st Century: Engage the Community

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“The Business School will become one of the top global schools recognized for the quality of research, teaching, and unique areas of excellence that benefit the people of Colorado, the nation and the world. We will:

- I. Drive economic growth and vitality in the community by preparing business leaders to compete and work in the global economy.*
- II. Link Denver and Colorado to the world market as a global hub for emerging industries and as a center for business innovation and entrepreneurship.*
- III. Be a magnet for talent and expertise in key industry clusters and centers of excellence in business education.*
- IV. Develop innovative learning and teaching experiences that allow students to learn anywhere they go.*
- V. Empower graduates to succeed in the changing global economy by creating and disseminating knowledge of real value..”*

iii. History and Background

The Business School at the University of Colorado at Denver and Health Sciences Center is located in downtown Denver, Colorado in the center of the city’s business, recreational and commercial districts. Denver has a thriving business community as well as vibrant cultural and sports venues within walking distance of the campus. Denver is also one of the fastest growing job markets in the country.

The Business School started as a branch of the University of Colorado in downtown Denver. In 1975 the University of Colorado at Denver became part of a four university system of the University of Colorado—Boulder, Denver, Colorado Springs and the Health Sciences Center. In 2004, the University of Colorado at Denver merged with the Health Sciences Center. The University of Colorado at Denver and Health Sciences Center (UCDHSC) is now a major public urban research university serving more than 27,000 students annually. With 100 degrees and 11 schools and colleges UCDHSC grants more graduate degrees than any other university in Colorado. Finally, with \$365 million in research funding and 12,000 employees, UCDHSC is a major employer in Colorado.

The Business School is the largest graduate school of business in the region with over 1,000 graduate students. With the recent opening of residence hall downtown, the Business School now has 1,300 undergraduate students. The majority of the undergraduate students are full-time students.

From its inception the Business School has focused on providing working professionals with graduate and undergraduate education. This includes successfully linking theory and practice, providing flexible program designs that range from one course to complete degrees. With six MBA options and seven specialized MS degrees, the students can tailor their program to meet career goals.

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iv. Organizational Structure

Academic Programs Offered

The following undergraduate and graduate programs are offered by the UCDHSC School of Business:

UNDERGRADUATE

- Business Administration (B.S.) – including the following primary areas of emphasis
 - Accounting
 - Financial Management
 - Human Resources Management
 - Information Systems
 - International Business
 - Management
 - Marketing

GRADUATE

- Business Administration (M.B.A.) – including the following offerings
 - Professional MBA (evening)
 - Executive MBA – (see Affiliated Centers/Programs below)
 - Executive Health Administration – (see Affiliated Centers/Programs below)
 - Full-time 11-month MBA – (see Affiliated Centers/Programs below)
- Masters of Science Degrees (M.S.)
 - Accounting
 - Finance (M.S.)
 - Health Administration (M.S.)
 - Information Systems (M.S.)
 - International Business (M.S.I.B.)
 - Management and Organization (M.S.)
 - Marketing (M.S.)
 - Dual MBA/MS offered in conjunction with the Professional MBA program
- Doctorate (Ph.D.)

Computer Science and Information Systems

Affiliated Centers/ Programs

Executive MBA/MHA

The executive Masters of Business Administration and executive Masters of Health Administration programs are collectively operated by Executive Programs, an organization affiliated with the Business Schools of each of the University of Colorado's three campuses.

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Each of the campuses is represented on the Executive Programs Board. However, Executive Programs is located on the UCDHSC Downtown Denver Campus.

The degrees are offered in an “executive” format, which allows working professionals to continue working while going through the program. This is accomplished by combining full-day class sessions with weekend sessions. The executive format also places a premium on students who have significant workplace and managerial experience and on teaching real world business applications.

11-Month MBA

The 11-month MBA offers a traditional MBA degree in a non-traditional format. As the name implies, the program is compressed into an 11 month period. Students attend class much longer in the course of a week than they would in an evening or traditional day MBA program. However, this tradeoff allows them to complete the program in a much shorter time and enter the workforce. The distinctive features of this innovative program include corporate executive partnerships and an international travel and study experience.

Bard Center

The Bard Center for Entrepreneurship is a place where students, faculty and entrepreneurs come together. The center is focused on the teaching and practice of entrepreneurship by accelerating the launch of new start-up companies and driving development of new products and services. The teaching of entrepreneurship includes a graduate course tied to the MBA program. The Bard Center’s programs are an integral part of the economic development activities and growth of Denver and Colorado.

Institute for International Business

The Institute works closely with and draws faculty expertise from the Business School, and collaboratively offers nationally recognized programs in international business, such as the faculty development programs in International Human Resources and International Entrepreneurship.

Program Accreditations/ Distinctions

The Business School at UCDHSC, as a whole, is accredited by The Association to Advance Collegiate Schools of Business (AACSB), a distinction bestowed upon less than 30% of all business programs in the United States.

In addition to this distinction for the Business School, individual programs and affiliated entities in the Business School have been recognized as follows:

- The Accounting programs have earned their own accreditation from AACSB International.
- The Health Administration programs have been recognized by the *Accrediting Commission of Education for Health Services Administration (ACEHSA)*.

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- The Health Administration Program was one of the first executive programs in the nation and is the only ranked executive health program in *US News and World Report*.
- The Bard Center for Entrepreneurship is ranked #3 as a regional program in *Entrepreneurship Magazine*
- The Institute for International Business has been nationally recognized as a Center for International Business Education and Research by the U.S. Department of Education for the past 14 years--the only one in Colorado, one of two in the Rocky Mountain region, and in the company of elite schools like The Wharton School of Business, Columbia and Duke universities.

v. Community Context

The UCDHSC Business School is linked to the local, national and global business community in a number of different ways. The Business School has more than 150 executives and community leaders on various boards and advisory councils. These executives and community leaders come from major companies such as Comcast, Molson-Coors, Ernst & Young, Frontier Airlines, PricewaterhouseCoopers, IBM, and Wells Fargo as well as midsize and smaller companies like Pacific Care, Exempla, and Myogen. These leaders provide financial support, participate in curriculum reviews, serve as guest lecturers, offer internships, participate in placement events and participate in strategic planning activities at the Business School.

Students of the Business School regularly participate in internships and class projects that support businesses, hospitals, governments and other non-profit community groups at home and across the world. Business school graduates are encouraged to participate in community leadership programs such as the Downtown Denver Partnership Emerging Leaders Program and to be leaders in professional associations like the Society for Human Resources Management. Overall, the Business School engages in collaborative efforts with the Denver Chamber of Commerce, the Metro Denver Network, the Downtown Denver Partnership and Offices of the Mayor and Governor for Economic Development.

Several of the UCDHSC Business School's academic programs and affiliated centers have ties to the local, national, and even broader global community.

- *The 11-Month MBA* has undertaken partnerships with prominent business leaders such as Molson-Coors, Prologis and IBM. These partnerships offer "live cases" where students address key strategic issues and "burning questions" presented by the corporate partners.
- *The Bard Center for Entrepreneurship's* students, faculty, incubator companies, and business plan competitors benefit from extensive involvement from the business community. In addition the organizations such as Metro Denver Chamber of Commerce, the Downtown Denver Partnership, and the Fitzsimmons Bioscience Business Incubator are partnering with the Bard Center to support student entrepreneurs through internships, networking connections, advising and mentoring new ideas and companies.
- *The Institute for International Business* The Institute for International Business and the Business School bring top global executives and faculty to speak to the local business community on significant global issues.

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- *The Executive Health Administration program* is a joint venture between the Business School and the Network for Healthcare Management, a consortium of 15 top health administration programs which include University of California at Berkeley, University of Michigan, Northwestern University, the Universities of Pennsylvania (Wharton) and University of Washington. The program offers a combination of intensive on-campus sessions, computer conferencing and computer-directed case analysis. The faculty come from consortium members and offer a rich perspective on the health care *industry*.
- *The Center for Information Technology Innovation* is an advisory council comprised of the CIOs of major companies in Colorado. It provides students and faculty with access to information technology practice in industry.

c. Relationship to the Facilities Master Plan

In 2007, the Auraria Higher Education Center Master Plan was updated by a consultant team comprised of Sasaki Associates, studioINSITE and U³ Ventures. The master plan was approved by the Auraria Higher Education Center Board of Directors on June 20, 2007. The plan includes five (5) development principles:

1. Expanding the campus to meet the current and future needs of the institutions

The 2007 Auraria Master Plan revealed a current space deficit (including all institutions) of 158,234 asf of classroom facilities and an overall deficit of 732,639 asf. By 2026, without the introduction of any additional space, these numbers are projected in the plan to increase to 230,810 asf and 1,179,268 asf respectively. A substantial portion of these gaps can be attributed to UCDHSC. The Business School project will help achieve this objective by adding classroom and other space to the campus inventory.

2. Enhance the identity of the institutions

One of the specific areas of concern cited in the master plan is a lack of institutional identity for each of the three institutions that share the Auraria campus- University of Colorado at Denver and Health Sciences Center- Downtown Denver Campus (UCDHSC-DDC), Metropolitan State College of Denver, and Community College of Denver. The master plan addresses this issue by establishing physical neighborhoods for each of the three institutions, with the recommendation that future development reinforce these neighborhoods and create some distinction amongst the institutions. The neighborhood area outlined for UCDHSC-DDC is shown in Figure 9 (page 37). The proposed site of the UCDHSC-DDC School of Business lies within the UCDHSC-DDC neighborhood, which supports the vision of the 2007 Auraria Master Plan.

3. Support the educational objectives of the three institutions, with specific emphasis on the student experience outside of the classroom.

The Business School will incorporate some of the latest technological and design advances, and provide non-traditional learning spaces such as a trading room and breakout study rooms. It will also provide one single, consolidated location for students, faculty and members of the business

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community to gather to exchange ideas and to learn as a community. In this way, the Business School project very much supports the enhancement of the overall learning environment.

4. *Create strong connections from campus to the core of downtown Denver.*

Creating strong connections from the campus to downtown Denver is a major point of emphasis in the 2007 master plan. One of the campus entry points that have been identified in both the Auraria Master Plan and Downtown Area Plan as having great potential as a major connection is Larimer Street. Larimer Street runs directly adjacent to the sites being proposed for the Business School. The Business School building could play a vital role in bridging the gap across Speer Boulevard, both physically and perceptually, by shortening the travel distance to campus facilities and attracting members of the business community to partake in opportunities such as the professional development and alumni center, which is one of the design goals for the Business School.

5. *Adherence to the principle of sustainable planning and design.*

The building will comply with State of Colorado requirements regarding LEED certification.

II. Justification

a. Existing Conditions

i. Current Program Enrollment

The following enrollment and contact hour data were taken from the fall 2006 semester.

	Undergraduate	Graduate	TOTAL
Headcount	1,382	1,033	2,415
Credit Hours	11,146	6,807	17,953
Contact Hours	9,781	5,298	15,079

Table 1: Business School Enrollment (Fall 2006)

ii. Current Space Inventory

Existing Locations

The activities of the Business School occur in six (6) different locations. These locations are illustrated in Figure 1, located on the following page. Figure 1 is followed by a description of what activities occur in each location as well as the square footage in each location listed by function.

University of Colorado at Denver and Health Sciences Center Downtown Denver Campus

Business School Program Plan

CU-Denver Building (1,2)

- + Dean's Office
- + Graduate and Undergraduate Student Services
- + Business School Staff
- + Majority of Business Faculty
- + Executive Programs (XMBA and XMHA)- First Floor

Masonic Building- 16th and Welton (4)

- + Bard Center for Entrepreneurship
- + 11-Month MBA Program

Lawrence Street Center (3)

- + Overflow Business Faculty

Science Building (6)

- + Various Classrooms

Auraria Library (6)

- + Various Classrooms

King Center (5,6)

- + Two (2) Classrooms
- + One (1) Computer Lab
- + Various Classrooms

North Classroom (6)

- + Various Classrooms

Plaza Building (6)

- + Various Classrooms

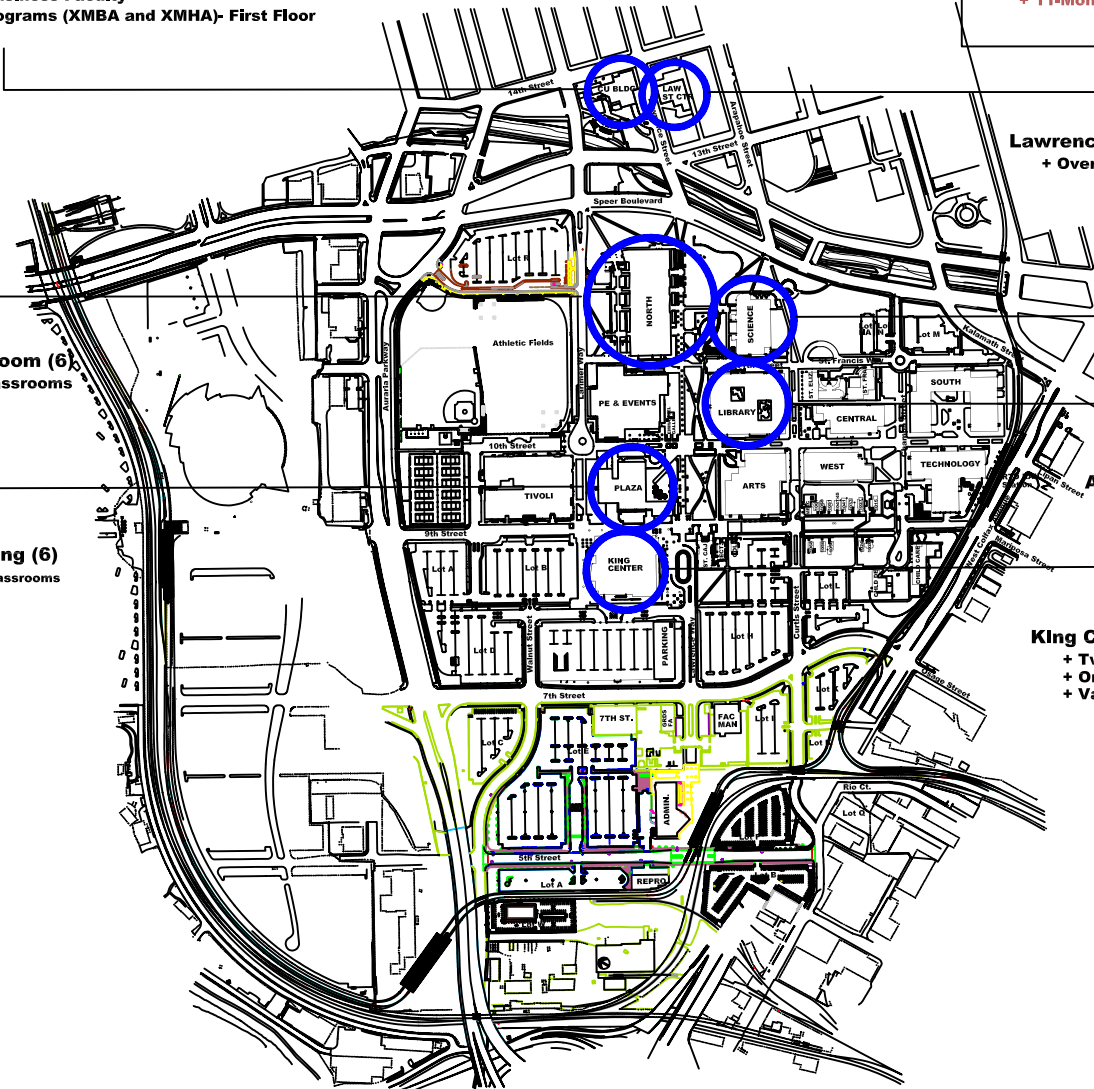


Figure 1: Current Business School Locations

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NOTE: The number next to each of the location descriptions correspond to the number shown on Figure 1.

1. CU-Denver Building 1st Floor

The School of Business has several affiliated D2 programs. Two of these programs, the Executive Master in Business Administration (XMBA) program and the Executive Master in Health Administration (XMHA) program, are housed in the Executive Programs suite located on the first floor of the CU-Denver Building.

Both programs operate entirely within this suite, without relying on any exterior teaching or meeting space. The CU-Denver Building is at 1250 14th Street, between Lawrence and Larimer. A breakdown of this space by space type is located below.

Executive Programs	ASF	GSF
OFFICE	2,491	4,018
INSTRUCTIONAL	1,283	2,069
OTHER	853	1,376
TOTAL	4,627	7,463

Table 2: Executive Programs Space Inventory

2. CU-Denver Building- 2nd Floor

The heart of the Business School lies in the CU-Denver Building on the second floor. The dean's office, undergraduate and graduate student services, professional staff and a large majority of the faculty all reside within this space. Business occupies the entire second floor of the CU-Denver Building. A breakdown of this space by space type is shown below.

CU-Denver Building	ASF	GSF
OFFICE	13,923	22,456
OTHER	261	421
TOTAL	14,184	22,877

Table 3: CU-Denver Building Space Inventory

3. Lawrence Street Center

Suite 390 in the Lawrence Street Center is used to house Business faculty that do not fit into the 2nd floor space in the CU-Denver Building. The Lawrence Street Center is at 1380 Lawrence

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Street, between Speer and 14th Street. A summary of the Lawrence Street Center space by space type is shown below.

Lawrence Street Center	ASF	GSF
OFFICE	2,254	3,635
OTHER	237	382
TOTAL	2,491	4,018

Table 4: Lawrence Street Center Space Inventory

4. Masonic Building

The Bard Center for Entrepreneurship and the 11-Month MBA Program collectively occupy the entire third floor of the Masonic Building, located at 16th Street and Welton Street. They share many of the rooms. To reflect that in the space summaries, the square footages of the shared spaces have been divided equally between the two programs. Both programs are D2 programs and like the Executive Programs operate entirely within this space.

Bard Center

The Bard Center for Entrepreneurship provides both a graduate level academic curriculum and a range of services to help launch and grow entrepreneurial businesses. In addition to teaching entrepreneurship to over 350 students a year, the Bard Center provides space, services and mentorship opportunities for up to 10 companies in its incubator space. The Advisory Council is at the core of the Bard Center and provides funding, guidance, and support to the entire entrepreneurship program. The Bard Center is also benefited by having its own venture fund which allows the Bard Center to provide necessary seed capital to new ventures. The current Bard Center space allotment is below.

Bard Center	ASF	GSF
OFFICE	2,002	3,229
INSTRUCTIONAL	1,497	2,415
OTHER	779	1,256
TOTAL	4,278	6,900

Table 5: Bard Center Space Inventory

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11-Month MBA

The 11-month MBA program is an accelerated degree program where students attend class throughout the day, five days a week in order to complete their degree in a shorter period of time. The current 11-Month MBA space allotment is below.

11 Month MBA	ASF	GSF
OFFICE	302	486
INSTRUCTIONAL	1,011	1,631
OTHER	603	973
TOTAL	1,916	3,090

Table 6: 11-Month MBA Space Inventory

5. King Center

The Business School manages a computer lab and two specialized SMART classrooms in the King Center. The use of the computer lab is restricted to Business students, and it is operated as a drop-in, general use computer lab. It is in room 216. The classroom spaces (KC 113,205) are scheduled by the Business School only. They are not available for scheduling by any other college or institution. A summary of the square footage of these spaces is provided below.

King Center	ASF	GSF
INSTRUCTIONAL	4,279	6,902
TOTAL	4,279	6,902

Table 7: King Center Space Inventory

6. Auraria Classroom Spaces

Although presented here as a single location, the Auraria Classroom Spaces are actually a collection of spaces located in various buildings throughout campus. Like most other departments and colleges at UCDHSC DDC, the Business School teaches their courses in classrooms that are shared not only amongst UCDHSC entities, but with Metropolitan State College of Denver (MSCD) and the Community College of Denver (CCD). During the fall semester of 2006, Business School courses were taught in five different buildings (North Classroom, Auraria Library, Plaza Building, Science Building, and the King Center) on the Auraria Campus in a total of 35 different classrooms. A full list of these classrooms and their utilization statistics are provided in Appendix B. The total square footage of these 35 classrooms is listed below.

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Auraria Shared Classrooms	ASF	GSF
INSTRUCTIONAL	25,048	40,400
TOTAL	25,048	40,400

Table 8: Auraria Shared Classrooms Space Inventory

7. Space Totals

The space inventories from all of these locations have been totaled below. This chart represents the total space presently occupied or used by the UCDHSC Business School.

Business School and D2/Affiliates Total	ASF	GSF
OFFICE	16,177	26,092
INSTRUCTIONAL	29,327	47,302
OTHER	498	803
<i>Business School Subtotal</i>	<i>46,002</i>	<i>74,197</i>
OFFICE	4,795	7,733
INSTRUCTIONAL	3,791	6,115
OTHER	2,235	3,605
<i>D2/Affiliates Subtotal</i>	<i>10,821</i>	<i>17,452</i>
TOTAL	56,823	91,649

Table 9: Total Business School and D2/Affiliates Space Inventory

For the sake of comparison, a summary chart of total existing space *by standard* is provided below. Existing Space (Above:Table 9) shows an inventory of *actual* space occupied and used by the Business School and its affiliates. By comparison, Existing Space by Standard (Table 10) shows the amount of space that would be allotted to the Business School and its affiliates if you took the roster and credit hour production and multiplied that by office, instructional and other applicable space standards.

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Business School and D2/Affiliates Total	ASF	GSF
OFFICE	14,508	23,400
INSTRUCTIONAL	15,079	24,321
OTHER	0	0
<i>Business School Subtotal</i>	<i>29,587</i>	<i>47,721</i>
OFFICE	1,355	2,185
INSTRUCTIONAL	6,573	10,602
OTHER	6,230	10,048
<i>D2/Affiliates Subtotal</i>	<i>14,158</i>	<i>22,835</i>
TOTAL	43,745	70,556

Table 10: Total Business School and D2/Affiliates Space Inventory By Standard

This comparison is useful because it provides a better benchmark for current instructional square footage need. Due to the shared nature of Auraria classrooms (where business is scheduled in many classrooms for sometimes very few hours per week), the actual existing square footage number for instructional space is abnormally high. Table 10 gives us a more realistic number for current instructional space need for the entire college and its D2 and affiliate programs.

iii. Assessment of Space Functionality

Adjacency Concerns

One of the principle drivers for the new Business School Building is the need and desire to bring the school together in one location. The physically de-centralized model that exists detracts from the student, faculty and staff experience, places the college at a competitive disadvantage, and results in operational inefficiencies. Some specific examples of the harmful effects of the current space alignment are:

- There are currently 14 faculty members that are cut off from the daily life of the Business School because there are no offices for them in the CU-Denver Building.
- There are no opportunities for informal hallway discussions amongst faculty that often lead to productive research ideas.
- The classrooms where faculty interact on a formal basis with students are separated from the faculty offices by Speer Boulevard. This environment deters students and faculty from interacting informally.
- The lack of a centralized facility makes it very difficult to create a brand for Business School students and prospective students to identify with.
- The current space alignment also makes it more difficult to create cohesion amongst the faculty and staff.

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- It is often necessary for faculty to travel long distances on a regular basis to teach their courses. This is especially difficult if it is necessary to carry presentation materials, test materials or equipment.
- Staff face these same complications, often having to travel great distances to oversee lab operations or attend meetings.
- The D2 operations (11-month MBA, Bard Center for Entrepreneurship, Executive MBA) have little to no opportunity to interact with the rest of the college and in some cases, the rest of the institution. These students feel little connection to UCDHSC, and in some cases do not have access to the resources on the Auraria Campus that most other UCDHSC students do (library, recreation, student union building, and student services).

Consolidation of the School of Business into one location will allow the following:

- A greater sense of belonging and collegiality.
- Opportunities for informal meetings, impromptu workshops that often lead to new research ideas.
- Opportunities to invite the Denver community into professional and attractive spaces through forums, meetings and informal events.
- A central location for all outreach efforts undertaken by the business school. Currently these events are spread between the Bard Center and the various locations on the Downtown Denver Campus.
- A venue for professional, continuing education, which is not presently offered due to a lack of adequate facilities.
- A true home for undergraduate and graduate students- a place that encourages people to come earlier, stay later and builds loyalty in undergraduate and graduate alumni. With the advent of campus housing at UCDHSC DDC and the focus on growing undergraduate (less transient) enrollment, this will become even more critical in the future.
- Improved and more meaningful relationships between faculty and students. Speer Boulevard acts as a divide between the students, who predominantly park and go to class on the Auraria side and faculty, who office on the downtown side. This divide deters interaction outside of class between faculty and students.

iv. Current Space Utilization by Classroom/Lab Hours of Use and Percent Station Utilization

The numbers below are a summary of the utilization of Auraria Classrooms by the Business School in the fall of 2006. (A more comprehensive chart of utilization by individual classroom is provided in Appendix B). In the fall of 2006, the Business School scheduled courses in 35 different Auraria classrooms.

