

University of Utah

David Eccles School of Business Replacement & Expansion
DFCM project# 06272750

Architectural Program

June 29, 2007

Prepared by:
Gould Evans Associates, LC
1000 S. Main Street, Suite 100
Salt Lake City, UT 84101
801-532-6100

**David Eccles School of Business
Replacement & Expansion – Program**

University of Utah, Salt Lake City

University of Utah Review Signatures

We have reviewed the David Eccles School of Business Replacement & Expansion Program and warrant that it adequately represents our request for a facility to fulfill our mission and programmatic needs. All appropriate parties representing the University have reviewed it for approval.

Jack Brittain, Ph.D, Dean **Date**
David Eccles School of Business

David W. Pershing, Ph.D. Chair **Date**
Senior Vice President, Academic Affairs

Tami Cleveland **Date**
Campus Planner, Facilities Planning

Cory Higgins **Date**
Director, Plant Operations

Bill Billingsley **Date**
Project Manager, Campus Design & Construction

Randall Funk
Director, Campus Design & Construction

Date

Michael Perez
Associate Vice President, Facilities Management

Date

Arnold B. Combe
Vice President, Administrative Services

Date

Division of Facilities Construction & Management
State of Utah Review Signature

I have reviewed the David Eccles School of Business Replacement & Expansion Program, jointly prepared with the University for approval.

Lyle R. Knudsen
Program Director, DFCM

Date

Acknowledgements

The contributions of the following individuals and others are gratefully acknowledged. Their dedicated efforts have made this document possible.

Steering Committee

Chair, David W. Pershing,
Senior Vice President for Academic Affairs
Jack Brittain,
Dean of the David Eccles School of Business
Laura Snow,
Special Assistant to the President
Lyle Knudsen,
Project Manager, Division of Facilities Construction & Management
Raelynn Potts,
Director of Business Affairs of the David Eccles School of Business
Bruce Gillars,
Director, Space Planning & Management
Tami Cleveland,
Campus Planner, Facilities Planning

Ex-Officio Steering Committee

Bill Billingsley,
University of Utah Campus Design & Construction
Regina Schaub,
Out-going Director, Space Planning & Management
Elizabeth Johnson,
University of Utah Campus Scheduling
Steve Clark,
Principal in Charge of Design, Gould Evans Associates
Peggy McDonough Jan
Project Manager, Gould Evans Associates

Utah State

Division of Facilities Construction and Management

Lyle Knudsen,
Project Manager, Division of Facilities Construction & Management

Programming Architects and Consultants

Gould Evans Associates, LC
Faithful+Gould – Cost Estimation
Colvin Engineering – Mechanical/Plumbing
Ken Garner Engineering – Electrical
Dunn Associates – Structural
Stantec – Civil

DESB Working Committee Participants

Bob Allen	Mike Lemmon
Lindsay Allen	Karl Lins
Katie Amundsen	Kurt McGrew
Abe Bahksheshy	Utahna Miller
Irina Baird	Bill Moore
Hank Bessembinder	Lindsay Nelson
Bill Billingsley	Gerardo Okhuysen
David Blackburn	Terry Pavia
Cal Boardman	Anu Phene
Bryan Boner	Raelynn Potts
Christine Botosan	Taylor Randall
Art Brief	Pat Reilly
Jack Brittain	Jon Ross
Carolyn Buma	Debbie Scammon
Steve Carson	Jim Schallheim
Mike Cooper	Regina Schaub
Tina Diekmann	Glen Schmidt
Martha Eining	Bill Schultze
Bryan Eldredge	Kay Shelton
Karen Fladmoe-Lindquist	Olivia Sheng
Lari Frandsen	Gordon Smith
Bruce Gillars	Monica Stapley
Abbie Griffin	Launa Turnbow
Gary Grikscheit	Brad Vierig
Mary Hasak	Don Wardell
Jeff Hassett	Mary Wells
Rachel Hayes	Jim Wood
Bill Hesterly	Heidi Woodbury
Barb Ianucci	Emily Workman
Liz Johnson	Sue Young
Barta Jones	
Kathy Kunz	
Helen Lacy	
Corrine Lemmon	

Table of Contents

1.0 Executive Summary	page 1
Introduction	
Project Justification	
Scope Summary	
Project Sequence & Schedule	
Cost Summary	
2.0 Program Space Summary	page 5
Efficiency Calculation Method	
Space Utilization Summary	
3.0 Site Considerations	page 9
Existing Site Considerations	p. 9
general physical characteristics	
soils – geologic and geotechnical considerations	
existing site utilities	
existing site survey	
New Expansion Site Considerations	p. 15
campus master plan considerations	
buildable site area limits	
construction access and staging	
site utilities for new expansion	
site circulation	
use of exterior space	
solar studies	
4.0 Project Vision & Programming Procedure	page 31
Identity and Mission	p. 31
History and Growth	p. 31
Project Purpose	p. 33
Project Vision	p. 34
Programming Approach	p. 35
Research Summary	p. 35
Program Goals Outline	p. 37
Needs Summary	p. 38

5.0 Space Relationships & Requirements page **39**

Detailed Space Utilization Summary	p. 39
Programming Conclusions / Concepts	p. 49
Overall Adjacency Recommendations	p. 56
Specific Adjacency Recommendations	p. 57
Programmatic Overlay / Stacking Diagrams	p. 59
Individual Room Requirements	p. 64
Plan Verification Diagrams	p. 65

6.0 Building Requirements page **171**

Architectural – Massing	p. 171
Architectural – Sustainability	p. 174
Exterior Materials Possibilities	p. 174
Building Systems	p. 174
Code Analysis / Independent Testing	p. 175
Structural Requirements	p. 176
Mechanical / Plumbing Requirements	p. 177
Mechanical Space Summary Sheets	p. 187
Electrical System Requirements	p. 189
Technology Systems Requirements	p. 197

7.0 Cost Model page **199**

Introduction	
Estimated Project & Construction Costs	

8.0 Appendix page **209**

Cost Model Detail	
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1.0 Executive Summary

Introduction

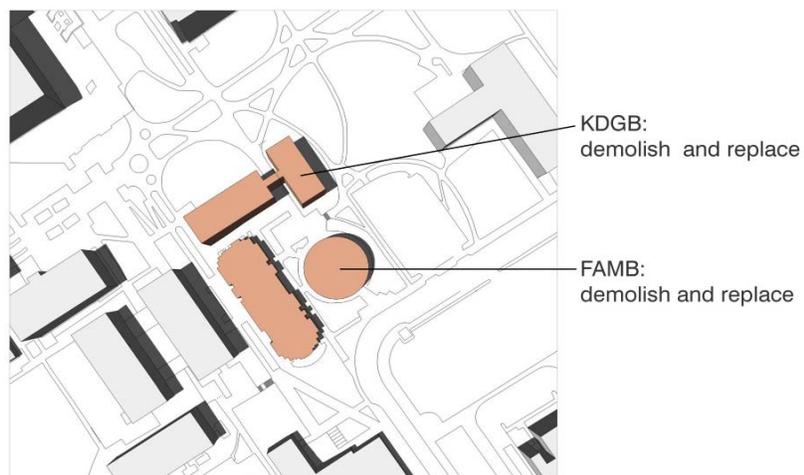
One of the nation's top business schools today, the University of Utah David Eccles School of Business is underserved in 44,009 net square feet of existing space spread among three older buildings originally constructed in the 1960's, when the school enrollment was a fraction of what it is today. For the school to function properly, fulfill its mission, and accommodate future growth, usable area needs are projected at 113,209 net square feet.

Project Justification

The David Eccles School of Business has assessed space and growth needs that will require approximately 188,681 GSF of replacement and new space at a preliminary estimated total project cost of \$99.6 million, which includes 28,836 NSF of classrooms, class-lab, and support space in the project.

The removal of two older, inadequately functioning existing buildings, the Francis A. Madsen Building (FAMB), and the Kendall D. Garff Building (KDGB), will provide buildable area needed for new construction.

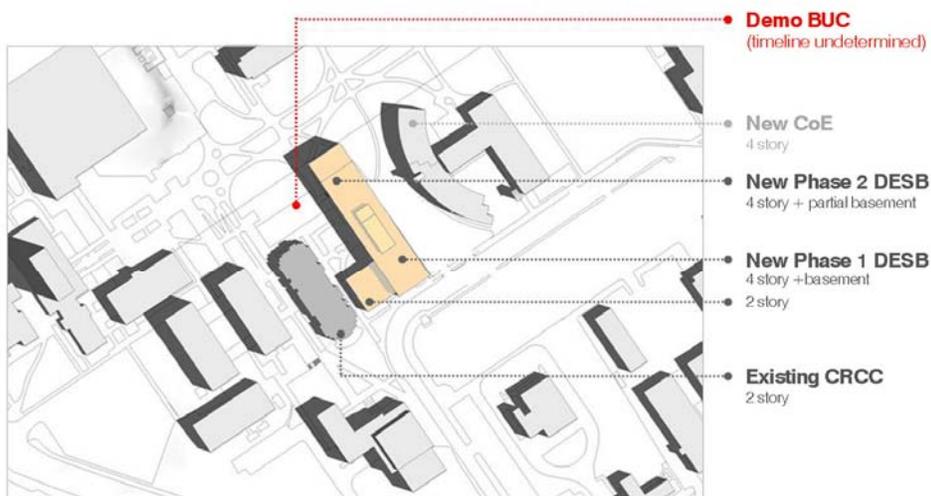
Depending on the timing of donations and the ability to manage the sequence of demolition of first FAMB at 23,727 GSF, and then KDGB at 32,884 GSF, the project may be completed in more than one phase.



DESB site: existing buildings to be replaced

justification of building replacement.

The programming team has assessed existing conditions, facility function, program expansion needs, and costs of renovation versus replacement. The current existing buildings built in the 1960's have numerous building code problems, seismic deficiencies, life-safety related issues, ADA access compliance problems, and outdated technology systems. Replacement of existing FAMB and KDGB buildings is recommended over seismic upgrade and remodeling in order to achieve best use of dollars and efficient use of building site area without disturbing the major campus water vault and associated lines north and west of BUC. Replacing these older buildings with new construction is also recommended to achieve floor to floor heights that accommodate tiered classrooms, and best achieve technology and flexibility needs of the business school learning environment.



Two phases of new construction would replace existing program areas currently housed in FAMB, KDGB, and business school program in the BUC building, as well as provide needed expansion program areas for the DESB, and 28,836 NSF of classrooms, class-lab, and support space. Although demolition of BUC is not considered part of this request, its eventual removal is recommended to become part of the future DESB master plan.

Structural, Electrical, and Mechanical feasibility and justification summaries are included in Section 6.0 of this document.

Scope Summary

The projected 188,681 GSF total DESB Replacement and Expansion need includes 112,039 GSF in Phase 1, and 76,642 GSF in Phase 2. Between the two construction phases, program components will include:

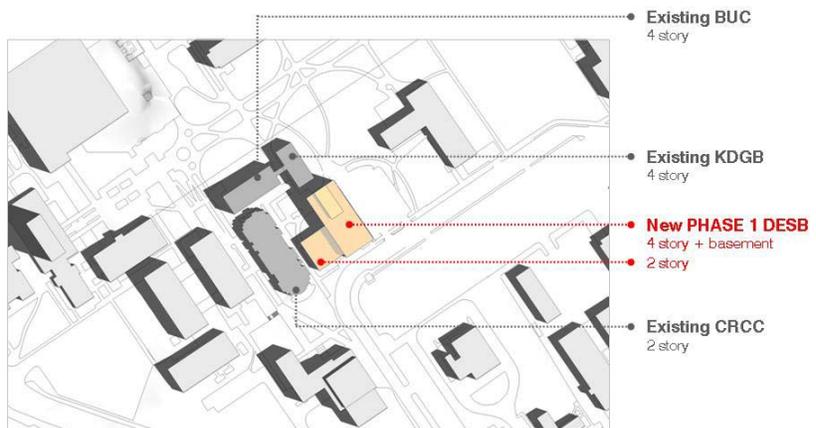
- o replacement classrooms for FAMB, as well as new DESB classrooms, class-labs, and support space
- o 28,836 NSF of classrooms, class-lab, and support space student study and collaboration spaces
- o offices for existing and expanded faculty, staff, and administrative positions
- o expansion of currently underserved advising and career services areas
- o replacement and new research development centers

Refer to Section 2.0 Projected Space Utilization Summary for a synopsis of required program component distribution, and Section 5.0 for the Detailed Space Utilization Summary.

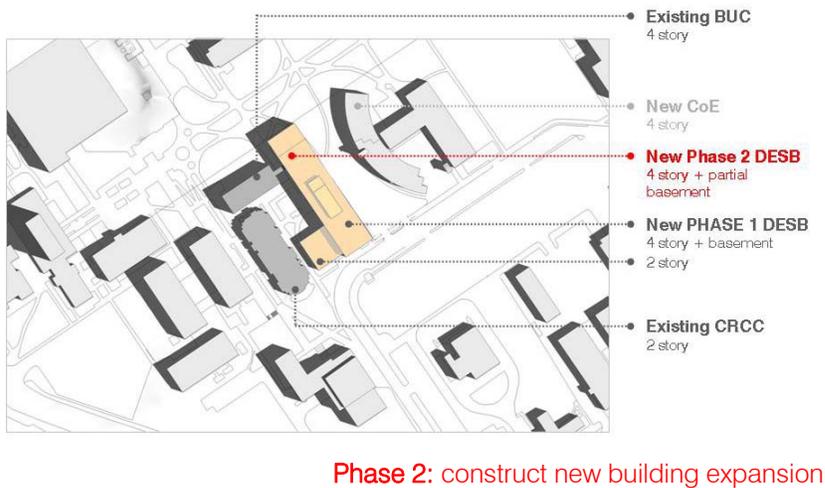
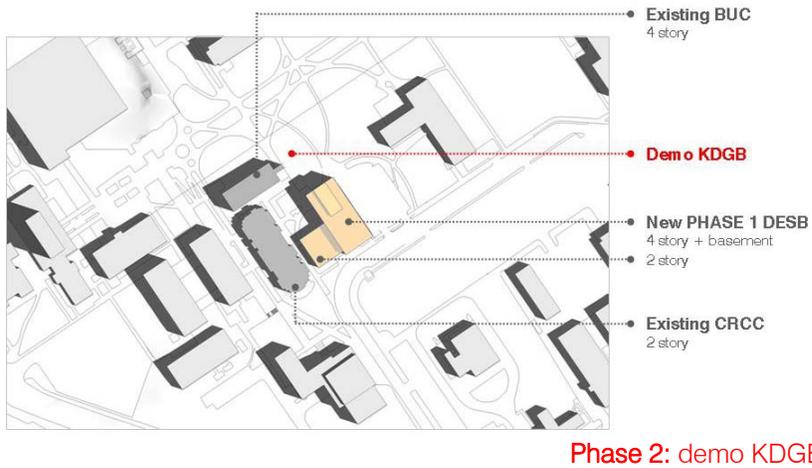
Project Sequence & Schedule

master plan considerations: two phases

Site conditions and phased replacement of uses indicates the following recommended master plan sequence: Phase 1 of construction will accommodate functional replacement of existing FAMB classrooms, as well as faculty spaces and student services which are currently housed in the KDGB building. Construction of Phase 2, will begin with a newly occupied Phase 1, and the demolition of the unoccupied KDGB building. The Phase 2 program includes DESB faculty and classroom growth, 28,836 NSF of classrooms, class-lab, and support space; administration; and research development center replacement and expansion.



Phase 1: demo FAMB, construct new building



design & construction

The Design and Construction Document period for the project is scheduled to begin in September of 2007, with Building 1 construction beginning in Fall of 2008. An early site utilities package is anticipated for Summer of 2008. Phase 2 construction would follow immediately after the first phase, beginning Fall of 2010.

Cost Summary

Total project costs are estimated to be \$54.1 million for Phase 1, and \$45.4 million for Phase 2. Estimated construction costs take into account escalation through mid-point of construction, at \$43.6 million for Phase 1, and \$35.5 million for Phase 2. The estimated project cost breakdown is found in Section 7.0, and a full Phase 1 construction cost model in the Appendix.

2.0 Program Space Summary

Efficiency Calculation Method

net-to-gross basis

A net-to-gross ratio of 0.60 has been used based on similar higher education classroom buildings and as the desired efficiency target by the University.

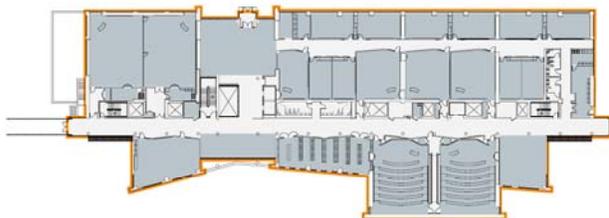
Net area is usable interior area (typically face of wall to face of wall), and includes unenclosed programmed spaces, such as lobbies, and study or social areas that may be contiguous with primary circulation. The net area also includes internal circulation of student services and administration office suites, as well as primary storage and receiving areas.

Gross area includes: primary horizontal circulation, all vertical circulation (stairs & elevators), restrooms, vertical shafts, utility and janitorial closets, mechanical and electrical equipment space, incidental storage closets, structure, interior and exterior walls

comparative examples

Although the existing neighboring CRCC building houses the most similar on-campus examples of classroom types and study spaces to the new DESB program, its efficiency is lower than the University desires for new buildings of this type. A more direct on-campus comparison of a recently constructed University classroom / office building with similar components can be used as an example. The Health Sciences Education Building (HSEB), constructed in 2006, although for a different discipline than business education, has direct similarities in size, internal components, and site constraints. Without the large atrium space, an example HSEB floor yields a .60 net to gross analogous to this program:

HSEB Level 2 – classrooms, seminar, study + lounge



20,385 nsf
34,141 gsf = .60

Space Utilization Summary

phase 1

Programmed spaces planned for Phase 1 will primarily replace demolished FAMB classrooms, provide updated and properly sized space for existing DESB functions currently housed with inadequate or entirely lacking space in the KDGB building, and provide much needed community spaces that do not exist in the KDGB, BUC, and FAMB buildings.

Phase 1 components include the following:

(14) CLASSROOMS	49,420 gsf
- Includes (2) 20-seat seminar rooms	
STUDENT SPACES	16,183 gsf
FACULTY	28,050 gsf
STUDENT SERVICES	9,153 gsf
COMMON	8,033 gsf
ADMINISTRATION (I.S. only)	1,200 gsf

phase 2

Programmed spaces planned for Phase 2 will provide classrooms and faculty spaces which meet projected DESB growth. 28,836 NSF of classrooms, class-lab, and support space in this phase will serve campus general purpose needs as well as DESB needs. Phase 2 will also provide updated and properly sized space for existing DESB Administrative and research centers functions currently housed with inadequate or entirely lacking space in the KDGB and BUC buildings, as well as extend community spaces established in Phase 1.

Phase 2 components include the following:

(9) CLASSROOMS	37,150 gsf
- Includes (1) 20-seat seminar room	
STUDENT SPACES	9,800 gsf
FACULTY	8,300 gsf
COMMON	3,117 gsf
ADMINISTRATION	9,025 gsf
CENTERS	9,250 gsf

PROJECTED SPACE UTILIZATION SUMMARY						GE Project # 0906-0620	
Gould Evans Associates						29-Jun-07	
Architectural Program Summary		phase 1 qty.	phase 2 qty.	NSF	GSF		
CLASSROOMS							
200-seat auditorium	qty.	1		4,700 nsf	7,833 gsf		
80-seat tiered case method classroom	qty.	6		13,410 nsf	22,350 gsf		
40-seat tiered case method classroom	qty.	2		2,886 nsf	4,810 gsf		
80-seat flat floor multi-use classroom	qty.	3		6,576 nsf	10,960 gsf		
80-seat flat floor multi-use classroom			qty. 2	4,384 nsf	7,307 gsf		
110-seat tiered case method classroom			qty. 2	17,166 nsf	28,610 gsf		
20-seat seminar	qty.	2		1,000 nsf	1,667 gsf		
20-seat seminar			qty. 1	500 nsf	833 gsf		
classroom support space - phase 1				1,080 nsf	1,800 gsf		
classroom support space - phase 2				240 nsf	400 gsf		
	classroom qty.	14	qty. 5				
subtotal phase 1 classroom area				29,652 nsf	49,420 gsf		
subtotal phase 2 classroom area				22,290 nsf	37,150 gsf		
total project classroom area				51,942 nsf	86,570 gsf		
STUDENT SPACES							
study - flexible break-out module	qty.	10		1,440 nsf	2,333 gsf		
study - dedicated open area				1,240 nsf	2,067 gsf		
social areas - phase 1	qty.	2		4,710 nsf	8,267 gsf		
information exchange - phase 1				2,000 nsf	2,917 gsf		
student support spaces - phase 1	qty.	2		360 nsf	600 gsf		
study - flexible break-out module			qty. 18	2,520 nsf	4,200 gsf		
study - dedicated open area				800 nsf	1,333 gsf		
social areas - phase 2				1,720 nsf	2,867 gsf		
information exchange - phase 2				600 nsf	1,000 gsf		
student support spaces - phase 2			qty. 2	240 nsf	400 gsf		
subtotal 140nsf flexible modules		14	20				
subtotal phase 1 student spaces area				9,710 nsf	16,183 gsf		
subtotal phase 2 student spaces area				5,880 nsf	9,800 gsf		
total project classroom area				15,590 nsf	25,983 gsf		
FACULTY							
accounting faculty - phase 1	qty.	13		1,820 nsf	3,033 gsf		
finance faculty - phase 1	qty.	13		1,820 nsf	3,033 gsf		
management faculty - phase 1	qty.	20		2,800 nsf	4,667 gsf		
marketing faculty - phase 1	qty.	9		1,260 nsf	2,100 gsf		
auxilliary full time faculty - phase 1	qty.	14		1,960 nsf	3,267 gsf		
phd & assoc/visiting fac. offices - phase 1	qty.	23		3,220 nsf	5,367 gsf		
core departmental offices - phase 1	qty.	12		1,680 nsf	2,800 gsf		
faculty support space - phase 1				2,270 nsf	3,783 gsf		
new faculty offices - phase 2			qty. 20	2,800 nsf	4,667 gsf		
phd & assoc./visiting fac. offices - phase 2			qty. 7	980 nsf	1,633 gsf		
faculty support space - phase 2				1,200 nsf	2,000 gsf		
subtotal 140nsf office modules		104	27				
subtotal phase 1 faculty area				16,830 nsf	28,050 gsf		
subtotal phase 2 faculty area				4,980 nsf	8,300 gsf		
total project faculty area				21,810 nsf	36,350 gsf		

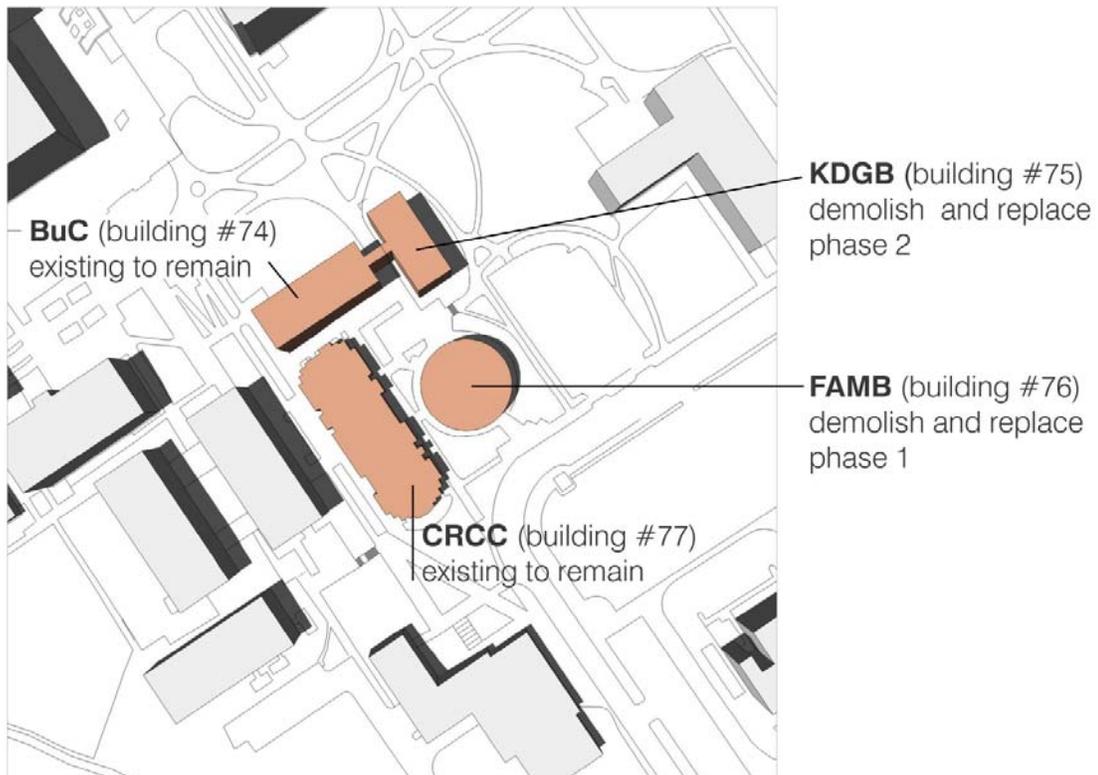
STUDENT SERVICES							
undergrad. program advising suite - phase 1	qty.	9		1,796	nsf	2,993	gsf
masters program advising suite - phase 1	qty.	9		1,796	nsf	2,993	gsf
career services - phase 1				500	nsf	833	gsf
student services shared spaces - phase 1				1,340	nsf	2,233	gsf
subtotal suite offices		18	0				
subtotal phase 1 student services area				5,492	nsf	9,153	gsf
subtotal phase 2 student services area				0	nsf	0	gsf
total project student services area				5,492	nsf	9,153	gsf
COMMON							
public & shared spaces - phase 1				3,500	nsf	5,833	gsf
general building support - phase 1				1,320	nsf	2,200	gsf
public & shared spaces - phase 2				1,100	nsf	1,833	gsf
general building support - phase 2				770	nsf	1,283	gsf
subtotal phase 1 common area				4,820	nsf	8,033	gsf
subtotal phase 2 common area				1,870	nsf	3,117	gsf
total project common area				6,690	nsf	11,150	gsf
ADMINISTRATION							
information services - phase 1	mod. qty.	4		720	nsf	1,200	gsf
dean's offices - phase 2			off. qty.	13	1,740	nsf	2,900
information services - phase 2			off. qty.	10	1,200	nsf	2,000
admin. office suite - phase 2			off. qty.	3	1,020	nsf	1,700
administration general - phase 2			mod. qty.	2	1,200	nsf	2,000
administration storage - phase 2					255	nsf	425
subtotal 120nsf flexible modules		4	2				
subtotal suite offices		0	26				
subtotal phase 1 administration area				720	nsf	1,200	gsf
subtotal phase 2 administration area				5,415	nsf	9,025	gsf
total project administration area				6,135	nsf	10,225	gsf
CENTERS							
centers - phase 1				0	nsf	0	gsf
centers - phase 2	qty.	6		5,550	nsf	9,250	gsf
subtotal phase 1 centers area				0	nsf	0	gsf
subtotal phase 2 centers area				5,550	nsf	9,250	gsf
total project centers area				5,550	nsf	9,250	gsf
TOTAL PROGRAM AREA							
total phase 1 area (net-to-gross 0.6)				67,224	nsf	112,039	gsf
total phase 2 area (net-to-gross 0.6)				45,985	nsf	76,642	gsf
total project area				113,209	nsf	188,681	gsf

3.0 Site Considerations

Existing Site Considerations

The present DESB campus consists of four existing buildings, three of which were constructed in the 1960's, and have grown outdated in both physical condition and teaching / learning environments. The fourth building, the CRCC, a two story classroom building constructed in 2000, will continue to serve DESB needs in conjunction with future new building(s).

Two buildings, the Kendall D. Garff Building (KDGB) and the Francis A. Madsen Building (FAMB), will be demolished and provide site area for replacement and expansion DESB building area.



general physical characteristics

The terrain of the site slopes generally from northeast to southwest, with a high point southeast of the FAMB. Grade change is such that two levels of a new building are potentially accessible from both a plaza-level, and an upper east exterior entry or exit.

soils - geologic and geotechnical conditions

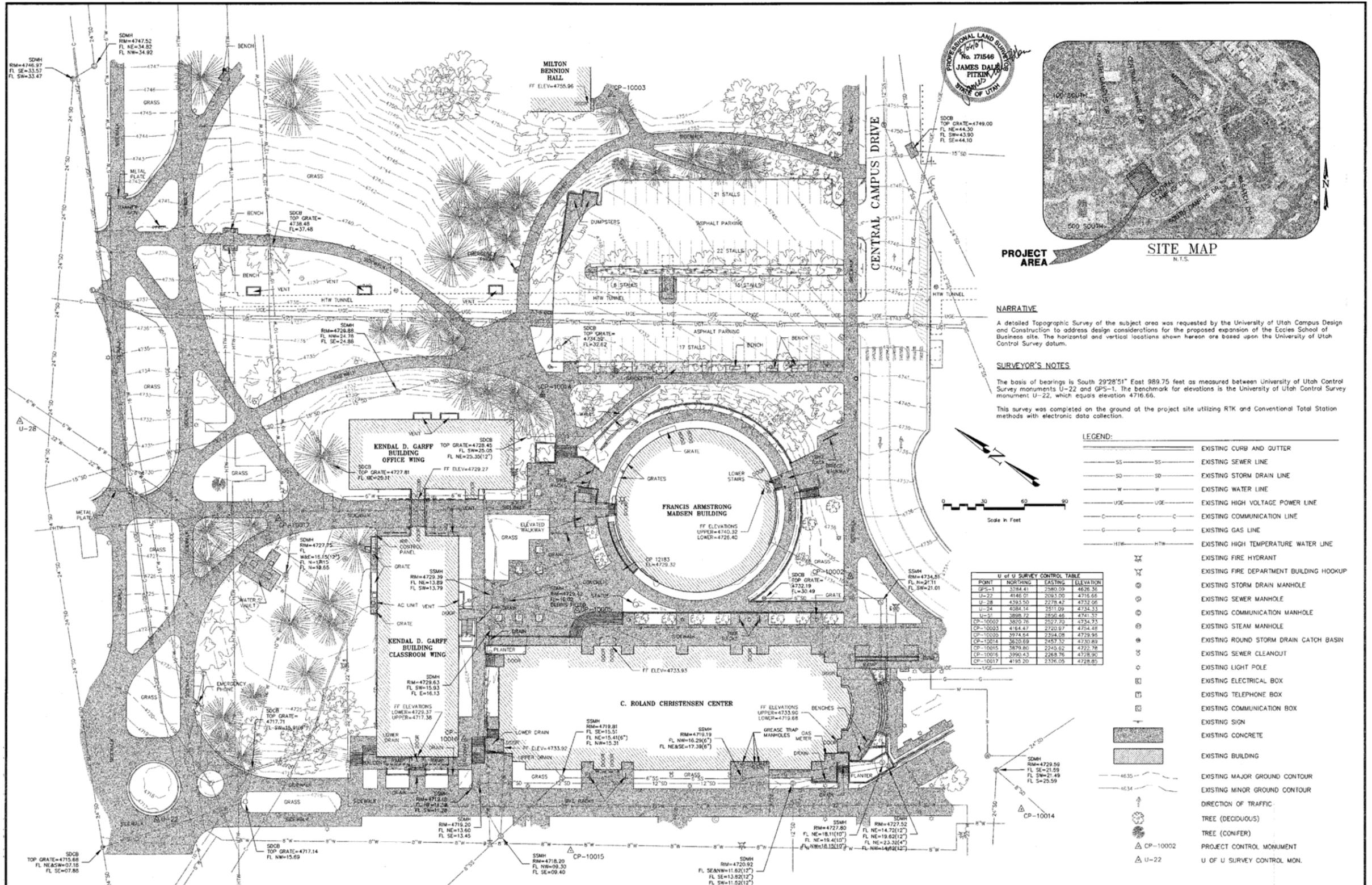
A general site geotechnical survey report is presently being conducted, and will be available prior to start of design work. A geologic trenching study has been conducted as well. Although a soils report and an additional trenching study for the specific site is not yet available, a review of the soils reports and trenching studies surrounding the proposed building site indicate that an active fault zone through the proposed building site is unlikely and that the soils have the strength and stiffness to support the proposed buildings without expensive foundation systems being required.

existing site utilities – water / sewer

High temperature water from the central campus system is available from a 4" main that extends south from manhole L1-1. Note that the portion of this line that extends from the manhole is direct buried, and is scheduled to be replaced in the summer of 2007. Starting at the breezeway that connects Building 074 and 075, the 4" pipe is routed in a tunnel as it continues south towards the existing Building 076. This pipe will need to be removed and replaced as part of the tunnel demolition.

The main distribution tunnel from the high temperature generators to the campus passes to the east of the building site. Maintain clearance of 15' from the main tunnel. The buildable area extends over the high temp expansion loops. It is desirable to provide adequate clearance from these loops, however, if the design of the building extends over the loops, then it is possible to relocate the loops to the north and / or south to achieve the adequate clearance. This will need to be coordinated with the University.

A 6" sanitary sewer line is presently connected to Building 075, and routes around Building 077. This line should be adequate for the new building. The 6" turns into a 4" and continues to the east and drains the KDGB buildings and continues to the north-west. A sewer line also runs west and south along the north and south sides of the BUC building which also sewers the BUC and KDGB buildings. A 6" sewer line sewers the FAMB building and runs to the south-west around the south side of the CRCC building. This 6" in turn runs north along the west side of the CRCC and then drains to the north-west connecting to the outfall for the sewer for the BUC and KDGB buildings.



PROJECT AREA

SITE MAP
N.T.S.

NARRATIVE

A detailed Topographic Survey of the subject area was requested by the University of Utah Campus Design and Construction to address design considerations for the proposed expansion of the Eccles School of Business site. The horizontal and vertical locations shown hereon are based upon the University of Utah Control Survey datum.

SURVEYOR'S NOTES

The basis of bearings is South 29°28'51" East 989.75 feet as measured between University of Utah Control Survey monuments U-22 and GPS-1. The benchmark for elevations is the University of Utah Control Survey monument U-22, which equis elevation 4716.66.
 This survey was completed on the ground at the project site utilizing RTK and Conventional Total Station methods with electronic data collection.

LEGEND:

- SS — SS — EXISTING CURB AND GUTTER
- SS — SS — EXISTING SEWER LINE
- SD — SD — EXISTING STORM DRAIN LINE
- W — W — EXISTING WATER LINE
- U3E — U3E — EXISTING HIGH VOLTAGE POWER LINE
- C — C — EXISTING COMMUNICATION LINE
- G — G — EXISTING GAS LINE
- HTW — HTW — EXISTING HIGH TEMPERATURE WATER LINE
- ⊕ — EXISTING FIRE HYDRANT
- ⊕ — EXISTING FIRE DEPARTMENT BUILDING HOOKUP
- ⊕ — EXISTING STORM DRAIN MANHOLE
- ⊕ — EXISTING SEWER MANHOLE
- ⊕ — EXISTING COMMUNICATION MANHOLE
- ⊕ — EXISTING STEAM MANHOLE
- ⊕ — EXISTING ROUND STORM DRAIN CATCH BASIN
- ⊕ — EXISTING SEWER CLEANOUT
- ⊕ — EXISTING LIGHT POLE
- ⊕ — EXISTING ELECTRICAL BOX
- ⊕ — EXISTING TELEPHONE BOX
- ⊕ — EXISTING COMMUNICATION BOX
- ⊕ — EXISTING SIGN
- ⊕ — EXISTING CONCRETE
- ⊕ — EXISTING BUILDING
- 46.35 — EXISTING MAJOR GROUND CONTOUR
- 46.34 — EXISTING MINOR GROUND CONTOUR
- ⊕ — DIRECTION OF TRAFFIC
- ⊕ — TREE (DECIDUOUS)
- ⊕ — TREE (CONIFER)
- ⊕ — PROJECT CONTROL MONUMENT
- ⊕ — U-22 U OF U SURVEY CONTROL MON.

U of U SURVEY CONTROL TABLE			
POINT	NORTHING	EASTING	ELEVATION
GPS-1	3284.41	2580.09	4626.36
U-22	4148.07	2083.00	4716.66
U-28	4393.50	2278.42	4732.05
U-24	4084.14	2511.09	4734.33
U-23	3808.72	2850.46	4741.37
CP-10002	3870.76	2927.03	4724.73
CP-10003	4164.47	2720.97	4754.48
CP-10005	3974.64	2394.08	4729.95
CP-10014	3620.89	2457.32	4725.89
CP-10015	3879.80	2243.62	4722.78
CP-10016	3990.43	2268.76	4728.90
CP-10017	4195.20	2326.05	4728.82

DRAWN KT 02/07
 CHECKED JOP 02/07
 DESIGNED KT 02/07
 PROJECT ENGINEER
 APPROVED JOP 02/07
 PROJECT MANAGER

UNIVERSITY OF UTAH PROJECT NO. 0074-12765
 SALT LAKE CITY, UTAH



ECCLES SCHOOL OF BUSINESS
 ADDITION AND REMODEL - TOPOGRAPHIC SURVEY

PROJECT NO.	1234-01		
SHEET NO.	1 of 1		
FILE NAME	topo Map.dwg		
SCALE	1"=30'		
NO.	REVISIONS	BY	DATE

BACK OF PAGE 11

culinary water & fire protection

A 22" water main runs along the north and west sides of the BUC and CRCC buildings. The 22" water enters a pressure lift station in vault along the north side of the BUC. A 6" water line runs from the north-east and continues south between the BUC and KDGB buildings, a portion of which runs inside the utility tunnel between the BUC and KDGB. This 6" then turns and runs west along the south side of the BUC and tees into 8" water at the north-east corner of the CRCC. This 8" water loops around the north, east and south sides of the CRCC connecting at both ends to a north / south 8" water line running along the west side of the CRCC and BUC. A 10" water line runs north / south along the north side of the BUC and KDGB. This 10" has a cross over connection with the 22" water main at the pressure lift station. A 12" water line tees off of the 22" water main inside of the pressure lift station and runs east along the north side of the BUC and KDGB. There are existing fire hydrants on the north side of the BUC and to the south-east of the FAMB and to the west of the CRCC.

storm drain

An existing 12" storm drain runs west between the existing BUC and CRCC buildings collects roof drains for the BUC and KDGB and area drains for the patio between the BUC, CRCC, KDGB and FAMB buildings. This 12" inch storm drain continues south along the west side of the CRCC building and then turns west. A 12" roof drain / area drain for the FAMB building runs to the south-west around the south side of the CRCC building and then north until it connects the above mentioned 12" storm drain. An existing 15" storm drain runs north-east on the east side of the KDGB. Roof drains on the north side of the BUC Building run north-west to a catch basin and then continues north-west.

natural gas

Natural gas is not required for any of the buildings being considered in this project.

irrigation

At this point, there is little information on the locations of irrigation lines. It can be assumed that a number of lines will need to be relocated due to construction.

chilled water

A 6" chilled water line comes from the south and runs north between the CRCC and FAMB and then turns east and runs along the south side of the BUC. This line supplies the CRCC and BUC

existing site utilities – power

Power service and transformer vaults located in the BUC building serve the BUC, KDGB, FAMB and the CRCC buildings as well as the water pump station immediately north of the BUC building. Since the BUC is intended to be demolished, the existing feeder can be replaced and new transformer vaults can be constructed for the new facilities. However, the CRCC building and the water pump station must be maintained throughout the construction, and any impact to the existing feeder will affect the existing operation.

The transformers for the CRCC building will remain, as they are fed with new 12470 volt system installed in 2000. However, the transformers feeding the KDGB, BUC, and FAMB buildings and the water pump station must be replaced with new as part of the project, to convert from 4160 volt to 12470 volt.

There is a vault in the basement of the BUC #74, with three sets of service transformers that feed the water vault north of the complex, and buildings 74 and 75 (Kendall D. Garff Building). A service feeder continues through the basement of BUC to the FAMB building vault, where another set of transformers, located in the basement of the FAMB, feeds this building. A new service feeder at 12470 volt also passes through the vault of BUC #74 and continues to a vault at the new CRCC building #77, where transformers feed that new facility.

There is a feeder that feeds the museum that is routed from the HTW Plant that may be extended north to the CRCC building, to facilitate construction and demolition. This refeed of the CRCC building should be accomplished early in the DESB Replacement & expansion schedule, prior to major construction activities.

A number of light poles including conduit and power for them are close to the location of the new buildings.

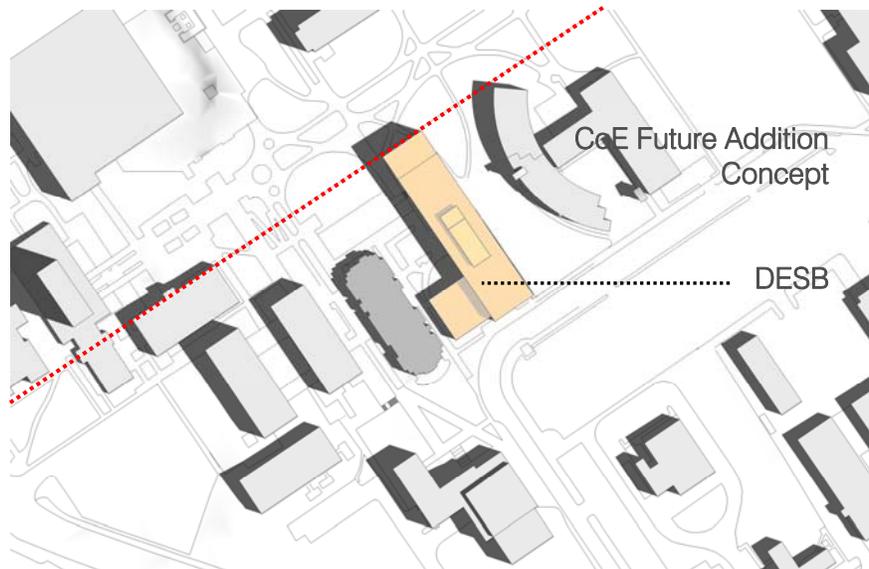
existing site utilities – telecommunications

The existing telecommunications service originates from a ductbank running northwest of the BUC building, and also west of the CRCC building. The service from the CRCC was installed directly west of the CRCC building, and is not in the way of expansion or demolition plans. Services for the KDGB and FAMB buildings go through the BUC building, so they will need to be relocated prior to demolition of the BUC building. Telephone services originate from a Qwest owned Central switching station located on 1100 east. The phone service is provided through Qwest, through the campus owned ductbank system. The data services are provided through a campus owned fiber optic system, with the data node originating at Marriott Library, north and west of the Business building complex.