TOTAL HOURS PER WEEK	490.6
AVG HRS PER CLASSROOM	14
OVERALL STATION UTILIZATION	61%

Table 11: Summary of Auraria Classroom Utilization (Fall 2006)

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Several important points need to be made about this information. First, the Business School utilizes the classrooms on the Auraria Campus that are shared amongst UCDHSC academic departments and between UCDHSC, MSCD and CCD. While there is some consistency in the classrooms used by Business from semester to semester, there is also some variation. Therefore, there may be classrooms used by business in other semesters not included on this list. Conversely, some of the rooms on this list might not be used by business every semester.

The second critical point is that the sharing of classrooms effects classroom usage from a college standpoint. When rooms are shown as being occupied by business for less than 30 hours per week, it is important to note that this does not mean they are vacant for the remainder of the week. In fact, it is very likely that they are occupied for 40 hours per week or more. A study recently conducted showed an average utilization for Auraria Campus classrooms of 42.6 hours per week.

The other consideration is that the demand for classroom space and the complexity of scheduling for three institutions does not always result in the optimal pairing of course and classroom. Courses are often scheduled in classrooms that are larger (sometimes substantially) or smaller than the desired enrollment of the course. Therefore, low occupancy rates do not always indicate low course enrollment, but may also indicate an inefficient match between course attendees and classroom capacity. Numerous examples of this can be seen in the chart below, where the data show a number of graduate courses (with historically smaller class sizes) scheduled in rooms that exceed 55 stations.

v. Facilities Condition Index

Facility Condition Index (FCI) information is provided here for the CU-Denver Building only. A majority of the space occupied by the Business School and its affiliates is within this building. Of the other buildings occupied by the Business School, the Masonic Building (location of the Bard Center and 11-Month MBA program) is not a state owned facility and as described above, the locations of classrooms used by Business can vary from semester to semester.

A facilities audit conducted by the Facilities Operations Department of UCDHSC in 2006 determined that the FCI of the CU-Denver Building is 55.9%. The most deficient system in the building was HVAC, which was found to have a deficiency rating of 26%. The report identified building structure as the least deficient system at 83%. The replacement value of the entire building was estimated at \$17,495,134.

The entire FCI report is included in this document as Appendix C.

vi. Specific Health/Life Safety Deficiencies

The facilities audit referenced above identified the following health and life safety deficiencies in the CU-Denver Building:

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- An emergency power generator is needed to serve the fire pump and to power emergency lights, which are currently battery operated.
- The elevator recall system needs to be updated to allow greater control by fire personnel in the event of a fire.
- Improvements are needed to establish and maintain the integrity of refuge areas for use by building occupants in the event of a fire.

b. Changes and Projections

i. Enrollment Projections by Program or Department

Business School

In 2005, the UCDHSC DDC Enrollment Projections Committee was charged with preparing detailed projections of main campus (D1) instructional activity from Fiscal Year 2006-07 through Fiscal Year 2011-12. Specifically, the group was asked to express the projections in terms of student credit hours, and to provide two scenarios- constrained and unconstrained. The constrained and unconstrained scenarios are described as follows:

Constrained: This projection estimates future program size based on current, known constraints on growth. These include but are not limited to funding issues, classroom availability, other program space concerns, and availability of funding.

Unconstrained: This projection captures potential growth based on known demand and assuming a modest but somewhat optimistic relaxation of current constraints (e.g. increases in program funding, availability of additional classroom space). This scenario may yield similar projections to the constrained scenario to the extent that few constraints exist for a given program.

In the case of the Business School, the five year and annual growth projections in the constrained and unconstrained scenarios were found to be the same.

From FY 2007 to FY 2012, enrollment and student credit hour production in the School of Business is projected to grow 11%, or 2% annually during that period.

The table below is an update of Table 1 (Existing Enrollment- page 8), and shows projected Headcount, Credit Hours and Contact Hours in 2012 using the 2% annual growth factor.

	Undergraduate	Graduate	TOTAL
Headcount	1,534	1,147	2,681
Credit Hours	12,372	7,556	19,928
Contact Hours	10,857	5,881	16,738

Table 12: Projected Business School Enrollment (2012)

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Table 13 below shows projected growth, or the difference between existing enrollment and the 2012 enrollment projection above.

	Undergraduate	Graduate	TOTAL
Headcount	152	114	266
Credit Hours	1,226	749	1,975
Contact Hours	1,076	583	1,659

Table 13: Projected Business School Enrollment Growth (2007-2012)

D2 and Affiliate Programs

The leaders of each of the D2 programs were asked to provide their goals for their respective programs over the next five year period.

1. 11-Month MBA

The five year goals of the 11-month MBA include the following:

- To acquire a separate facility or space dedicated specifically to the 11-Month MBA program. This space would include:
 - A Smart Classroom (perhaps two depending on demand)
 - Breakout Rooms and Conference Rooms
 - Staff Offices
- To grow the program significantly. This goal has been hampered by the current shared space arrangement. The 11-Month MBA currently shares space with the Bard Center for Entrepreneurship in the Masonic Building.

Long-Term goals are as follows:

- Increase alumni involvement, including endowing some portion of the program (as well as scholarships and special activities) through alumni gifts.
- Increased involvement from the business community through executive collaborations.

2. Bard Center

The five year goals of the Bard Center include the following:

- To continue to expand its current program of entrepreneurship course offerings.
- Double the amount of available incubator space.
- Grow the Venture Fund Specifically.
- New focus on bio-entrepreneurship including a new bio-entrepreneurship certificate program. Much of this will build from the Colorado Bioentrepreneurship Program – a fellowship program for Health Sciences Center PhDs and post-docs. Bioscience

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internships will expand for Bard Center students and the Bard Center will become the Colorado academic hub for Bioentrepreneurship.

- New focus on Social Venturing. New courses in this area will be introduced to the Bard Center curriculum along with new means and methods of support for social ventures through incubation, funding, and networking.
- Create an endowed chair or dedicated faculty position in entrepreneurship.

Long-Term Goals are as follows:

- Establish an undergraduate certificate program to complement the existing graduate certificate program.
- Continued growth in the bioscience area with a focus on developing a new MBA degree in Bioscience Management.
- Continued growth in social venturing by building additional support for the creation of new ventures in social entrepreneurship and the non-profit areas.
- Establish a satellite location on the Anschutz Medical Campus in Aurora.

3. XMBA/XMHA

Unlike the Bard Center and 11-Month MBA programs, the XMBA and XMHA programs (known collectively as Executive Programs) have no plans to separate. Their collective five year needs are as follows:

Additional Square footage, including the following needs (this includes their current square footage):

- Two (2) fixed case rooms- capacity 60 each
- Five (5) break out rooms- capacity 10 each
- One (1) large meeting room
- One (1) kitchen- small- prep only
- One (1) reception area
- Access to loading dock
- Outdoor area
- One (1) Secure room for files
- One (1) Copy room
- Storage
- Add one (1) faculty office in addition to the one they already have

In addition, the XMHA program articulated the following specific Long-Term goals:

- Draw more out-of-state applicants
- Examine the feasibility of offering a doctoral degree in health administration delivered in the executive education format

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ii. New or Modified Academic Programs/Instructional Methodology

Trends That Impact Business Schools

Four trends will drive the new economy and have major implications for business schools: [1] the globally interdependent economy; [2] the new information technologies; [3] managing for sustainability; and [4] the importance of innovation and entrepreneurship.

Globally Interdependent Economy

Global interdependence is just that- touching every place in the world. Technologies have collapsed the traditional barriers of time and space, enabling direct access to global markets. The global infrastructure depends on telecom, IT, fiber optics and satellite technologies, many of which were developed in Colorado. These technologies are the enabling forces of globalization and are critical to Colorado's future.

Colorado has identified key industry clusters that will lead the state's participation in the global economy: bioscience, energy, financial services, and information technology-software. The clusters were based on an analysis of industries where there is a clear competitive advantage in the region including potential employees, investment dollars and growth opportunities. Colorado will become more networked with the world over time. The Business School will lead in the development of new initiatives in key industry clusters and will work in partnership with global players.

New Information Technologies

New technology means work will increasingly be done virtually, or in an asynchronous, geographically distributed manner. Current research suggests that many workers spend 40% of their work time at their office, 30% of their work time at home and 30% of their work time in "third places"--client offices, hotels, airports, restaurants and cafes.

The implication is that students should learn how to design and manage distributed work and lead change in organizations to adapt to this trend. It also implies education needs to be delivered in a flexible, virtual manner, and business school facilities must support collaboration, innovation and problem solving, wherever it may occur. The Business School offer excellent online courses in business and will continue to innovate and enhance the programs with the best use of technology. In addition, using the very successful model of the Executive Health Administration program, the Business School will develop new programs that will allow students to learn from outstanding faculty wherever students go to work. The new Business School building will use the best practices of industry with technology to support work and learning.

Managing for Sustainability

With the 2005 Millennium Ecosystem Report finding that 60 percent of the Earth's ecosystems are not sustainable, the need for businesses to manage for sustainability is widely accepted. Sustainability Management recognizes the business case for practices that protect natural

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resources environment, and positions companies to take advantage of emerging opportunities to develop new products and services that reduce carbon emissions and other harmful impacts. Managing for sustainability is also a key concern in business education. As businesses and governments statewide, nationwide and internationally have developed sustainable management initiatives, there is a growing demand for professionals to implement these initiatives.

The Business School has taken a lead in developing a Management for Sustainability emphasis for its Master's in Management and MBA students, offering courses in Managing for Sustainability, Business and the Natural Environment, Accounting and Finance for Environmental Issues, Social Marketing, and Social Entrepreneurship, and developing a course in Sustainable Supply-Chain Management. There is a pressing need for business research to improve sustainable management practices, including ways to account for the cost benefit of sustainable practices in capital budgeting decisions, ensure that practices truly reduce environmental problems, and manage the integrity of sustainable practices across a firm's supply chain.

Importance of Innovation and Entrepreneurship

In addressing how Americans can lead and prosper in a changing world, the Technology CEO Council outlined three structural trends that will impact the economy of the future:

The geopolitical trend recognizes 3 billion residents of nations like China, India and Russia are rapidly integrating into the global economy. These citizens are smart, hard working and will be customers, partners, colleagues and competitors.

The technology trend shows almost any job can be done from anywhere with high quality global communications.

The hyper competition trend among firms in the global marketplace requires that companies constantly improve or reinvent themselves and their products.

This is a very different world than our parents or grandparents entered. Today's graduate will face far more competition, in addition to having more customers, collaborators and global partners. It is a world that will demand agility, innovation and entrepreneurship. The Bard Center for Entrepreneurship cultivates and will expand its programs to undergraduates and non-business majors. In addition, the Business Plan Competition will be extended to an Idea Competition to engage students from other disciplines like engineering and arts and media. Innovation and entrepreneurship are the business of the Bard Center and are fundamental values in the culture of the Business School.

Accreditation Recommendations

During the most recent accreditation visit of the Association to Advance Collegiate Schools of Business (AACSB) in 2006, the following recommendations and observations were made:

- The accreditation team noted the need for a new facility, one that could prepare students for the rapidly changing business climate. They specifically noted a need for more large

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classrooms and specialized spaces such as discussion rooms, team meeting rooms, and others which are discussed later in this document.

- The team noted a current shortage of tenure-track faculty, specifically at the undergraduate level where the coverage is currently below average.

New Academic Programs

The Business School is launching programs in three interdisciplinary areas rooted in industry trends and local industry clusters. These programs are ***Bioentrepreneurship***, ***Sports and Entertainment Management***, and ***Global Energy Management***. These areas will be founded on the strength of existing and new faculty, and represent an opportunity for national and global leadership for UCDHSC. Each area will facilitate interdisciplinary research and provide experiential learning opportunities for students. The new Business School facility will play a critical role in the success of these programs by providing the space that will allow these programs to succeed. A description of each of these new programs is below.

The Bioentrepreneurship Program Initiative

The Bioentrepreneurship Program Initiative will be a collaboration with the Health Sciences Center Campus, the Anschutz Medical Campus Bio-Business Park, Technology Transfer Office and companies in the Colorado Bioscience Association. The Health Sciences Center generates \$363 million in external grant support for basic, clinical and translational research and is located at the all new Anschutz Medical Campus. It is the largest world-class academic health center between Chicago, Texas and the West Coast and the only completely new education, research and patient care facility in the world today. Anschutz Medical Campus and affiliates have benefited from \$2 billion in investments to date and will ultimately attract more than \$4 billion in facility-related funds.

Elements of the Bioentrepreneurship program include:

- Courses taught for UCD and HSC students. A certificate of Bioscience and Entrepreneurship will be offered in 2007-2008 and eventually an MBA track in Bioscience and Entrepreneurship.
- A special prize category in bioscience at the annual Bard Center Business Plan Competition. Preceding the annual competition will be an “idea competition” focusing on the Health Sciences Center and Bioscience opportunities
- The housing of bioscience start-up companies in the Bard Center incubator space
- A bioscience post-doc program for PhD. Scientists
- The inclusion of six representatives from bioscience and medical device companies on the Business School Advisory Board .

The Sports and Entertainment Management Program Initiative

The Sports and Entertainment Management Program Initiative will develop leaders who will drive business excellence in the sports and entertainment industries. The initiative will feature an

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MBA track in Sports and Entertainment Management, which will include four core classes: Management and Law, Contracts and Negotiation, Marketing, and Finance. The program will bring together people who love sports, have a passion for the arts and are very good at the business practices associated with each. The program has an advisory council of 20 top executives who will advise on the curriculum, offer internships and connections and support fundraising. The program will provide a comprehensive business case, cover industry dynamics in core disciplines and maintain a special focus on real estate development, new media, and the convergence of sports and entertainment. Denver is the nation's top sports city based on the number of professional teams, quality of the facilities, and per capita attendance. The Business School will be in the heart of the sports and entertainment complex: five venues are located within a one mile radius.

The program goals for the first five years are to:

- *establish the MBA track*
- *launch an Undergraduate emphasis, maintaining strong revenue-generating executive short programs*
- *launch a dedicated MBA in Sports and Entertainment Management.*

The Long-Term program goals are:

- *Achieve a top five national ranking for all three programs (Undergraduate, Graduate and Executive)*
- *Create a powerful alumni network that keeps the program cutting edge.*

The Global Energy Management Program Initiative

The Global Energy Management Program Initiative will be a collaboration between the energy industry and the Business School that will meet the need in the energy industry for leadership and management talent. The program will focus both on renewable energy sources (wind, solar, biofuel, etc) and non-renewable energy sources. Denver is uniquely positioned to be a leader in industry trend of renewable energy and sustainable building. The National Renewable Energy Lab is in Boulder and the regional Environmental Protection Agency is in Denver. Denver is a major energy hub for U.S., Canadian, and global energy companies. In collaboration with energy companies, the Business School will launch a series of graduate energy courses, beginning with *accounting for the oil and gas industry* in the fall of 2007. The School of Business will then offer short courses such as "Introduction to the Oil and Gas Industry" and "Introduction to the Renewable Energy Industry" in the Spring of 2008. An MS in Global Energy Management, designed to educate the next generation of leaders in the energy industry, will begin being offered in the Summer of 2008. The curriculum will include topics in energy, the environment, alternative energy and corporate and social responsibility. The Business School will offer joint degrees with major engineering schools in Colorado in the Fall of 2008.

c. Total Space Requirements

i. Planned Program Space Utilization

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In summary, the total space requirements for the Business School can be attributed to these core areas:

- *Growth in Enrollment*

As shown in the enrollment projections (11% over the next five years), the Business School is projected to grow. This will drive an additional need for office, instructional and other spaces. There are no opportunities for growth in the spaces currently occupied by Business.

- *Consolidation of the Business School*

Consolidation of the Business School into one location is critical to its future success and will improve the student experience dramatically for the many reasons listed earlier in this document.

- *Growth in D2 and affiliate Programs*

In addition to the growth in the core Business School programs, the Business D2 and other affiliate programs are also growing to meet the demands of those seeking non-traditional instructional formats. The space needs these programs were provided by the program leaders.

- *New Academic Programs*

The three new programs being launched by the Business School (see page 22) will require space to operate in the new Business School. The space needs of these programs were provided by the program leaders.

- *The Need for Dedicated Academic Spaces*

While somewhat related to the consolidation of the Business School, the instructional component of that is worth mentioning on its own merits. The new Business School will feature instructional spaces designed for the specific needs of Business Education, and will allow for informal interaction in some of the related spaces (breakout rooms) when classes are not in session. Instructional space needs are derived directly from projected Student Contact Hours or Student Station Period of Occupancy (SSPO).

- *Specialty Spaces*

Specialty spaces are critical to the function of the Business School and are typically most identifiable to students, the business community and donors. These are spaces that are unique to schools of business, such as a trading room, an events center, or an executive case study room. The specifics of these rooms and the quantifiable space need they represent were taken from interviews with the faculty.

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ii. Space Planning Assumptions

The program for the New Business School is derived from both quantitative data gathered from the enrollment projections committee and qualitative data gathered in meetings with the Business Schools and all of its affiliated D2 programs. This data form the basis for the following program principals and assumptions:

Overall Assumptions

1. A 62% efficiency factor is used to convert assignable square feet to gross square feet
2. The baseline data used to project future office and instructional space is Existing Space by Standard, NOT actual existing space. Existing Space by Standard reflects the square footage that would be allotted if each space were built to the campus standard for that space type.(ex. current office space allotment is calculated by taking the number of office staff and multiplying by the campus office standard of 120 assignable square feet, rather than taking the actual office space occupied by that group).

Business School Assumptions

1. To reflect existing shortages of space, two adjustments were made to the Existing Space by Standard (ESS) total for this group. The first change is that 17 FTE faculty have been added to the ESS to reflect the current shortage of full-time tenured faculty as per accreditation standards. Secondly, four FTE staff offices have been added to the ESS to reflect the current shortage of staff in the undergraduate and graduate advising areas. Again, this baseline ESS number is then being used to project future growth.
2. The growth projection is calculated using the above mentioned 2% annual growth number. The growth percentages are applied in the following manner:
 - a. With office space, the growth factors are applied to the staff *numbers*, and rounded off.
 - b. With instructional space, the growth factors are applied to the assignable square footage numbers.
 - c. The spaces listed as *other* are those which are not driven directly by program growth, and are thus projected using qualitative data or by assuming a baseline need. They represent spaces required in a business education environment and in some cases required in any office environment. *Note: Many of these needs were taken directly from an earlier program exercise conducted by RNL Design, and last updated in June of 2006. The remaining spaces in this category were mined from meetings with Business administrators, staff and faculty.*
3. Instructional square footage is based on contact hour production. One assignable square foot of instructional space is allotted for every Contact Hour, or Student Station Period Occupied (SSPO). The contact hour number used is 16,738 (taken from Table 12, Page 17).

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D2 Program Assumptions

1. The XMBA and XMHA programs will continue to share space. In addition, there will be some sharing of academic spaces amongst the other D2 programs.
2. Due to the different model of funding used by D2 programs, their projected needs are based on interviews with the respective program managers. The assumption is made that the operating income from these entities would support the additional space demand.

iii. Total Space Requirement

Table 14, shown on the following two pages, shows the total space requirement for the Business School by organizational group and space type.

**University of Colorado at Denver and Health Sciences Center
Business School Program Plan**

	GSF		ASF		Eff.	GSF	#	Total GSF	ASF	#	Total ASF
	Subtotal	Subtotal									
SCHOOL OF BUSINESS											
Office	24,380	15,095									
Dean			62%	387	1	387		240	1	240	
Associate Dean			62%	323	2	646		200	2	400	
Assistant Dean			62%	323	1	323		200	1	200	
Professional/Technical			62%	194	22	4,268		120	22	2,640	
Administrative			62%	129	10	1,290		80	10	800	
Tenure/Tenure Track Faculty			62%	194	43	8,342		120	43	5,160	
Instructor			62%	194	22	4,268		120	22	2,640	
Adjunct/Honorarium			62%	40	37	1,480		25	37	925	
Student			62%	65	11	715		40	11	440	
Circulation						2,661				1,650	
Instructional Space	26,753	16,587									
Other	35,079	21,750									
Breakout Rooms			62%	484	10	4,840		300	10	3,000	
Trading Room			62%	2,419	1	2,419		1,500	1	1,500	
Executive Case Study			62%	2,419	2	4,838		1,500	2	3,000	
Kitchen			62%	1,210	1	1,210		750	1	750	
Faculty Lounge			62%	484	0	-		300	0	-	
Student Lounge			62%	323	1	323		200	1	200	
Informal Interaction Spaces			62%	161	6	966		100	6	600	
Staff Lounge/Lunchroom			62%	484	1	484		300	1	300	
Library			62%	806	1	806		500	1	500	
30 Seat Conference Room			62%	1,210	1	1,210		750	1	750	
20 Seat Conference Room			62%	806	2	1,612		500	2	1,000	
200 Person Events Center			62%	6,452	1	6,452		4,000	1	4,000	
Server Room			62%	242	1	242		150	1	150	
Entry Lobby			62%	2,419	1	2,419		1,500	1	1,500	
Shower/Exercise Room			62%	323	1	323		200	1	200	
IT Equipment/Storage			62%	484	1	484		300	1	300	
Program Office Reception			62%	645	1	645		400	1	400	
Storage Room			62%	645	3	1,935		400	3	1,200	
File Room			62%	645	3	1,935		400	3	1,200	
Career Center Office			62%	806	1	806		500	1	500	
Admissions/Records Office			62%	645	1	645		400	1	400	
Supply Room			62%	97	5	485		60	5	300	
SCHOOL OF BUSINESS Total	86,212	53,432									
D2 PROGRAMS											
Bard Center											
Offices	1,066	660									
Program Director			62%	290	1	290		180	1	180	
Professional/Technical			62%	194	4	776		120	4	480	
Instructional Space	3,266	2,025									
50 Seat Classroom			62%	2,016	1	2,016		1,250	1	1,250	
Computer Lab			62%	282	1	282		175	1	175	
Group Study Area			62%	968	1	968		600	1	600	
Incubator	4,032	2,500									
Other	960	595									
Kitchen			62%	242	0	-		150	0	-	
Copy Room			62%	129	1	129		80	1	80	
Storage			62%	323	1	323		200	1	200	
Library			62%	992	0	-		615	0	-	
Conference Room			62%	508	1	508		315	1	315	
Bard Center Total	9,324	5,780									
11 Month MBA											
Offices	1,066	660									
Program Director			62%	290	1	290		180	1	180	
Professional/Technical			62%	194	4	776		120	4	480	
Instructional Space	3,266	2,025									
50 Seat Classroom			62%	2,016	1	2,016		1,250	1	1,250	
Computer Lab			62%	282	1	282		175	1	175	
Group Study Area			62%	968	1	968		600	1	600	
Other	323	200									
Kitchen			62%	242	0	-		150	0	-	
Copy Room			62%	129	0	-		80	0	-	
Storage			62%	323	1	323		200	1	200	
Library			62%	992	0	-		615	0	-	
Conference Room			62%	508	0	-		315	0	-	
11 Month MBA Total	4,653	2,885									
Executive Programs											
Offices	1,025	635									

**University of Colorado at Denver and Health Sciences Center
Business School Program Plan**

	GSF		ASF		Eff.	GSF	#	Total		GSF	ASF	#	Total	
	Subtotal	Subtotal	GSF	ASF				GSF	ASF				GSF	ASF
Program Director			62%		290	1	290		180		1	180		
Instructor			62%		194	2	388		120		2	240		
Professional/Technical			62%		194	1	194		120		1	120		
Administrative			62%		153	1	153		95		1	95		
Instructional Space	4,069	2,523												
60 Seat Classroom			62%		2,258	1	2,258		1,400		1	1,400		
Conference Room			62%		1,379	1	1,379		855		1	855		
Computer Lab			62%		290	1	290		180		1	180		
Computer Lab			62%		142	1	142		88		1	88		
Other	6,921	4,290												
Reception Space			62%		323	1	323		200		1	200		
Breakout Rooms			62%		484	10	4,840		300		10	3,000		
Copy Room			62%		129	1	129		80		1	80		
Kitchen/Events			62%		1,145	1	1,145		710		1	710		
Storage			62%		484	1	484		300		1	300		
Executive Programs Total	12,015	7,448												
NEW PROGRAMS														
Bioscience and Health														
Offices	194	120												
Professional/Technical			62%		194	1	194		120		1	120		
Instructional Space	1,815	1,125												
45 Seat Classroom			62%		1,815	1	1,815		1,125		1	1,125		
Incubator	2,016	1,250					2,016					1,250		
Bioscience and Health Total	4,025	2,495												
Energy														
Offices	1,049	650												
Tenure/Tenure Track			62%		194	2	388		120		2	240		
Program Director			62%		290	1	290		180		1	180		
Administrative			62%		129	1	129		80		1	80		
Landing Area- 3 Station			62%		242	1	242		150		1	150		
Instructional Space	-	-												
45 Seat Classroom			62%		1,815	0	-		1,125		0	-		
Other	646	400												
Reception Space			62%		323	1	323		200		1	200		
Breakout Rooms			62%		-	0	-		-		0	-		
Student Club Space			62%		-	0	-		-		0	-		
Copy Room			62%		-	0	-		-		0	-		
Kitchen			62%		-	0	-		-		0	-		
Storage			62%		323	1	323		200		1	200		
Energy Total	1,695	1,050												
Sports, Entertainment and Media														
Offices	1,049	650												
Tenure/Tenure Track			62%		194	2	388		120		2	240		
Program Director			62%		290	1	290		180		1	180		
Administrative			62%		129	1	129		80		1	80		
Landing Area- 3 Station			62%		242	1	242		150		1	150		
Instructional Space	242	150												
45 Seat Classroom			62%		1,815	0	-		1,125		0	-		
6 Station Media Lab			62%		242	1	242		150		1	150		
Other	775	480												
Reception Space			62%		323	1	323		200		1	200		
Breakout Rooms			62%		-	0	-		-		0	-		
Student Club Space			62%		-	0	-		-		0	-		
Copy Room			62%		129	1	129		80		1	80		
Kitchen			62%		-	0	-		-		0	-		
Storage			62%		323	1	323		200		1	200		
Sports, Entertainment and Media Total	2,066	1,280												
TOTAL	119,991	74,370												

Table 14: Business School Total Space Need

Program Plan for the Business School Building

Table 15 below shows a comparison between the *Existing* gross square feet occupied by the Business School and its affiliate and D2 programs and the *Existing By Standard* and *Projected* space for each of these entities.

	<i>Existing (GSF)</i>	<i>Existing By Standard (GSF)</i>	<i>NEW Business School (GSF)</i>
School of Business	74,197	47,721	86,212
Bard Center	6,900	9,976	9,324
11 Month MBA	3,090	6,331	4,655
XMBA/XMHA	7,463	6,529	12,015
Bioscience/Health	-	-	4,025
Energy	-	-	1,695
Sports/Entertainment/Media	-	-	2,066
TOTAL	91,649	70,556	119,991

Table 15: Business School Space Comparison

iv. Specialized Space Requirement

Trading Room

The first trading room was built in the Sloan School of Management at MIT in 1996. Now, more than 60 business schools nationwide feature trading rooms. The educational benefits of trading rooms are many, and include: Giving students a glimpse at what a trading environment entails, Allowing students to learn specialized trading software, and providing a base of operations for student-managed funds and faculty research. Trading Rooms typically feature multiple projection screens, access to the latest in communication technology and special trading software. A picture of a trading room is provided below.



Figure 2: Trading Room

Program Plan for the Business School Building

Breakout Room

Breakout rooms are rooms designated for individual groups or for small meetings. Each room would feature a wallboard for writing, a computer terminal for access to the internet, and a central table and chairs to facilitate discussion. A picture of a breakout room is provided below.



Figure 3: Breakout Room

Executive Case Study

Executive Case Study Rooms are commonly used for lecture, community events and other group gatherings. They typically seat 100 executives/students, and feature computer access at each station, and dual projection that can be either synchronized or driven by separate output devices. An Executive Case Study Room is pictured below.



Figure 4: Executive Case Study Room

Program Plan for the Business School Building

v. Alternate Scenarios

Several development scenarios were considered for the Business School. Some of these that were considered and rejected are described below.

Leasehold Relationship- Existing Structure

One possibility that was considered for the Business School was to lease all of or some portion of an existing building. The university would enter into a lease agreement for the space, with the renovation of the space funded up front in gift money or financed into the terms of the lease and amortized over the period of the lease. General operating funds or gift funds would have to be identified to cover the ongoing occupancy costs. Depending on the length of the lease commitment and the building, it may have been possible to negotiate the right to name the building or some portion of the building. The naming rights for interior spaces might also be negotiated into the lease agreement.

Positives:

- Less up front cost
- Faster Timeline (assuming space could be identified quickly)

Negatives:

- No equity position
- Less Control over operation of the facility.*
- Could lose opportunity to make a statement with the Building- Naming and branding opportunities could be reduced or altogether lost.
- Challenge of finding a building close to the campus with 120,000 gross square feet available. (In a study conducted by Frederick Ross Company in 2006, four Class A buildings were presented as options for the Business School. None of these had enough vacant space to accommodate the full program for the Business School)

**NOTE: Depending on the university's administrative position on leasing versus owning assets, having someone manage and operate a leased facility for the university could be considered a positive or a negative. While deferring to a property manager does decrease budget and operating flexibility, it does not require additional management and maintenance staffing that owning a facility would.*

Leasehold Relationship- New Build

Another possibility that was considered was to lease all of or some portion of a newly constructed or soon to be constructed building. The arrangement would be the same as that of leasing space in an existing building. Given the many developments underway downtown or in the early planning stages, leasing part of a new or yet to be constructed facility might give the university a better chance at acquiring a sufficient quantity of space and would give the university more flexibility and input on the design of the space.

Program Plan for the Business School Building

Positives:

- Less up front cost
- Faster Timeline (assuming space could be identified quickly)

Negatives:

- No equity position
- Less Control over operation of the facility- see comments above
- Could lose opportunity to make a statement with the Building- Naming and branding opportunities could be reduced or altogether lost.
- Challenge of finding a building close to the campus with nearly 120,000 gross square feet available.

Status Quo

The third option is for the Business School to continue to operate in its existing spaces. The many detrimental aspects of this option have been discussed at length in this document, but to summarize:

- The current model of operating in many different locations is a competitive disadvantage, makes it difficult to establish an identity for the college and is detrimental to the learning experience of the students.
- There is no room at all for growth in any of the spaces occupied by Business, so the college could not grow and could not launch any of the new programs.
- Business would continue to have to adapt their instructional methodology to match the classrooms they are given, rather than the other way around as is the customary practice.

III. Implementation and Design Criteria

a. Spatial Relationships

General Alignment

Although some of the specific parameters of the Business School are unknown at this time, the illustration below provides one possibility of how the various components of the Business School could be aligned.

Program Plan for the Business School Building

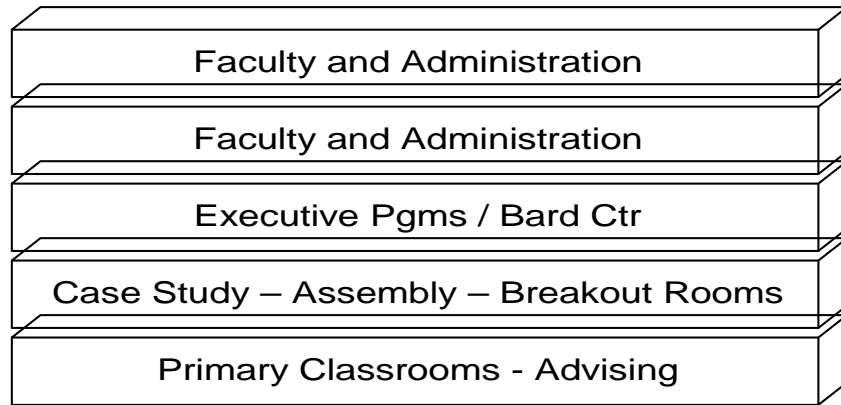


Figure 5: Business School Program Alignment

Main Floor

The main floor will be a critical component of the Business School. The diagram below articulates two desired elements of the ground floor: 1) A central stairway and 2) Advising and other student and community resources on the ground floor.

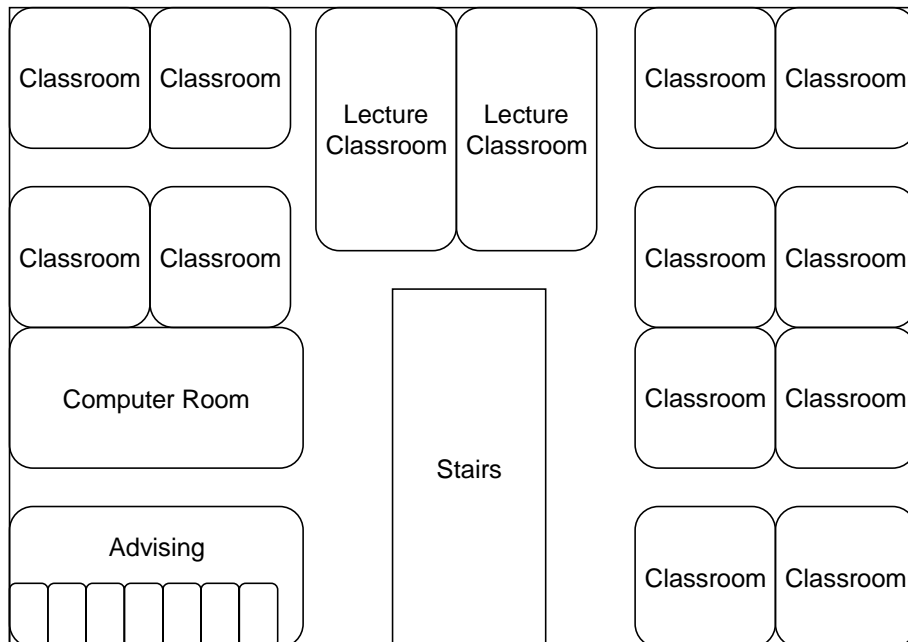


Figure 6: Business School Main Floor Spatial Diagram

Program Plan for the Business School Building

Academic Floor

The illustration below depicts the vision for an academic floor, with classrooms, computer rooms, breakout spaces, assembly spaces, and a center stairway with surrounding gathering spaces.

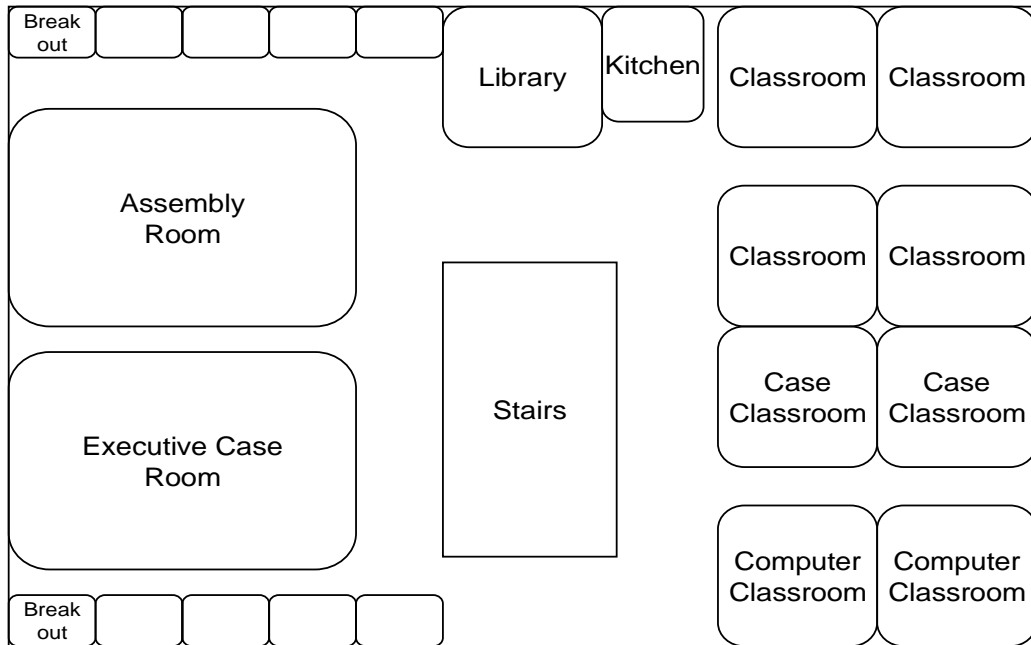


Figure 7: Business School Academic Floor Spatial Diagram

Program Plan for the Business School Building

Administration Floor

The illustration below depicts the vision for the administration floor, which would most likely be located on one of the higher floors in the building. It features predominantly office space, including the Dean’s area and some of the academic support functions.

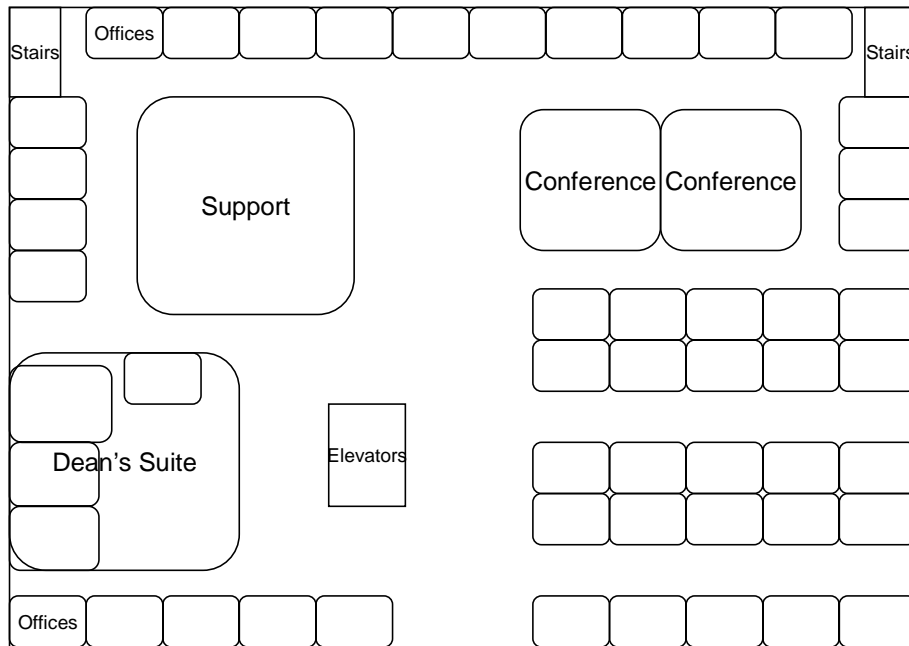


Figure 8: Business School Administration Floor Spatial Diagram

b. Site Improvements and Requirements

i. Site Requirements and Vision

Site Requirements

The *Business School Building Initiative Committee (BSBIC)*, formed in 2007 to allow input on the Business School Building from faculty, the CU Foundation and the external design and development communities, established the following criteria for site for the Business School:

- It must be within the Denver Central Business District or easily accessible to the downtown Denver Business community
- It must be within a 15 minute walking radius of the UCDHSC DDC

Program Plan for the Business School Building

- It must occupy a position of high visibility
- It must be allow the Business School to create a space that is distinct and easily recognizable
- It must be able to accommodate the entire School of Business and its affiliated programs
- The site and related development proposal should respect and relate to the many planning initiatives occurring in Downtown Denver including the Downtown Area Plan.

Vision

The vision for the Business School Building is that it will provide an opportunity to develop even stronger ties with the Denver business community, students and alumni due both to location and design and that it will be a model of sustainability.

ii. Site Selected

The site that is being presented for the Business School is shown in Figure 9, on the following page.

University of Colorado at Denver and Health Sciences Center Downtown Denver Campus Business School Program Plan

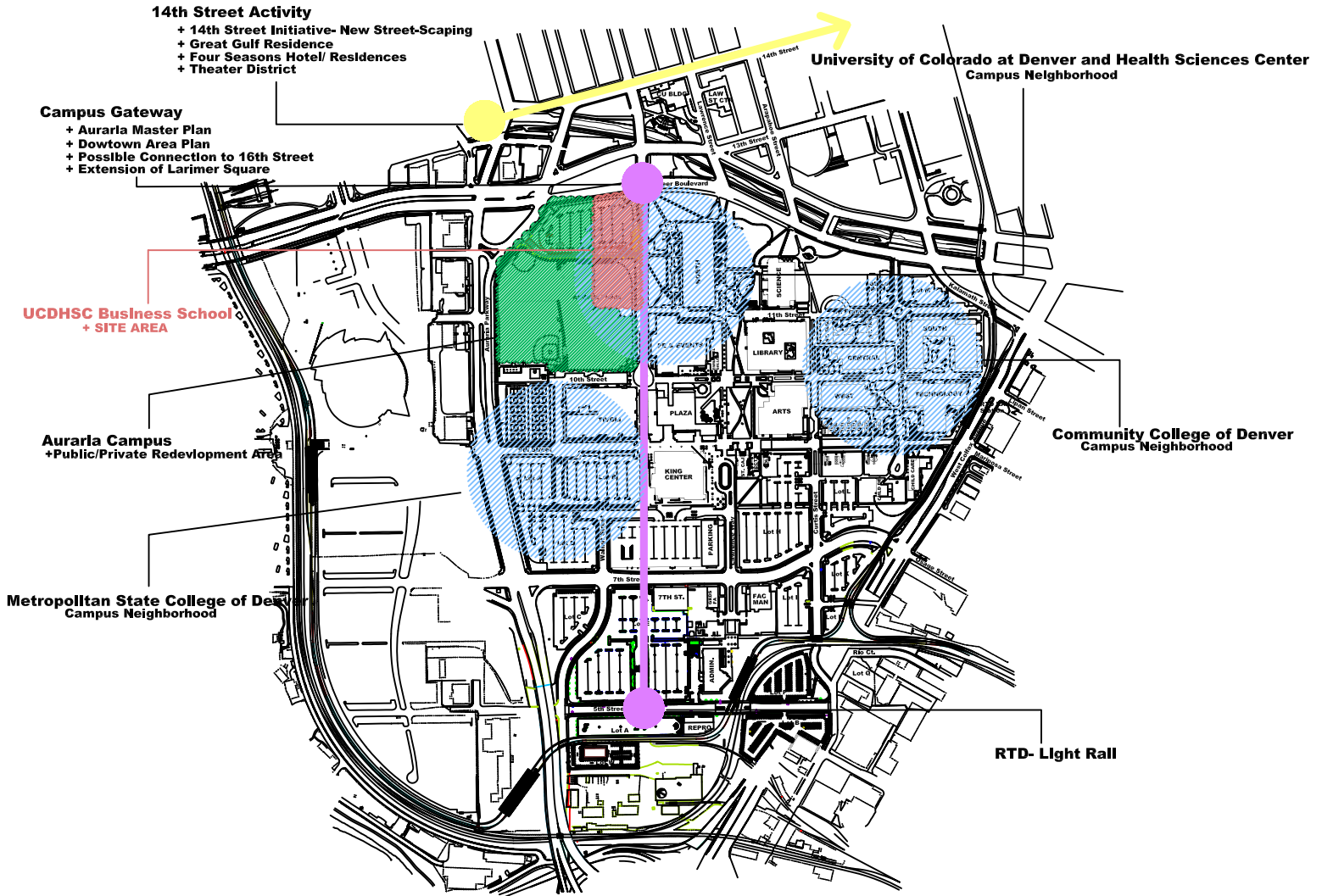


Figure 9: Business School Proposed Site

Program Plan for the Business School Building

Site Characteristics

The site on the Auraria Campus was chosen for the following reasons:

1. The Site Satisfies the Site Criteria Established by the BSBIC

These criteria are listed on page 35 (*Site Requirements*).

2. The Site Lies Within the UCDHSC Neighborhood

In 2006, The Auraria Higher Education System (AHEC) engaged the services of Sasaki Associates, studioINSITE and U3 Ventures to prepare a new campus master plan for the Auraria Campus. One of the principal recommendations of this plan (as discussed in Section I.c- page 7) was to identify a distinct neighborhood area for each of the three institutions on the Auraria Campus. Figure 9 (page 37) shows the location of each of the three neighborhoods.

3. The Site is Adjacent to an Area Projected for Private Development in the Master Plan

Another recommendation of the Auraria Master Plan was to divide the area bordered by the Tivoli Student Union, Speer Boulevard and the Auraria Parkway into parcels to be targeted for private development through public-private partnerships. The projected site would benefit from being adjacent to this dynamic area. This development area can be seen on Figure 9 (page 37)

4. The Site is Adjacent to a Major Campus Gateway and Axis

Both in the Auraria Master Plan and the Downtown Denver Partnership Downtown Area Plan, Larimer Street was identified as an existing major campus gateway, but also one to actively strengthen in the future. Part of the discussion in the Downtown Area Plan specifically was on tying the campus into the existing 16th Street Mall axis via a lateral Larimer Street connection. At the opposite end of the axis formed by Larimer Street will be a major RTD Light Rail junction. When complete, more trains will pass through this junction than all but the Union Station terminal.

5. The Site is Close to the Resurging 14th Street Corridor

The site will be two blocks away from 14th Street, the site of some of the most intense real estate development in Denver. Two projects (The Four Seasons, Great Gulf) are currently underway, with several more in the planning phases. In addition, portions of 14th Street near the Denver Performing Arts Center Complex (within three blocks of the proposed site) have been included in the recently established Theater District. All of these projects and initiatives should have the net effect of shifting some of downtown Denver's activity to the Speer Boulevard side.

6. The Site Features Fewer Physical Constraints and Uncertainties than Others That Were Considered

Program Plan for the Business School Building

One other site was given serious consideration for the Business School. That site is the annex of the CU-Denver Building. More information on that site is provided in section III.b.iii (page 40).

The Auraria site ultimately involved less development risk and fewer uncertainties, and for those reasons was selected for the Business School.

Site Constraints

View Plane

The site proposed for the Business School lies within the Bell Park view plane corridor. Bell Park lies at the intersection of Larimer Street and 14th Street, and is the site of the original City Hall. The implications of this view plane restriction are that building heights moving west from Bell Park are restricted to preserve views of the mountains from the park. As presently written, the view plane would therefore impose height restrictions on any structure built where the Business School Building is proposed to go. The view plane and corresponding height restrictions can be seen on the illustration below.



Figure 10: Auraria Campus View Plane Restrictions

As seen in Figure 10, the proposed Business School site would be subject to height restrictions of 1 ½- 2 stories. As the process moves forward, the view plane will be a critical driver in the site presentation and design of the Business School.

Program Plan for the Business School Building

Recreation Fields

The success of the new Auraria Master Plan concept, specifically the recommendation to re-develop the area where the recreation fields are now located, is dependent on finding a suitable location for the recreation fields elsewhere on campus.

Given the view plane issues described above, it may become necessary to move the site for the Business School further west, and into the area where the recreation fields now sit. This would allow for greater building heights, but would mean that the Business School Building project would be predicated on moving the recreation fields to another location.

Barker Rinker Seacat is nearing completion of a recreation fields study under the direction of AHEC. This study will be completed in the Fall of 2007, and will be the first step in identifying a new location for the recreation fields.

iii. Alternative Sites

CU-Denver Building

Of the many options that were examined, one other site met enough of the site criteria to warrant detailed consideration. This site is the CU-Denver Building (also known as the Dravo Building) located at 14th and Larimer Streets. In June of 2006, the University of Colorado at Denver and Health Sciences Center purchased the CU-Denver Building from the Auraria Foundation, after master leasing this facility for nearly 10 years. The CU-Denver Building consists of a main, eight story tower, complimented on the north side by a split level annex building. Figure 11 on the following page shows the location of the CU-Denver Building in relation to the Auraria Business School Building site.

University of Colorado at Denver and Health Sciences Center Downtown Denver Campus Business School Program Plan

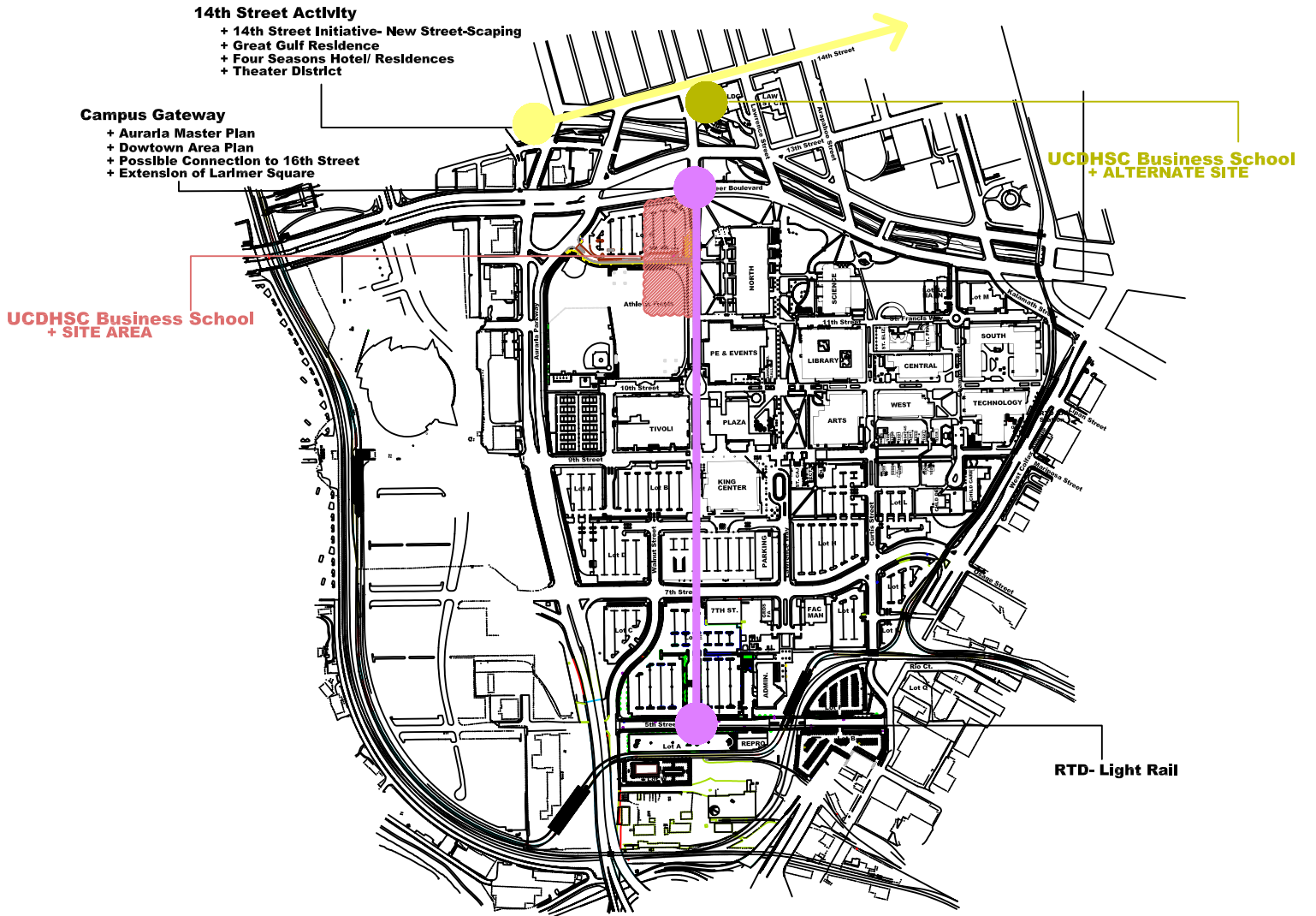


Figure 11: Business School Alternate Site

Program Plan for the Business School Building

In all, the tower and annex sit on a 57,867 square foot site. The parcel is zoned B-5, and lies in Overlay District 4. The proposal for the Business School was to demolish the one story annex structure and build on the annex site of the CU-Denver Building, as shown on the following two pages in Figures 12 and 13. A preliminary study revealed that the site could yield as much as 149,500 gross square feet, with a maximum building height of 200 feet.