New Expansion Site Considerations

campus master plan considerations

The University of Utah is in the process of updating their current campus master plan, scheduled to be issued in 2008. The ongoing process of the campus master plan update must be taken into consideration during the design of the DESB Replacement & Expansion. Two of the planning considerations for the DESB site are alignment with the HPER Mall setback, shown below, and coordination with planning concepts for the neighboring College of Education (CoE) future expansion. As the project moves into the design phase, it is possible for DESB and the design team to recommend a variance to HPER Mall setback to Facilities Planning. Consideration of this will be reviewed within the context of the overall campus master plan. Coordination of entries, massing, and proximity with the planned addition to the College of Education will be necessary.



buildable site area limits

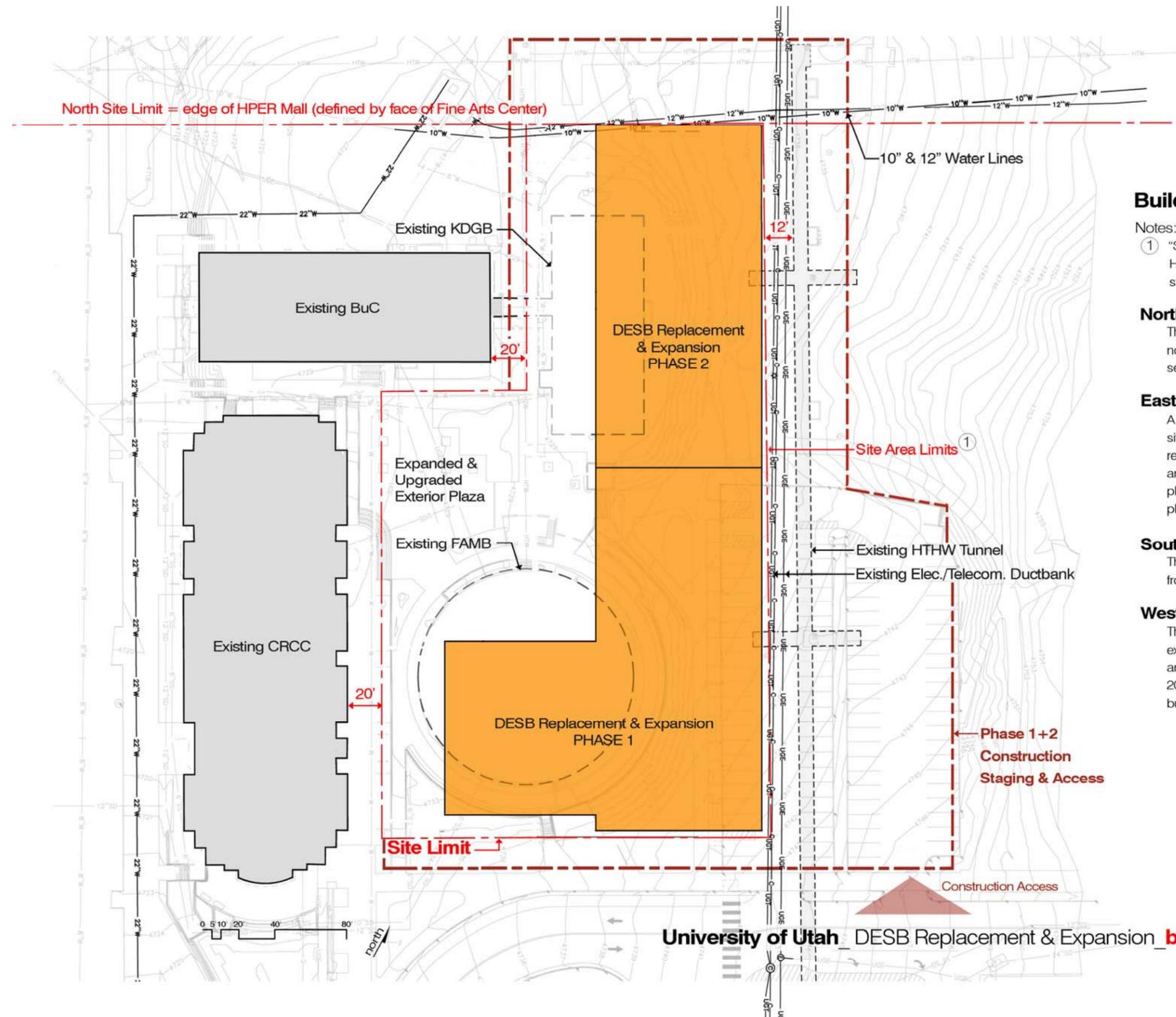
The footprint of the new DESB Expansion will be confined by primary site limitations of the HPER Mall setback to the north, the main campus utility tunnel to the east, the pedestrian walkway and Campus Center Drive to the south, and the existing 2-story CRCC building to the west.

Within these site constraints, both Phase 1 and Phase 2 will be four stories above plaza level, with one level below grade.

construction access and staging

Construction access and staging for both phases of the project will be primarily from the existing surface parking lot to the east. A secured construction area that allows safe campus pedestrian circulation to all existing surrounding buildings will be necessary.

It is desired that campus use of the redesigned DESB exterior plaza will occur with occupancy of Phase 1; therefore Phase 2 construction staging will be limited to the existing surface parking area, and the area required for the Phase 2 footprint and re-routed site utilities.



Buildable Site Area Limits

Notes:

- ① "Site Area Limits" assume a 12' setback from main branch of HTHW tunnel. A 20' setback is recommended from existing structures and edge of sidewalk on south side of site.

North Boundary

The Campus Master Plan setback against the HPER Mall is the northern site limit for the new DESB project. Building to this setback will require relocation of existing 10" & 12" water lines.

East Boundary

A 12' distance from the main HTHW tunnel establishes the eastern site boundary for the project. Building to this setback will require relocation of HTHW expansion loops, along west side of tunnel, and shoring of the existing electrical/telecom ductbank. Building placement at this boundary must consider distance from the future planned addition to the neighboring College of Education.

South Boundary

The south boundary is established by a 20' landscape setback from the existing walkway edge.

West Boundary

The western boundary of the buildable site includes the existing exterior plaza area, which should be expanded and designed as an active community space for the business school campus. A 20' setback from the eastern side of the existing CRCC building is recommended for new building construction.

BACK OF PAGE 17

site utilities for new expansion

Building 1: The current proposed location for the new Eccles Business Building works well with the existing utilities. Utilities, which will be impacted, will for the most part, be only those that service the existing FAMB.

Building 2: Replacing the existing KDGB with a larger footprint will impact utilities. Preliminary costs include replacement of the adjacent utility tunnel that runs north / south between the KDGB and BUC. Existing 6" water lines as well as High Temperature water and Chilled water lines run through this tunnel. These utilities service the existing BUC, KDGB and FAMB buildings.



There are several site utility issues that reinforce the recommendation to take down the FAMB building first in the demolition sequence, electrical considerations include the fact that all electric utility services feed through the BUC building, therefore, to relocate the power service equipment first, or on a temporary basis, would be extremely expensive. The basic plan proposed consists of re-feeding the CRCC building from the south, and developing a new electrical service for the new building plus the KDGB and water pumps from the northeast. The water service vault and pumps are in the way of an expansion of BUC to the north, and also in need of backup power. The addition of a large generator to the DESB complex will benefit not only the school of business complex, but the campus as a whole to maintain water service in the event of a large-scale power outage at Stadium substation.

exterior equipment yards

Recommended exterior equipment yard locations are shown with best proximity to the anticipated interior mechanical and electrical service room locations. The location indicated is also in a high profile campus pedestrian area. The University of Utah is in the process of conducting a South Campus Utility Study that is specifically looking at possible ways to centralize some of the mechanical and electrical equipment serving other buildings in this general area, including UMFA, CoE, CA+P, and DESB. Alternative locations may be considered as part of this study. The best solution should be sought, evaluated, and pursued during the design phase of the project that best integrates with the pedestrian environment and / or blends with the new building.

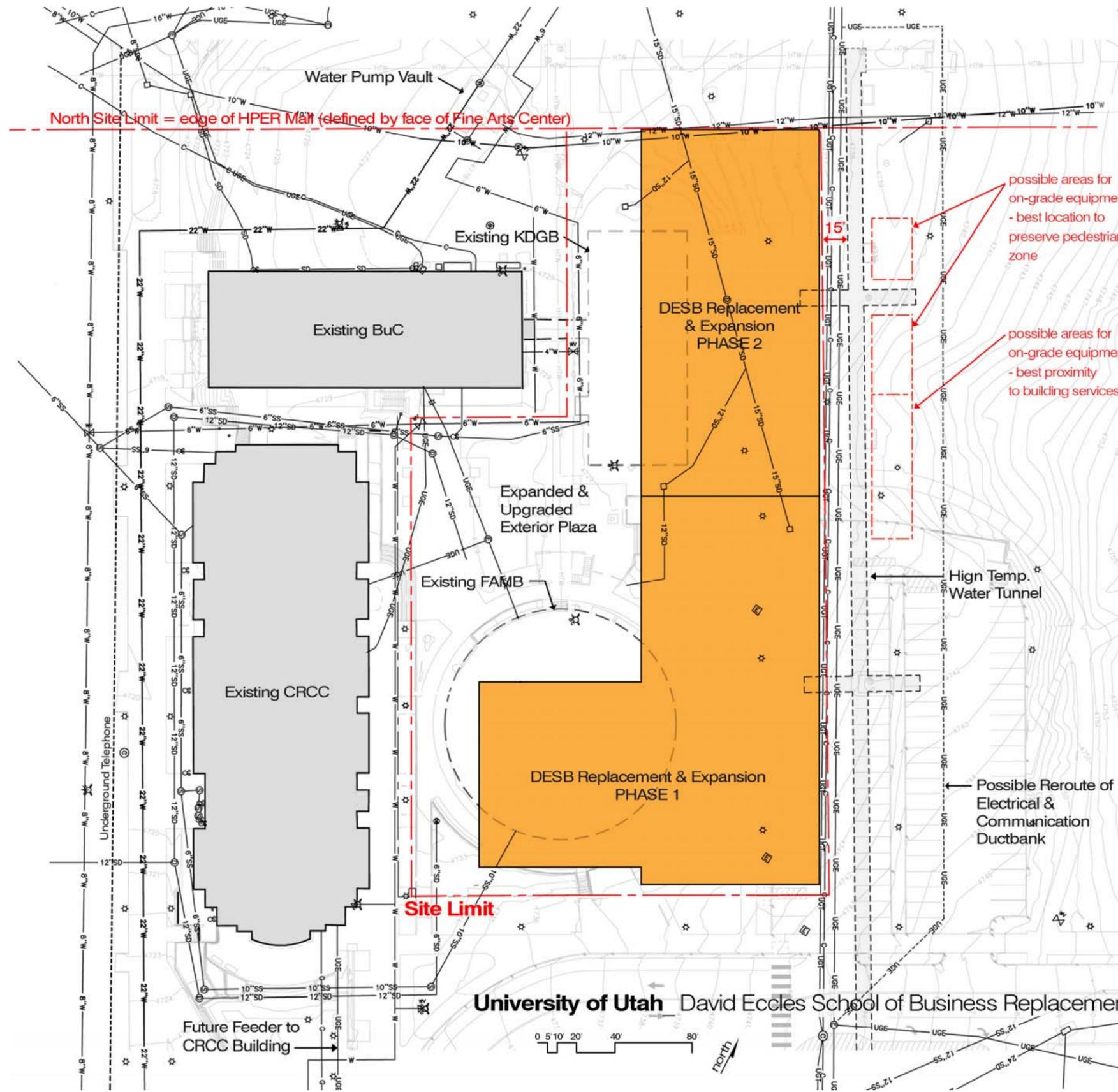
Equipment to be accommodated in the on-grade exterior enclosures includes a ceramic-fill cooling tower. Due to weight and height, this piece of equipment is not recommended to be placed within the roof penthouse. Other equipment to locate on grade will be transformers, and the new diesel generator which will be required as part of the project. A new pad mounted vacuum fault interrupter (VFI) switch, with dielectric medium, shall be installed near the transformer(s). Campus planning discussions may consider the on-grade tower and associated piping to be designed so that it can be expanded to serve a potential future phase of the Business School if needed, as well as serve the college of education building as part of a future project.

A new transformer(s) should be installed to serve each new facility. The transformers and pad VFI switch must be screened from the public view. Concealed underground vaults under the building are discouraged by the University Electric Shop.

Electrical service can originate in one of the new manholes recently installed as part of the 12470 volt system improvements project. Manhole MH31-1, located at the northwest corner of the proposed building site, has a new 6 way RAM style vault switch, with 2 spare ways. MH32A, located just south of Orson Spencer Hall, has a new 12470 volt feeder; however, the existing switches are largely full.

storm drain and sanitary sewer capacity

The 2003 U of U Campus Utilities Study indicates that the area of this project is not subject to flooding for the 2-year, 10-year or 100-year storms modeled. University Campus Facilities has indicated that no additional storm runoff which would surpass existing flows will be allowed. To offset the additional impervious areas detention or pervious area will most likely need to be added. Sewer lines which will be used to serve the proposed building have excess capacity.



Phase One Civil Engineering, Site Utilities

Storm Drain - It is anticipated that no existing storm drain lines will be impacted by the demolition and construction of the Phase 1 portion of the proposed building. The existing 12" roof drain on the south side of the FAMB should be used to service the roof drains and area drains for the proposed building. There is also a possibility of using the existing 12" storm drain in the patio between the FAMB, BUC and CRCC for roof drains for the proposed building.

Sanitary Sewer - It is anticipated that no existing sanitary sewer lines will be impacted by the demolition and construction of the Phase 1 portion of the proposed building. The existing 10" sewer which services the existing FAMB should be able to be used for the proposed building. The existing 6" sewer between the BUC and CRCC may also have capacity for servicing portions of the proposed building.

Culinary Water & Fire Protection - It is anticipated that no existing main water lines will be impacted by the demolition and construction of the Phase 1 portion of the proposed building. A service tunnel runs north from the existing FAMB and contains both high temperature water and culinary water lines. The Phase 1 portion of construction will require the removal of this tunnel however, these lines service only the FAMB and will not be needed after its demolition. The existing 6" water which runs between the BUC and KDGB will provide service to the proposed building.

High Temperature Water - See the discussion on culinary water above regarding the service tunnel which contains the high temperature water for the FAMB. The existing 4" HTW which currently runs between the BUC and KDGB will need to be terminated at the north end of the proposed phase 1 footprint.

Phase Two Civil Engineering, Site Utilities

Storm Drain - The existing 15" storm drain to the north-east of the KDGB will be re-routed north to avoid the new building footprint.

Sanitary Sewer - The existing 6" sewer between the BUC and CRCC which services the KDGB will need to be adjusted to meet the needs of the proposed building.

Culinary Water & Fire Protection - The 6" water, which currently runs between the BUC and KDGB, may need to be shifted to the east to avoid the proposed building. 10" and 12" camous lines will need to be re-routed around the northern footprint of phase 2.

High Temperature Water - The existing 4" HTW which currently runs between the BUC and KDGB will need to be terminated at the north end of the proposed building.

possible areas for on-grade equipment - best location to preserve pedestrian zone

possible areas for on-grade equipment - best proximity to building services

High Temp. Water Tunnel

Possible Reroute of Electrical & Communication Ductbank

University of Utah David Eccles School of Business Replacement & Expansion **site utility/infrastructure plan**

BACK OF PAGE 21

site circulation

The expanded business campus site must be designed to create a primarily pedestrian experience. The site's south edge is immediately adjacent to vehicular access, a bus stop, and parking. It is a short walk to the University's second lite rail transit stop.

The established vehicular and transit patterns are expected to continue, and intensify. With anticipated increased campus density in the coming years, the DESB location will remain as part of the southern edge transition from vehicle to pedestrian circulation. Therefore, balance between the two is imperative.

In general, more DESB visitors, MBA students, and evening students come from the south parking and transit areas, and remain on the DESB campus, while more undergraduate traffic circulates from the north.

The DESB campus is populated primarily during the morning hours between 7:30 a.m. and 1:00 p.m., on all days, but primarily Mondays / Wednesdays, and Tuesdays / Thursdays. After 4:00 p.m., students begin to arrive again for evening classes and studying. The Executive Education program of the DESB holds classes on Fridays and Saturdays that cause intense use of the CRCC.

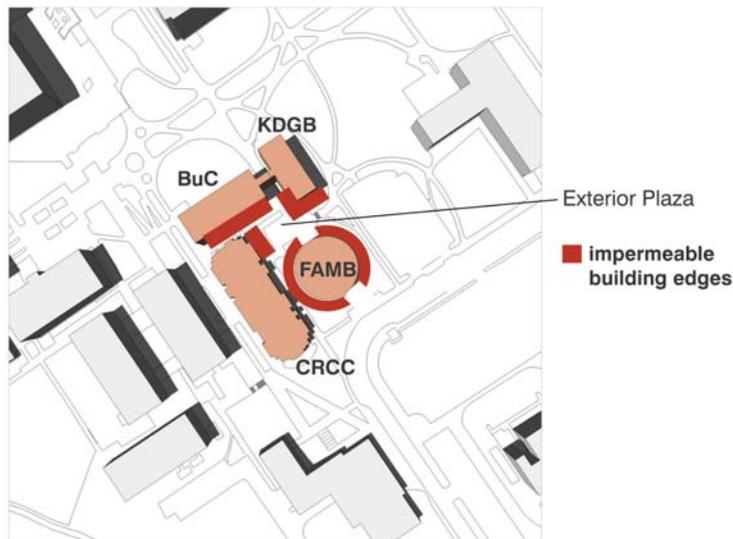
During the hours of 2:00 p.m. to 5:00 p.m., the circulation is almost non-existent. An interview with a student focus group indicated that some prefer to spend the in-between time off-campus. Some indicated that lack of study and social space has caused preference to study or eat in their cars during this down-time.

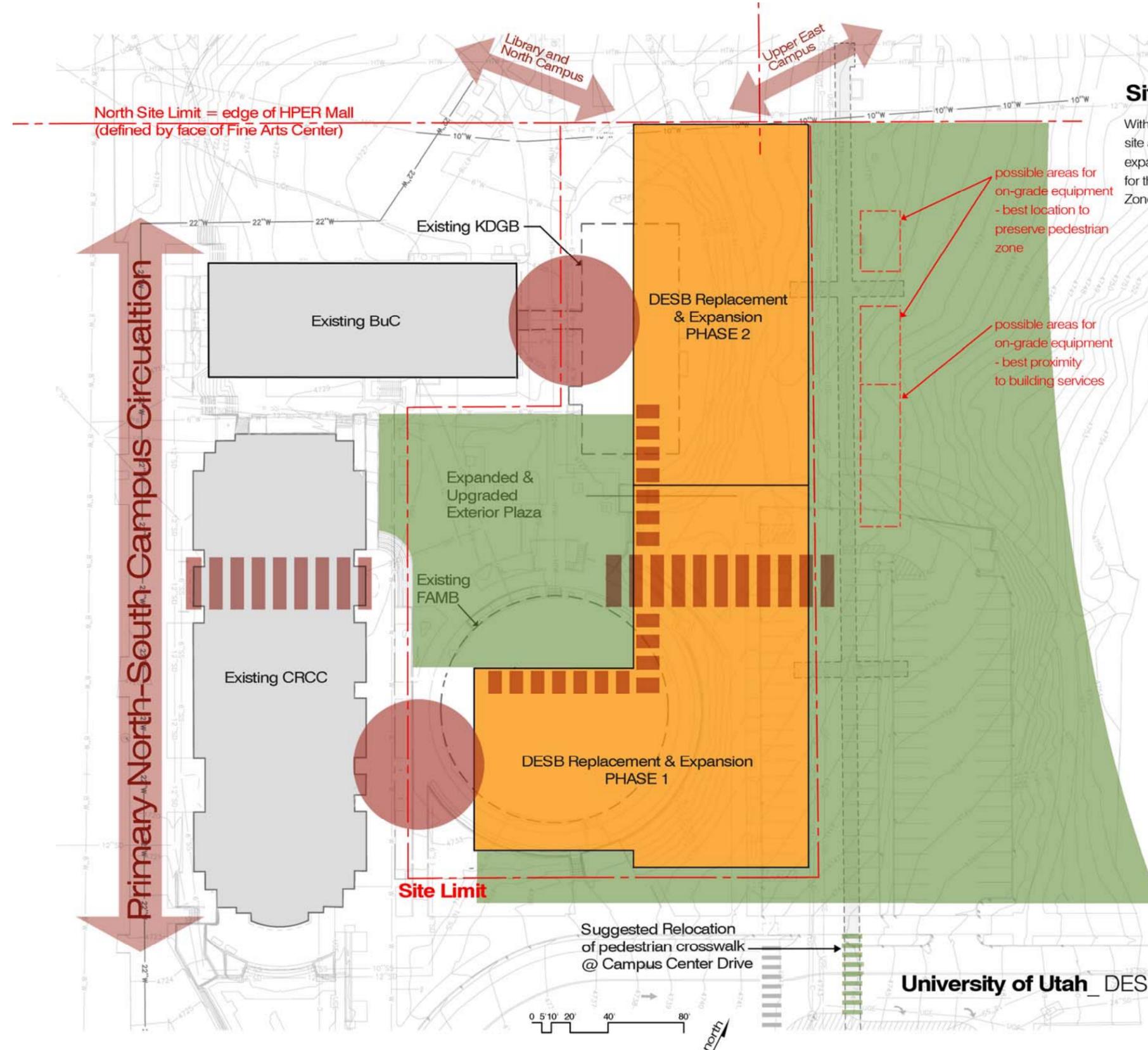
Building entries at the north of phase 2, at the plaza, at the east and possibly at the south are foreseen for the new Replacement & Expansion project. The diagram on the following page indicates a permeable transition through the project for a potential east-west link that would continue circulation from the main north-south campus circulation axis on the west side of the CRCC, through the lobby of the CRCC, through the new DESB Replacement & Expansion, and finally to the neighboring College of Education. Essentially, the circulation patterns that occur on the site today should continue. Accommodation of access from undergraduates from the northeast into the phase 2 portion of the project is desired.

use of exterior space

Currently, use of existing exterior space within and around the business school campus is minimal. The exterior plaza at the heart of the DESB complex is particularly under-utilized due to many factors which primarily include lack of permeability (doors and other operable penetrations) in the surround building edges, and lack of deciduous trees or other elements that temper harsh summer or winter weather.

“permeable” edges are seen to effectively activate and encourage circulation between indoor and outdoor spaces. The edges surrounding the plaza today consist of blank solid walls of the FAMB, the small distant apertures of the KDGB and BUC window openings, and – although transparent – the raised and disconnected entry edge of the CRCC. No CRCC on-grade entries communicate directly on level with today’s DESB plaza.





Site Circulation

With pedestrian access coming from all directions, primarily from the south, vehicular site access must be limited, safe and well-integrated in the site design of the DESB expanded campus. Four aspects are identified as key components of site circulation for the project design: Pedestrian Thresholds, Pedestrian Zones, Vehicular Access Zones, and Building Edge Permeability.

Pedestrian Thresholds

Apertures created between DESB buildings will function as critical pedestrian linkages between the DESB exterior plaza, and adjacent campus exterior spaces. Each site threshold must take into account scale and articulation of architecture to create an inviting and safe transition. At the south threshold, it is recommended that the new building height at this condition be kept to 2 levels in order to maintain a desirable amount of natural light between the existing low massing of the CRCC and the new DESB building.