While this alternate site has number of positive characteristics, it was ultimately not selected due to a number of uncertainties and negative characteristics, including the following:

- Floor Size

If the new tower were to occupy the area currently occupied by the annex, the floor sizes would be approximately 11,500 gross square feet or 7,130 assignable square feet (assuming a 62% efficiency factor). The result would be a very fragmented building, and one in which it might be difficult to program large academic uses such as lecture rooms. This could be mitigated by connecting to the existing CU-Denver Building Tower, but that would require extensive study and would likely require significant improvements to the tower mechanical systems. More on the mechanical issues in the CU-Denver Building is provided below.

- CU-Denver Building Mechanical Engineering Issues

The CU-Denver Building was built in 1976. Due to the age of the building, many of the mechanical systems of the building have or are beginning to exceed their useful life. Any connection to the tower would necessitate mechanical system upgrades, which would likely be expensive.

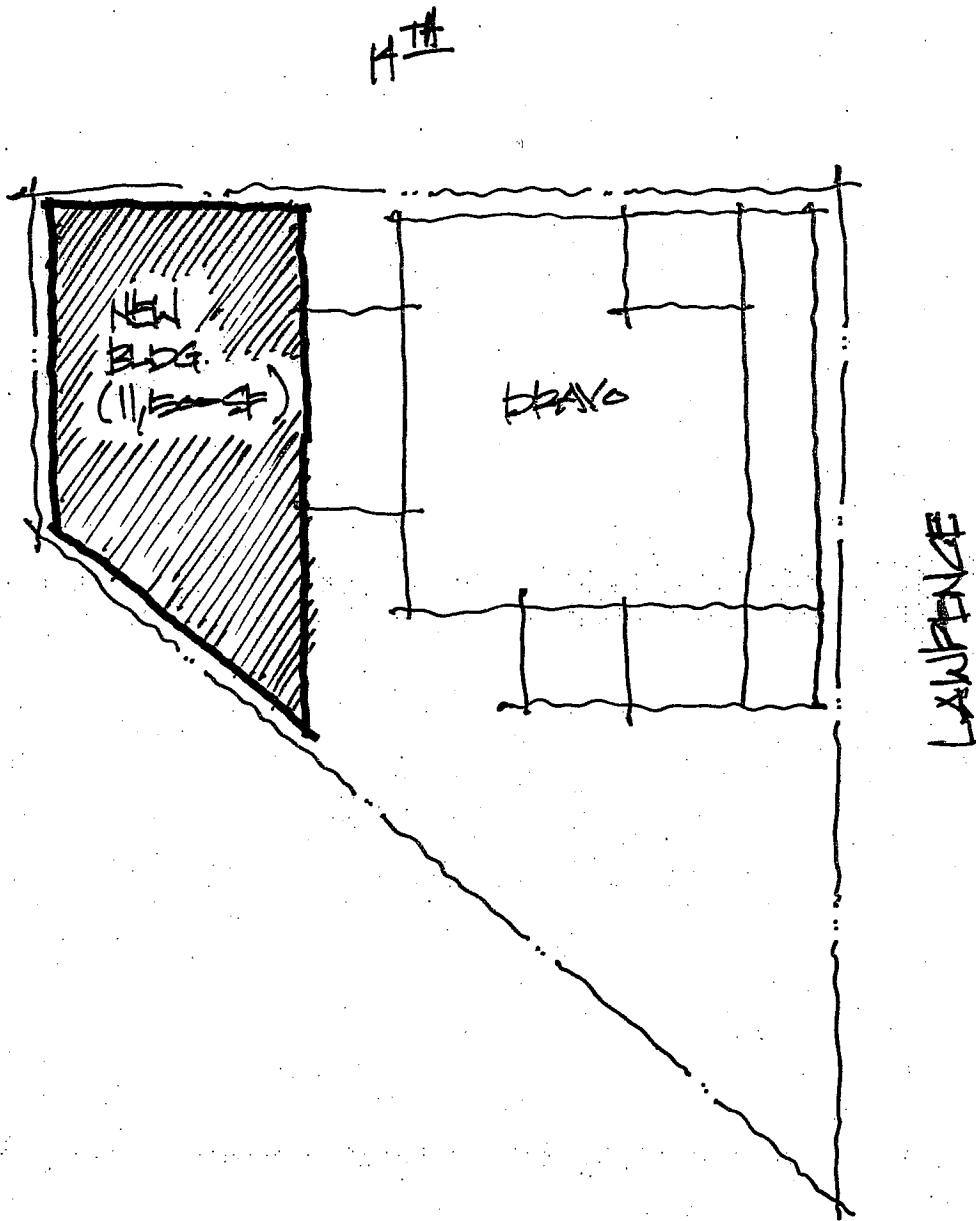


Figure 12: Alternate Building Site (CU-Denver/Dravo Building) Site Plan

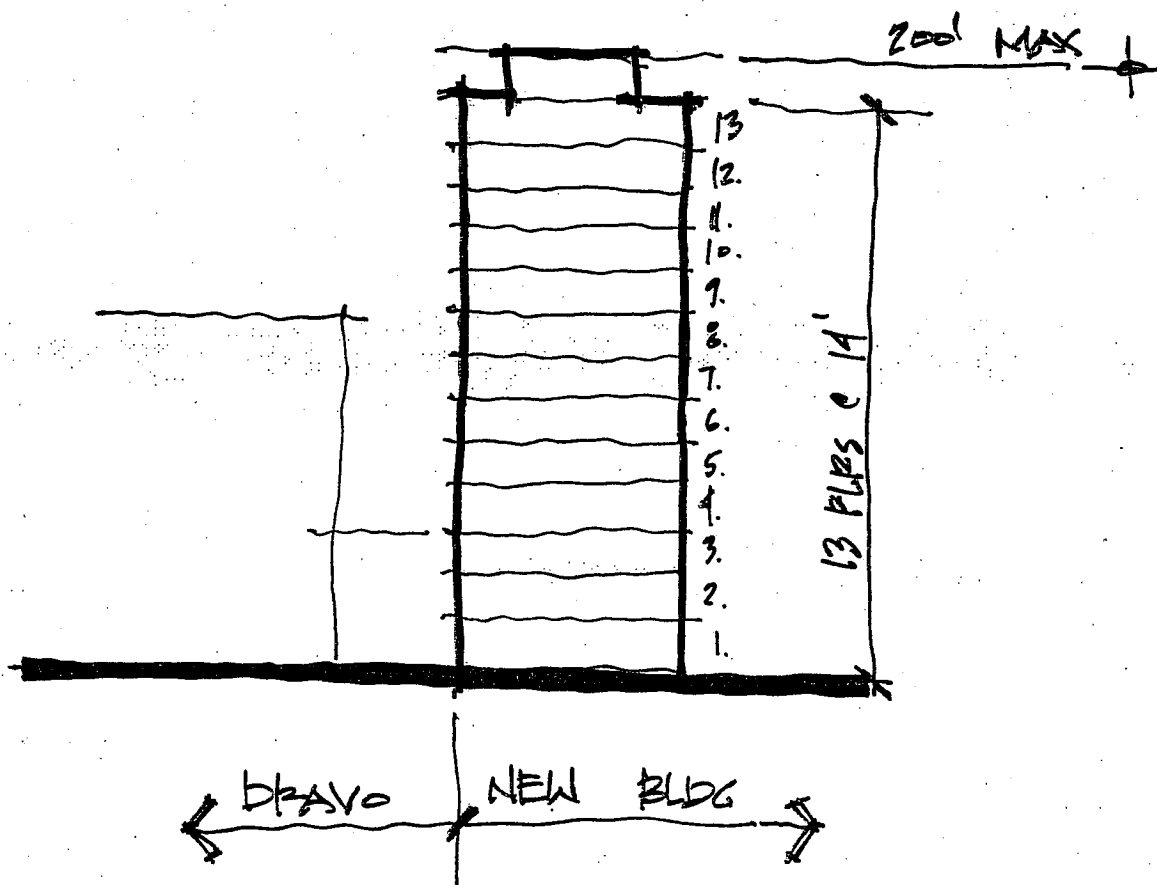


Figure 13: Alternate Building Site (CU-Denver/Dravo Building) Cross-Section

Program Plan for the Business School Building

c. Design Requirements

i. Utilities/ Infrastructure

As part of the recent AHEC master plan development, a site infrastructure analysis is currently being conducted by Underground Consulting Solutions. Specific infrastructure requirements for this project are yet to be determined. Initial assumptions for the new CAP building include the following:

Electrical Distribution

The campus is fed by two separate 13.2 kV substation feeders from Xcel Energy. Each of the feeders enters the primary switchgear and metering equipment in the Arts Building. Each of these two main switchgear lineups supply four fused circuits that reticulate through underground duct banks to the respective building transformers. All primary distribution equipment downstream of the primary meters, including transformers, high voltage cabling, and primary selector switches, are owned and operated by AHEC.

Cooling

A stand alone chiller system will support the facility.

Steam

It is assumed that the current campus steam distribution system will be enhanced to serve both site options. Xcel Energy Company provides district steam to the campus via the Delegany and Zuni Steam Plants. Steam enters the campus at Colfax and tenth Streets just east of the Technology Building. It enters the campus at a pressure of approximately 150 psi through a 12 inch pipeline but is reduced to 40 psi for distribution through the campus. The main line runs along Tenth Street to the Plaza Building with an extension to the North Classroom and Sciences Buildings. Steam is currently supplied to ten classroom buildings at a pressure of 12 psi at the building entrance. Additionally, Xcel Energy will provide natural gas through a distribution pipe line to the new campus building.

Sewer – Sanitary and Storm

The AHEC campus maintains all sanitary lines from its buildings up to the point of connection with the Denver city system. Specific requirements for sanitary and storm systems, including on-site detention is yet to be determined. The new building will require studies of the existing line capacity. Results will dictate whether additional lines are required or upsizing/replacement is an option.

Program Plan for the Business School Building

ii. Parking/Transportation

Two studies are underway that will clarify Parking and Transportation issues related to the proposed site for the Business School.

Fehr and Peers has been engaged to prepare a transportation study for the Auraria Campus. This study will be completed in the Fall of 2007, and was not available when this program plan was submitted for approval. The expectation is that the transportation study will address issues such as access to the site and access onto the campus through the Larimer gateway. This information will help define the site parameters, which will in turn drive the siting and design of the building.

The second study being conducted is a parking study, which is currently being prepared by Carl Walker and was nearing completion when this document was written. This study will examine parking demand on the campus, and make recommendation on how to replace the parking inventory that will be lost as surface lots on the campus (including the one on the Business School site) are lost to development. Concerns over the loss of surface parking as part of the Business School project will be addressed after the findings of that study are available.

iii. Building Systems and Any Applicable Performance Criteria

Performance Criteria

The Business School project will comply with the State of Colorado requirements regarding LEED certification. Specific strategies for achieving certification will be fully addressed during the pre-design and design phases. Assessments of building efficiency will also be made during pre-design, which will allow an opportunity for a comprehensive review of long-term operating efficiencies, energy savings, technology needs, and other sustainability issues. The 120,000 square-foot facility will employ numerous sustainable strategies in an integrated design. The Business School will provide flexibility in space configurations, and accommodate changes in technology. The building systems will reflect the latest AHEC and University of Colorado at Denver and Health Sciences Center design and construction standards.

Health, Life Safety and Code Requirements

The following analysis for Business School is based upon this program and preliminary plan information, without a building design. A comprehensive code analysis will be completed during the Schematic Design, Design Development and Construction Document phases of the project. The Auraria Higher Education Center and the University of Colorado have overall jurisdiction for the project and will provide final interpretation on code issues.

Within its jurisdictional authority, the University will employ the services of an independent code consulting firm to be responsible for review of the design and construction documents for compliance with applicable codes and standards. State inspections will be required during construction for elevators, electrical, and plumbing work.

Program Plan for the Business School Building

This project falls under the State Buildings Programs (SBP). As such, the following list of building codes and standards shall govern this project:

- 2003 International Building Code (IBC)
- 2003 International Mechanical Code (IMC)
- 2003 International Energy Conservation Code (IECC)
- 2005 National Electric Code (NEC)
- 2003 International Plumbing Code (IPC)
- 2003 International Fuel Gas Code (IFGC)
- 2003 International Fire Code (IFC)
- 2001 ASME Boiler and Pressure Vessel Code
- 2001 National Boiler Inspection Code (NBIC)
- 2002 Controls and Safety Devices for Automatically Fired Boilers CSD-1
- 2001 Boiler and Combustion Systems Hazards Code, NFPA 85
- 1998 ICC/ANSI A117.1 Accessible and Usable Buildings and Facilities
- National Fire Protection Association Standards
- (NFPA) as follows:
 - NFPA-1 (2000), 10 (1998), 11 (1998), 11A (1999), 12 (2000), 12A (1997), 13 (1999), 13D (1999), 13R (1999), 14 (2000), 15 (1996), 16 (1999), 17 (1998), 17A (1998), 20 (1999), 22 (1998), 24 (1995), 25 (2002), 45 (2004), 72 (1999), 231D (1998), 409 (1995), 705 (1997) and 2001 (2000)
- ASME A17.1 (Safety Code for Elevators - 2000)

Building

The Building is expected to be a maximum of 4 stories tall, which is allowed by the IBC for B Occupancies for all Construction Types except Type V. For this review, it is anticipated that the Building will be Type II-A construction. An Occupancy Type B is possible by keeping Assembly (A) and Hazardous (H) Occupancies as accessory uses (less than 10% of the floor area). Continuous setbacks of 20 feet or more should be maintained from the property lines.

Fire Resistance

At this time the structural system is assumed to be steel; the final determination will depend upon a variety of factors including the vibration isolation criteria of the program spaces; the cost and schedule and how these two parameters interface, the architectural design and how conventional or unusual it must be to accommodate the program.

Currently the fire resistance of building components is assumed as follows:

- a) The fire resistance of structural members shall be 1 hour.
- b) Fire resistance of exit routes shall be of not less than one hour fire resistive construction.
- c) Fire resistance of vertical openings shall be of not less than 2 hour fire resistive construction.

Program Plan for the Business School Building

- d) Fire resistance of special occupancy enclosures—bulk hazardous material storage—shall be enclosed with the appropriate fire resistive construction.
- e) Fire resistance of other building elements like partitions, doors and exterior openings shall be of the appropriate fire resistive construction for the required construction type and fire separation.
- f) Sealing of penetrations through fire resistive construction separations shall be fire stopped.

Fuel Control

Combustible building materials shall be limited per IBC 603. Interior finishes shall have a minimum Class C flame spread classification and Class B in exits.

Means of Egress

The means of egress system is composed of the exit access, the exit, and the exit discharge. Occupant Loads shall be calculated for each floor to determine exits and will comply with the following requirements:

- a) The number of exits shall not be less than two (2) above the first story and in basements (except where the story has an occupant load of more than 500). Conference rooms and lecture rooms with occupancies of 50 or more must have at least two exits.
- b) The minimum width of exits shall be 0.2 inches per occupant in stairways and 0.15in other exits.
- c) The maximum travel distance to an exit is 300 feet for a B Occupancy.
- d) The maximum allowable dead end corridor is 50 feet.
- e) The maximum common path of travel shall be 100 feet.
- f) All doors must swing in the direction of exit travel.
- g) A place of refuge may serve as an acceptable means of egress.
- h) Exit signage and exit access doors shall be marked by an approved sign.
- i) Exit lighting at the means of egress shall be illuminated at all times.
- j) An emergency power supply shall be provided.

Fire Protection Systems

The devices, equipment and systems or combinations of systems used to detect a fire, activate and alarm, extinguish or control a fire, control or manage smoke and products or a fire or any combination thereof will/shall be provided as follows:

- a) Portable fire extinguishers shall be provided.
- b) An automatic fire sprinkler system shall be provided.
- c) A standpipe system shall be provided where floors are located 30 feet above fire department vehicle access.
- d) Fire department access will be maintained on building sides and suppression requirements shall be reviewed with the fire department.

Program Plan for the Business School Building

- e) Smoke resistance shall be provided in doors through fire resistive walls.
- f) Manual pull stations shall be provided.
- g) Automatic detectors shall be provided.
- h) Occupant notification and alarms shall be provided.
- i) Systems sequence of operation shall be in compliance with codes.
- j) Smoke extraction shall be provided in stairways serving four or more floors.
- k) Smoke, fire dampers and detectors shall be provided.
- l) Stair pressurization is not required for four stories.
- m) High rise building requirements do not apply.
- n) Basement requirements for special smoke control do not apply.

Building Services

All building services shall meet applicable codes as follows:

- a) An emergency generator shall be provided.
- b) Elevators shall be in compliance with codes.
- c) Accessibility shall be in compliance with codes.
- d) Plumbing shall be in compliance with applicable codes.
- e) Ventilation and exhaust shall be in compliance with applicable codes.
- f) Electrical work shall be in compliance with applicable codes.

iv. Architectural Design Features

The following should serve as the cornerstones of the Business School design:

Atrium, Destination and Meeting Place

This is the place that will welcome students and visitors- a place where they will feel at home. It will be the “living room” of the Business School. Here students, faculty and business leaders can learn, congregate, entertain and relax while they exchange ideas. It will be a space filled with light, excitement and become a magnet for people throughout the university and the community.

Professional Development and Alumni Center

This space or core area will cater to business professionals, students and alumni. The space should be attractive to local businesses, mentors and corporate recruiters. It should include well appointed interview rooms and feature the latest technology throughout. In addition to interview and recruitment activities, alumni will use this space to access services and network with students.

Knowledge Center a Market Place of Ideas

This is a place where business executives can come share their expertise with students and faculty. It is also a virtual place where new ideas from faculty research are posted and discussed.

Program Plan for the Business School Building

Business executives and alumni can subscribe to updates from the knowledge center on pressing topics in business like sustainability of products or health care benefits for employees.

Institutes, Centers and Programs of Excellence

The new building should create a hub for the D2 and affiliate programs of the School of Business, while making sure to integrate them within the fabric of the school as a whole. These programs include: The Bard Center for Entrepreneurship, the Accelerated 11 Month MBA, the Executive Health Administration MBA and the Executive MBA. It area should allow faculty, students and business executives to work together in a professional environment. It should allow the Business School to host seminars featuring visiting business executives speaking on topics of importance to the community. The design should allow sharing of amenities such as study areas, lounges and kitchens. It should also allow dedicated space for team projects and other group study activities.

Unique Spaces for Key Industry Clusters

The new Bioentrepreneurship, Global Energy Management, and Sports and Entertainment Management programs must have spaces for their programs. These spaces should reflect the individuality of the programs as well as their collective entrepreneurial spirit.

Technology Supporting Learning

The new facility must accommodate dramatic changes in how students will learn and how faculty will teach. In the future, time will be at an ever greater premium. Learning collaborators will be global, and learning occasions will increasingly emerge spontaneously, often student driven. Digital learning resources will be massive and learning environments will be increasingly interactive, experiential, and immersive, connect physical and virtual worlds and be available to mobile participants wherever they are, whenever they need them. Space must be more than just flexible, it must enable learning environments to emerge in the moment wherever a learning need or opportunity presents itself with ubiquitous access to high bandwidth worldwide, connectivity, high speed wireless access to everything, high definition image projection, tele-presence video conferencing to include remote participants, and all easily available to students as well as the faculty who mentor them.

d. Project Schedule, Cost Estimates and Financial Analysis

i. Project Schedule and Phasing

The following timeline is projected for the Business School project. The assumption has been made here that the necessary funds will be available and the authority to encumber them will have been issued in time to begin design in fiscal year 2008-09.

Program Plan for the Business School Building

- Project Design: July 2008 – June 2009
- Core/Shell Construction: July 2009– June 2010
- Finish/Equip: July 2010 – June 2011
- Occupancy: July 2011

It is also assumed that the project will be built using the Construction Manager/General Contractor (CM/GC) model. The CM/GC will be hired during the design phase and will develop the construction schedule and provide a Guaranteed Maximum Price for the Project at the conclusion of Design Development. Construction may begin at that time by means of a fast track process. The fast track process utilizes bid packs which allow bidding and constructions for certain systems before the entire building is completely designed and documented.

ii. Cost Estimates

Table 16 on the following page shows the estimated cost for the Business School Project by year and by funding source.

The following assumptions were used in the preparation of this preliminary budget:

- Site is perfectly clean and the utilities are immediately adjacent to the site
- No program plan cost is included.
- AHEC waives their project management services fee and does not hire a program manager – The UCDHSC provides PM services.
- All electronic security is eliminated.
- Initial estimate assumes the space mix of approximately 40-50% education-type space and 50% office-type.
- Assumes that the instructional space is fully furnished and office furnished @ \$2,000/office
- Assumes Denver does not raise its water tap fees for project
- Assumes the building efficiency is in the 60 to 62% range versus 65% - 68%.
- The project is authorized in the spring of 2008.
- Natural gas or electricity will be the source for heating and cooling vs. having a central plant for steam and chilled water.
- There is speculation that LEED gold requirement that will go into effect Jan 1, 2008 will add 5% to initial building cost but saves much more over the life of a building. Budget reflects 2% for the known professional services cost (registering, tracking, and commissioning costs); however building costs have not been adjusted upwards.
- Cost escalation assumption of 5% was used in the preparation of this cost estimate.

		Total Project Costs	FY 2008-09	FY 2009-10	FY 2010-11
Land Acquisition					
Land Purchase Cost		\$ -	\$ -	\$ -	\$ -
Professional Services					
Master Plan/PP		\$ -	\$ -	\$ -	\$ -
Site Surveys, Investigations, Reports		\$ 224,030	\$ 44,806	\$ 89,612	\$ 89,612
Architectural/Engineering/Basic Services		\$ 3,285,775	\$ 2,628,620	\$ 328,578	\$ 328,578
Code Review/Inspection		\$ 180,000	\$ 30,000	\$ 90,000	\$ 60,000
Construction Management		\$ -	\$ -	\$ -	\$ -
Advertisements		\$ -	\$ -	\$ -	\$ -
Other (LEED Consulting)		\$ 597,400	\$ 477,920	\$ 59,740	\$ 59,740
Total Professional Services		\$ 4,287,205	\$ 3,181,346	\$ 567,930	\$ 537,930
Construction					
Infrastructure		\$ -	\$ -	\$ -	\$ -
(a) Service/Utilities		\$ 750,000		\$ 750,000	\$ -
(b) Site Improvements		\$ 750,000		\$ -	\$ 750,000
Structure/Systems/Components					
(a) New (GSF): 120,000		\$ 28,370,681		\$ 17,022,409	\$ 11,348,272
New \$236/GSF					
(b) Renovate GSF:		\$ -	\$ -	\$ -	\$ -
Renovate \$ /GSF					
Other (Specify)		\$ -	\$ -	\$ -	\$ -
High Performance Certification Program		\$ -	\$ -	\$ -	\$ -
Total Construction Costs		\$ 29,870,681	\$ -	\$ 17,772,409	\$ 12,098,272
Equip. and Furnishings					
Equipment		\$ 2,640,000		\$ -	\$ 2,640,000
Furnishings		\$ 1,244,700		\$ -	\$ 1,244,700
Communications		\$ 960,000		\$ -	\$ 960,000
Total Equip. and Furnishings Cost		\$ 4,844,700	\$ -	\$ -	\$ 4,844,700
Miscellaneous					
Art in Public Places =1% of Total Construction Costs		\$ 298,707		\$ 177,724	\$ 120,983
Relocation Costs		\$ 298,707		\$ -	\$ 298,707
Other Costs (TAP fee)		\$ 400,000		\$ 400,000	\$ -
Total Misc. Costs		\$ 997,414	\$ -	\$ 577,724	\$ 419,690
Total Project Costs		\$ 40,000,000	\$ 3,181,346	\$ 18,918,062	\$ 17,900,592
Project Contingency					
5% for New		\$ 2,000,000	\$ 159,067	\$ 945,903	\$ 895,030
10% for Renovation		\$ -	\$ -	\$ -	\$ -
Total Contingency Requested		\$ 2,000,000	\$ 159,067	\$ 945,903	\$ 895,030
Total Budget Request [A(1)+B(8)+C(4)+D(4)+E(4)+F(3)]		\$ 42,000,000	\$ 3,340,413	\$ 19,863,965	\$ 18,795,621
Source of Funds					
CCFE		\$ 27,000,000	\$ -	\$ 14,034,173	\$ 12,965,827
CF		\$ -	\$ -	\$ -	\$ -
CFE		\$ 15,000,000	\$ 3,340,413	\$ 5,829,792	\$ 5,829,794
FF		\$ -	\$ -	\$ -	\$ -

Table 16: Business School Projected Cost

Program Plan for the Business School Building

iii. Financing Explanation

The total projected budget for this project (\$42,000,000) includes both State funding (\$27,000,000) and a cash contribution (\$15,000,000). The University is requesting funding authorization for this project over a three-year period. The first year's request (FY 2008-09) will be cash only and will be sufficient to complete the project design. The Year 2 (FY 2009-10) project authorization will allow for the completion of the core/shell construction, and the Year 3 (FY2010-2011) authorization is necessary to complete the fit-out and furnishing/equipping of the facility. Each year the campus will update the budget accordingly, through the capital construction budget process.

IV. Appendices

- A. Business School View Book
- B. Classroom Utilization by Room
- C. CU-Denver Building Facilities Audit
- D. Third Party Review

University of Colorado at Denver & Health Sciences Center

Program Plan for the Business School Building

APPENDIX A: BUSINESS SCHOOL VIEW BOOK



education to business

BUSINESS SCHOOL

UNIVERSITY OF COLORADO AT DENVER
AND HEALTH SCIENCES CENTER

1250 14th Street, Second Floor
Denver, Colorado

MAILING ADDRESS
Campus Box 165
P.O. Box 173364
Denver, CO 80217-3364

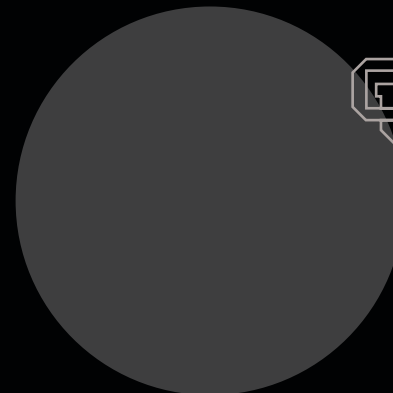
Telephone 303-556-5900
Fax 303-556-5904

www.cudenver.edu/business

BUSINESS SCHOOL

UNIVERSITY OF COLORADO AT DENVER
AND HEALTH SCIENCES CENTER

www.cudenver.edu/business





As the Business School looks to the future, its commitment remains strong for providing a world-class business education. Helping prepare students for tomorrow's business environment is a critical role and they are succeeding through a vibrant collaboration between top-notch faculty, bright students, committed alumni and engaged trustees.

Bill Easter, Business School Board Member
Chairman, President & CEO, Duke Energy Field Services



THE FIRST CHOICE of Business Professionals

In today's highly competitive business environment, those with the right knowledge have access to a world of opportunities. The Business School at the University of Colorado at Denver and Health Sciences Center (UCDHSC), with Colorado's largest MBA program, is the school many people turn to for the advantages they seek to get ahead in their business careers.

We provide a variety of AACSB accredited degree programs for both undergraduate and graduate students. Each offers a challenging curriculum designed in close partnership with an advisory board composed of top local, regional and national business leaders, and taught by professional educators with real-world business experience. Students benefit from a blend of classroom learning and field projects which work together to create an advanced business education with the perfect balance of theory and practice. And what better place to learn than in downtown Denver, the center of business in the Rocky Mountain region.

Through flexible course and scheduling options, undergraduate and graduate students can build the ideal way to further their own education. Daytime, evening and online programs can be pursued full-time or can be tailored for the busy schedules of working professionals. Those looking for a fast track can take

advantage of the 11-Month MBA program, which provides an intense, full-time option during the day. In addition to the general management expertise the MBA programs provide, a range of Master of Science programs are available to those looking for more in-depth fields of study in a particular business discipline.

The Business School also provides a number of specialized resource centers to equip students for business in a changing world. The Bard Center for Entrepreneurship furnishes specialized coursework and operates an incubator and venture fund for students wishing to turn ideas into a reality. The Center for Information Technology Innovation (CITI) offers IT education for students, faculty and area business leaders. The Institute for International Business extends opportunities for students looking to master the complexities of doing business on a global level. And the Center for Health Administration provides health needs assessments and benefit studies to hospitals in the community.

Regardless of the program they choose for their focus, students end up with a highly respected University of Colorado degree, the support of an alumni network composed of thousands of working professionals and the tools to help them stay competitive in the future.

The Business School provides motivated students a top-quality, individualized education combining core knowledge and highly relevant practical application.

Sueann Ambron, Business School Dean



Our Advantages Give You the Edge

A Direct Connection to Business

Business advisory board members contribute to curriculum development, sponsor and support events, provide internship opportunities for our students, engage our faculty in research projects, and participate in our learning centers. This board is composed of more than 160 corporate advisors from companies such as Ball, Duke Energy, Frontier Airlines, Lockheed Martin, Molson-Coors, Price Waterhouse Coopers and Wells Fargo.

A Faculty of Leaders

With doctoral degrees from prominent universities such as Harvard, Yale, Stanford, UC-Berkeley, UCLA and MIT, our professors are teaching professionals. Many are also former high-level business professionals bringing years of business experience with them to their classrooms. In addition, the faculty remains highly involved with the business world through boards, associations, research and consulting.

A Cutting Edge Curriculum

Through constant interaction with the business community, course offerings at the Business School are tailored around the skills businesses need most. Case studies, computer simulations and real-world projects place an emphasis on active learning. In addition, senior executives from leading area businesses and civic organizations contribute input and ensure the curriculum is always relevant.

A Diverse Student Body

The school attracts intelligent, highly motivated students from all over the country and around the world – almost half of which are women. And with a graduate student body averaging 10 years of business experience, students bring with them a wide range of skills helping foster poignant, spirited class discussions, and enhance cultural awareness.

A Wider Range of Choices

Being the largest graduate school in the Rocky Mountain Region, the Business School offers students a more complete choice of programs. Undergraduate disciplines include accounting, entrepreneurship, finance, information systems, international business, management and marketing. Graduate programs include: five MBA choices (a Professional MBA, an 11-Month MBA, an MBA with a Health Administration emphasis, an Executive MBA and an Executive MBA in Health Administration); seven Master of Science programs; and one PhD program. Students also benefit from a greater number of core classes and a large selection of elective coursework and specialized tracks for an added advantage and more flexible scheduling alternatives.

A Spectacular Setting

The Business School is advantageously located in downtown Denver, providing students opportunities to not only expand their knowledge, but to explore life outside of school. The dynamic energy of the area has attracted the offices of Fortune 500 companies as well as many other successful professional businesses. The area is also the cultural heart of Denver, offering the best in sporting events, theatre, dining, shopping and nightlife. Add to the mix more than 300 days of sunshine a year and recreational opportunities, both around town as well as an hour or so away in the Rocky Mountains, and it's no wonder more than 2.4 million people embrace Denver as the perfect place to live, learn, work and play.

A Quality Accredited Education

The exceptional educational experience of the Business School is well recognized. It has earned accreditation by the Association to Advance Collegiate Schools of Business (AACSB). This elite distinction has only been granted to the top business programs in the United States and only to those which meet rigorous standards for curriculum, faculty, library and computer resources.





The Business School is a clear innovator, with ground-breaking academic programs and leading-edge research centers. The commitment to innovation can be seen in every aspect of the school, from the faculty, to the students, to the alumni, serving as a foundation for great success in the future. This innovation leads the way in educating our future business leaders for companies both locally and globally.

Robin Thurston, Business School Board Member
Vice President, Global Director of Research, Media and Marketing, Lipper

Undergraduate DEGREE PROGRAMS

Broad-Based Curriculum

The undergraduate degree program is designed to give students a well-rounded educational foundation for success in a future business career. Students have the option of earning a BS or BA with an area of emphasis in Accounting, Finance, Human Resources Management, Information Systems, International Business, Marketing or Management, or a general business degree with a non-business minor.

Faculty Who Bring More to the Classroom

Business School faculty are selected for their strong academic knowledge as well as the real-world insights developed through successful business careers. Through research and private consultancies, they keep current with the latest business issues and trends. With their range of knowledge, it isn't uncommon to find the same instructors teaching both undergraduate and graduate level classes.

Enriched Learning Environment

The distinguished quality of the undergraduate program is further enhanced by the student body, which enters with strong academic credentials and a high level of motivation. Advisors assist students in planning their course of study to meet specific career goals. They also help students locate internships, mentorship opportunities and student organizations to broaden their experiences and strengthen their resumes.



Our students know what they want and are very committed to their education. Involving students in the research process is an important teaching tool and they find the experience invaluable. Most of our students are “in the trenches” and are able to take what they learn on Wednesday evening and use it on Thursday morning at work.

Herman Aguinis (pictured left)
Mehalchin Term Professor of Management

Graduate DEGREE PROGRAMS

Advanced Degrees That Advance Careers

Some graduate programs teach primarily from the academic perspective—educating on the theories of business. Others teach using current working professionals—educating through their own personal experiences. The Business School curriculum provides a balance between both theory and practice. Professors are experts and among the most sought after consultants in their fields, while class projects regularly involve solving real problems faced by businesses in the region.

The emphasis on active learning — through case studies, real-world group projects and interaction with area businesses — ensures graduates have both the understanding of business practices and solid proof they can turn them into working solutions. Whether students pursue the generalized knowledge base of a Master of Business Administration (MBA) degree or the specialized focus of a Master of Science (MS) degree, they benefit from this uniquely relevant approach. In addition, graduates get the strong respect afforded a University of Colorado degree earned in Denver’s business hub.

MBA PROGRAMS

11-Month MBA
Executive MBA
Executive MBA –
Health Administration
MBA – Health Administration
Online MBA
Professional MBA

MS PROGRAMS

MS in Accounting
MS in Finance
MS in Health Administration
MS in Information Systems
MS in International Business
MS in Management
MS in Marketing

PhD PROGRAM

PhD in Computer Science
and Information Systems

Dual Degree Programs: The Best of Both Worlds

Through the dual degree program, students can combine the career advantages of the MBA’s broad knowledge base with the sought after skills of a specialized MS degree or blend the knowledge of two MS degrees to expand their career options. Pursuing the dual degree program requires additional coursework tailored to fulfill each student’s individual needs.



My MBA has opened many doors for me and provided a wealth of opportunities for growth, both as a person and as a professional. I have met a number of outstanding students, influential people and many healthcare leaders who have become my mentors. These people have become more than just my colleagues, they have instilled in me a great pride in the pursuit of my healthcare career.

Cassandra Moore
Administrative Resident, Health One/Medical Center of Aurora

Master of Business Administration PROGRAMS

The Right Balance

The Master of Business Administration (MBA) program is designed to meet the needs of business professionals. The curriculum combines established business theory with practical knowledge gained by working closely with businesses. Maximum flexibility lets students design their MBA degree around their schedule and career goals. Choices include an intensive full-time program requiring only 11 months of daytime coursework, full or part-time evening programs and flexible online options. The MBA program does not require prerequisite coursework or an undergraduate business degree.

11 MONTH MBA (FULL-TIME)

This innovative accelerated program provides the complete curriculum and knowledge base of a MBA in less than a year. Classes meet during the day at the state-of-the-art Bard Center in downtown Denver and provide an intense, highly productive learning atmosphere. Over the course of the 11-Month program, candidates move through the curriculum as a group. The curriculum includes nine core, one international business, one information technology and five special topic courses. The international course includes an overseas component and is taught by international professors to provide an especially insightful experience.

PROFESSIONAL MBA (FULL- OR PART-TIME)

The ultimate in flexibility, this program lets students complete an MBA at their own pace and at times which are convenient to regular work schedules. Students take anywhere from one to five classes per semester, allowing them earn an MBA in as little as 16 months or as long as five years. Specialized learning tracks also are available.

ONLINE MBA (FULL- OR PART-TIME)

Online courses represent a valuable extension of the Professional MBA program, with the same faculty and the same learning outcomes. Students who choose this option are not required to attend classes on campus, freeing them to pursue their studies anytime, anywhere during the semester. The entire MBA core curriculum and a wide variety of electives are available online. With courses designed to be equivalent, it is easy to combine online and on-campus classes. Students can complete one course or their entire MBA online.

MBA, HEALTH ADMINISTRATION EMPHASIS (FULL- OR PART-TIME)

Recognized by the Commission on Accreditation in Health Management Education (CAHME), this is the only accredited graduate program of its type in the Rocky Mountain region. The program offers an MBA with an emphasis in Health Administration. The curriculum combines general business management

concepts and techniques with tools specific to health services systems. In addition, Colorado is a center for many health care organizations, providing students extensive opportunities to apply their classroom learning.

EXECUTIVE MBA (PART-TIME)

With the increasing need for business leaders to interpret critical information important in long-term decisions for their organizations, the Executive MBA Program is specifically designed to provide the knowledge for strategic decision makers. Executive MBA coursework provides experienced business professionals with a broader business perspective, improves their ability to think and make decisions strategically, and creates an environment where participants apply the techniques and tools learned in class to challenges specific to their current job.

The program is structured so Executive MBA participants attend classes one full day each week, on alternating Fridays and Saturdays, and they can complete their MBA in 21 months, including a three-month summer break, while continuing to work at their careers.

EXECUTIVE MBA, HEALTH ADMINISTRATION (PART-TIME)

For candidates with healthcare management experience, the Executive MBA in Health Administration program provides an opportunity to earn an MBA without career interruption. The Executive Program at the Business School is the most established of its kind in the country and is accredited by the Commission on Accreditation in Health Management Education (CAHME). It is offered in partnership with the Network for Healthcare Management, a consortium of 17 leading universities throughout the United States and Canada. The program consists of two intensive one-week on-campus sessions each year combined with computer conferencing for the remainder of the time. A 24-month program, the Executive Program grants the same strong MBA with an emphasis in Health Administration as the full-time program, but within a framework designed for experienced healthcare professionals.





Teaching at the University of Colorado at Denver and Health Science Center (UCDHSC) is an incredibly exciting challenge. My goal is to see the knowledge and experience students gain in my classes add value to their busy lives. Incorporating leading-edge research in my field and engaging in research projects for local companies lets me take students well beyond textbook learning. Thanks to a very supportive business community, we've had the opportunity to conduct customer satisfaction, service quality, and other marketing projects for more 100 Colorado companies. The interaction between the business community and the university makes this a stimulating place to teach and learn.

Sue Keaveney
Wells Fargo Term Professor of Marketing

Master of Science PROGRAMS

The Master of Science degree is ideal for students looking to gain in-depth knowledge in a chosen area of business. These graduate programs emphasize a balance between theoretical learning and practical application gained through project work. In fact, many of the assigned projects require students to work directly with area businesses in addressing a current challenge or issue they are facing. As with the MBA program, a number of MS program courses can be taken online. Students who have completed an undergraduate business degree program from an accredited University can petition to waive the Common Body of Knowledge coursework. In some cases, this reduces the MS requirements by three to seven courses.

MASTER OF SCIENCE IN ACCOUNTING

The MS in Accounting is highly respected for the breadth of knowledge it provides. The program has earned an additional accounting AACSB accreditation. While students who complete the program consistently do well in passing the CPA exam, the accounting curriculum is designed from a broader perspective, arming students with knowledge which focuses on issues beyond the CPA exam such as IS processes and controls, fraud examination and tax planning.

MASTER OF SCIENCE IN FINANCE

The MS in Finance is one of the few graduate finance programs in the country. The curriculum embraces a unique course selection providing in-depth knowledge and the analytical skills needed for a career as a financial manager or finance specialist. The program builds a theoretical foundation and then augments it with a choice of four specialized electives. This program is excellent preparation for the CFA exam and provides specialized knowledge to help students advance in a finance profession.

MASTER OF SCIENCE IN HEALTH ADMINISTRATION

The MS in Health Administration provides a path of learning which addresses the special challenges of the health care industry. The program also offers specialized tracks which provide additional knowledge focused on specific areas within the health care industry including international health management and policy, financial management, and health information technology. The specialized tracks allow students to better understand global health issues, financial aspects of the industry and the technology needed to support major health care institutions.

MASTER OF SCIENCE IN INFORMATION SYSTEMS

The MS in Information Systems (IS) is Colorado's largest and one of the most comprehensive graduate IS programs in the West. The curriculum, covering a fundamental core of knowledge as well as specialized learning tracks, is regularly updated to meet the changing technology needs of business. It also integrates the Association of Computer Machinery (ACM) coursework recommendations.

MASTER OF SCIENCE IN INTERNATIONAL BUSINESS

The MS in International Business is an elite program which prepares students for the opportunities and challenges businesses face while operating in a global arena. Students build an understanding of international business environments, cross-border movement of goods, people and technology, as well as management of organizations in global markets. Students also develop skills regarding managerial aspects of global business, such as entering foreign markets, managing a multicultural workforce and coordinating multinational operations.

MASTERS OF SCIENCE IN MANAGEMENT

The MS in Management prepares students for upper level managerial positions in the public and private sectors. They learn to manage interpersonal dynamics, effectively design organizations, implement planned change and organization transformations, and create effective strategies for today's complex business environment. A special Human Resources track provides specific knowledge, tools and techniques used in recruiting, hiring, developing, motivating and rewarding managerial and non-managerial employees. A Communication Management track allows students to

develop skills in managing, creating, assessing, and delivering communication services within organizational contexts. Coursework also includes technology solutions such as designing and delivering online training and staff evaluation programs.

MASTER OF SCIENCE IN MARKETING

The MS in Marketing builds its strength on relevance. The curriculum provides comprehensive exposure to all aspects of marketing, preparing students for significant marketing management responsibilities in both private and public sectors. Students gain and apply theoretical marketing knowledge in a practitioner context, led by a research-based faculty who bring sustained experiences to the classroom. Close ties to the business community add to this unique learning opportunity.



Global perspective is important to the area's success, and the Business School is the principal source of this value-added education. The Business School prepares talented individuals to run future businesses and trains graduates to understand and be able to function successfully in what is an ever-expanding global business world.

Tony Bolazina, Business School Board Member
President, Northern Trust Bank of Colorado



Doctor OF PHILOSOPHY

PhD in Computer Science & Information Systems

A joint program between the Business School and the Computer Science and Engineering Department at UCDHSC, the Doctor of Philosophy degree in Computer Science and Information Systems (CSIS) was designed to meet the demand for advanced education in the areas of computer science and information systems related to information technology. The program blends computer science and information systems knowledge with strong industry interaction and targets students with a master's level education in either computer science or information systems who seek research training which combines CS and IS coursework along with strong industry interaction. This degree provides training for successful careers in academia, industry, research or consulting.



My degrees from the Business School have helped me open new horizons. I discovered a number of ways to improve today's businesses by applying techniques and procedures learned in class, including analyzing and solving problems, using teamwork to meet important business objectives and the importance of ethics in the business environment.

Jessica L. Sandoval
General Manager, Comercializadora Medica Farmaceutica (CMF-Mexico) and Representative for Mexico and Latin America, BrandSavvy Inc.

Expanding Opportunities BEYOND THE CLASSROOM

Just as business is as much about experience as it is knowledge, the Business School maintains strong associations with a number of active learning centers. These centers provide students and faculty access to local, regional, national and global business professionals, allowing them to gain first-hand insight and experience with current local and world business issues.

BARD CENTER FOR ENTREPRENEURSHIP

The Bard Center for Entrepreneurship was created in 1996 as an educational center devoted to promoting economic vitality and entrepreneurship in the region. The Bard Center provides classes designed to deliver practical knowledge in conceiving, launching and operating new businesses.

Students at the Bard Center are offered courses in opportunity and risk evaluation, new venture design, financial structuring and business plan creation. They also have the opportunity to participate in the Business Plan Competition, access the Rutt Bridges Venture Capital Fund and receive mentoring from the Bard Center Advisory Council comprised of top business leaders from the Rocky Mountain region.

CENTER FOR INFORMATION TECHNOLOGY INNOVATION

The Center for Information Technology Innovation (CITI) provides a forum for information interchange, specialized educational programs, research, and management of technology initiatives aimed at assisting major Denver area businesses as they plan, design, implement and manage information systems.

Students and faculty of the Business School can tap into this "living laboratory" environment and gain knowledge as well as practical experience through internships and externships at CITI member companies. The active CITI involvement of the business and academic communities creates a direct pipeline to the classroom for the most current technologies, concepts and business methods.

INSTITUTE FOR INTERNATIONAL BUSINESS

The Institute for International Business (IIB) is dedicated to the continual improvement of globally-focused education, research and outreach initiatives. Through the IIB's efforts UCDHSC was granted the prestigious Center for International Business Education Research (CIBER) designation by the United States Department of Education. Congress established CIBERs to help United States companies prosper in an international economy by marshaling the resources of select universities and enhancing their abilities to provide highly effective, internationally oriented educational, research and outreach initiatives.

The IIB and CIBER offer a number of programs to support students and faculty interested in mastering the complexities of global level business. These programs include the Global Executive Forum—bringing together senior executives in global business; Faculty Development in International Business Programs which enable national and international faculty to expand their knowledge; International Business Conferences offering topic specific conferences and seminars; International Executive Roundtables where students and faculty can interact informally with senior international business executives; leading business delegations to emerging market areas; and awarding faculty grants to fund research on global business related topics.

CENTER FOR HEALTH ADMINISTRATION

The Center for Health Administration provides health needs assessments and benefit studies to hospitals throughout the state of Colorado. They also conduct strategic planning and management education programs for individual physicians, as well as for hospital boards of directors.

Housed in the Business School, the Center provides graduate students in Health Administration programs the opportunity to gain valuable knowledge by assisting with the research and reports involved with these studies.

STUDENT ORGANIZATIONS

At the Business School, students' education only begins in the classroom. A wide variety of academic and professional organizations provide opportunities for self-development, career networking among members and practicing professionals, and developing a sense of ethical, social and public responsibility. These organizations also regularly host speaker functions and career panels where students can expand their knowledge and establish beneficial relationships with local, regional and national members of the business community.

Student organizations include the African American Business Student Alliance, the Aggressive Allegiance of Competitive Marketers (a sub-chapter of the American Advertising Federation), Beta Alpha Psi, Theta Sigma Chapter (a national scholastic and professional finance fraternity), Beta Gamma Sigma (honor society for AACSB International business programs), the Financial Management Association International, the Golden Key International Honor Society, the Health Administration Student Organization, the Information Systems Association, the Auraria Marketing Club, the MBA Student Organization, Phi Chi Theta, Gamma Iota Chapter (national business fraternity) and the Society for Human Resource Management. Details on specific organizations can be found under Campus Life on the Business School website.

EXECUTIVE EDUCATION

Through the Business School Executive Education program, area companies can leverage the same innovative research, real-world experience and effective teaching methods of the school's degree programs to get customized certificate programs, workshops and courses for senior management level individuals and teams. Program details can be obtained from the Business School website or by contacting the dean's office at 303.556.5802.



Admission

The curriculum of the Business School is rigorous and focused. The school admits highly motivated applicants who show a potential for business success. Detailed information and application forms are available on the Business School website. (Note: there are separate forms for undergraduate, graduate and international applicants.) Consideration for the undergraduate program requires a high school diploma or a High School Equivalency Certificate (GED). The school bases admission on several factors, the most important being grade point average, high school rank, scores on the ACT or SAT, and courses taken. Transfer students are evaluated based on the grade point average of their college-level work.

Graduate admission requires a bachelor's degree from a regionally accredited college or university, or an equivalent foreign degree, however it does not have to be an undergraduate business degree. Applicants must also submit Graduate Management Admission Test (GMAT) scores, their previous educational record and work experience, and answers to specific essay questions.