Pedestrian Zones

There are two primary pedestrian zones which can be considered extensions of programmed space: the DESB exterior plaza and the campus entry zone to the east. The exterior plaza should be designed as an extension of usable DESB program community space. The campus entry zone to the east should escort pedestrians to an east entry to the new project. Screening and design integration of exterior equipment enclosures will be extremely important through this zone. Landscape designed to campus standards shall be a focus in these areas.

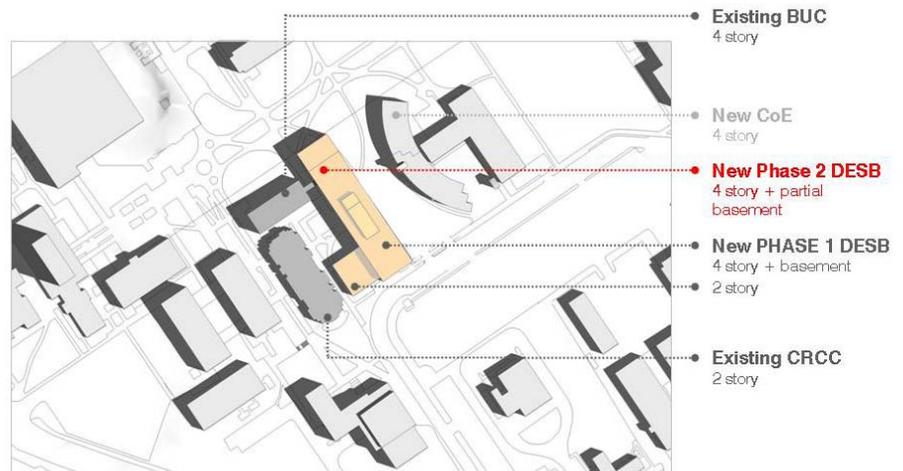
Vehicular Zones

Vehicle access will be from the south adjacent road, Campus Center Drive, and the existing parking lot to the east will be eliminated in anticipation of a future campus pedestrian zone between the DESB and College of Education addition. Vehicular zones for loading and service to the new project should be along its east edge, and be carefully designed where pedestrian paths interface. Architectural screening and visual integration will be required.

Building Permeability

Being largely a classroom building, many building edges of the new DESB Replacement & Expansion will be "impermeable" - solid walls without doors or windows. A permeable building edge with windows and access points along the DESB exterior plaza edge will help activate this space through circulation. Likewise, impermeable edges placed along service access sides of the project will be a visual cue to those approaching the building.

BACK OF PAGE 25

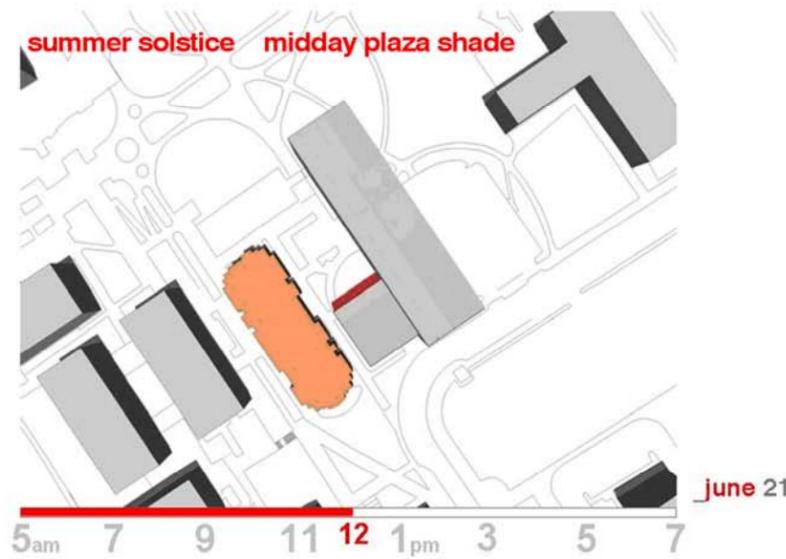
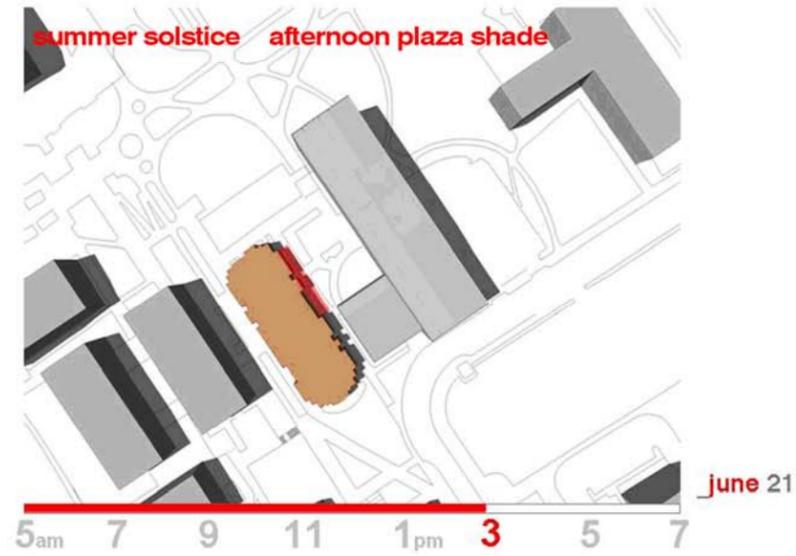
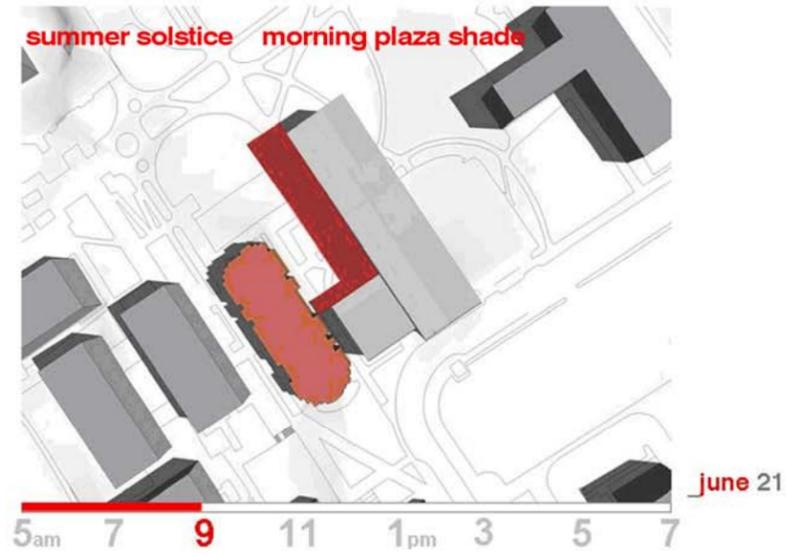


solar studies

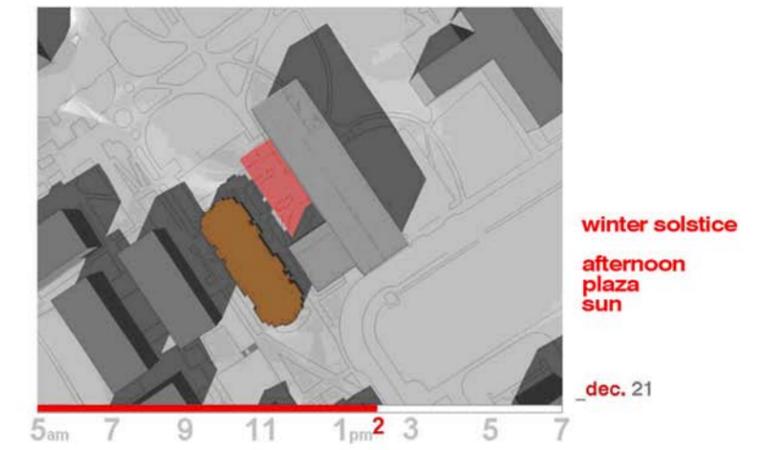
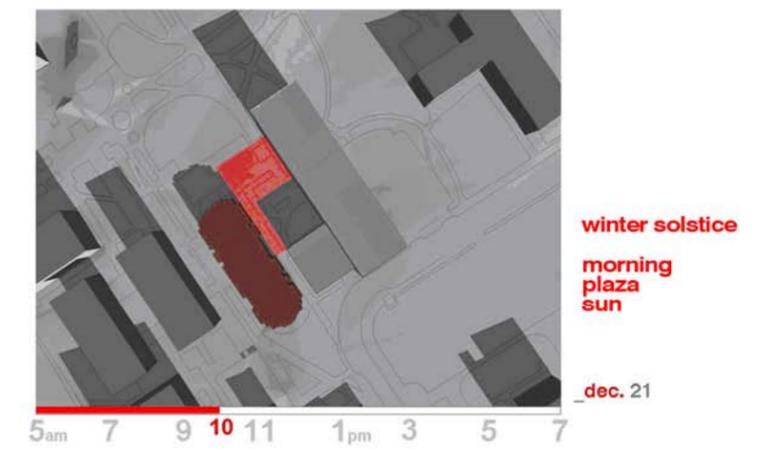
Solar path studies reveal sun and shade patterns which change desirability or occupancy ability with each season. The study reveals that a large amount of plaza area needs to be designed and augmented to creatively increase desirable all-season outside area. The desire is to truly activate a re-designed DESB plaza at the center of this campus.

The following stills show summer and winter solstice, taken as most extreme conditions which identify most shaded areas in summer and areas of highest solar warmth in winter. Most desirable seasonal outdoor areas are shown in red. Build-out volume studied is 4 stories along the eastern plaza edge, and 2 stories for a building volume along the south edge of the plaza. Solar studies consider eventual removal of the existing BUC building:

Summer Solstice Plaza Shading Studies



Winter Solstice Plaza Sun Studies



BACK OF PAGE 29

4.0 Project Vision & Programming Procedure

Identity and Mission

The David Eccles School of Business (DESB) has identified itself as one of the top business schools in the nation, and this success is derivative of innovation within its curriculum.

“The mission of the David Eccles School of Business is to build foundations for business leadership by creating, discovering, and communicating knowledge about leading-edge research and best management practices. By preparing students for the rapidly changing global world of business, and through the synergy of research, education, and service, the David Eccles School of Business strives to be among the most respected business schools in the nation.”

History and Growth

history

The David Eccles School of Business at the University of Utah began in 1896 as part of the Economics and Sociology Department; it quickly became obvious that there was a great need to educate students in the ways of business. In 1917, it became the School of Commerce and Finance, with 126 students in its first year as an official school. Today, the David Eccles School of Business has approximately 2,700 students in four departments of study: Accounting, Finance, Management and Marketing, and another 1,200 students that will minor in International Studies and have selected the Pre-Business course of study.

The School of Business was officially accredited by the American Association of Collegiate Schools of Business in August 1936, making the School of Business one of the first in the country to receive this honor from the world's most respected business school accreditation society.

In 1955, the MBA program was instituted making it the first of its kind between the Rockies and the Pacific. In 1966, with enrollment a fraction of what it is today, the school moved to the current building complex: the Business Classroom Building (BUC), Kendall D. Garff Building (KDGB) and the Francis Armstrong Madsen Building (FAMB).

During the 1970's, the School of Business focused on expanding its international business component along with increasing its faculty and incoming student qualifications. Throughout the 1980's and 1990's, the School's goal was to become a leader in the use of information technology and it became one of the first business schools in the country with a network accessible to students and faculty.

In 1991, the School of Business was named the David Eccles School of Business to honor one of Utah's most prominent and successful frontier industrialists. David Eccles founded 48 businesses in various sectors throughout Utah, Idaho, Oregon and Wyoming during the latter part of the 19th century. A \$15 million endowment was given by Eccles' youngest daughter, Emma Eccles Jones, in honor to her late father's legacy.

In 2000, the C. Roland Christensen Center was opened and currently serves all degrees with a focus on the growing Executive Education program.

In 2006, the David Eccles School of Business launched a capital campaign to raise funds for what will become its home for the next 50 years.

growth

The school of business expects sustained growth in enrollment, and approximately 27% growth in full time faculty positions. With its six degree programs offered, DESB enrollment for the 2006-2007 academic year was 3,906 students, as shown in the chart below. Replacement and expansion will accommodate classes for all programs with the exception of the Executive Education program which will remain to be accommodated in the CRCC building.

Degree	enrollment '06-'07	projected 2012
MBA	100 students	160 students
PMBA (2yr)	320 students	320 students
Exec. MBA (2yr)	110 students	150 students
M Accounting	42 students	80 students
MS Finance	40 students	60 students
Other grad	20 students	100 students
Undergrad.	2,874 students	3,200 students
Other*	400 students	800 students
TOTALS	3,906 students	5,270 students
PROJECTED ENROLLMENT GROWTH: +964 (22.4%)		

*other undergraduate programs: 1.) International Studies; 2.) Lower Division ASAP, LEAP

Faculty and Administration / Services growth is needed to follow projected enrollment and program development, and is planned as follows:

Position	today	future
Faculty	73	+20
Phd	48	+20
Student Services	18	+ 4
Admin	11	+ 5
Admin I.S.	8	+ 7
Centers Staff	5	+ 8
totals	163	+64
PROJECTED FTE TOTAL:		228

Project Purpose

The purpose of this project is to provide updated and state-of-the-art facilities to replace existing outgrown and outdated, inadequately functioning facilities; to help the David Eccles School of Business achieve its academic mission of excellence; and to provide the University with state-of-the-art classrooms, class-lab, and support space.

Cost-benefit of renovation vs. new construction, area needs verification, and collaboration with campus classrooms, class-lab, and support space needs, has led the David Eccles School of Business to pursue replacement of the existing FAMB and KDGB (1966) buildings over seismic upgrade and remodeling.

The current existing buildings have numerous building code problems, seismic deficiencies, life-safety related issues, ADA access compliance problems, and outdated technology systems. In addition, the existing structures lack case method format classroom types, break-out study space, faculty and student space to function properly for a top national business school. Replacement and expansion will achieve best use of dollars and efficient use of building site area for approximately 188,681 GSF of state-of-the-art classrooms, faculty, staff, and student-centered spaces.

The project includes 28,836 NSF of classrooms, class-lab, and support space in the project, which will provide a total of twenty-three (23) classroom / class-lab spaces in the entire project, serving both business school and University campus needs.

Project Vision

three significant opportunities

The DESB has identified three significant opportunities for the design of its new Replacement and Expansion.

1. **Celebrate the School's standing as one of the world's top business schools.**

The David Eccles School of Business ranks among the top 50 in the U.S. and top 100 in the world in number ranking (*Wall Street Journal* and *Financial Times*). The AACSB indicates over 2,000 business schools just in the U.S. and 10,000 worldwide. This ranking is reflected in the DESB faculty and increasingly in its students. The new Replacement and Expansion project gives the school the opportunity to communicate this performance to DESB stakeholders and potential applicants. The desired result is a building that works for the DESB in recruiting both students and faculty, and a building that is a source of pride on campus.

2. **Define business education for the next 40 years.**

The David Eccles School of Business is an innovator in business education. The school differentiates itself by programs like its Entrepreneurship Program, Low Income Taxpayer Clinic, Venture Fund, and Non-profits Consulting Group, and the Pierre Lassonde New Venture Development Center. The school needs a facility that supports this educational model and includes more "Centers" space, flexibly and efficiently utilized.

Collaboration and flexibility need to be "built into the building." One example of this is anticipating how faculty will work in the future. To optimize flexibility and collaboration within faculty environments, effective "hoteling" will be used as temporary offices for part-time faculty and guest lecturers, and as a second retreat for full-time faculty study, research, or meetings.

3. **Build education into the building.**

There is an opportunity to tell Utah's business story by integrating donor acknowledgement via exhibits throughout the building in a way that engages and embodies the concept of student-centered learning.

Programming

Approach

Space, use, and area needs for the new DESB, have been developed and informed through incorporating research of other high ranking business schools, prototype university level learning environments, community and corporate trends, and DESB student, faculty and staff experiences and practices. In many cases this research was done while questioning and challenging the status quo. It is the aspiration of the David Eccles School of Business to capitalize on the opportunity of new construction to refine practices that work, to rethink relationships to be improved, and to create a facility that serves the needs of the vibrant and engaging School of Business of the future.

Research Summary



When one thinks of change during the first 50 years of the 20th century, you may easily point out advancements in technology: the invention of the telephone, the computer, the gasoline powered car, the electric range, and economy in air travel... the past 50 years, on the other hand, have realized very little change in technology: we still communicate via the phone, though now much smaller and portable, we still drive our cars to work, air travel is still common, and there is even a good chance that we fly out of the same airports. We still use electricity to power our stoves, to cook our food, to iron our clothes. But, despite the last half of the 20th century realizing little change in technology, **the past 50 years have proven to change our lives in a much bigger way than was ever experienced during the first half of the century: the way we work and the way we do business!**

Richard Florida examined this change in *The Rise of the Creative Class* and describes the qualities that exist today as containing "Evolutionary Survival Value," meaning that what remains are significant and tested results of change over time. He claims we simply adopt those values and characteristics that we find

necessary to do our jobs and to be “original.” Dress codes have become a relic of the old command-and-control bureaucracies, in which we wore a business uniform to reflect status as either an “officer” or, in the lower ranks, as a “good soldier.” Business schools have long talked about innovation. There are many books examining the paradox of the requirement of reliability for business performance with the need for innovation and creativity; with creativity becoming the focus. Florida argues that status today accrues from being seen as a member of this creative elite. And creative people don't wear uniforms. Collaboration and social interaction have driven a natural trend towards informality as a key quality of the model work environment, and such powerhouses as IBM have paved the way with the no-collar work place and flexible schedules. Ever wonder how the casual styling of Banana Republic became the staple for business attire?



As **flexibility and social informality have forged their way into this new creative culture**, much supporting research and development has followed. Thomas Allen, an MIT alumni considered to be one of the progenitors of modern office design, was one of the first to conclude that “proximity matters” within the work environment. His findings had in fact stated that distances of 70’ or greater would result in relatively little, if any interaction between peers and colleagues. As closed working environments characteristic of office towers gave way to the open-office plan, such concerns as voiced in *The New York Times* headline: “Shut Up So We Can Do Our Jobs” permeated the office environment. Leading furniture companies like Knoll, Steelcase, and Herman Miller quickly responded with solutions like the “Green Grasshopper,” giving the individual back some control over his / her immediate environment.



Our own research of top business executives, innovative companies like Google, Bloomberg, and Cerner Corporation, and trends in contemporary business practice, suggests that this **innovation in business is fundamentally social**. Innovation within the curriculum of the David Eccles School of Business is one of the reasons the school is a member of the top business schools in the nation, and understanding how social interaction may support creative and innovative environments has been a fundamental programming initiative.

Program Goals Outline

Synthesizing the comments of faculty, students, and staff of the DESB and incorporating the extensive research of business and business schools, the following goals have emerged:

- 01.** The new DESB must have the quality of flexibility. As architects, we know that this can only be achieved if two conditions are in place: choices for all building users are available within the environment itself, and the individual desire to be flexible is present.
- 02.** Educational experience for the student is the ultimate driver; the goal is to produce learning environments before teaching environments.
- 03.** Responsible and efficient use of funds is fundamental; overlap of spatial functions will be key to the success of this project.
- 04.** The University of Utah and the DESB are unique in that its students and its culture are built around the commuter lifestyle.
- 05.** Students, faculty, and staff alike desire a sense of community and are committed to supporting this community.
- 06.** Social interaction and collaboration should be “built” into the architecture.

Needs Summary

The School of Business is currently underserved in 44,009 net square feet of existing space spread among the three older existing buildings, originally constructed at a time when the school enrollment was a fraction of today's enrollment:

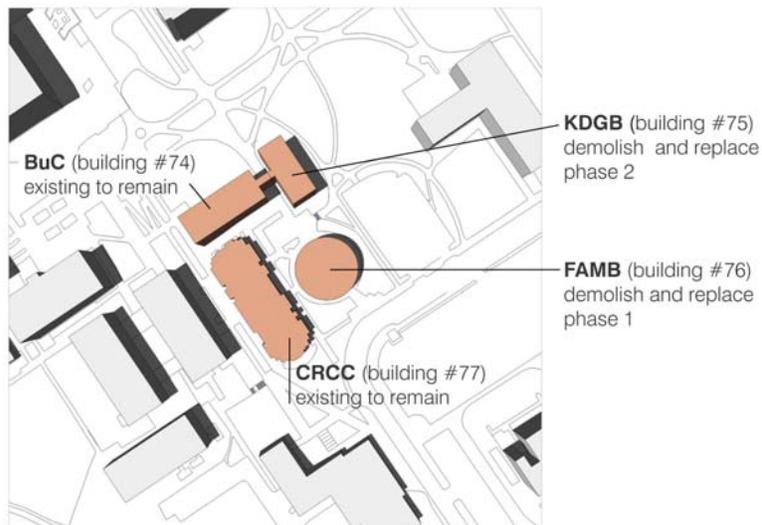
BUC net assignable: 15,502 sf
KDGB net assignable: 14,433 sf
FAMB net assignable: 14,074 sf

For the DESB to function properly, fulfill its mission, and accommodate future growth, usable area needs are projected at 101,765 net square feet, which includes:

- properly size-adjusted replacement space of the above
- expansion area for faculty, staff, and enrollment growth
- 16 classrooms and 3 seminar rooms

On top of this number, University classrooms, class-lab, and support space replacement and future needs will be accommodated by adding 28,836 net square feet to this number, bringing the total program net space need to 113,209 net square feet. At 0.60 net-to-gross ratio, this translates to 188,681 gross square feet of projected total area.

Phase 1 and Phase 2 classrooms total 23, comprised of 20 large-format classrooms and 3 seminar rooms.



5.0 Space Relationships & Requirements

Detailed Space Utilization Summary

The spaces required for the project include the following areas:

Space	Phase 1	Phase 2
Classrooms	49,420 gsf	37,150 gsf
Student Spaces	16,183 gsf	9,800 gsf
Faculty	28,050 gsf	8,300 gsf
Student Services	9,153 gsf	0 gsf
Common	8,033 gsf	3,117 gsf
Administration	1,200 gsf	9,025 gsf
Centers	0 gsf	9,250 gsf
TOTALS	112,039 gsf	76,642 gsf

Classrooms – Case-method tiered, flat flexible, and seminar discussion format classrooms are included, and are to be designed to be learning focused. *Prior to Phase 2 construction, Phase 1 flat floor classrooms will be utilized to accommodate 100-seat capacity classes.*

Student Spaces – Also seen as critical “community” forming space, the student spaces include open and enclosed study areas, social areas, access to data and equipment.

Faculty – Offices for full-time, departmental, auxiliary, phd and visiting hoteling spaces are included, as well as faculty support spaces. These spaces should be distributed throughout the project to increase interaction among all occupants in the school.

Student Services – This group covers the Masters Program Advising suite, the Undergraduate Program Advising suite, Career Services Offices and facilities, and a “one-stop-shop” service counter for combined student information & needs.

Common – Public and shared spaces such as lobbies, common building receiving and storage

Administration – Office suite to centralize administrative office spaces for the Dean’s Office, External Relations, and I.S.. The entry to this suite shall act as the “face” of the DESB for students and visitors.

Centers – Flexible research space that includes “deep dive” collaborative spaces. Each Center will be technology heavy, and have different degrees of enclosure. High exposure to visitor traffic is desired.

DETAILED SPACE UTILIZATION SUMMARY						11-Jun-07	
Gould Evans Associates							
I.D.#	CLASSROOMS	# of rooms	Size NSF	Subtotal	Total NSF		
classrooms - phase 1							
1. 1. 1	200-seat auditorium	1 @	4700 =	4,700			
1. 1. 2	80-seat tiered case method classroom	6 @	2235 =	13,410			
1. 1. 3	40-seat tiered case method classroom	2 @	1443 =	2,886			
1. 1. 4	80-seat flat floor multi-use classroom	3 @	2192 =	6,576			
	subtotal phase 1 classrooms	12			27,572	nsf	
seminar rooms - phase 1							
1. 1. 5	20-seat seminar	2 @	500 =	1,000			
	subtotal seminar rooms	2			1,000	nsf	
classroom support space - phase 1							
1. 1. 6	storage @ tiered classroom	9 @	80 =	720			
1. 1. 7	storage @ multi-use classroom	3 @	120 =	360			
	subtotal cl. support space - phase 1	12			1,080	nsf	
subtotal NET area for PHASE 1 classrooms					29,652	nsf	
subtotal GROSS building area for PHASE 1 classrooms (.60)					49,420	gsf	
classrooms - phase 2							
2. 1. 1	110-seat tiered case method classroom	6 @	2861 =	17,166			
2. 1. 2	80-seat flat floor multi-use classroom	2 @	2192 =	4,384			
	subtotal classrooms	8			21,550	nsf	
seminar rooms - phase 2							
2. 1. 3	20-seat seminar	1 @	500 =	500			
	subtotal seminar rooms	1			500	nsf	
classroom support space - phase 2							
2. 1. 4	storage @ tiered classroom	2 @	80 =	160			
2. 1. 5	storage @ multi-use classroom	2 @	120 =	240			
	subtotal cl. support space - phase 2	4			240	nsf	
subtotal NET area for PHASE 2 classrooms					22,290	nsf	
subtotal GROSS building area for PHASE 2 classrooms (.60)					37,150	gsf	

DETAILED SPACE UTILIZATION SUMMARY							11-Jun-07	
Gould Evans Associates								
I.D.#	STUDENT SPACES		qty	Size NSF	Subtotal	Total NSF		
	<p>module: study break-out rooms have been standardized on a 140 nsf module that can be divided or expanded at 70 nsf intervals to accommodate flexibility of occupancy, or allow flexibility for other functions.</p>							
	study areas - phase 1							
1. 2. 1	study - flexible break-out module		10 @	140 =	1,400			
1. 2. 2	study - dedicated open area		4 @	310 =	1,240			
	subtotal study areas - phase 1		10	flexible modules		2,640	nsf	
	social areas - phase 1							
1. 2. 3	casual social - open lounge (16 seat)		8 @	400 =	3,200			
1. 2. 4	food break vendor		2 @	120 =	240			
1. 2. 5	coffee shop / cafe		1 @	750 =	750			
1. 2. 6	vending		2 @	120 =	240			
1. 2. 7	student leadership conference/office		1 @	280 =	280			
	subtotal social areas - phase 1		2	flexible modules		4,710	nsf	
	information exchange - phase 1							
1. 2. 8	trading floor		1 @	1000 =	1,000			
1. 2. 9	student data stations (spread throughout)		50 @	20 =	1,000			
	subtotal info. exchange - phase 1					2,000	nsf	
	student support spaces - phase 1							
1. 2. 10	shared resource		2 @	120 =	240			
1. 2. 11	locker - 24 full height (adj. to career services)		1 @	120 =	120			
	subtotal support spaces - phase 1		2			360	nsf	
	subtotal NET area for PHASE 1 student spaces					9,710	nsf	
	subtotal GROSS building area for PHASE 1 student spaces (.60)					16,183	gsf	

DETAILED SPACE UTILIZATION SUMMARY							
Gould Evans Associates							11-Jun-07
I.D.#	STUDENT SPACES			qty	Size NSF	Subtotal	Total NSF
	study areas - phase 2						
2. 2. 1	study - flexible break-out module			18 @	140 =	2,520	
2. 2. 2	study - dedicated open area			4 @	200 =	800	
	subtotal study areas - phase 2			18	flexible modules		3,320
	social areas - phase 2						
2. 2. 3	casual social - open lounge (16 seat)			4 @	400 =	1,600	
2. 2. 4	food break vendor			0 @	150 =	0	(blding 1)
2. 2. 5	vending			1 @	120 =	120	
	subtotal social areas - phase 2						1,720
	information exchange - phase 2						
2. 2. 6	student data stations (10 per level)			30 @	20 =	600	
	subtotal info. exchange - phase 2						600
	student support spaces - phase 2						
2. 2. 7	shared resource			2 @	120 =	240	
	subtotal student support spaces - phase 2			2			240
	subtotal NET area for PHASE 2 student spaces						5,880 nsf
	subtotal GROSS building area for PHASE 2 student spaces (.60)						9,800 gsf

DETAILED SPACE UTILIZATION SUMMARY							
Gould Evans Associates							
11-Jun-07							
I.D.#	FACULTY	# of rooms	Size NSF	Subtotal	Total NSF		
	module: faculty offices have been standardized on a 140 nsf module that can be divided or expanded at 70 nsf intervals to accommodate flexibility of specific function.						
	accounting faculty - phase 1						
1.3.1	offices - full time replace BUC level 00	5 @	140 =	700			
1.3.1	office - full time replace 1/2 BUC rm. 313	1 @	140 =	140			
1.3.1	offices - full time replace KDGB level 02	7 @	140 =	980			
	subtotal accounting faculty - phase 1	13	office modules			1,820 nsf	
	finance faculty - phase 1						
1.3.1	office - full time replace 1/2 BUC rm. 313	1 @	140 =	140			
1.3.1	offices - full time replace KDGB	12 @	140 =	1,680			
	subtotal finance faculty - phase 1	13	office modules			1,820 nsf	
	management faculty - phase 1						
1.3.1	offices - full time replace KDGB	20 @	140 =	2,800			
	subtotal management fac. - phase 1	20	office modules			2,800 nsf	
	marketing faculty - phase 1						
1.3.1	offices - full time replace BUC offices	9 @	140 =	1,260			
	subtotal marketing faculty - phase 1	9	office modules			1,260 nsf	
	auxilliary full time faculty - phase 1						
1.3.1	office - replace KDGB office level 02	2 @	140 =	280			
1.3.1	office - full time replace KDGB	2 @	140 =	280			
1.3.1	office - replace BUC office level 00	1 @	140 =	140			
1.3.1	office - full time replace BUC level 00	9 @	140 =	1,260			
	subtotal auxilliary faculty - phase 1	14	office modules			1,960 nsf	
	phd & assoc/visiting fac. offices - phase 1						
1.3.2	phd office - full time research replace part of (60) BUC+KDGB+future workstations	46 @	70 =	3,220			
	subtotal phd & assoc/visit. offices	23	office modules			3,220 nsf	
	core departmental offices - phase 1						
1.3.3	accounting - (1 office, 2 admin stations)	2 @	140 =	280			
1.3.3	finance - (1 office, 2 admin stations)	2 @	140 =	280			
1.3.3	management -(1 office, 2 admin stations)	2 @	140 =	280			
1.3.3	marketing - (1 office, 2 admin stations)	2 @	140 =	280			
1.3.3	departmental waiting areas (common)	4 @	140 =	560			
	subtotal core dept'l offices - phase 1	12	office modules			1,680 nsf	

DETAILED SPACE UTILIZATION SUMMARY					
Gould Evans Associates					11-Jun-07
I.D.#	STUDENT SERVICES	qty	Size NSF	Subtotal	Total NSF
undergrad. program advising suite - phase 1					
1. 4. 1	UPO director office	1 @	120 =	120	
1. 4. 1	undergrad new advising offices	2 @	120 =	240	
1. 4. 1	staff advising - replace KDGB 112	2 @	120 =	240	
1. 4. 1	staff advising - replace KDGB 105	2 @	120 =	240	
1. 4. 1	staff advising - replace KDGB 103	2 @	120 =	240	
1. 4.	office suite grossing factor (0.2)	0.2 x	1,080 =	216	
1. 4. 2	undergrad advising reception/open office	1 @	500 =	500	
	subtotal UPO advising suite - phase 1	9	suite offices		1,796 nsf
masters program advising suite - phase 1					
1. 4. 1	MPO director office	1 @	120 =	120	
1. 4. 1	graduate new advising offices	2 @	120 =	240	
1. 4. 1	staff advising - replace KDGB 102	2 @	120 =	240	
1. 4. 1	staff advising - replace KDGB 101F	2 @	120 =	240	
1. 4. 1	staff advising - replace BUC 104	2 @	120 =	240	
1. 4.	office suite grossing factor (0.2)	0.2 x	1,080 =	216	
1. 4. 2	graduate advising reception/open office	1 @	500 =	500	
	subtotal MPO advising suite - phase 1	9	suite offices		1,796 nsf
career services - phase 1					
1. 4. 3	recruit interview rooms	6 @	80 =	480	
1. 4. 4	recruit office storage	1 @	80 =	80	
	subtotal career services - phase 1				560 nsf
student services shared spaces - phase 1					
1. 4. 5	student services - one stop service counter	1 @	500 =	500	
1. 4. 6	shared conference room	2 @	240 =	480	
1. 4. 7	shared break kitchenette	1 @	160 =	160	
1. 4. 8	shared storage	2 @	100 =	200	
	subtotal s.s. shared spaces - phase 1				1,340 nsf
subtotal NET area for PHASE 1 student services					5,492 nsf
subtotal GROSS building area for PHASE 1 student services (.60)					9,153 gsf

DETAILED SPACE UTILIZATION SUMMARY									
Gould Evans Associates									
11-Jun-07									
I.D.#	CENTERS		# of rooms	Size NSF	Subtotal	Total NSF			
	centers - phase 1					0 nsf			
						subtotal NET area for PHASE 1 centers		0 nsf	
						subtotal GROSS building area for PHASE 1 centers (.60)		0 gsf	
	centers - phase 2								
2. 7. 1		behavioral research center	1 @	1800 =	1,800				
2. 7. 2		BEBR statistics lab (flexible)	1 @	750 =	750				
2. 7. 2		global knowledge mgt. center (flexible)	1 @	750 =	750				
2. 7. 2		future flexible center	1 @	750 =	750				
2. 7. 2		future flexible center	1 @	750 =	750				
2. 7. 2		future flexible center	1 @	750 =	750				
	subtotal centers - phase 2		6			5,550 nsf			
						subtotal NET area for PHASE 2 centers		5,550 nsf	
						subtotal GROSS building area for PHASE 2 centers (.60)		9,250 gsf	

Programming Conclusions / Concepts

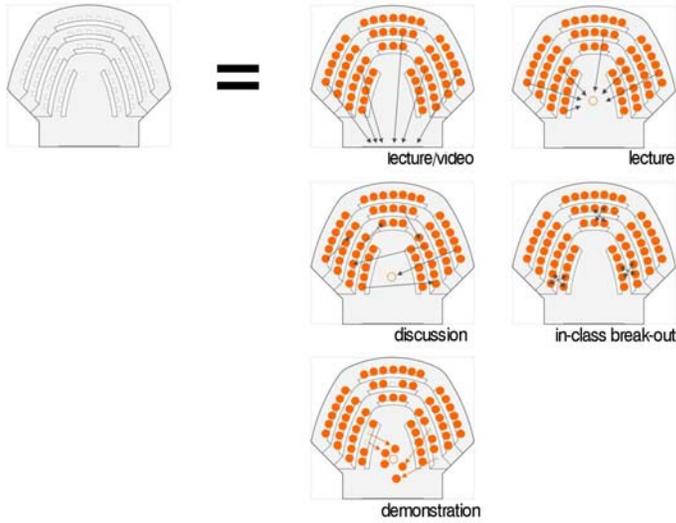


Concepts for achieving the goals of

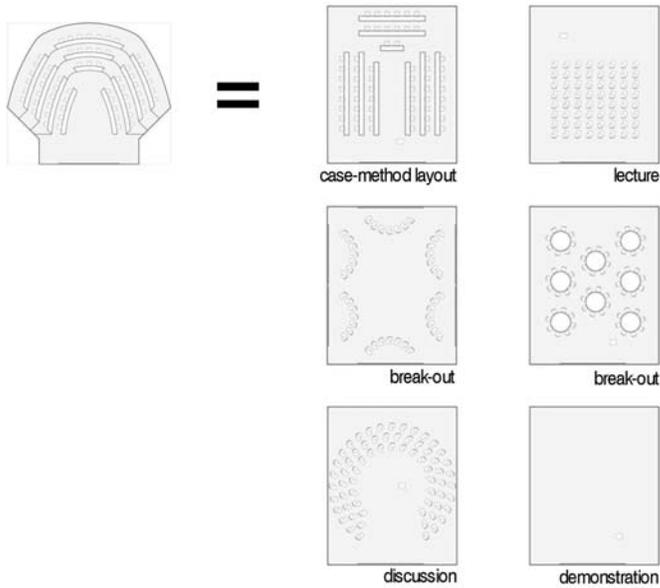
01. flexibility
02. learning environments before teaching environments
03. overlap of spatial functions
04. being unique to the commuter lifestyle
05. achieving a sense of community
06. social interaction and collaboration 'built' into the architecture

...should consider these approaches
to challenging the "closed" business
education spaces of yesterday & today.

Design flexible classrooms enabling learning in multiple ways. Create a classroom that allows for team-break out sessions of multiple sizes: break-out sessions with access to marker-boards and projection screens, demonstrations that allow ALL students to participate, discussion occurring both between students and teacher as well as between EVERY student, and of course, lecture in the standard case-method format.

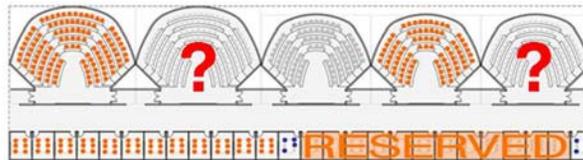
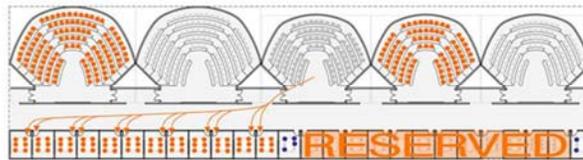
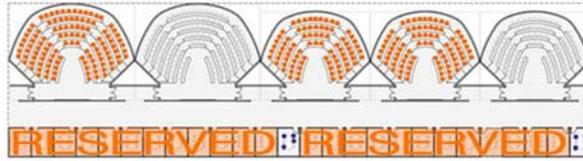


...limiting

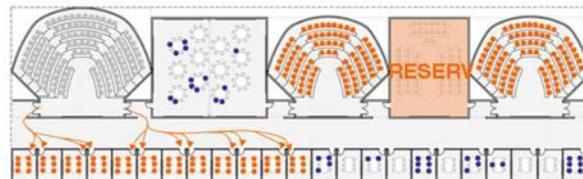
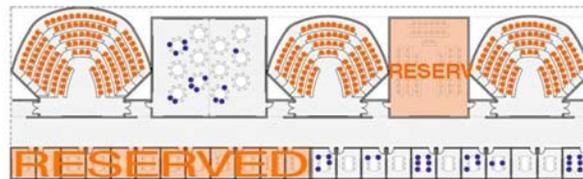
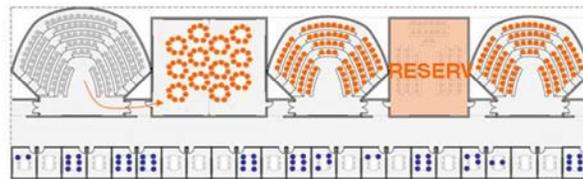
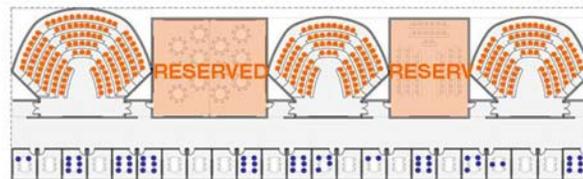


...adaptive / flexible

Utilize classrooms for in-class break-outs. Create an environment where in-class break-out sessions do not compromise the student's ability to socialize and study on campus... no longer are students required to study in their cars or return home between classes.



existing in-class break-out solution



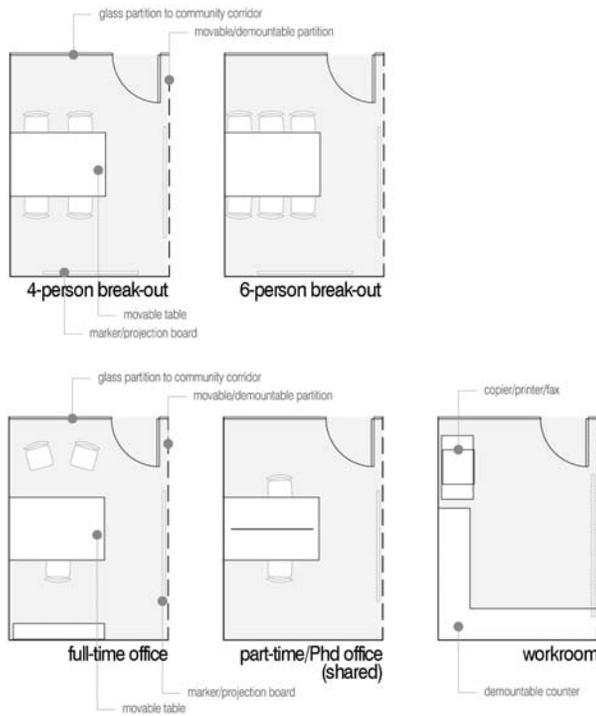
...adaptive / flexible

- student in group/individual study
- student in classroom lecture/break-out

Utilize some offices as a break-out rooms. Create an office module that allows the flexibility for a room to be used as a standard office, a TA office, a break-out room, a workroom, AND a department office!



configurations



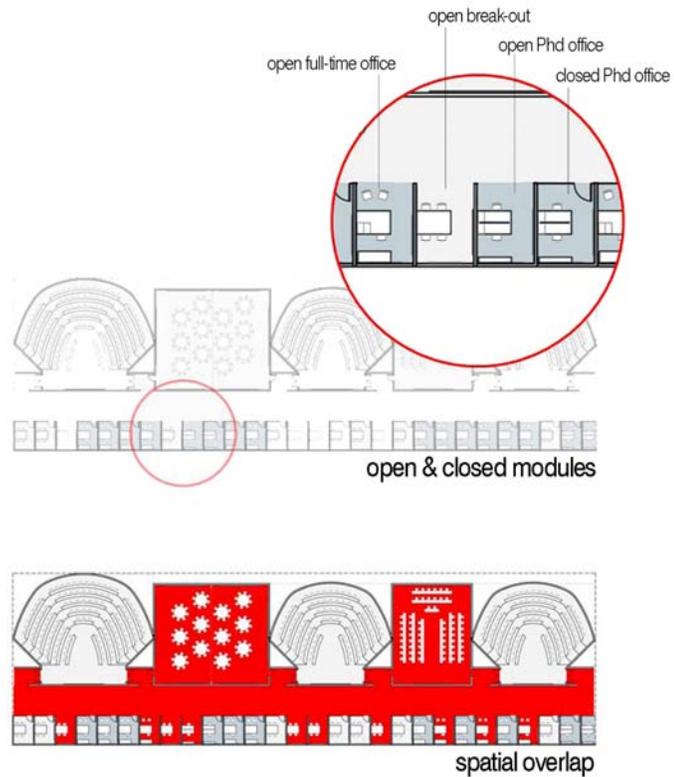
Provide “choice” for self by creating offices (and other places to “work”) with varying degrees of openness and “publicness.” Create a mixture of open and closed multifunctional office / break-out / suite spaces so that you can choose, whichever way you prefer to work. Allow this openness to create spatial overlap and a connection to other spaces, that in concert with one another, represent the community commons.