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Tuition

Tuition is based on a student's state of residency and the level of degree, undergraduate or graduate, he or she is pursuing. Specific tuition costs can be found under Admissions on the UCDHSC Downtown Denver Campus website at www.cudenver.edu or in the academic catalog.

Financial Aid and Scholarships

More than \$30 million in financial aid is awarded to UCDHSC students each year. Scholarships funded by members of the Colorado business community, the State of Colorado and private donors are available for both academic accomplishment and for financial need. Visit the UCDHSC Downtown Denver Campus website at www.cudenver.edu for details on individual awards programs.

Advising

The Business School curriculum is designed to be extremely flexible regarding the specific courses students can take. Undergraduate and graduate advisors help students sort through the options and select the best program to fit their career goals. Appointments may be arranged by calling 303.556.5800 for undergraduate advisors and 303.556.5900 for graduate advisors.

Through the opportunities afforded by campus activities, clubs, and associations, the Business School fosters students' growth beyond classroom knowledge. Joining the Financial Management Association, I received a great deal of real-world knowledge from leading experts in such fields as venture capital, idea conception and market adoption, innovation, SEC regulatory and accounting practices, and much more. These leading speakers were able to connect what I learned in the classroom to a more hands-on experience.

Paul Wise
Global Mobility Specialist, Thompkins, LLC

University of Colorado at Denver & Health Sciences Center

Program Plan for the Business School Building

APPENDIX B: CLASSROOM UTILIZATION BY ROOM

CourseID	CourseLevel	CRS_TRM_TITLE_DESC	ACTIVITY TYPEDESC	CombEnr I	CombSC H	MeetStart Date	MeetEnd Date	MEETING DAYS	STARTTIME	ENDTIME	BLDG	ROOM	duration_ho ur_adjusted	StuConta ctHours	SISRoom Capacity	PctOccup ied
ACCT3054002	Undergrad	MARKETING RESEARCH	LECTURE	29	87	21AUG06:00	16DEC06:00	M	0655PM	0935PM	KING CENTER	103	3.2	92.8	48	60%
Subtotal Hours Per Week													3.2			
Subtotal % Occupied													60%			
ACCT2200001	Undergrad	ACCOUNTING SYSTEMS AND DATA PROCESSING	LECTURE	41	123	21AUG06:00	16DEC06:00	MW	0100PM	0215PM	KING CENTER	113	3	123.0	44	93%
ACCT2200002	Undergrad	ACCOUNTING SYSTEMS AND DATA PROCESSING	LECTURE	45	135	21AUG06:00	16DEC06:00	MW	0400PM	0515PM	KING CENTER	113	3	135.0	44	102%
ACCT2200003	Undergrad	INFORMATION SYSTEMS INTRO TO BUSINESS	LECTURE	45	135	21AUG06:00	16DEC06:00	MW	1000AM	1115AM	KING CENTER	113	3	135.0	44	102%
ACCT2200OL1	Undergrad	INFORMATION SYSTEMS INTRO TO BUSINESS	LECTURE	44	132	21AUG06:00	16DEC06:00	TR	1000AM	1115AM	KING CENTER	113	3	132.0	44	100%
ACCT2220001	Undergrad	PROBLEM SOLVING INTRO TO BUSINESS	LECTURE	44	132	21AUG06:00	16DEC06:00	MW	0230PM	0345PM	KING CENTER	113	3	132.0	44	100%
Subtotal Hours Per Week													15			
Subtotal % Occupied													100%			
ACCT2220002	Undergrad	DATABASE MANAGEMENT AND APPLICATIONS	LECTURE	17	51	21AUG06:00	16DEC06:00	MW	0400PM	0515PM	KING CENTER	205	3	51.0	36	47%
ACCT2220OL1	Grad	SERVICE ORIENTED ARCHITECTURE	HYBRID	9	27	21AUG06:00	16DEC06:00	W	0655PM	0935PM	KING CENTER	205	3.2	28.8	36	25%
Subtotal Hours Per Week													6.2			
Subtotal % Occupied													36%			
ACCT2220003	Grad	DATABASE MANAGEMENT SYSTEMS	LECTURE	12	36	21AUG06:00	16DEC06:00	R	0655PM	0935PM	KING CENTER	211	3.2	38.4	54	22%
Subtotal Hours Per Week													3.2			
Subtotal % Occupied													22%			
ACCT3054001	Grad	ADVANCES IN MANAGEMENT INFORMATION SYSTEMS	SEMINAR	7	21	21AUG06:00	16DEC06:00	M	0600PM	0840PM	KING CENTER	315	3.2	22.4	24	29%
Subtotal Hours Per Week													3.2			
Subtotal % Occupied													29%			
ACCT3220001	Grad	FINDMYLTS OF HLTH INFO TECHNOLOGY MGMT	LECTURE	6	18	21AUG06:00	16DEC06:00	W	0655PM	0935PM	LIBRARY & MEDIA CENTER	4	3.2	19.2	27	22%
Subtotal Hours Per Week													3.2			
Subtotal % Occupied													22%			
ACCT6510001	Grad	ST: FRAUD EXAMINATION	LECTURE	27	81	21AUG06:00	16DEC06:00	T	0655PM	0935PM	NORTH CLASSROOM BUILDING	1202	3.2	86.4	72	38%
Subtotal Hours Per Week													3.2			
Subtotal % Occupied													38%			
ACCT6340001	Grad	CURRENT ISSUES IN PROFESSIONAL ACCOUNTING	LECTURE	13	39	21AUG06:00	16DEC06:00	M	0655PM	0935PM	NORTH CLASSROOM BUILDING	1204	3.2	41.6	72	18%
BUSN6521001	Grad	LEGAL AND ETHICAL ENVIRONMENT OF BUSINESS	LECTURE	23	69	21AUG06:00	16DEC06:00	W	0655PM	0935PM	NORTH CLASSROOM BUILDING	1204	3.2	73.6	72	32%
BUSN6540001	Grad	MARKETING MANAGEMENT	LECTURE	26	78	21AUG06:00	16DEC06:00	T	0655PM	0935PM	NORTH CLASSROOM BUILDING	1204	3.2	83.2	72	36%
Subtotal Hours Per Week													9.6			
Subtotal % Occupied													29%			
INTB6000001	Grad	STMARKETING IN THE CHINESE ENVIRONMENT	LECTURE	24	72	21AUG06:00	16DEC06:00	W	0655PM	0935PM	NORTH CLASSROOM BUILDING	1207	3.2	76.8	96	25%
Subtotal Hours Per Week													3.2			
Subtotal % Occupied													25%			
ACCT6250002	Grad	SEMINAR: FINANCIAL ACCT	SEMINAR	27	81	21AUG06:00	16DEC06:00	T	0655PM	0935PM	NORTH CLASSROOM BUILDING	1311	3.2	86.4	42	64%
ACCT6350001	Grad	ADV TAX FOR BUSINESSES	LECTURE	7	21	21AUG06:00	16DEC06:00	R	0655PM	0935PM	NORTH CLASSROOM BUILDING	1311	3.2	22.4	42	17%
Subtotal Hours Per Week													6.4			
Subtotal % Occupied													40%			
FNCE6350001	Grad	HUMAN RESOURCES MGMT: TRAINING	LECTURE	6	18	21AUG06:00	16DEC06:00	W	0655PM	0935PM	NORTH CLASSROOM BUILDING	1312	3.2	19.2	36	17%
Subtotal Hours Per Week													3.2			
Subtotal % Occupied													17%			
ACCT6420001	Grad	ACCOUNTING & INFO SYSTEMS PROCESSES & CONTROL	LECTURE	17	51	21AUG06:00	16DEC06:00	W	0655PM	0935PM	NORTH CLASSROOM BUILDING	1314	3.2	54.4	36	47%
Subtotal Hours Per Week													3.2			
Subtotal % Occupied													47%			
ACCT3230002	Undergrad	INTERMEDIATE FINANCIAL ACCOUNTING I	LECTURE	42	126	21AUG06:00	16DEC06:00	MW	1130AM	1245PM	NORTH CLASSROOM BUILDING	1315	3	126.0	49	86%
ACCT3230001	Undergrad	INTERMEDIATE FINANCIAL ACCOUNTING I	LECTURE	34	102	21AUG06:00	16DEC06:00	MW	0530PM	0645PM	NORTH CLASSROOM BUILDING	1315	3	102.0	49	69%
ACCT3230002	Undergrad	INTERMEDIATE FINANCIAL ACCOUNTING II	LECTURE	44	132	21AUG06:00	16DEC06:00	MW	1000AM	1115AM	NORTH CLASSROOM BUILDING	1315	3	132.0	49	90%
ACCT4410001	Undergrad	INTERMEDIATE FINANCIAL ACCOUNTING II	LECTURE	45	135	21AUG06:00	16DEC06:00	MW	0400PM	0515PM	NORTH CLASSROOM BUILDING	1315	3	135.0	49	92%
BLAW3000OL1	Undergrad	LEGAL AND ETHICAL ENVIRONMENTS OF BUSI	LECTURE	24	72	21AUG06:00	16DEC06:00	TR	1130AM	1245PM	NORTH CLASSROOM BUILDING	1315	3	72.0	49	49%
FNCE3100001	Undergrad	INTRODUCTION TO BUSINESS	LECTURE	25	75	21AUG06:00	16DEC06:00	TR	1000AM	1115AM	NORTH CLASSROOM BUILDING	1315	3	75.0	49	51%
FNCE3200003	Undergrad	INTRO TO HUMAN RESOURCES	LECTURE	45	135	21AUG06:00	16DEC06:00	TR	0400PM	0515PM	NORTH CLASSROOM BUILDING	1315	3	135.0	49	92%
FNCE4330002	Undergrad	ORGANIZATION DESIGN	LECTURE	47	141	21AUG06:00	16DEC06:00	MW	0230PM	0345PM	NORTH CLASSROOM BUILDING	1315	3	141.0	49	96%
DSCI2010002	Grad	INTERNATIONAL FINANCIAL MANAGEMENT	LECTURE	21	63	21AUG06:00	16DEC06:00	TR	0530PM	0645PM	NORTH CLASSROOM BUILDING	1315	3	63.0	49	43%
DSCI3000003	Grad	TRANSNATIONAL LEADERSHIP: INTERNATIONAL MANAGEMENT	LECTURE	7	21	21AUG06:00	16DEC06:00	M	0655PM	0935PM	NORTH CLASSROOM BUILDING	1315	3.2	22.4	49	14%
DSCI3000004	Grad	INTERNATIONAL HEALTH POLICY AND MANAGEMENT	LECTURE	19	57	21AUG06:00	16DEC06:00	W	0655PM	0935PM	NORTH CLASSROOM BUILDING	1315	3.2	60.8	49	39%
Subtotal Hours Per Week													33.4			
Subtotal % Occupied													65%			
FNCE4370003	Undergrad	HUMAN RESOURCES MGMT: STAFFING	LECTURE	23	69	21AUG06:00	16DEC06:00	R	0655PM	0935PM	NORTH CLASSROOM BUILDING	1316	3.2	73.6	36	64%
ACCT6250001	Grad	SEMINAR: FINANCIAL ACCT	SEMINAR	24	72	21AUG06:00	16DEC06:00	W	0655PM	0935PM	NORTH CLASSROOM BUILDING	1316	3.2	76.8	36	67%
Subtotal Hours Per Week													6.4			
Subtotal % Occupied													65%			
ACCT6024002	Grad	ADV FINANCIAL ACCOUNTING	LECTURE	28	84	21AUG06:00	16DEC06:00	T	0655PM	0935PM	NORTH CLASSROOM BUILDING	1323	3.2	89.6	42	67%

														Subtotal Hours Per Week		3.2	
														Subtotal % Occupied		67%	
ACCT3220002	Undergrad	FINANCIAL ACCOUNTING AND FINANCIAL STATEMENT ANALYSIS	LECTURE	46	138	21AUG06:00	16DEC06:00	MW	1130AM	1245PM	NORTH CLASSROOM BUILDING	1325	3	138.0	49	94%	
ACCT6840900	Undergrad	LEGAL AND ETHICAL ENVIRONMENTS OF BUSINESS	LECTURE	53	159	21AUG06:00	16DEC06:00	TR	1000AM	1115AM	NORTH CLASSROOM BUILDING	1325	3	159.0	49	108%	
BLAW4120001	Undergrad	LEGAL AND ETHICAL ENVIRONMENTS OF BUSINESS	LECTURE	45	135	21AUG06:00	16DEC06:00	TR	0100PM	0215PM	NORTH CLASSROOM BUILDING	1325	3	135.0	49	92%	
BUSN6630001	Undergrad	PRINCIPLES OF FINANCE I	LECTURE	46	138	21AUG06:00	16DEC06:00	W	0655PM	0935PM	NORTH CLASSROOM BUILDING	1325	3.2	147.2	49	94%	
BUSN6640002	Undergrad	INVESTMENT AND PORTFOLIO MANAGEMENT	LECTURE	28	84	21AUG06:00	16DEC06:00	MW	1000AM	1115AM	NORTH CLASSROOM BUILDING	1325	3	84.0	49	57%	
BUSN6710002	Undergrad	INTERNATIONAL FINANCIAL MANAGEMENT	LECTURE	26	78	21AUG06:00	16DEC06:00	TR	0230PM	0345PM	NORTH CLASSROOM BUILDING	1325	3	78.0	49	53%	
FNCE3100002	Undergrad	INTRODUCTION TO BUSINESS	LECTURE	47	141	21AUG06:00	16DEC06:00	TR	1130AM	1245PM	NORTH CLASSROOM BUILDING	1325	3	141.0	49	96%	
FNCE4500001	Undergrad	HUMAN RESOURCES MGMT: COMPENSATION	LECTURE	24	72	21AUG06:00	16DEC06:00	MW	0230PM	0345PM	NORTH CLASSROOM BUILDING	1325	3	72.0	49	49%	
BUSN6540OL1	Grad	MARKETING MANAGEMENT	LECTURE	28	84	21AUG06:00	16DEC06:00	R	0655PM	0935PM	NORTH CLASSROOM BUILDING	1325	3.2	89.6	49	57%	
BUSN6610001	Grad	FINANCIAL MANAGEMENT	LECTURE	23	69	21AUG06:00	16DEC06:00	MW	0400PM	0515PM	NORTH CLASSROOM BUILDING	1325	3	69.0	49	47%	
BUSN6840900	Grad	QUANTITATIVE METHODS FOR FINANCE	LECTURE	29	87	21AUG06:00	16DEC06:00	TR	0530PM	0645PM	NORTH CLASSROOM BUILDING	1325	3	87.0	49	59%	
DSCI6840900	Grad	INTERNATIONAL BUSINESS NEGOTIATIONS	LECTURE	19	57	21AUG06:00	16DEC06:00	M	0655PM	0935PM	NORTH CLASSROOM BUILDING	1325	3.2	60.8	49	39%	
FNCE6310OL1	Grad	INTERNATIONAL HUMAN RESOURCES MANAGEMENT	LECTURE	17	51	21AUG06:00	16DEC06:00	MW	0530PM	0645PM	NORTH CLASSROOM BUILDING	1325	3	51.0	49	35%	
														Subtotal Hours Per Week		39.6	
														Subtotal % Occupied		68%	
BUSN6620001	Undergrad	BUSINESS STATISTICS	LECTURE	35	105	21AUG06:00	16DEC06:00	MW	0230PM	0345PM	NORTH CLASSROOM BUILDING	1402	3	105.0	48	73%	
BUSN6630002	Undergrad	PRINCIPLES OF FINANCE II	LECTURE	48	144	21AUG06:00	16DEC06:00	MW	1000AM	1115AM	NORTH CLASSROOM BUILDING	1402	3	144.0	48	100%	
FNCE4330001	Undergrad	CONFLICT & CHANGE IN ORGANIZATIONS	LECTURE	30	90	21AUG06:00	16DEC06:00	MW	0100PM	0215PM	NORTH CLASSROOM BUILDING	1402	3	90.0	48	63%	
FNCE6420001	Undergrad	APPLIED MARKETING MGMT	LECTURE	39	117	21AUG06:00	16DEC06:00	TR	1130AM	1245PM	NORTH CLASSROOM BUILDING	1402	3	117.0	48	81%	
FNCE6430001	Undergrad	APPLIED MARKETING MGMT	LECTURE	32	96	21AUG06:00	16DEC06:00	TR	0230PM	0345PM	NORTH CLASSROOM BUILDING	1402	3	96.0	48	67%	
FNCE6480001	Undergrad	APPLIED MARKETING MGMT	LECTURE	36	108	21AUG06:00	16DEC06:00	TR	0530PM	0645PM	NORTH CLASSROOM BUILDING	1402	3	108.0	48	75%	
HLTH6055001	Undergrad	CUSTOMER RELATIONSHIP MANAGEMENT	LECTURE	22	66	21AUG06:00	16DEC06:00	TR	1000AM	1115AM	NORTH CLASSROOM BUILDING	1402	3	66.0	48	46%	
ACCT6260001	Grad	SEMINAR: MANAGERIAL ACCOUNTING	SEMINAR	14	42	21AUG06:00	16DEC06:00	R	0655PM	0935PM	NORTH CLASSROOM BUILDING	1402	3.2	44.8	48	29%	
BUSN6520002	Grad	DATA ANALYSIS FOR MANAGERS	LECTURE	42	126	21AUG06:00	16DEC06:00	M	0655PM	0935PM	NORTH CLASSROOM BUILDING	1402	3.2	134.4	48	88%	
BUSN6520003	Grad	DATA ANALYSIS FOR MANAGERS	LECTURE	41	123	21AUG06:00	16DEC06:00	MW	0530PM	0645PM	NORTH CLASSROOM BUILDING	1402	3	123.0	48	85%	
BUSN6530001	Grad	LEGAL AND ETHICAL ENVIRONMENT OF BUSINESS	LECTURE	31	93	21AUG06:00	16DEC06:00	MW	0400PM	0515PM	NORTH CLASSROOM BUILDING	1402	3	93.0	48	65%	
BUSN6550001	Grad	INFORMATION TECHNOLOGY MANAGEMENT	LECTURE	18	54	21AUG06:00	16DEC06:00	W	0655PM	0935PM	NORTH CLASSROOM BUILDING	1402	3.2	57.6	48	38%	
BUSN6560003	Grad	FINANCIAL MANAGEMENT	LECTURE	22	66	21AUG06:00	16DEC06:00	T	0655PM	0935PM	NORTH CLASSROOM BUILDING	1402	3.2	70.4	48	46%	
														Subtotal Hours Per Week		39.8	
														Subtotal % Occupied		66%	
ACCT3220OL1	Undergrad	FINANCIAL ACCOUNTING AND FINANCIAL STATEMENT ANALYSIS	LECTURE	49	147	21AUG06:00	16DEC06:00	MW	0100PM	0215PM	NORTH CLASSROOM BUILDING	1408	3	147.0	56	88%	
ACCT6020001	Undergrad	INCOME TAX ACCOUNTING	LECTURE	32	96	21AUG06:00	16DEC06:00	TR	0230PM	0345PM	NORTH CLASSROOM BUILDING	1408	3	96.0	56	57%	
FNCE4350001	Undergrad	ORGANIZATION DESIGN	LECTURE	48	144	21AUG06:00	16DEC06:00	W	0655PM	0935PM	NORTH CLASSROOM BUILDING	1408	3.2	153.6	56	86%	
FNCE6290001	Undergrad	BUSINESS POLICY AND STRATEGIC MANAGEMENT	LECTURE	36	108	21AUG06:00	16DEC06:00	MW	0530PM	0645PM	NORTH CLASSROOM BUILDING	1408	3	108.0	56	64%	
BUSN6530OL1	Grad	ANALYZING & INTERPRETING ACCOUNTING INFORMATION	LECTURE	35	105	21AUG06:00	16DEC06:00	R	0655PM	0935PM	NORTH CLASSROOM BUILDING	1408	3.2	112.0	56	63%	
BUSN6550003	Grad	APPLIED ECONOMICS FOR MANAGERS	LECTURE	28	84	21AUG06:00	16DEC06:00	M	0655PM	0935PM	NORTH CLASSROOM BUILDING	1408	3.2	89.6	56	50%	
DSCI3000001	Grad	HEALTH CARE SYSTEMS	LECTURE	28	84	21AUG06:00	16DEC06:00	T	0655PM	0935PM	NORTH CLASSROOM BUILDING	1408	3.2	89.6	56	50%	
														Subtotal Hours Per Week		21.8	
														Subtotal % Occupied		65%	
BUSN6640003	Undergrad	INVESTMENT AND PORTFOLIO MANAGEMENT	LECTURE	35	105	21AUG06:00	16DEC06:00	MW	0530PM	0645PM	NORTH CLASSROOM BUILDING	1511	3	105.0	56	63%	
FNCE3200001	Undergrad	MANAGING INDIVIDUALS AND TEAMS	LECTURE	45	135	21AUG06:00	16DEC06:00	TR	1130AM	1245PM	NORTH CLASSROOM BUILDING	1511	3	135.0	56	80%	
FNCE3200002	Undergrad	MANAGING INDIVIDUALS AND TEAMS	LECTURE	45	135	21AUG06:00	16DEC06:00	TR	0230PM	0345PM	NORTH CLASSROOM BUILDING	1511	3	135.0	56	80%	
BUSN6530003	Grad	ANALYZING & INTERPRETING ACCOUNTING INFORMATION	LECTURE	23	69	21AUG06:00	16DEC06:00	TR	0530PM	0645PM	NORTH CLASSROOM BUILDING	1511	3	69.0	56	41%	
BUSN6560OL1	Grad	FINANCIAL MANAGEMENT	LECTURE	20	60	21AUG06:00	16DEC06:00	M	0655PM	0935PM	NORTH CLASSROOM BUILDING	1511	3.2	64.0	56	36%	
DSCI6822OL1	Grad	CROSS-CULTURAL MANAGEMENT	LECTURE	27	81	21AUG06:00	16DEC06:00	T	0655PM	0935PM	NORTH CLASSROOM BUILDING	1511	3.2	86.4	56	48%	
FNCE6330OL1	Grad	DESIGNING EFFECTIVE ORGANIZATIONS	LECTURE	17	51	21AUG06:00	16DEC06:00	W	0655PM	0935PM	NORTH CLASSROOM BUILDING	1511	3.2	54.4	56	30%	
FNCE6370001	Grad	BARGAINING & NEGOTIATION	SEMINAR	18	54	21AUG06:00	16DEC06:00	R	0655PM	0935PM	NORTH CLASSROOM BUILDING	1511	3.2	57.6	56	32%	
														Subtotal Hours Per Week		24.8	
														Subtotal % Occupied		51%	
BLAW3000001	Undergrad	LEGAL AND ETHICAL ENVIRONMENTS OF BUSINESS	LECTURE	43	129	21AUG06:00	16DEC06:00	R	0655PM	0935PM	NORTH CLASSROOM BUILDING	1515	3.2	137.6	58	74%	
BUSN6631002	Undergrad	PRINCIPLES OF FINANCE II	LECTURE	45	135	21AUG06:00	16DEC06:00	T	0655PM	0935PM	NORTH CLASSROOM BUILDING	1515	3.2	144.0	58	78%	
FNCE3100OL1	Undergrad	MANAGING INDIVIDUALS AND TEAMS	LECTURE	43	129	21AUG06:00	16DEC06:00	MW	0530PM	0645PM	NORTH CLASSROOM BUILDING	1515	3	129.0	58	74%	
BLAW4120002	Grad	MANAGING INDIVIDUALS AND TEAMS	LECTURE	44	132	21AUG06:00	16DEC06:00	M	0655PM	0935PM	NORTH CLASSROOM BUILDING	1515	3.2	140.8	58	76%	
BLAW4120003	Grad	MANAGING INDIVIDUALS AND TEAMS	LECTURE	21	63	21AUG06:00	16DEC06:00	TR	0530PM	0645PM	NORTH CLASSROOM BUILDING	1515	3	63.0	58	36%	
BUSN6610OL1	Grad	STRATEGIC MANAGEMENT	LECTURE	16	48	21AUG06:00	16DEC06:00	W	0655PM	0935PM	NORTH CLASSROOM BUILDING	1515	3.2	51.2	58	28%	
														Subtotal Hours Per Week		18.8	
														Subtotal % Occupied		61%	
ACCT4410002	Undergrad	INTERMEDIATE COST ACCT	LECTURE	29	87	21AUG06:00	16DEC06:00	R	0655PM	0935PM	NORTH CLASSROOM BUILDING	1602	3.2	92.8	48	60%	