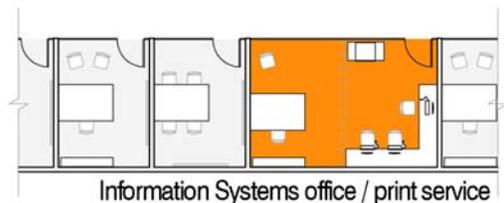
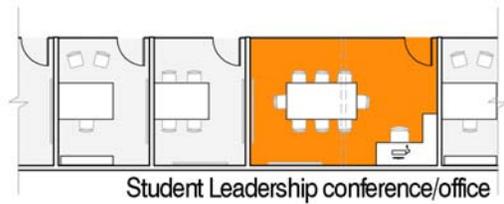
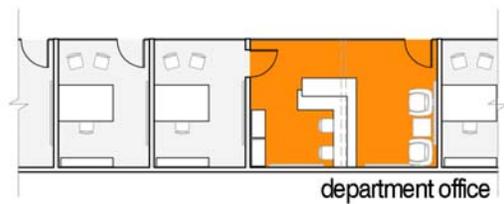
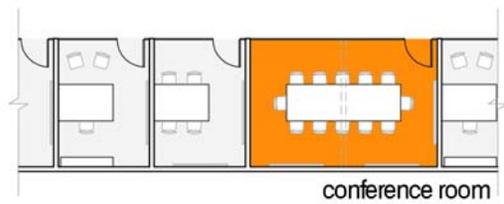
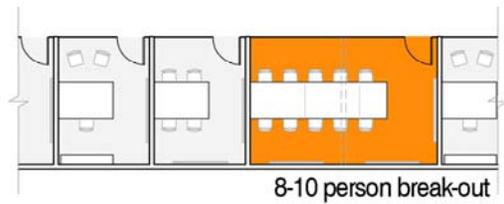
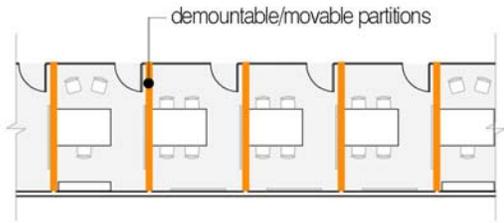
(a)



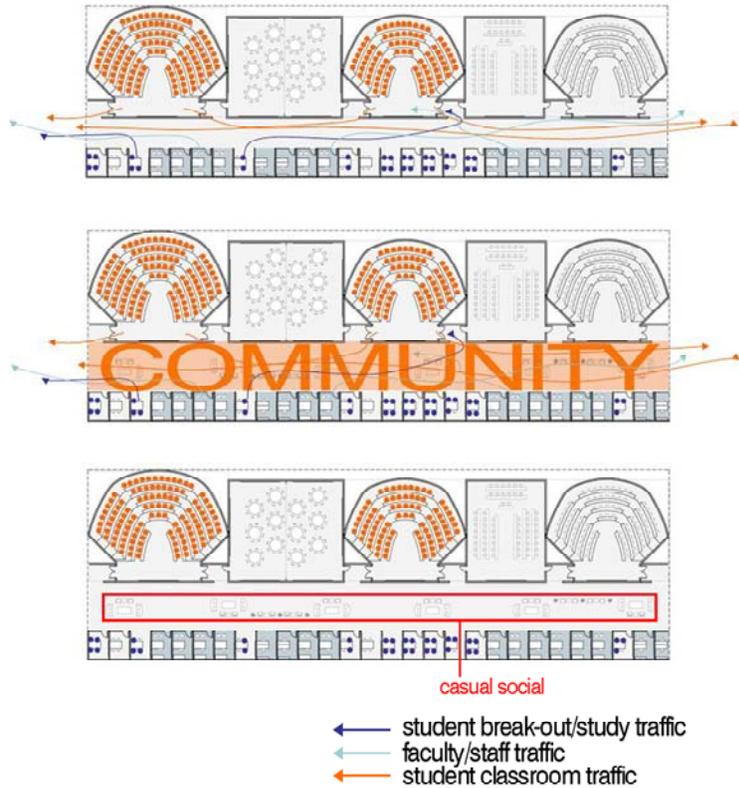
(b)



Make offices and break-outs more flexible by enabling changes in size. Create “demountable” partitions that allow for the expansion of offices and department suites as needed. Expand 4-person break-out spaces to 6,8,10-person rooms.



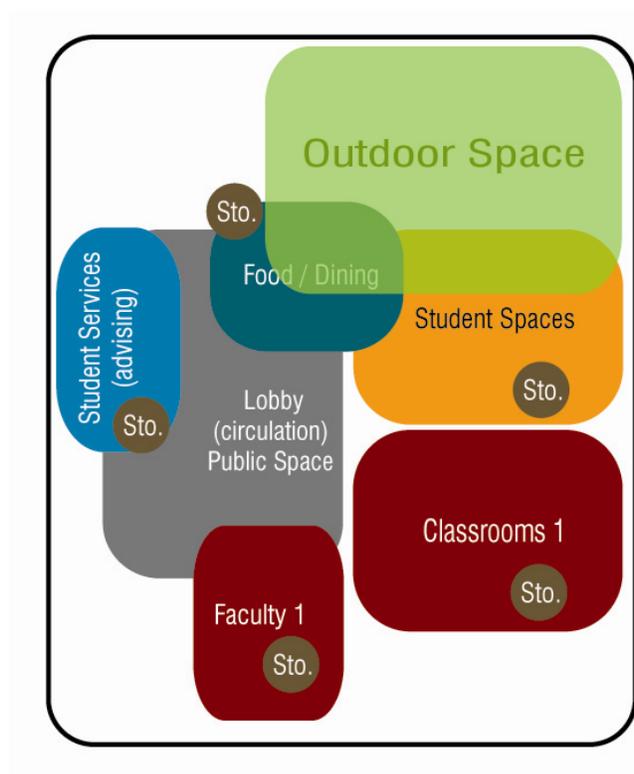
Create community for faculty, staff, and students. Design an environment where informal interaction is enabled between faculty, students, and faculty and students. Allow for the instantaneous ability to discuss problems over a table, review a PowerPoint on a projection screen, or discuss sensitive subjects in an enclosed room. Create a sense of place with the integration of informal seating, message centers, beverage centers, and e-mail kiosks.



Utilize an all-school plaza. Create an exterior plaza that promotes community between the various business school facilities. Allow for various study / leisure environments. Activate this space with openings to companion interior spaces such as student services and a state-of-the-art trade floor!

Overall Adjacency Recommendations

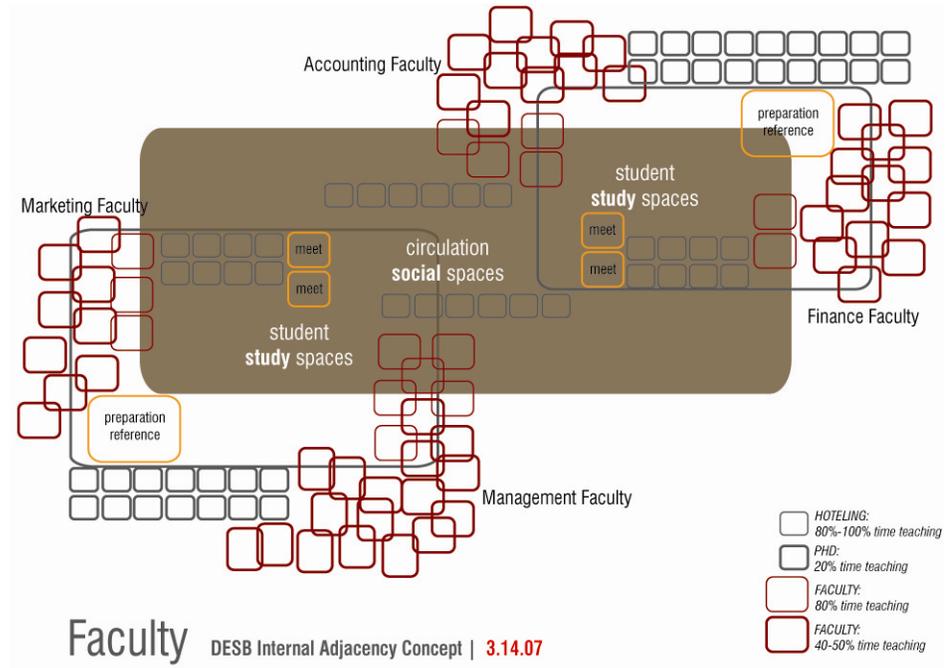
General Phase 1 primary adjacencies include the discussion accompanying the previous Programming Concept illustrations. Other project adjacencies include outdoor space access to student spaces and food / dining, a strong association between Student Services and the primary circulation space or lobby, and a balanced and constant adjacency between classrooms, student spaces, and faculty areas.



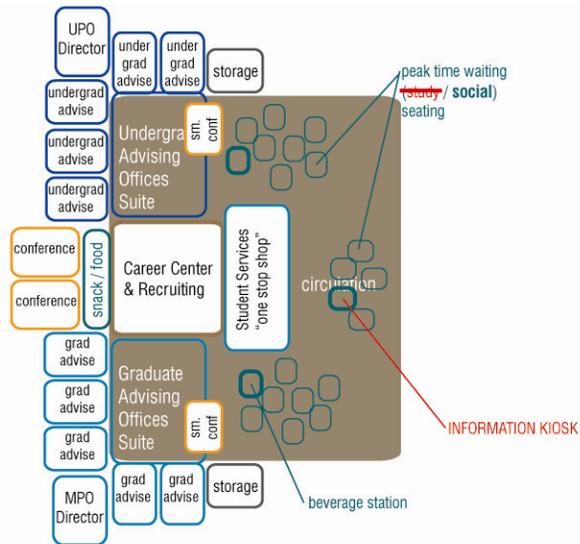
Phase 2 primary adjacencies include a strong presence of Centers along primary circulation, but out of undergraduate traffic flow. The same strong association between classrooms, student spaces, and faculty areas should continue through phase 2. Administration, like Student Services, should have a strong presence adjacent to a main entry lobby. Storage and data support have been programmed to be well distributed throughout both buildings.

Specific Adjacency Recommendations

The following are specific adjacency concepts for faculty that do not necessarily represent all spaces on a single floor level:



Faculty spaces are recommended to be in close proximity to common community spaces such as quiet student areas. Other components of faculty spaces, like printing support and conference rooms, can be adjacent to more social common spaces.



Student Services

DESB Internal Adjacency Concept | 3.14.07

GouldEvans

The Student Services office suites and the Administration office suite should be grouped to share common support facilities. Particularly, the Student Services area should be organized around a central “one stop shop” counter where students can get information about class scheduling and registration, as well as career services and advising.

The Masters Program Advising suite and the Undergraduate Advising suite should be separate in identity and waiting areas as these two programs serve distinct student groups. Support spaces can be shared between the two.

It is desired that waiting areas for these spaces are easily able to utilize adjacent student social spaces for overflow waiting at peak times of the year.

Programmatic Overlay / Stacking Diagrams

Phase 1 Stacking / Volume Study Sequence:

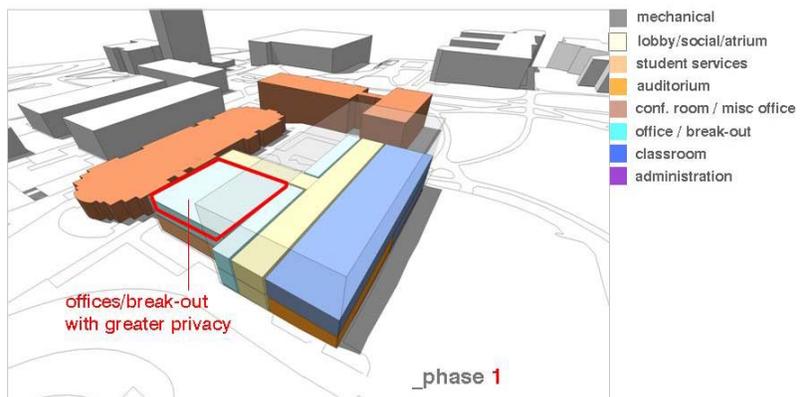


Lower Level: below plaza – mechanical at north end

Create an exterior plaza that promotes community between the various business school facilities. Allow for various study / leisure environments. Activate this space with student services...



Level 01: plaza level



Level 02



Level 03

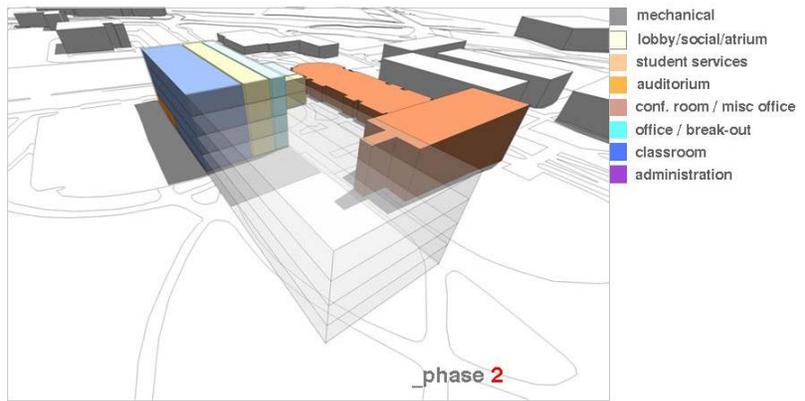


Level 04

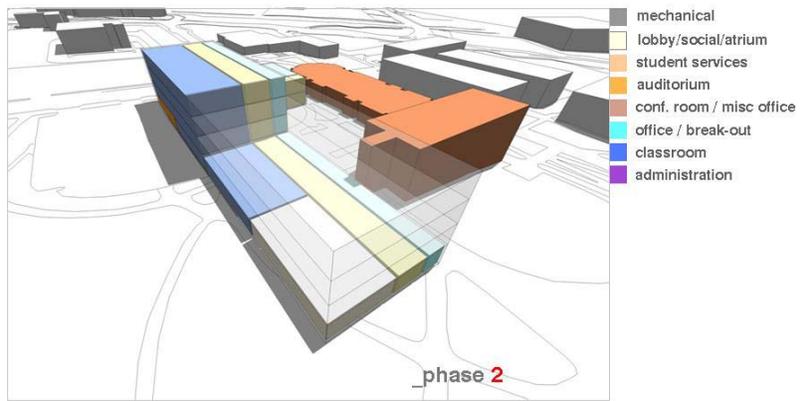
Phase 2 Stacking / Volume Study Sequence:



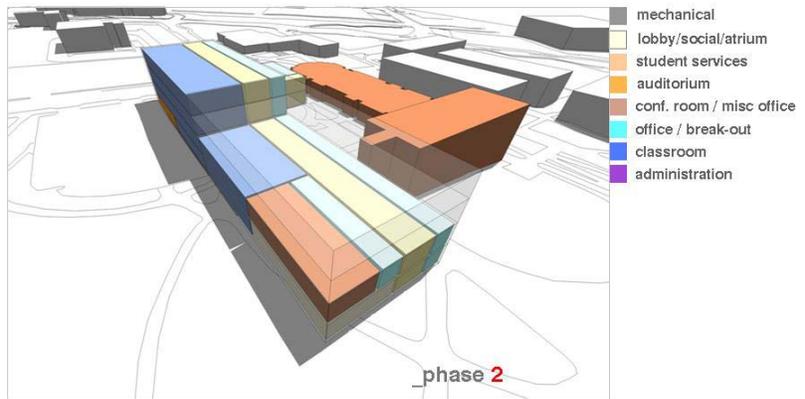
Demolish Existing KDGB



Lower Level: below plaza: extend phase 1 mechanical space



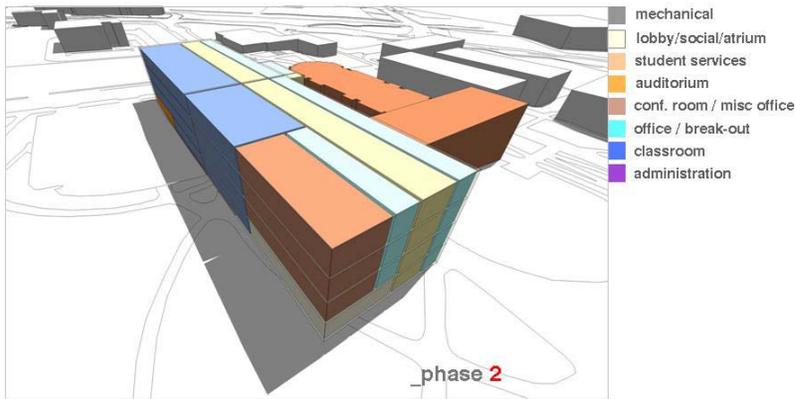
Level 01



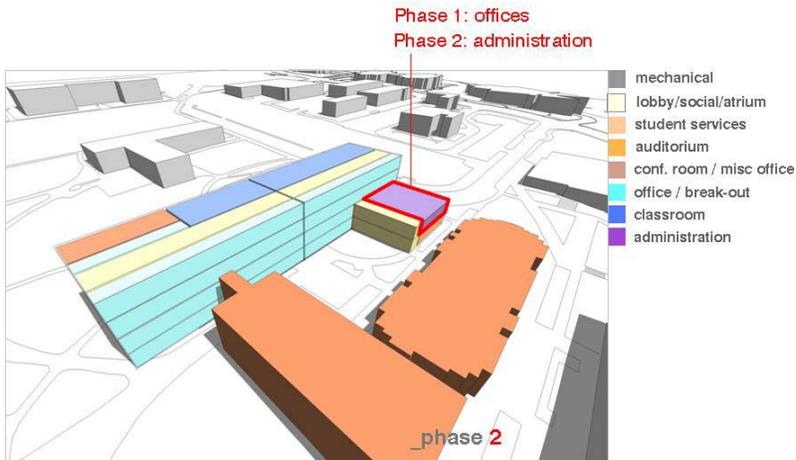
Level 02



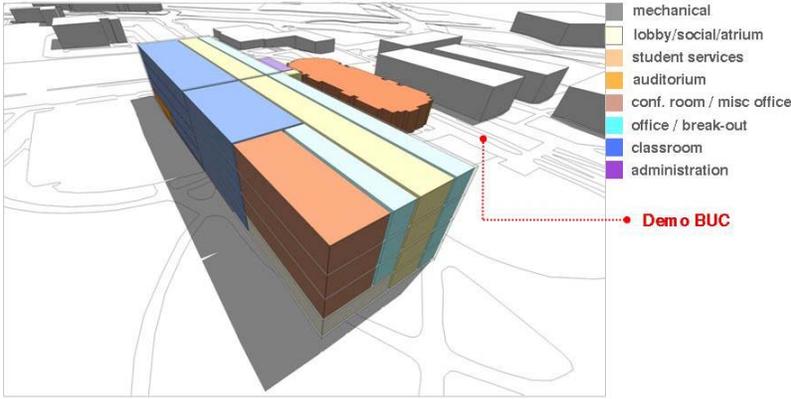
Level 03



Level 04



Possible phasing option: final location of Administration Suite in Phase 1. Displaced faculty / staff offices to move to Phase 2, along "community corridor."



With future eventual demolition of the existing BUC

Space Category: classroom
I.D. Number: 1.1.1
Room Type: 200-seat auditorium

General Requirements

- number required (phase 1): 1
- number required (phase 2): 0
- proposed nsf (each): 4700
- proposed gsf (each): 7833
- assigned capacity: 200
- unassigned capacity: 1
- frequency / hours of use:
- users:

Function / Activities

- tiered floor lecture format auditorium for combined classes, special lectures, and some general undergraduate classes

Adjacencies

- locate adjacent to primary circulation, main lobby / reception, and some break-out study rooms

Special Requirements

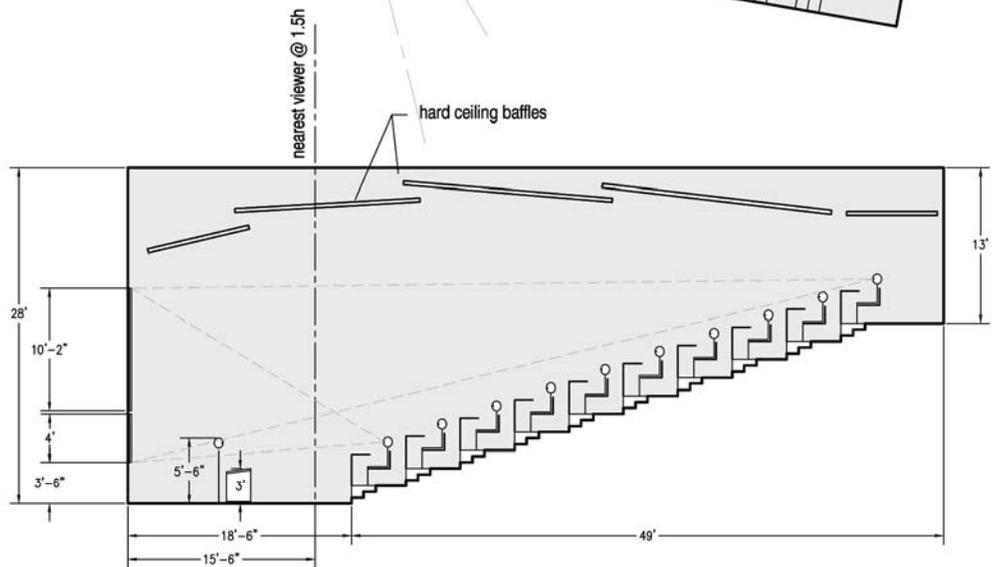
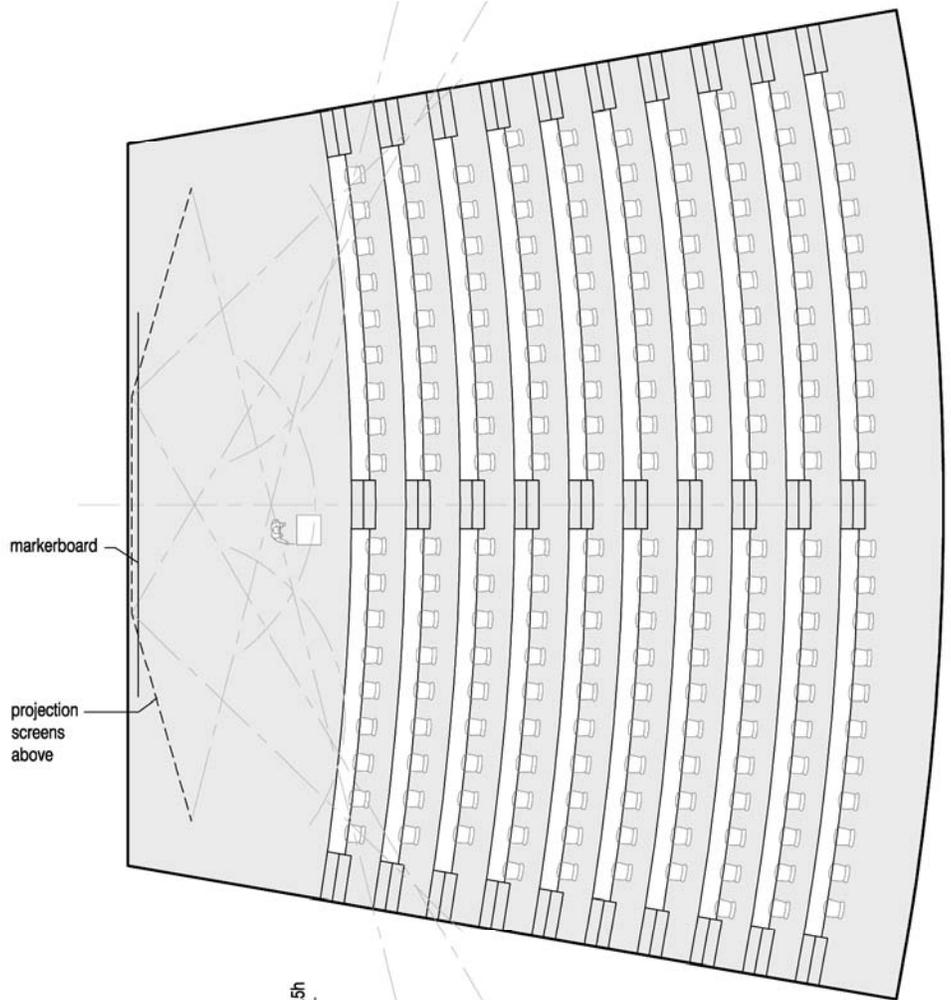
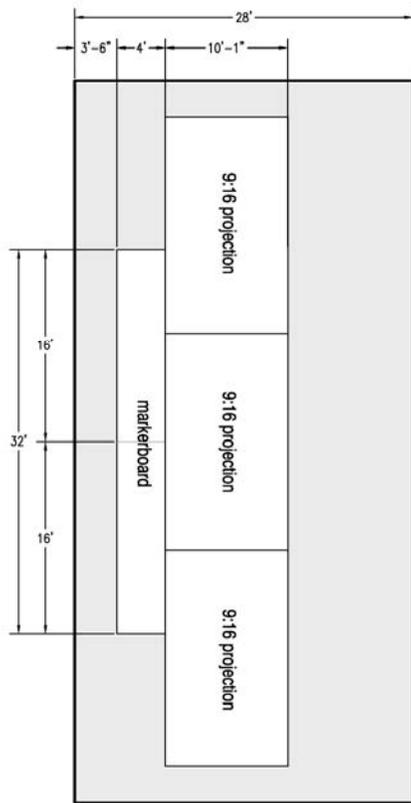
- loose full swivel chairs; (3) screens / projectors; (3)-track raisable whiteboards, movable podium with touch-screen media / lighting controls, lockable storage for instructor supplies