BUSN6620003	Undergrad	PRINCIPLES OF FINANCE I	LECTURE	45	135	21AUG06:00	16DEC06:00	MW	0100PM	0215PM	NORTH CLASSROOM BUILDING	1602	3	135.0	48	94%
BUSN66200L1	Undergrad	PRINCIPLES OF FINANCE I	LECTURE	43	129	21AUG06:00	16DEC06:00	TR	1130AM	1245PM	NORTH CLASSROOM BUILDING	1602	3	129.0	48	90%
BUSN66300L1	Undergrad	PRINCIPLES OF FINANCE II	LECTURE	41	123	21AUG06:00	16DEC06:00	TR	1000AM	1115AM	NORTH CLASSROOM BUILDING	1602	3	123.0	48	85%
FNCE3100003	Undergrad	INTRODUCTION TO BUSINESS	LECTURE	19	57	21AUG06:00	16DEC06:00	MW	0400PM	0515PM	NORTH CLASSROOM BUILDING	1602	3	57.0	48	40%
HLTH5939900	Undergrad	ADVERTISING	LECTURE	42	126	21AUG06:00	16DEC06:00	TR	0230PM	0345PM	NORTH CLASSROOM BUILDING	1602	3	126.0	48	88%
HLTH6010001	Undergrad	INTERNATIONAL MARKETING	LECTURE	29	87	21AUG06:00	16DEC06:00	MW	0230PM	0345PM	NORTH CLASSROOM BUILDING	1602	3	87.0	48	60%
HLTH6040001	Undergrad	INTERNATIONAL MARKETING	LECTURE	35	105	21AUG06:00	16DEC06:00	MW	0530PM	0645PM	NORTH CLASSROOM BUILDING	1602	3	105.0	48	73%
ACCT6024001	Grad	ADV FINANCIAL ACCOUNTING	LECTURE	30	90	21AUG06:00	16DEC06:00	TR	0100PM	0215PM	NORTH CLASSROOM BUILDING	1602	3	90.0	48	63%
BUSN6550002	Grad	INFORMATION TECHNOLOGY MANAGEMENT	LECTURE	24	72	21AUG06:00	16DEC06:00	T	0655PM	0935PM	NORTH CLASSROOM BUILDING	1602	3.2	76.8	48	50%
BUSN6560001	Grad	MANAGEMENT OF OPERATIONS	LECTURE	31	93	21AUG06:00	16DEC06:00	M	0655PM	0935PM	NORTH CLASSROOM BUILDING	1602	3.2	99.2	48	65%
BUSN6560002	Grad	MANAGEMENT OF OPERATIONS	LECTURE	17	51	21AUG06:00	16DEC06:00	W	0655PM	0935PM	NORTH CLASSROOM BUILDING	1602	3.2	54.4	48	35%
FNCE63400L1	Grad	MANAGING PEOPLE FOR COMPETITIVE ADVANTAGE	LECTURE	8	24	21AUG06:00	16DEC06:00	TR	0530PM	0645PM	NORTH CLASSROOM BUILDING	1602	3	24.0	48	17%
Subtotal Hours Per Week													39.8			
Subtotal % Occupied													63%			
ACCT6800001	Undergrad	LEGAL AND ETHICAL ENVIRONMENTS OF BUSI	LECTURE	47	141	21AUG06:00	16DEC06:00	MW	0230PM	0345PM	NORTH CLASSROOM BUILDING	1603	3	141.0	48	98%
BLAW3000002	Undergrad	LEGAL AND ETHICAL ENVIRONMENTS OF BUSI	LECTURE	35	105	21AUG06:00	16DEC06:00	MW	0400PM	0515PM	NORTH CLASSROOM BUILDING	1603	3	105.0	48	73%
BUSN66400L1	Undergrad	FINANCIAL MARKETS AND INSTITUTIONS	LECTURE	21	63	21AUG06:00	16DEC06:00	TR	0230PM	0345PM	NORTH CLASSROOM BUILDING	1603	3	63.0	48	44%
FNCE3200004	Undergrad	MANAGING CULTURAL DIVERSITY	LECTURE	34	102	21AUG06:00	16DEC06:00	TR	1130AM	1245PM	NORTH CLASSROOM BUILDING	1603	3	102.0	48	71%
FNCE5939900	Undergrad	BUSINESS POLICY AND STRATEGIC MANAGEMENT	LECTURE	34	102	21AUG06:00	16DEC06:00	MW	1130AM	1245PM	NORTH CLASSROOM BUILDING	1603	3	102.0	48	71%
FNCE63000L1	Undergrad	BUSINESS POLICY AND STRATEGIC MANAGEMENT	LECTURE	44	132	21AUG06:00	16DEC06:00	W	0655PM	0935PM	NORTH CLASSROOM BUILDING	1603	3.2	140.8	48	92%
DSCI6820001	Grad	INTRO TO INTERNATIONAL BUSINESS	LECTURE	37	111	21AUG06:00	16DEC06:00	M	0655PM	0935PM	NORTH CLASSROOM BUILDING	1603	3.2	118.4	48	77%
ENTP3000001	Grad	INTERNATIONAL TRADE, FINANCE, MANAGEMENT	LECTURE	29	87	21AUG06:00	16DEC06:00	R	0655PM	0935PM	NORTH CLASSROOM BUILDING	1603	3.2	92.8	48	60%
Subtotal Hours Per Week													24.6			
Subtotal % Occupied													73%			
ACCT3230001	Undergrad	FINANCIAL ACCOUNTING AND FINANCIAL STATEMENT ANAL	LECTURE	48	144	21AUG06:00	16DEC06:00	MW	0400PM	0515PM	NORTH CLASSROOM BUILDING	1605	3	144.0	48	100%
BUSN68300L1	Undergrad	CORPORATE FINANCIAL DECISIONS	LECTURE	37	111	21AUG06:00	16DEC06:00	MW	0530PM	0645PM	NORTH CLASSROOM BUILDING	1605	3	111.0	48	77%
FNCE4350002	Undergrad	INTRO TO INTERNATIONAL BUSINESS	LECTURE	30	90	21AUG06:00	16DEC06:00	W	0655PM	0935PM	NORTH CLASSROOM BUILDING	1605	3.2	96.0	48	63%
FNCE6380001	Undergrad	PRINCIPLES OF MARKETING	LECTURE	42	126	21AUG06:00	16DEC06:00	TR	1130AM	1245PM	NORTH CLASSROOM BUILDING	1605	3	126.0	48	88%
BUSN6610002	Grad	STRATEGIC MANAGEMENT	LECTURE	26	78	21AUG06:00	16DEC06:00	M	0655PM	0935PM	NORTH CLASSROOM BUILDING	1605	3.2	83.2	48	54%
DSCI3000002	Grad	HEALTHCARE FINANCIAL MANAGEMENT	LECTURE	23	69	21AUG06:00	16DEC06:00	R	0655PM	0935PM	NORTH CLASSROOM BUILDING	1605	3.2	73.6	48	48%
HLTH6072001	Grad	ADVERTISING & PROMOTION MANAGEMENT	LECTURE	27	81	21AUG06:00	16DEC06:00	T	0655PM	0935PM	NORTH CLASSROOM BUILDING	1605	3.2	86.4	48	56%
Subtotal Hours Per Week													21.8			
Subtotal % Occupied													69%			
ACCT6020002	Undergrad	INCOME TAX ACCOUNTING	LECTURE	40	120	21AUG06:00	16DEC06:00	TR	0530PM	0645PM	NORTH CLASSROOM BUILDING	1607	3	120.0	72	56%
BUSN6520001	Grad	MANAGING INDIVIDUALS & TEAMS (HEALTH SECTION)	LECTURE	21	63	21AUG06:00	16DEC06:00	MW	0530PM	0645PM	NORTH CLASSROOM BUILDING	1607	3	63.0	72	29%
BUSN65200L1	Grad	DATA ANALYSIS FOR MANAGERS	LECTURE	39	117	21AUG06:00	16DEC06:00	W	0655PM	0935PM	NORTH CLASSROOM BUILDING	1607	3.2	124.8	72	54%
BUSN6530002	Grad	ANALYZING & INTERPRETING ACCOUNTING INFORMATION	LECTURE	45	135	21AUG06:00	16DEC06:00	T	0655PM	0935PM	NORTH CLASSROOM BUILDING	1607	3.2	144.0	72	63%
HLTH6070001	Grad	SERVICES MARKETING	LECTURE	17	51	21AUG06:00	16DEC06:00	MW	0400PM	0515PM	NORTH CLASSROOM BUILDING	1607	3	51.0	72	24%
Subtotal Hours Per Week													15.4			
Subtotal % Occupied													45%			
BLAW3000003	Undergrad	LEGAL AND ETHICAL ENVIRONMENTS OF BUSI	LECTURE	51	153	21AUG06:00	16DEC06:00	M	0655PM	0935PM	NORTH CLASSROOM BUILDING	1806	3.2	163.2	68	75%
BLAW4120004	Grad	MANAGING INDIVIDUALS AND TEAMS	LECTURE	40	120	21AUG06:00	16DEC06:00	T	0655PM	0935PM	NORTH CLASSROOM BUILDING	1806	3.2	128.0	68	59%
BUSN6540002	Grad	MARKETING MANAGEMENT	LECTURE	24	72	21AUG06:00	16DEC06:00	MW	0530PM	0645PM	NORTH CLASSROOM BUILDING	1806	3	72.0	68	35%
BUSN65500L1	Grad	APPLIED ECONOMICS FOR MANAGERS	LECTURE	49	147	21AUG06:00	16DEC06:00	W	0655PM	0935PM	NORTH CLASSROOM BUILDING	1806	3.2	156.8	68	72%
Subtotal Hours Per Week													12.6			
Subtotal % Occupied													60%			
BUSN6640001	Undergrad	PRINCIPLES OF FINANCE II	LECTURE	33	99	21AUG06:00	16DEC06:00	TR	0530PM	0645PM	NORTH CLASSROOM BUILDING	2001	3	99.0	48	69%
BUSN6710001	Undergrad	FINANCIAL MARKETS AND INSTITUTIONS	LECTURE	39	117	21AUG06:00	16DEC06:00	T	0655PM	0935PM	NORTH CLASSROOM BUILDING	2001	3.2	124.8	48	81%
BUSN67100L1	Undergrad	INTERNATIONAL FINANCIAL MANAGEMENT	LECTURE	38	114	21AUG06:00	16DEC06:00	R	0655PM	0935PM	NORTH CLASSROOM BUILDING	2001	3.2	121.6	48	79%
FNCE4370002	Undergrad	INTRO TO INTERNATIONAL BUSINESS	LECTURE	15	45	21AUG06:00	16DEC06:00	M	0655PM	0935PM	NORTH CLASSROOM BUILDING	2001	3.2	48.0	48	31%
DSCI2010001	Grad	FINANCIAL INNOVATIONS	LECTURE	15	45	21AUG06:00	16DEC06:00	MW	0400PM	0515PM	NORTH CLASSROOM BUILDING	2001	3	45.0	48	31%
DSCI2010003	Grad	FUTURES AND OPTIONS	LECTURE	20	60	21AUG06:00	16DEC06:00	MW	0530PM	0645PM	NORTH CLASSROOM BUILDING	2001	3	60.0	48	42%
DSCI2010004	Grad	FINANCIAL MODELING	LECTURE	30	90	21AUG06:00	16DEC06:00	W	0655PM	0935PM	NORTH CLASSROOM BUILDING	2001	3.2	96.0	48	63%
Subtotal Hours Per Week													21.8			
Subtotal % Occupied													57%			
INTB6020001	Undergrad	MANAGERIAL ACCOUNTING & PROFESSIONAL ACCOUNTING ISSUES	LECTURE	45	135	21AUG06:00	16DEC06:00	TR	1130AM	1245PM	PLAZA BUILDING (FORMERLY ST)	112	3	135.0	48	94%
ISMG6080001	Undergrad	PRINC OF INFO SYSTEMS THEORY & PRACTICE	LECTURE	39	117	21AUG06:00	16DEC06:00	TR	1000AM	1115AM	PLAZA BUILDING (FORMERLY ST)	112	3	117.0	48	81%
ISMG7200001	Undergrad	PRINCIPLES OF MARKETING	LECTURE	45	135	21AUG06:00	16DEC06:00	MW	0400PM	0515PM	PLAZA BUILDING (FORMERLY ST)	112	3	135.0	48	94%
ISMG7840900	Undergrad	PRINCIPLES OF MARKETING	LECTURE	37	111	21AUG06:00	16DEC06:00	MW	0530PM	0645PM	PLAZA BUILDING (FORMERLY ST)	112	3	111.0	48	77%
ISMG64200L1	Grad	BUSINESS PROCESS MANAGEMENT	HYBRID	12	36	21AUG06:00	16DEC06:00	TR	0530PM	0645PM	PLAZA BUILDING (FORMERLY ST)	112	3	36.0	48	25%

ISMG64500L1	Grad	IT INFRASTRUCTURE	LECTURE	9	27	21AUG06:00	16DEC06:00	T	0655PM	0935PM	PLAZA BUILDING (FORMERLY ST)	112	3.2	28.8	48	19%	
Subtotal Hours Per Week													18.2				
Subtotal % Occupied													65%				
INTB6840900	Undergrad	INTERMEDIATE COST ACCT	LECTURE	40	120	21AUG06:00	16DEC06:00	TR	1130AM	1245PM	PLAZA BUILDING (FORMERLY ST)	114	3	120.0	48	83%	
ISMG2200001	Undergrad	BUSINESS STATISTICS	LECTURE	32	96	21AUG06:00	16DEC06:00	M	0655PM	0935PM	PLAZA BUILDING (FORMERLY ST)	114	3.2	102.4	48	67%	
ISMG6280OL1	Undergrad	PROJECT MANAGEMENT AND PRACTICE	LECTURE	13	39	21AUG06:00	16DEC06:00	MW	0530PM	0645PM	PLAZA BUILDING (FORMERLY ST)	114	3	39.0	48	27%	
ISMG8990900	Undergrad	PRINCIPLES OF MARKETING	LECTURE	45	135	21AUG06:00	16DEC06:00	TR	1000AM	1115AM	PLAZA BUILDING (FORMERLY ST)	114	3	135.0	48	94%	
ISMG8990901	Undergrad	PRINCIPLES OF MARKETING	LECTURE	47	141	21AUG06:00	16DEC06:00	TR	0230PM	0345PM	PLAZA BUILDING (FORMERLY ST)	114	3	141.0	48	98%	
ISMG8990902	Undergrad	INTERNATIONAL TRANSPORTATION	LECTURE	31	93	21AUG06:00	16DEC06:00	T	0655PM	0935PM	PLAZA BUILDING (FORMERLY ST)	114	3.2	99.2	48	65%	
ISMG8990904	Grad	MARKETING RESEARCH	LECTURE	11	33	21AUG06:00	16DEC06:00	TR	0530PM	0645PM	PLAZA BUILDING (FORMERLY ST)	114	3	33.0	48	23%	
Subtotal Hours Per Week													21.4				
Subtotal % Occupied													65%				
ISMG3000003	Undergrad	OPERATIONS MANAGEMENT	LECTURE	41	123	21AUG06:00	16DEC06:00	MW	1130AM	1245PM	PLAZA BUILDING (FORMERLY ST)	130	3	123.0	48	85%	
ISMG3000OL1	Undergrad	OPERATIONS MANAGEMENT	LECTURE	33	99	21AUG06:00	16DEC06:00	MW	0100PM	0215PM	PLAZA BUILDING (FORMERLY ST)	130	3	99.0	48	69%	
ISMG4500001	Undergrad	OPERATIONS MANAGEMENT	LECTURE	34	102	21AUG06:00	16DEC06:00	MW	0230PM	0345PM	PLAZA BUILDING (FORMERLY ST)	130	3	102.0	48	71%	
ISMG4700001	Undergrad	OPERATIONS MANAGEMENT	LECTURE	44	132	21AUG06:00	16DEC06:00	MW	0530PM	0645PM	PLAZA BUILDING (FORMERLY ST)	130	3	132.0	48	92%	
ISMG6280H01	Undergrad	NETWORKS AND TELECOMMUNICATION	LECTURE	20	60	21AUG06:00	16DEC06:00	TR	0530PM	0645PM	PLAZA BUILDING (FORMERLY ST)	130	3	60.0	48	42%	
ISMG2000001	Grad	AUDITING	LECTURE	37	111	21AUG06:00	16DEC06:00	TR	0230PM	0345PM	PLAZA BUILDING (FORMERLY ST)	130	3	111.0	48	77%	
ISMG4900001	Grad	PROJECT MANAGEMENT	LECTURE	32	96	21AUG06:00	16DEC06:00	W	0655PM	0935PM	PLAZA BUILDING (FORMERLY ST)	130	3.2	102.4	48	67%	
ISMG6020OL1	Grad	MERGERS AND ACQUISITIONS	LECTURE	16	48	21AUG06:00	16DEC06:00	M	0655PM	0935PM	PLAZA BUILDING (FORMERLY ST)	130	3.2	51.2	48	33%	
Subtotal Hours Per Week													24.4				
Subtotal % Occupied													67%				
INTB6022001	Undergrad	MANAGERIAL ACCOUNTING & PROFESSIONAL ACCT ISSUES	LECTURE	43	129	21AUG06:00	16DEC06:00	TR	0230PM	0345PM	PLAZA BUILDING (FORMERLY ST)	132	3	129.0	48	90%	
ISMG3000001	Undergrad	BUSINESS STATISTICS	LECTURE	39	117	21AUG06:00	16DEC06:00	TR	1000AM	1115AM	PLAZA BUILDING (FORMERLY ST)	132	3	117.0	48	81%	
ISMG3000002	Undergrad	BUSINESS STATISTICS	LECTURE	38	114	21AUG06:00	16DEC06:00	TR	1130AM	1245PM	PLAZA BUILDING (FORMERLY ST)	132	3	114.0	48	79%	
ISMG6240OL1	Undergrad	PRINC OF INFO SYSTEMS THEORY & PRACTICE	LECTURE	14	42	21AUG06:00	16DEC06:00	T	0655PM	0935PM	PLAZA BUILDING (FORMERLY ST)	132	3.2	44.8	48	29%	
ISMG2000OL1	Grad	FINANCIAL STATEMENT ANALYSIS	SEMINAR	40	120	21AUG06:00	16DEC06:00	MW	0530PM	0645PM	PLAZA BUILDING (FORMERLY ST)	132	3	120.0	48	83%	
Subtotal Hours Per Week													15.2				
Subtotal % Occupied													73%				
INTB6024001	Undergrad	MANAGERIAL ACCOUNTING & PROFESSIONAL ACCT ISSUES	LECTURE	33	99	21AUG06:00	16DEC06:00	T	0655PM	0935PM	PLAZA BUILDING (FORMERLY ST)	213	3.2	105.6	48	69%	
ISMG2000002	Grad	AUDITING	LECTURE	45	135	21AUG06:00	16DEC06:00	TR	0530PM	0645PM	PLAZA BUILDING (FORMERLY ST)	213	3	135.0	48	94%	
Subtotal Hours Per Week													6.2				
Subtotal % Occupied													81%				
ISMG6040H01	Grad	PRACTICAL EQUITY ANALY & PORTFOLIO MGMT	LECTURE	20	60	21AUG06:00	16DEC06:00	R	0655PM	0935PM	PLAZA BUILDING (FORMERLY ST)	260	3.2	64.0	53	38%	
Subtotal Hours Per Week													3.2				
Subtotal % Occupied													38%				
ISMG8990903	Grad	MARKETING STRATEGY, EVALUATION & DEVELOPMENT	LECTURE	24	72	21AUG06:00	16DEC06:00	W	0655PM	0935PM	PLAZA BUILDING (FORMERLY ST)	M104	3.2	76.8	41	59%	
Subtotal Hours Per Week													3.2				
Subtotal % Occupied													59%				
ISMG6060OL1	Undergrad	PROGRAMMING INTRO TO BUSINESS	LECTURE	11	33	21AUG06:00	16DEC06:00	MW	0100PM	0215PM	PLAZA BUILDING (FORMERLY ST)	M206	3	33.0	47	23%	
ISMG6120001	Undergrad	PRINC OF INFO SYSTEMS THEORY & PRACTICE	LECTURE	26	78	21AUG06:00	16DEC06:00	TR	0230PM	0345PM	PLAZA BUILDING (FORMERLY ST)	M206	3	78.0	47	55%	
ISMG2050001	Grad	MANAGEMENT OF OPERATIONS (HEALTH SECTION)	LECTURE	24	72	21AUG06:00	16DEC06:00	M	0655PM	0935PM	PLAZA BUILDING (FORMERLY ST)	M206	3.2	76.8	47	51%	
Subtotal Hours Per Week													9.2				
Subtotal % Occupied													43%				
MGMT1000001	Undergrad	PRINCIPLES OF ENTREPRENEURSHIP	LECTURE	28	84	21AUG06:00	16DEC06:00	TR	0400PM	0515PM	SCIENCE BUILDING	327	3	84.0	45	62%	
Subtotal Hours Per Week													3				
Subtotal % Occupied													62%				
TOTAL HOURS PER WEEK													490.6				
AVG HRS PER CLASSROOM													14				
OVERALL UTILIZATION													61%				

University of Colorado at Denver & Health Sciences Center

Program Plan for the Business School Building

APPENDIX C: CU-DENVER BUILDING FACILITIES AUDIT

Facilities Audit

UCDHSC Facilities Operations Department
Engineering Programs, Prepared by Scott Roen, P.E.
Controlled Maintenance & Facilities Audit Program
Provided for State Buildings & Real Estate Programs

DRAFT

Active Document – includes on-going entry/revision (e-file)

July 2006

CU-Denver Building (DRAVO)
Downtown Denver Campus

Report Content

- Facilities Audit Summary Report
- General Facilities Audit Process
 - Background
 - Audit Methodology
- Facilities Audit Narrative
- Deferred Maintenance Projects
- List of Supporting Documents
 - Problem List (active on-going database)
 - Inspection Forms
 - Calculation Page/Cost Estimates (spreadsheet)
 - Other Appendix Items (typically not attached to this e-document)

Facilities Audit Summary Report

Building Name: CU-Denver Building (DRAVO)
Campus/Location: Downtown Denver
Occupancy Type: office, student auditorium, records storage, computer-server
Gross Space (sq ft): 159,573
Number of Levels: 8
Year Built: 1977
Year Remodeled:
Date Inspected: July 2006

Building Estimated Current Replacement Value (C.R.V.): \$ 17,495,134

Summary: Assessment Rating & Deficiency Cost

Building Component	System Deficiency Rating	Building Component Multiplier	Component Value (C.R.V.)	Estimated Cost of Deficiency
Building Structure	83%	0.31	5,423,492	949,111
HVAC Systems	26%	0.40	6,998,054	5,150,567
Plumbing Systems	71%	0.07	1,224,659	355,764
Electrical Systems	74%	0.15	2,624,270	675,750
Code Compliance & Safety	52%	0.07	1,224,659	590,163

100%=Perfect

Total: \$ 7,721,355

Facilities Condition Index $(1 - (\text{Deficiency}/\text{C.R.V.})) \times 100 = \text{F.C.I.}$

$$\text{F.C.I.} = \frac{\text{Cost of Deficiency}}{\text{C.R.V.}} = \frac{\$ 7,721,355}{\$ 17,495,134} = \mathbf{55.9\%}$$

Percent Change from Previous = -x.x %

Focuses Critical Need:

To achieve the greatest impact, define the Building Component that will be emphasized

Fire Protection/Life- Safety, HVAC – VAV-reheat

General Facilities Audit Process

Background

The Facilities Audit is a building condition assessment process, developed specifically for University of Colorado at Denver and Health Sciences Center facilities, though largely modeled after industry standard guidelines - primarily APPA (“The Association of Higher Education Facility Officers” and from information provided by State Buildings and Real Estate Programs – SBREP). The Facilities Audit is used to rapidly evaluate the physical condition of existing buildings and campus infrastructure.

The Facilities Audit is the starting point for identifying deficient assets that comprise the campus complex. This process starts with fact-finding and quantitative grading that leads to project planning and prioritizing, and then finally project development and recommendation.

There are two main objectives of the Facilities Audit Program. First, a methodical approach for surveying building conditions was necessary to allow comprehensive Controlled Maintenance project planning. This survey process was intended to be broad in nature, generally identifying maintenance deficiencies that could be developed into corrective projects. The audit is completed periodically – generally over a 3 year cycle. Also, the Facilities Audit is intended to produce standardized building condition information, enabling meaningful comparisons within an inventory of similar building types or functions. Comparative grading allows ranking and prioritizing based on relative condition and allows Controlled Maintenance planning based on objectively applied criteria of condition. This comparative approach should lead to an improved ability to prioritize the greatest maintenance needs.

The Facilities Audit will result in quantifiable grading as expressed in an FCI number (the Facilities Condition Index, which is the cost ratio of maintenance deficiencies within the building, divided by the estimated cost of replacement for the building - one minus this ratio allows a large percentage figure to indicate an excellent condition). The FCI number should assist with prioritizing needs.

$$FCI = 1 - \frac{\text{Cost of Maintenance Deficiencies}}{\text{Current Replacement Value}}$$

The second main objective is to develop a list of maintenance problems. The listing of deficiencies will help provide detail for developing potential projects. Then this information is used to prepare a list of top priority deferred maintenance projects. Included in this project database is an estimate of project costs. The projects in this list are then prioritized to identify major maintenance needs. Using consulting services, greater detail will be developed in preparing for future Controlled Maintenance projects.

Audit Methodology

The Facilities Audit assesses building condition to identify a “snap-shot” of maintenance problems in the various campus buildings. The audit draws upon data that basically already exists, though may be in various forms laid out over several years. It relies upon theoretical life spans and broad estimating rates for replacement valuations. Building component condition grades are translated to theoretical costs - comparing the cost of new versus old, expressed as a percentage as expressed in the grade.

Emphasis is placed on site walk-through and visual inspection of condition, interviews and discussion with operating staff, and review of any past consulting reports. Previous projects are reviewed. Current operating and maintenance problems are discussed. The results provide a broad-brush assessment of building sub-component condition.

This information is most valuable when used in a comparative manner. The audit should identify the problems on a building component basis. Then comparing component deficiencies of one building to other campus buildings allows for a quantitative understanding of priority problems.

Building Condition Survey

The Facilities Audit Program uses an inspection team – made up of building trades experts (supervisors, foreman, and work leaders) – who are each responsible for one of the five predetermined major building construction components, these are: Building Structure, HVAC Systems, Electrical Systems, Plumbing Systems, and Code Compliance & Life Safety Systems.

Each building component is broken down into several sub-components. The building sub-component definition remains consistent for each similar building on campus - thereby allowing for comparative evaluation. Each building sub-component is graded using simplistic criteria, such as: Good, Fair, Needs Work, Poor (with graduation between these relative expressions of condition).

The inspection team members complete a building walk-through survey and fill-out a “Facilities Audit Inspection Form” for each building that is audited. This grading form asks questions about life safety issues, potential system failure issues, and asks questions about the condition of sub-components in the building. Also, the evaluator lists observed top-priority maintenance problems (it is emphasized to the audit team to make this list of maintenance problems as detailed and comprehensive as possible – this forms the beginning of the deferred maintenance project database).

There three general approaches to conducting the building inspection. These are generally referred to as: fly-by, walk-through, or crawl through. Each approach has a differing degree of detail and conversely a differing amount of time commitment and money.

Building Component Grade

The building sub-components are graded in a simplistic manner in order to obtain a broad understanding of building condition. These grades, when compared to other buildings, allow for prioritization of need. Greater detail is necessary to develop projects. Generally, each grade is defined as shown:

- **Poor Condition** – Building component should be replaced and/or an extensive renovation project is required to correct obsolescence of a nonfunctioning system.
- **Needs Work** – Building component could be corrected with extensive renovation. The system appears to be working, but modernization is needed to upgrade the system. The component has surpassed its expected useful life.
- **Fair Condition** – Building component is functioning, but is in need of maintenance work. The component is approaching the end of its useful life.
- **Good Condition** – Routine and preventive maintenance should be continued to keep the building component in good working order.

Each building sub-component is graded by the audit team. These grades are discussed during the post-walk-through meeting. Specialists attend this meeting as necessary to comment on unique circumstances or reoccurring maintenance problems. The sub-component grades and maintenance problems are listed and fine-tuned during the discussion. Each grade is assigned a point value, from one to four including fractional amount if applicable, and a weighted-average is calculated and reported as a percentage.

The inspection grade is further modified by additional criteria obtained during the building survey. Specific questions are used to address potential life safety problems, to address the possibility of a major system failure that could result in disruption of building operation, and to address the comparative nature of the condition of this particular sub-component with respect to other campus buildings. This additional criteria is used to adjust the final grade and to assign preliminary cost estimates.

Cost Estimates

The grade is used to arrive at an estimated cost of deficiency. The audit team does not complete project cost estimates in the field – although cost concerns are discussed at the post-walk-through meeting. Cost estimates are obtained indirectly. Knowing the approximate replacement value of the building (estimated on a per square foot basis) and the approximate value of the building component (estimated as a percentage of the overall building value with consideration for occupancy type), then the cost of building deficiencies is determined empirically. Using the component grade and a practical understanding of building component replacement, the cost of the deficiency is estimated. Assuming the relative condition of the building sub-component is directly related to the cost of repairing this sub-component, then an approximate cost of deficiency can be assumed. This cost data does not make up the project cost estimates, which are analyzed separately as individual stand-alone projects (using consulting services when necessary for priority projects). However, this cost data should provide general guidance when identifying the associated cost of all the prioritized deferred maintenance projects within the building. This cost data is used to calculate the Facilities Condition Index (FCI). The

FCI ratio is a useful gage when comparing buildings across campus. Also, the FCI number is used to prioritize potential Controlled Maintenance projects.

Deferred Maintenance Projects

The second main objective of the Facilities Audit Program is to use the audit data to help identify future projects. Each building has a listing of maintenance problems that is developed into a database of top priority deferred maintenance projects. This listing of deficiencies will help provide detail for developing potential projects. Maintenance deficiencies in and of themselves, are not complete projects. Generally, similar maintenance problems are logically grouped together to create potential projects. These preliminary projects are expanded to reflect complete project development requirements, such as: consulting services, contractor mobilization, contractor overhead & profit, project closeout, commissioning, and owner contingency. Initially, an approximate deficiency markup of about 35% is used in preparing for potential projects. High priority projects are further developed by using consulting services. These projects are candidates for inclusion in the Controlled Maintenance Five-Year Plan.

Facilities Condition Narrative

The overall goal of this report is to establish a short list of top priority improvement projects that will begin to correct on-going facilities deficiencies. And to identify the relative condition of the facility - for comparative purposes - as expressed in a quantifiable grade – the F.C.I. number. The State Buildings and Real Estate Programs (SBREP) uses the Controlled Maintenance process to fund facilities improvement projects, and the basis for prioritizing projects is the Facilities Audit.

The CU-Denver Building was recently acquired as an asset under ownership of the CU System, even though this building has been continually occupied by university programs over a long time period. The long term space lease arrangement placed the university as a de facto owner without holding title to the property. Over the long term the university has provided all building operating and maintenance services, including some capital improvements and paying for all required utilities. At this point of transition, long term capital renewal should be considered.

The 1977 constructed, 8 floor building (with associated Annex building) is showing its age and is in need of improvements. An important early consideration is an agreed upon master-plan process for identifying the long term versus short term direction of facilities improvements (this report is unable to fully address this need for “planning direction” nor to provide full detail on all recommended projects).. It is potentially a mistake to undertake quick maintenance projects in a piece-meal fashion without understanding the big picture – thereby requiring removal/alteration of recent work. In some cases work could begin rapidly, such as on Fire Protection/Life Safety projects that need to happen one way or another. On the other hand, space heating and cooling needs as provided through an air-side HVAC system versus a water-side HVAC system need early resolution.

HVAC Improvements: water-side equipment versus air-side equipment

The audit process attempts to consider replacement of deteriorated building components with similar modernized systems. In reality new more advanced technology would make this simple replacement less valuable. The more likely approach to replacing old equipment would be to take advantage of new more energy efficient systems and in some cases systems that better accommodate the current space function.

This is precisely the case for this building and especially for one of it’s the top priority needs - 1st floor heating and cooling improvements. The original space use consisted of tenant-leased retail/restaurant operations. Due to changing needs and poorly renovated changes over the last 30 years, the 1st floor HVAC system is in poor shape. The current unventilated 4-pipe/single-coil fan coil system should be completely replaced (the audit assume replacement with like system – estimate about \$230,000). The preferred replacement project would be for a VAV-reheat air delivery system. To make this type of improvement would require a building wide capital renewal effort driven by a long

term master plan. This first major decision point of water-side HVAC (similar to existing) versus a more suitable air-side HVAC system needs resolution (for comparative purposes, for the 1st floor only, plus additional AHU ductwork/miscellaneous improvements – estimate about \$240,000; however these miscellaneous improvements help to correct other problems in 2nd – 8th floor HVAC; allowing for greater value).

Improvement Strategy

Various maintenance improvement projects will help extend the life of the major building systems – including basic preventative maintenance practice. There are several large scale projects that must be considered as capital improvements. A strategic plan is necessary to define direction for undertaking facilities improvements. The traditional operations and maintenance budget will not be sufficient to correct the large scale nature of the problem. SBREP has a “Capital Renewal” program that could be considered. Generally a Controlled Maintenance project – or any phase of a CM project – that exceeds two million dollars would be a candidate for capital renewal funding. Project requests of this type should first be submitted to CCHE as a capital construction project (including explanation of why this project is “maintenance driven” and not “program driven”).

Performance contracting may also be considered – using future energy savings to obtain funding to pay for major renovation through an ESCO (Energy Services Contractor). It is generally understood that the project loan must be backed by a CU treasure obligation, though no cash outlay is required.

The following information describes facilities deficiencies of the building components.

Building Code, Life Safety, Hazardous Materials

An existing older facility is generally exempt from changing codes and regulation as new understanding changes over time. This is as long as the existing structure remains unchanged. As alterations, renovations, and especially expansion is considered, often time the existing structure must be updated. Also many facilities that serve the general public voluntarily modernize or otherwise attempt to meet existing building code requirements. The CU-Denver Building is in great need of correcting code deficiencies.

Fire Protection & Life Safety

As a priority need, an emergency power generator should be installed to serve the fire pump and should be sized large enough to feed emergency exit lighting (which would allow for the removal of battery operated exit lights – and ongoing O&M cost). Included in this project is a need for ATO switchgear to transfer power in the event of utility power interruption.

Egress problems are another need that must be addressed. At the Annex Building, there is a “stairway to no where”. Apparently there was previous work that may have been done for security reasons. At that time, a metal pan was installed with poured concrete

on top that blocks entry to the first floor, thereby creating a dead-end corridor. This is in violation of fire code and needs to be corrected.

Another fire protection improvement is a required upgrade to the elevator recall system. Upgrades are required per code to improve the current system. Denver Fire Dept defines Phase 1 and Phase 2 improvements. Phase 1, which returns the car to the ground floor has been done; Phase 2 which allows the fire department to control the elevator through use of a fire key may need to be completed in the future.

Public Refuge Area

Providing areas of refuge may be code required, though additional work needs to be done in this area, especially existing conditions investigation. The integrity of fire-rated barriers needs to be maintained. This may include space air pressure control for the refuge area - and/or just the elevator shaft. Apparently a fan/damper system was designed for pressurization of the elevator shaft (there are no fire-rated walls that could allow for pressurization of the elevator lobbies), though the integrity of this system has not been maintained. This problem must be corrected.

Most modern facilities meet code requirements through a sprinkler-system using booster pump pressurization, automatic heat-detected activation, and automatic notification to the local fire protection district serving the municipality. Additional features include pull-stations for hand activated emergency response, audible fire alarming and strobe lights, illuminated exit lights, and specially constructed egress paths (public corridors constructed with floor-to-ceiling structure participations to minimize smoke travel, special fire rated doors, and walls constructed with fire rated gypsum drywall board). These areas must be addressed by design and construction firms specializing in this area.

Miscellaneous

General safety concerns that need ongoing attention include: exit lighting, fire-rated barriers (partitions extending to structure where required, eliminating holes in fire-rated partitions above the ceiling, insuring sprinkler head coverage, maintain egress passage, machine rooms may need to be sprinkled.

ADA Compliance:

Public facilities are required to meet pertinent ADA regulations of the Americans with Disabilities Act to improve access for handicapped individuals. This building appears to have made adequate and reasonable accommodation – though there are several smaller items that need ADA attention and should be further investigated. The facility should make every reasonable attempt to ensure compliance with ADA requirements.

Apparently there is only one ADA accessible bathroom arrangement which is located on the 4th floor – this should be expanded (most bathrooms should be updated).

Hazardous Materials:

Buildings constructed in the early 1970's or earlier often times have problems associated with pipe and duct insulation that has asbestos containing materials (ACM). This building was built in 1977 and consequently there is no evidence of asbestos problems.

Mechanical – HVAC (heating, ventilation, and air-conditioning)

The HVAC building components greatly impact occupant comfort and have large energy consumption consequence. Basic operating strategies may have energy conservation value (simple control strategies should be automated, such as time clocks, thermostat set-back, turning off lights, etc. - this could all save energy dollars).

1st Floor & Annex HVAC

There are approximately 25 four-pipe fan coil units serving this area (each unit consists of only one coil that attempts to provide heating or cooling – not both at the same time – this single coil results in water mixing and poor temperature control with great energy waste). These units are beyond repair and require replacement.

The control valve at each fan coil unit is defective and allows mixing of hot water with chilled water return. This mixing places an artificial load on the chiller increasing energy consumption and affecting occupant comfort. The fan coil units operate continuously and do not shutdown during unoccupied hours. This system must be replaced, though an alternate system should be considered prior to implementing a replacement program.

This area would be better served by an air-side HVAC system and would allow for code required ventilation improvements and energy conservation improvements – including improved temperature control. Air-side equipment refers to an HVAC system that uses air as the primary medium for transferring thermal energy. Central equipment located in the penthouse is used to condition and then distribute air through ductwork. The air-handling-unit (AHU) consists of chilled water coils, heating water coils, fans, etc. Water-side equipment uses piping to distribute chilled water and heating water to many small local units consisting of coils and fans (ventilation air is not distributed and temperature control fine-tuning is accomplished by local hot water reheat coils for each zone).

The area should be served by a VAV-reheat system, though extension of the existing air system serving the floors 2 through 8 may be difficult (further investigation should be considered). The Annex would be best served by its own roof-top mount AHU. Extending the existing system would be preferred but several system components may need to be upgraded (though upgrade may be necessary due deterioration as it is a 30-year old system). If then central system is not expanded, then the first floor will need its own AHU. Location will be difficult – including duct runs to bring in ventilation air from the outside.

As discussed previously, an important decision point is resolution of how to proceed with 1st floor HVAC improvements – air-side HVAC or water-side HVAC. Considering a like-for-like replacement assumes the provision of fan-coil-units (2 coils) – not

recommended. Using a VAV-reheat system is preferred, but more complicated and has greater reliance on building-wide improvements (increased risk due to greater unknown conditions). The first significant consideration involves how to get more air supplies to the 1st floor where needed ductwork does not exist. Additional related concerns are many, including: supply fan capacity and capability (cfm/static-pressure/motor-horsepower), AHU ancillary equipment (chilled water/heating water), access to building shafts/chase allowing for ductwork extension, etc. Additionally, as increase ventilation air is brought into the AHU and then delivered to the space, building pressure relief must be considered.

Ventilation & Outside Air Economizer

Code required ventilation air may not be adequate and is not provided on the 1st floor (original 1st floor function as retail/restaurant). In addition to ventilation for occupant health is the need to consider energy conservation. Using damper arrangements to bring in greater amounts of outside air when its temperature is advantageous to the AHU process can help minimize energy costs (or the opposite of bring in less air if at outside air temperature extremes). This is referred to as the air-economizer-cycle and is non-existent in this building.

The current AHU arrangement has no economizer though there is sufficient wall and louver space for outside air and the relief side of an economizer system. Dampers, actuators/controls, and return/exhaust fans are required. This is a basic energy conservation measure. (Also, water-side at the cooling tower should be considered to enhance the free cooling mode of HVAC operation.)

HVAC Piping

Especially related to the 1st floor fan coil units, but also the existing reheat system on floors 2nd – 8th is the HVAC piping (also any building improvements will be impacted by the piping). The heating water piping and chilled water piping distribution system through out the building is in poor shape – especially on the 1st floor. During a recent maintenance project, isolation and shutoff valves were installed at several locations. This work allowed for a view into the piping that clearly indicated great corrosion problems and piping deterioration (due to mixing of hot and cold water and the failed thermal expansion system, water chemistry has been greatly compromised, lead to corrosion problems). This entire system will most likely need replacement, including ancillary equipment.

2nd – 8th Floor HVAC

Conditioned air from the penthouse AHU is delivered to various zones via a terminal unit configuration referred to as a Z-box. Apparently the Z-box is similar to a VAV-reheat box, though it was a contractor-proprietary device that has been very problematic. These boxes are original equipment and are difficult to maintain due to lack of replacement parts. There have been numerous tenement-finish renovations that were insufficiently designed resulting in inconsistent use of the base HVAC infrastructure and a mixed-match temperature control zoning. Perimeter baseboard hot water convectors are used for perimeter heating loads.

The Z-box terminal units should be replaced with a modern VAV-reheat system including a DDC control system.

Heating Water

The original heating system used electric boilers (1,000 KW) that were discontinued some time ago. Most recently the building has purchased steam from Xcel Energy's downtown Denver district steam plant. They currently use steam-to hot water heat exchangers to provide the building heating. The cost of this utility is rising and it may be desirable for the building to invest in its own heating plant to save on future energy costs.

Approximately March 2005, UCDHSC procured consulting services through Shaffer-Baucom Engineering Consultants to further investigate the feasibility and boiler provision alternatives. The new boiler(s) could be installed in the roof top penthouse after the disassembly and removal of the old disabled electric boilers (including the shut down and removal of the city steam heat exchanger). The new boiler plant, with necessary controls, piping, electrical service, gas service, was estimated have a capacity of 2,000 MBTU/H heat input. The new gas line was to be routed through an abandoned grease exhaust shaft.

Significant findings of this investigation determined that a penthouse boiler retrofit would be unfeasible due to potential code violations. The existing boiler room exits to a refrigeration room and this manner of egress is not allowed by current buildings codes (both the City of Denver and the IBC codes) – additionally the space of the existing boiler room would not accommodate increased capacity boiler size.

Also noted in this feasibility study is that the existing building electrical equipment is located in the chiller room (this is also a violation of both codes). The building codes require that the only electrical equipment that is allowed to be located in this space is the electrical equipment that directly serves the chiller system, not building wide electrical service – this equipment should be in a separate room. Also the refrigeration room must be in a separate fire rated enclosure.

Therefore the study recommended an alter location for the new boiler. The proposed new location resulted in the construction of a new 1-hr fire rated boiler room in a penthouse location currently used as a portion of the building return air plenum. This is a reasonable alternative with an estimated June 2005 simple payback based on current energy use of about 8.3 years.

Air-Handling-Unit & Supporting Ancillary Equipment Replacement

AHU equipment is old but in fairly good working order. An air economizer system should be considered. If the VAV-reheat system is expanded, AHU capacity will likely be impacted. If additional ductwork is added, especially at the far-end of the duct run, then the critical flow path will be altered and thereby change fan static pressure requirements (additional investigation will be necessary).

AHU supporting equipment must also be considered for upgrade. New boiler equipment is considered elsewhere, but additionally the heating water pumping system will need improvements. The system should be upgraded for variable flow and the current cross connection with the chilled water system must be eliminated. Expansion tank volume should be considered in conjunction with an improved water treatment program. Also the chilled water distribution system needs improvement including water-side free cooling provisions made at the cooling tower. Also, variable flow pumping, controls, water treatment must be corrected.

Water cooled chillers and the associated cooling tower may need to be modification - including bypass filtration on the condenser water loop.

Mechanical – Plumbing

The plumbing systems include domestic potable water, water heating equipment, sanitary sewer piping, and roof drains/stormwater.

Miscellaneous

The building needs a domestic water booster pump. Poor water pressure at penthouse is a problem and this makes it a slow process to fill the cooling towers. This may also result in the need to add PRV's at lower floors to regulate water pressure.

Also floor drains and branch sewer piping need to be cleaned out (use jet cleaner).

Electrical

In general, the electrical system providing power to the facility is of sufficient capacity. Emergency power per a standby generator is an important consideration and is addressed in another section.

Miscellaneous

Electrical safety through the use of ground-fault-interruption devices should be considered - put GFI's on the mains. Circuit breakers are all fused as would be expect for a 1970's building. Generally, the electrical system is in fair condition given its age.

There is a roof located transformer room (there is no roof on this enclosure). Xcel has complete ownership of this equipment (with lock& key). Also because the transformers are oil-filled, there is no stormwater drain and consequence a standing water problem.

Annual maintenance must continue including tightening lugs on all electrical connections and using an infra-red scanner as necessary to look for poor connections.

The domestic hot water heaters (qty of 2) use electric heating.

Recently a lighting upgrade project was completed for the 2' X 4' fixture that included electronic ballasts and T8 lamps.

Building Structure

The building is structurally sound and well kept.

Miscellaneous

The windows are in somewhat poor condition and replacement should be considered.

It is likely that all 4 elevators will need to be replaced at some point in the near future.

On the northeast entry to the building, the brick pavers are coming up in many places and present a trip hazard and the general condition of this entry area is somewhat unsightly. Corrective work is necessary in this area.

Ancillary – IT (information technology & security)

To modernize the information systems physical plant, new category 5 cabling improvements are required. This work is straight forward and very necessary to transmit electronic data as required by the occupants of this facility.

The preliminary cost estimate of \$350 per FT of cable and covers about 1,100 FT is generally accurate. Therefore the project cost estimate is \$385,000.

Previous/Recent Improvements

Not as an exhaustive listing, but some previous capital improvements have been completed in an attempt to update the facility. The following list includes some basic projects, but does not include smaller day-to-day operating improvements.

1. T-8 lighting upgrade
2. 8th Floor computer A/C (refrigeration) – split DX system
3. fire detection – “Silent Night” system
- 4.

Deferred Maintenance Projects

List of Potential Priority Controlled Maintenance Projects:

During the inspection and evaluation of the facility condition, several high priority projects were identified. These project suggestions may be further refined using architectural and/or engineering consulting services and then submitted as Controlled Maintenance projects.

Generally as an estimate, to create a stand-alone project definition, the identified maintenance deficiency cost is increased by about 35% to account for consulting services, contractor general conditions, project contingency, and other associated costs.

Potential Project:	Cost Estimate:
Emergency Generator	\$ 185,000

Upgrade the fire protection system to include an emergency power generator, fuel storage, automatic transfer switch suitable to provide backup power in the event of utility power interruption.

Potential Project:	Cost Estimate:
Life Safety Improvements	\$ 227,900

Insure egress pathways, provide fire-rated partitions from structure-to-structure where required by code, insure the integrity of fire-rated barriers by eliminating any holes, provide public refuge areas as required by code, including pressure control if necessary – through the provision of smoke control fans, dampers, and controls. Provide additional sprinkler heads in machine rooms and insure adequate sprinkler coverage throughout the building. Provide elevator recall as necessary and insure fire phones, door magnetic release, exit lighting, and all required fire/safety code provision.

Potential Project:	Cost Estimate:
1st Floor HVAC Improvements	\$ 427,500

Several HVAC improvements are necessary, though may need to be phased. The 1st floor fan coil system should be replaced with a VAV-reheat system. Air-handling-unit ductwork distribution will need to be extended to the first floor (this may be difficult and will need further investigation). This will require shaft/case space and may require AHU retrofit work (potentially a temporary AHU static pressure solution may allow phasing). HVAC piping will need to be replaced.

Potential Project:	Cost Estimate:
HVAC Piping Improvements	\$ 230,000

Several HVAC improvements are necessary, though may need to be phased. The heating water, chilled water, piping, expansion control, water treatment equipment must be replaced.

Potential Project:	Cost Estimate:
2nd - 4th Floor HVAC Improvements	\$ 445,500

Several HVAC improvements are necessary, though may need to be phased. The 2nd to 4th floor Z-box distribution system must be replaced with a new VAV-reheat system.

Potential Project:	Cost Estimate:
5th - 8th Floor HVAC Improvements	\$ 595,000

Several HVAC improvements are necessary, though may need to be phased. The 5th to 8th floor Z-box distribution system must be replaced with a new VAV-reheat system.

Potential Project:	Cost Estimate:
Annex Rooftop Unit Installation	\$ xxx

Several HVAC improvements are necessary, though may need to be phased. The Annex building needs its own rooftop unit to supply the building with a VAV-reheat system.

Potential Project:	Cost Estimate:
New Boiler Installation	\$ 356,250

Provide new hot water boiler in lieu of Xcel provided steam, remove old disabled boilers and heat exchangers, provide new boiler room, and gas service.

Potential Project:	Cost Estimate:
AHU Replacement	\$ 244,950

The air-handling-unit needs to be upgraded to serve the new/expanded VAV-reheat system (new fans may be required), provide air-economizer system with dampers, controls, return/exhaust fan, filtration, miscellaneous improvements.

Potential Project:	Cost Estimate:
AHU Ancillary Equipment	\$ xxx

The air-handling-unit needs to be upgraded, including supporting equipment hot water and chilled water coils, control valves, variable-flow pumping, DDC control system, and other miscellaneous improvements.

Potential Project:	Cost Estimate:
AHU Ancillary Equipment: Chillers/Cooling Towers	\$ xxx

The air-handling-unit needs to be upgraded, including supporting equipment such as chillers, cooling towers.

Potential Project:	Cost Estimate:
IT Cable Replacement	\$ 385,000

Provide new category 5 cable for data network.

Potential Project:	Cost Estimate:
Window Replacement	\$ xxx

Potential Project:	Cost Estimate:
Elevator Replacement	\$ xxx

Potential Project:	Cost Estimate:
	\$ xxx

University of Colorado at Denver & Health Sciences Center

Program Plan for the Business School Building

APPENDIX D: THIRD PARTY REVIEW