Architectural Requirements

- floor: carpet - broadloom
- base: rubber
- walls: painted gypsum bd.
- ceiling treatment: hard ceiling baffles
- ceiling height (a.f.f. min.): 16'-0" min.
- acoustic treatment: ceiling baffles

Mechanical / Electrical Requirements

- refer to Section 6.0 Building Requirements
- natural lighting: none required
- security:
- plumbing: none required



1.1.1 classroom_200-seat auditorium

drawing scale: 1/16" per foot

net size: 4,700 sf

notes: simultaneous view of projection & markerboard

Space Category:	classroom
I.D. Number:	1.1.2
Room Type:	80-seat tiered case method classroom

General Requirements

- number required (phase 1): 6
- number required (phase 2): 0
- proposed nsf (each): 2235
- proposed gsf (each): 3725
- assigned capacity: 82
- unassigned capacity: 1
- frequency / hours of use:
- users:

Function / Activities

- 7" tiered floor case-study method classroom for primary business school classes, and some general undergraduate classes; (2) diagonal aisles for student distribution & mobility

Adjacencies

- locate adjacent to primary circulation, flat floor multi-use classrooms, and some break-out study rooms

Special Requirements

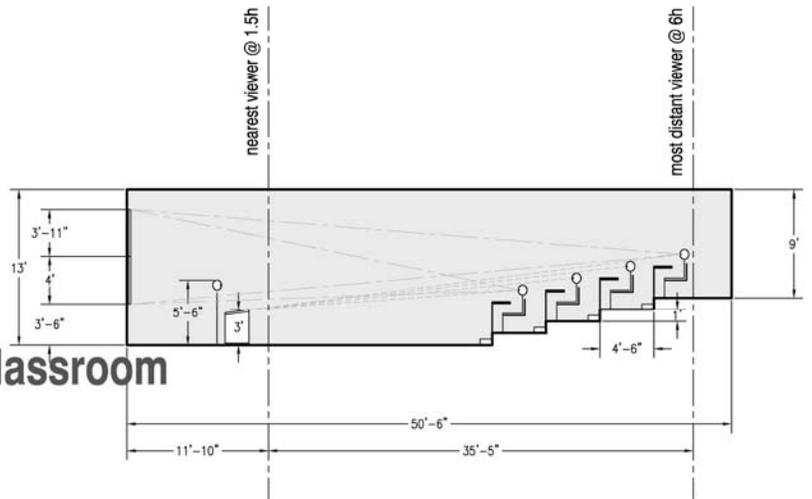
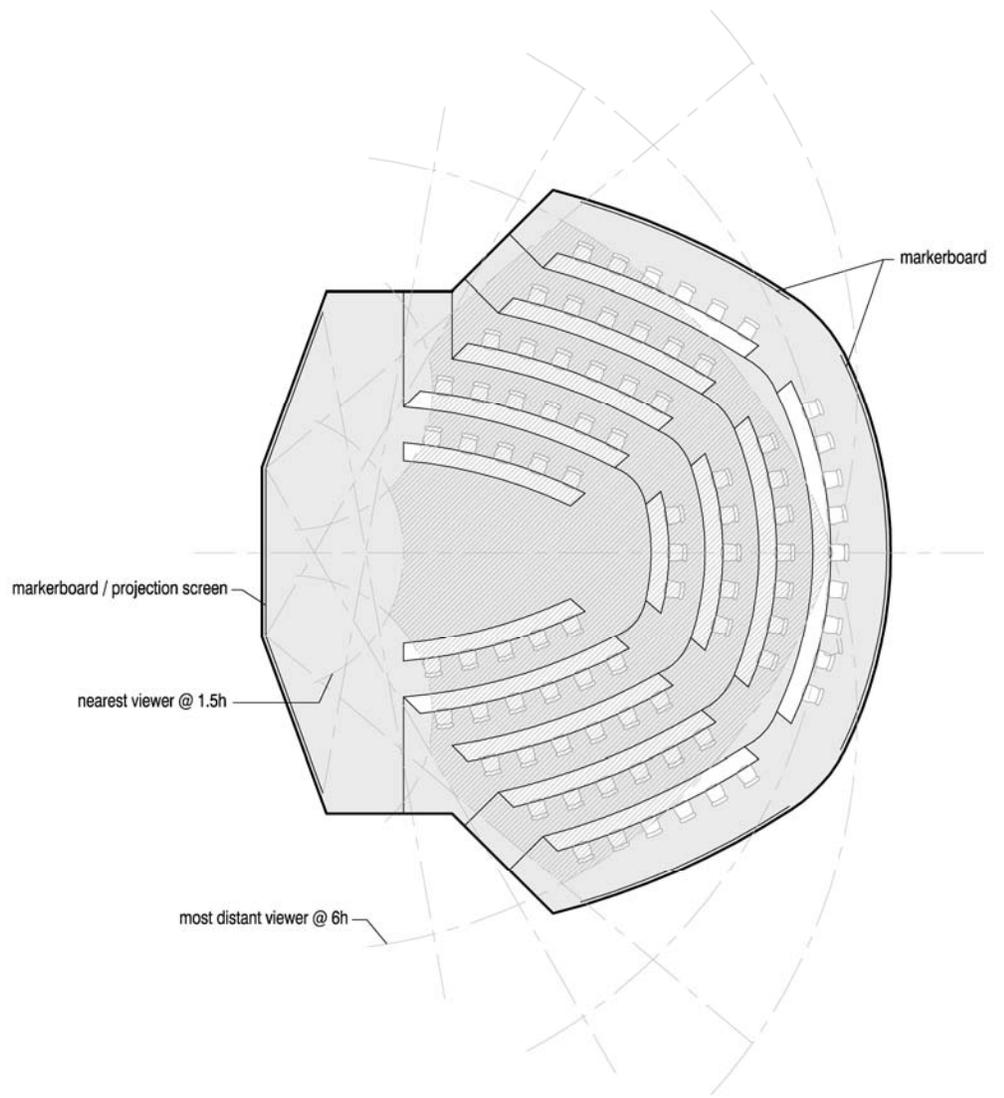
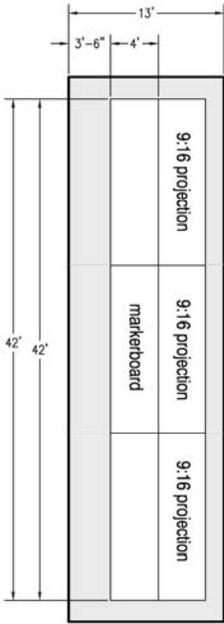
- loose, full swivel chairs; (2) screens / projectors; (3)-track raisable whiteboards at instructor level, whiteboard each side wall of the room, movable podium with touch-screen media / lighting controls, lockable storage for instructor supplies

Architectural Requirements

- floor: carpet - broadloom
- base: rubber
- walls: painted gypsum bd.
- ceiling treatment: acoustical lay-in
- ceiling height (a.f.f. min.): 13'-0" min.
- acoustic treatment:

Mechanical / Electrical Requirements

- refer to Section 6.0 Building Requirements
- natural lighting: none required
- security:
- plumbing: none required



1.1.2 classroom_80-seat tiered classroom

drawing scale: 1/16" per foot

net size: 2,235 sf

notes: simultaneous view of projection & markerboard

Space Category: classroom
I.D. Number: 1.1.3
Room Type: 40-seat tiered case
method classroom

General Requirements

- number required (phase 1): 2
- number required (phase 2): 0
- proposed nsf (each): 1443
- proposed gsf (each): 2405
- assigned capacity: 42
- unassigned capacity: 1
- frequency / hours of use:
- users:

Function / Activities

- 7" tiered floor case-study method classroom for primary business school classes, and some general undergraduate classes; (2) diagonal aisles for student distribution & mobility

Adjacencies

- locate adjacent to primary circulation, flat floor multi-use classrooms, and some break-out study rooms

Special Requirements

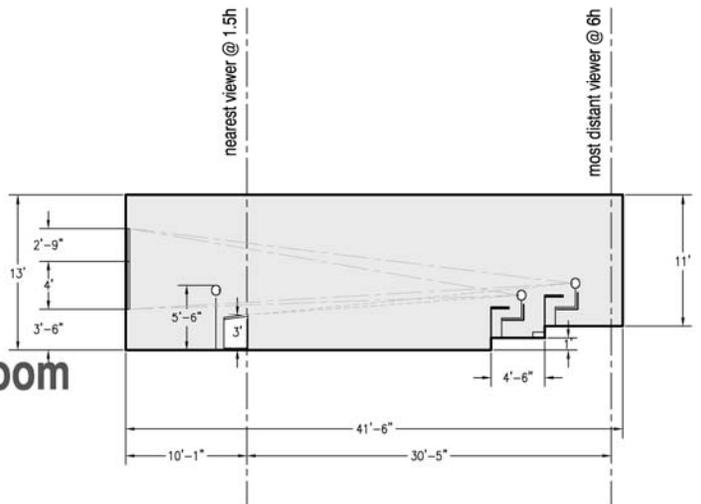
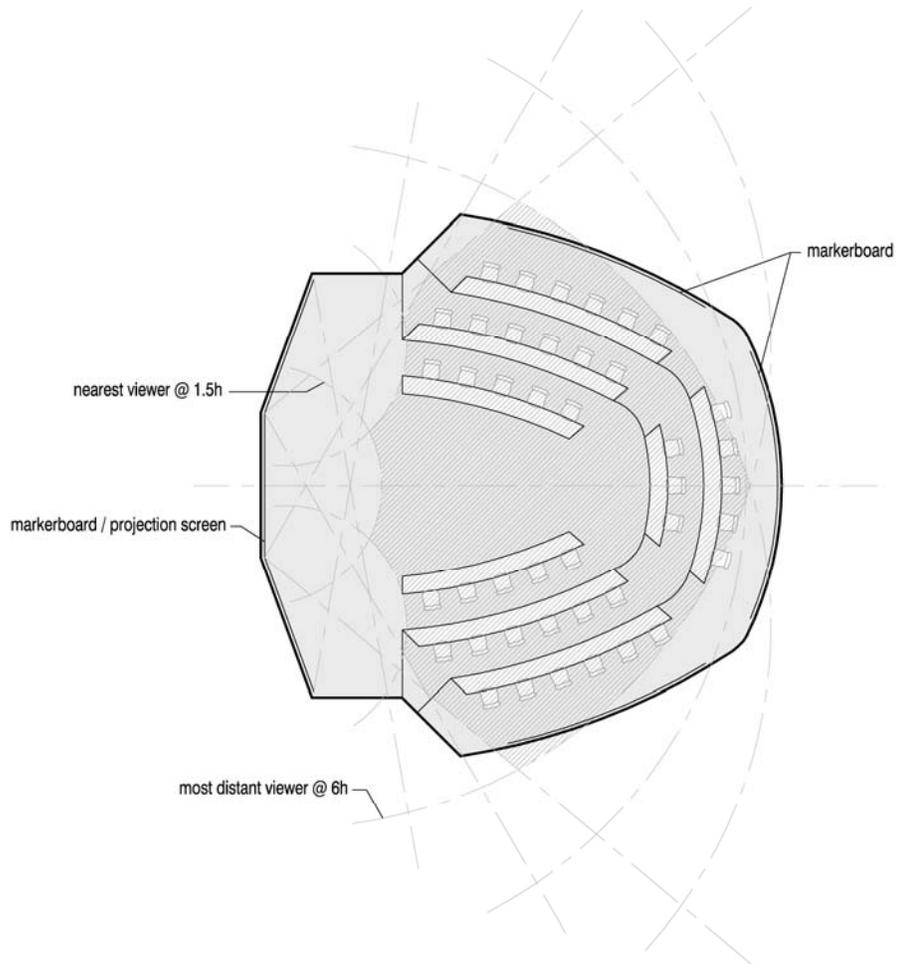
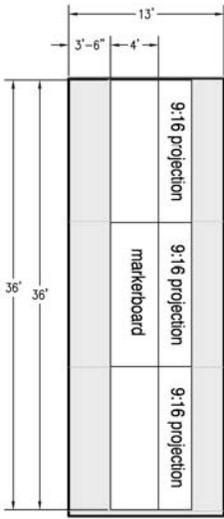
- loose, full swivel chairs; (2) screens / projectors; (3)-track raisable whiteboards at instructor level, whiteboard each side wall of the room, movable podium with touch-screen media / lighting controls, lockable storage for instructor supplies

Architectural Requirements

- floor: carpet - broadloom
- base: rubber
- walls: painted gypsum bd.
- ceiling treatment: acoustical lay-in
- ceiling height (a.f.f. min.): 13'-0" min.
- acoustic treatment:

Mechanical / Electrical Requirements

- refer to Section 6.0 Building Requirements
- natural lighting: none required
- security:
- fire protection:
- plumbing: none required



1.1.3 classroom_40-seat tiered classroom

drawing scale: 1/16" per foot

net size: 1,443 sf

notes: simultaneous view of projection & markerboard

Space Category:	classroom
I.D. Number:	1.1.4, 2.1.2
Room Type:	80-seat flat floor multi-use classroom

General Requirements

- number required (phase 1): 3
- number required (phase 2): 2
- proposed nsf (each): 2192
- proposed gsf (each): 3653
- assigned capacity: up to 100
- unassigned capacity: 1
- frequency / hours of use:
- users:

Function / Activities

- flat floor multi-use classroom for varied format instruction; classroom is meant to be utilized as break-out study space, and open study space when not scheduled

Adjacencies

- locate adjacent to primary circulation, tiered case-method multi-use classrooms, and some break-out study rooms

Special Requirements

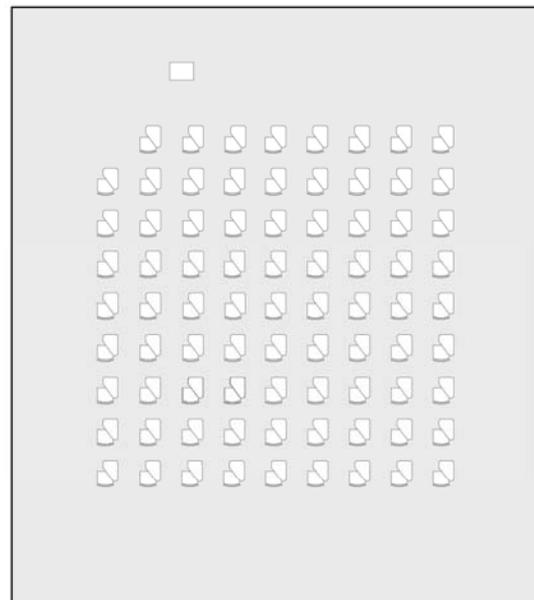
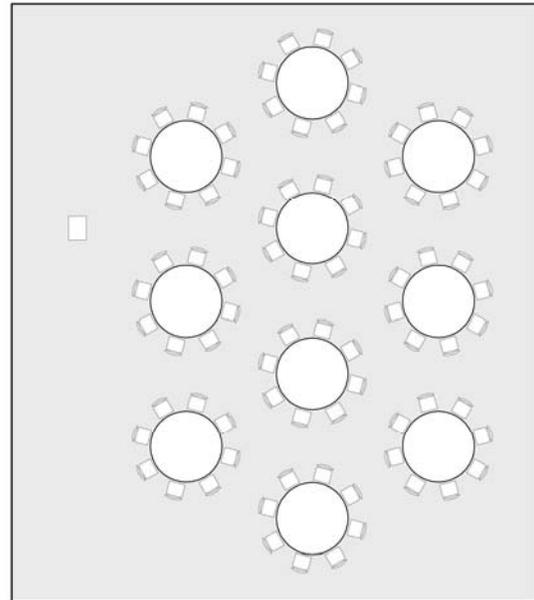
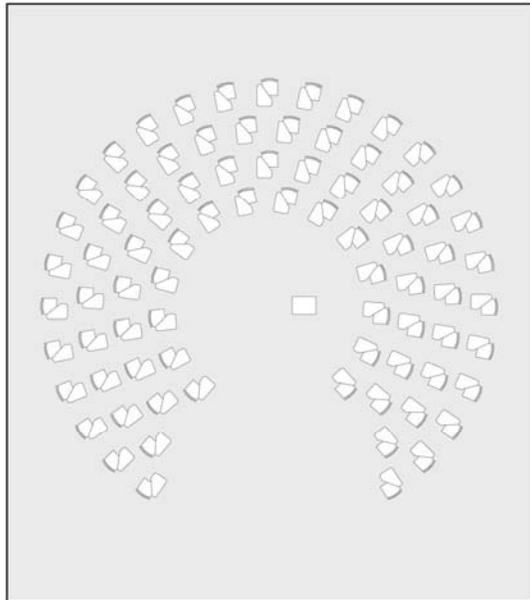
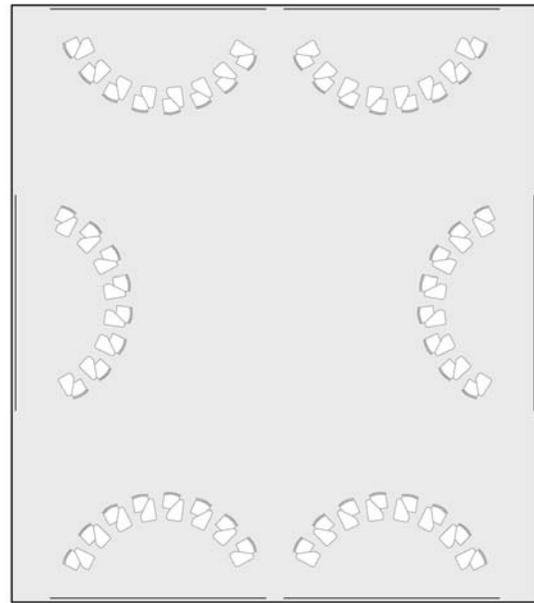
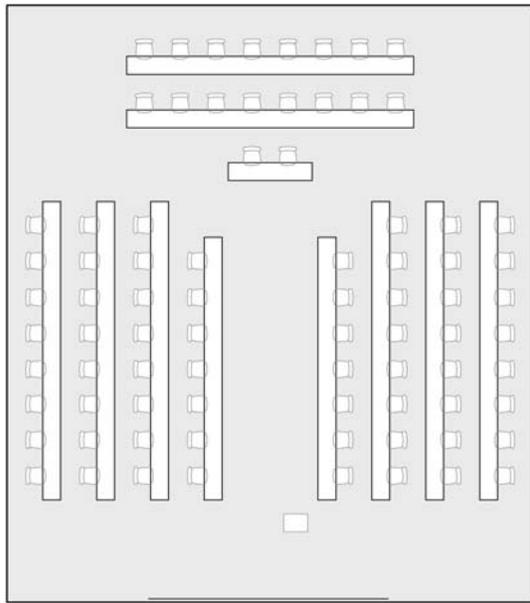
- accommodate up to 100 seats; (4) screens / projectors; (3)-track raisable whiteboards at two sides of the room, single whiteboards at other (2) walls of the room, movable podium with touch-screen media / lighting controls, lockable storage for instructor supplies; tables, round and rectangular; (80) movable chairs without tablet arms

Architectural Requirements

- floor: carpet - broadloom
- base: rubber
- walls: painted gypsum bd.
- ceiling treatment: acoustical lay-in
- ceiling height (a.f.f. min.): 10'-0" min.
- acoustic treatment:

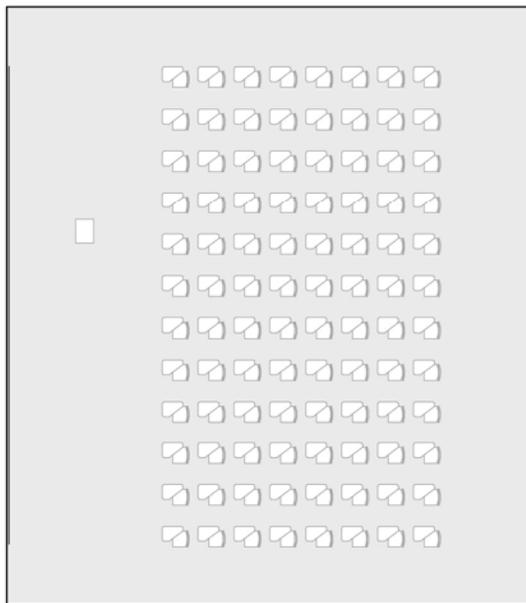
Mechanical / Electrical Requirements

- refer to Section 6.0 Building Requirements
- natural lighting: preferred
- security:
- fire protection:
- plumbing: none required



1.1.4
2.1.2 classroom **80-seat flat floor**

drawing scale: 1/16" per foot
net size: 2,192 sf
notes:



1.1.4
2.1.2 classroom_100-seat flat floor classroom

drawing scale: 1/16" per foot

net size: 2,192 sf

notes: alternative seating layout to 80-seat flat floor classroom layouts

Space Category: classroom
I.D. Number: 1.1.5, 2.1.3
Room Type: 20-seat seminar room

General Requirements

- number required (phase 1): 2
- number required (phase 2): 1
- proposed nsf (each): 500
- proposed gsf (each): 800
- assigned capacity: 20
- unassigned capacity: 1
- frequency / hours of use:
- users:

Function / Activities

- primarily for small seminar classes and discussion; preferred rectangular format for easy transition to conference or presentation prep use

Adjacencies

- locate adjacent to primary circulation, other classrooms, and faculty areas

Special Requirements

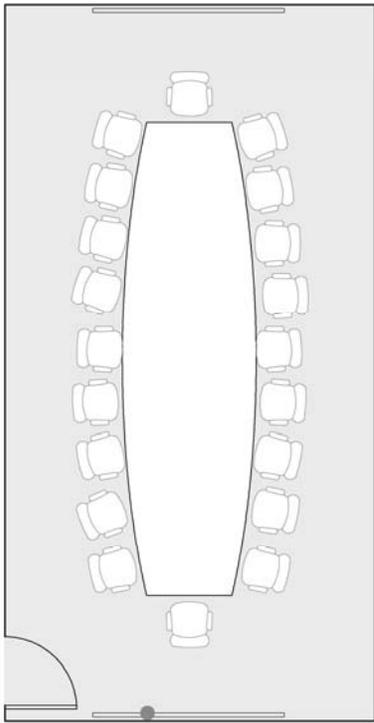
- loose chairs, table sections for alternate configurations; (1) screen / projector; whiteboards at (2) sides of the room

Architectural Requirements

- floor: carpet - broadloom
- base: rubber
- walls: painted gypsum bd.
- ceiling treatment: acoustical lay-in
- ceiling height (a.f.f. min.): 10'-0" min.
- acoustic treatment:

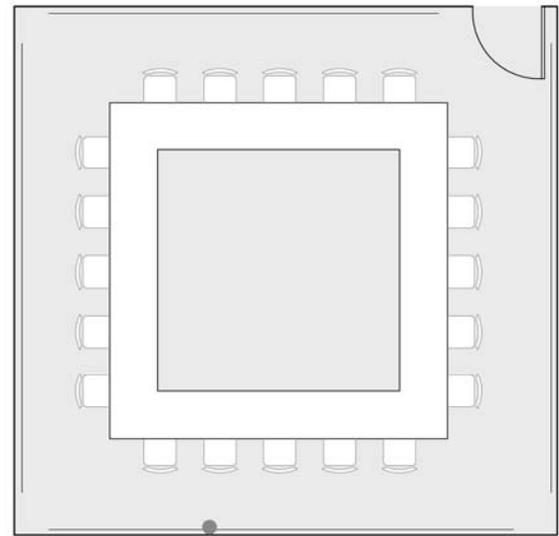
Mechanical / Electrical Requirements

- refer to Section 6.0 Building Requirements
- natural lighting: none required
- security:
- fire protection:
- plumbing: none required



layout 1

markerboard, projection screen above



layout 2

markerboard, projection screen above

1.5.2

2.1.3

2.5.2 common_ **general business conference**

drawing scale: 1/8" per foot

size: 460-500 sf

notes: seats 20

Space Category: classroom
I.D. Number: 1.1.6, 2.1.4
Room Type: storage @ tiered
classroom

General Requirements

- number required (phase 1): 9
- number required (phase 2): 2
- proposed nsf (each): 80
- proposed gsf (each): 128
- assigned capacity: 0
- unassigned capacity: 0
- frequency / hours of use:
- users:

Function / Activities

- for storage of a/v equipment not accommodated in instructors' podium, instructor materials, instructor presentation table(s), replacement chairs

Adjacencies

- immediately adjacent to classroom instructor level

Special Requirements

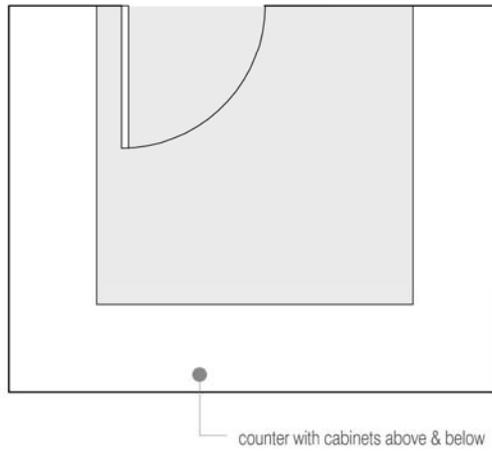
- secured space for staff and faculty access only

Architectural Requirements

- floor: vinyl composition tile
- base: rubber
- walls: painted gypsum bd.
- ceiling treatment: acoustical lay-in
- ceiling height (a.f.f. min.): 10'-0" min.
- acoustic treatment: none

Mechanical / Electrical Requirements

- refer to Section 6.0 Building Requirements
- natural lighting: none required
- security:
- fire protection:
- plumbing: none required



1.1.6

1.4.4

1.6.2

2.1.4 classroom **storage @ tiered classroom**

drawing scale: 1/4" per foot

size: 80 sf

notes:

Space Category: classroom
I.D. Number: 1.1.7, 2.1.5
Room Type: storage @ multi-use
classroom

General Requirements

- number required (phase 1): 3
- number required (phase 2): 2
- proposed nsf (each): 120
- proposed gsf (each): 192
- assigned capacity: 0
- unassigned capacity: 0
- frequency / hours of use:
- users:

Function / Activities

- for storage of (8) 10' round tables, 4'x8' rectangular tables, 100 foldable chairs, a/v equipment and entire instructors' podium when not in use, instructor materials, and small presentation tables

Adjacencies

- immediately adjacent to classroom instructor level

Special Requirements

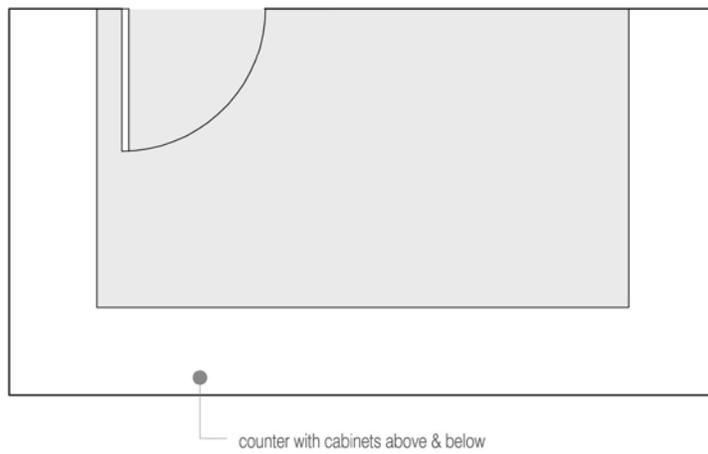
- secured space for staff and faculty access only

Architectural Requirements

- floor: vinyl composition tile
- base: rubber
- walls: painted gypsum bd.
- ceiling treatment: acoustical lay-in
- ceiling height (a.f.f. min.): 10'-0" min.
- acoustic treatment:

Mechanical / Electrical Requirements

- refer to Section 6.0 Building Requirements
- natural lighting: none required
- security:
- fire protection:
- plumbing: none required



1.1.7
2.1.5 classroom **storage @ multi-use classroom**

drawing scale: 1/4" per foot
size: 120 sf
notes:

Space Category: classroom
I.D. Number: 2.1.1
Room Type: 110-seat tiered case
classroom

General Requirements

- number required (phase 1): 0
- number required (phase 2): 6
- proposed nsf (each): 2861
- proposed gsf (each): 4768
- assigned capacity: 114
- unassigned capacity: 1
- frequency / hours of use:
- users:

Function / Activities

- 7" tiered floor case-study method classroom for business and general education classes; (2) diagonal aisles for student distribution & mobility

Adjacencies

- locate adjacent to primary circulation for easy access by students coming from other parts of campus, some flat floor multi-use classrooms, some break-out study rooms

Special Requirements

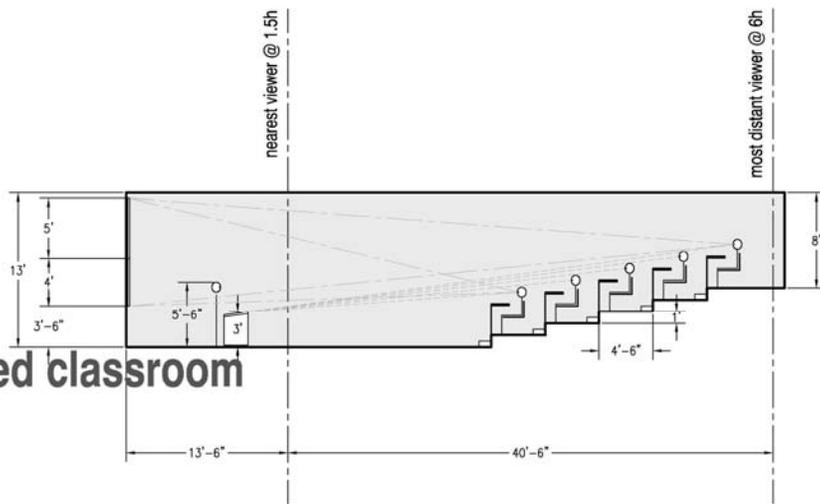
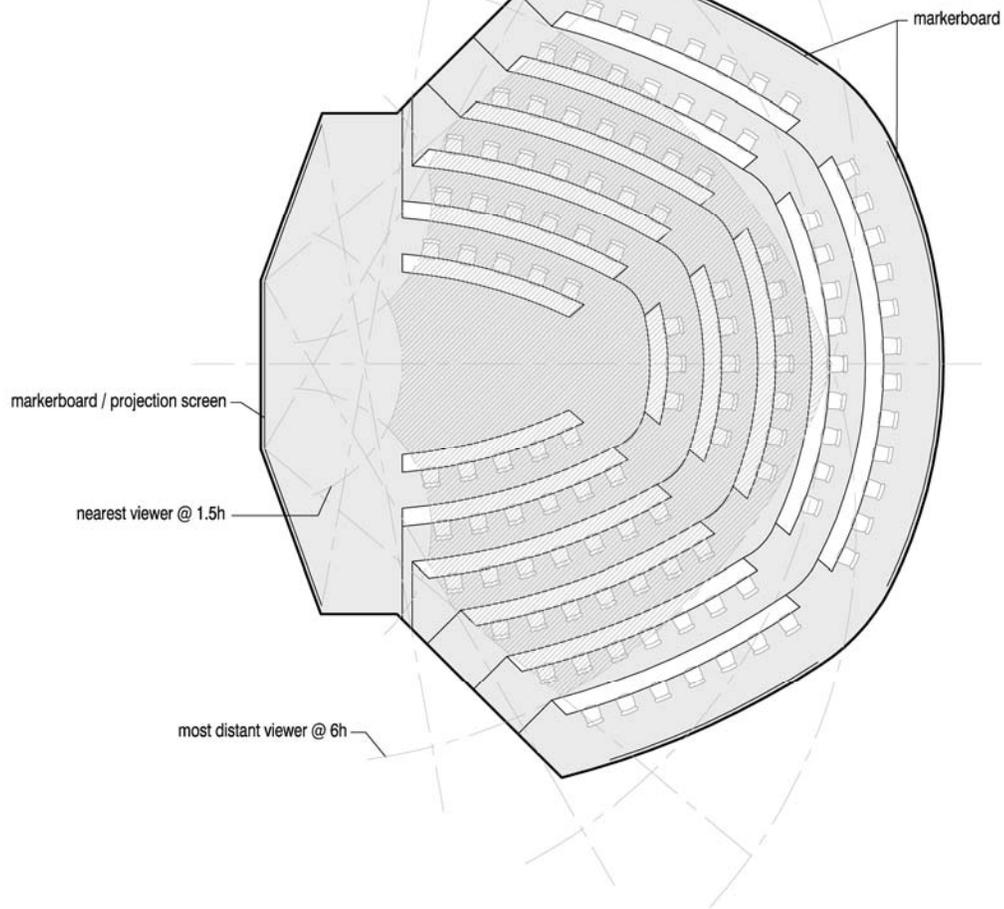
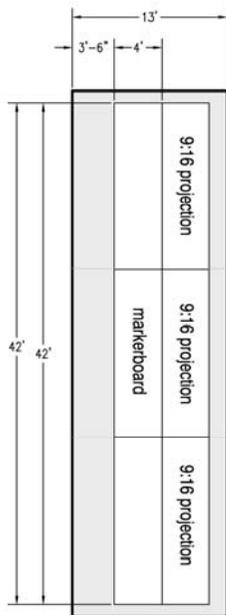
- loose, full swivel chairs; (3) screens / projectors; (3)-track raisable whiteboards at instructor level, whiteboard each side wall of the room, movable podium with touch-screen media / lighting controls, lockable storage for instructor supplies

Architectural Requirements

- floor: carpet - broadloom
- base: rubber
- walls: painted gypsum bd.
- ceiling treatment: acoustical lay-in
- ceiling height (a.f.f. min.): 13'-0" min.
- acoustic treatment:

Mechanical / Electrical Requirements

- refer to Section 6.0 Building Requirements
- natural lighting: none required
- security:
- fire protection:
- plumbing: none required



2.1.1 classroom_110-seat tiered classroom

drawing scale: 1/16" per foot

net size: 2,861 sf

notes: simultaneous view of projection & markerboard

Space Category:	student spaces
I.D. Number:	1.2.1, 2.2.1
Room Type:	study – flexible break-out module

General Requirements

- number required (phase 1): 10
- number required (phase 2): 18
- proposed nsf (each): 140
- proposed gsf (each): 224
- assigned capacity: 4-6
- unassigned capacity: 0
- frequency / hours of use:
- users:

Function / Activities

- enclosed study room for reserved use by student teams of 6-8 during class time break-out, as well as general reserved study or presentation preparation use by business students

Adjacencies

- locate adjacent to primary circulation, case-method classrooms, and open social or study areas

Special Requirements

- lockable for reserved use; acoustic mitigation from adjacent spaces; (2) whiteboards; visibility between room and circulation space; natural light

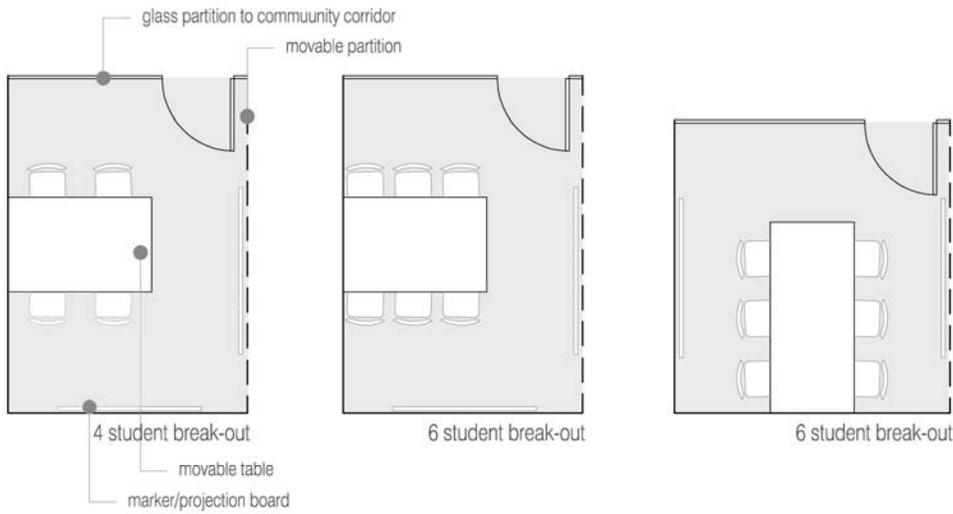
Architectural Requirements

- floor: carpet - broadloom
- base: rubber
- walls: painted gypsum bd.
- ceiling treatment: acoustical lay-in
- ceiling height (a.f.f. min.): 10'-0" min.
- acoustic treatment:

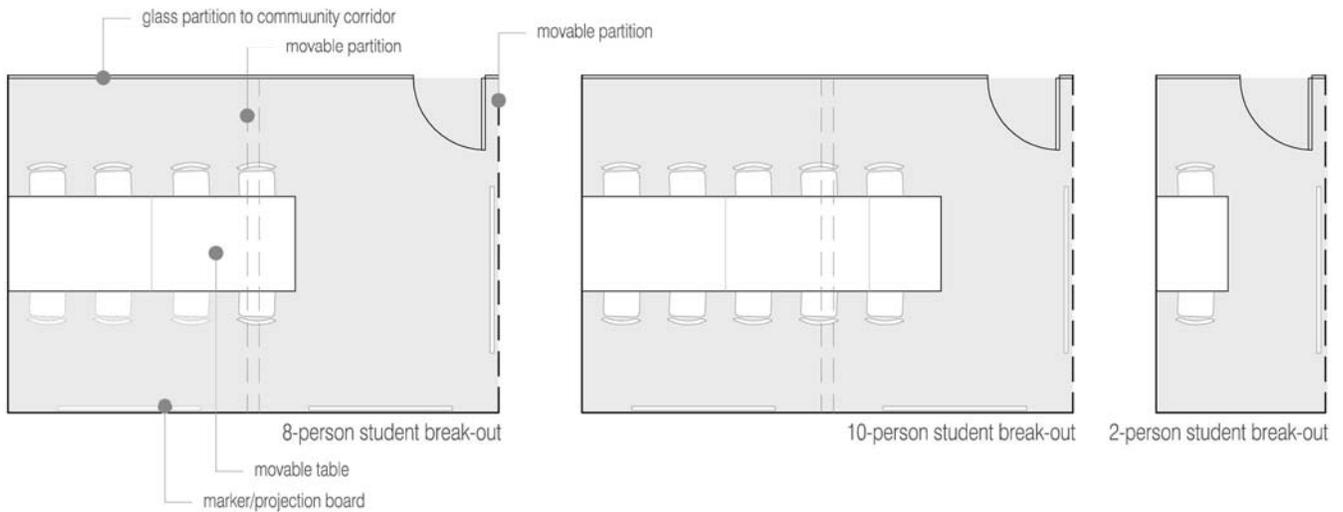
Mechanical / Electrical Requirements

- refer to Section 6.0 Building Requirements
- natural lighting: preferred
- security:
- fire protection:
- plumbing: none required

single module configurations



multi/partial-module configurations



1.2.1
2.2.1 student spaces **flexible break-out module**

drawing scale: 1/8" per foot

net size: 140 sf

notes: part of 'flexible module system'

Space Category: student spaces
I.D. Number: 1.2.2, 2.2.2
Room Type: study – dedicated
open area

General Requirements

- number required (phase 1): 4
- number required (phase 2): 4
- proposed nsf (each): 310
- proposed gsf (each): 496
- assigned capacity: 16-20
- unassigned capacity: 0
- frequency / hours of use:
- users:

Function / Activities

- open study areas for unreserved use by students during building operating hours; each study area should accommodate 16-20 students

Adjacencies

- locate adjacent to primary circulation with low noise level to permit studying

Special Requirements

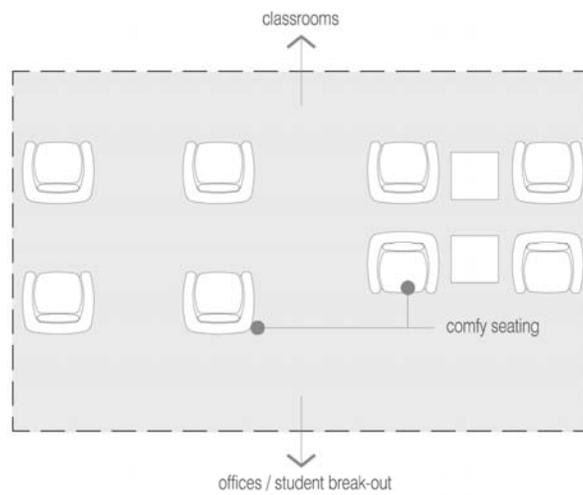
- stackable chairs, table sections for alternate configurations; power for 16-20 laptops; natural light if possible

Architectural Requirements

- floor: carpet - broadloom
- base: rubber
- walls: painted gypsum bd.
- ceiling treatment: acoustical lay-in
- ceiling height (a.f.f. min.): 13'-0" min.
- acoustic treatment:

Mechanical / Electrical Requirements

- refer to Section 6.0 Building Requirements
- natural lighting: preferred
- security:
- fire protection:
- plumbing: none required



1.2.2

2.2.2 student spaces **study - dedicated open area**

drawing scale: 1/8" per foot
size: 310 sf phase 1, 200 sf phase 2
notes: configuration may vary

Space Category: student spaces
I.D. Number: 1.2.3, 2.2.3
Room Type: casual social – open lounge

General Requirements

- number required (phase 1): 8
- number required (phase 2): 4
- proposed nsf (each): 850 (phase 1)
425 (phase 2)
- proposed gsf (each): 960
- assigned capacity: 8-16
- unassigned capacity: 0
- frequency / hours of use:
- users:

Function / Activities

- open seating areas for unreserved use by students during building operating hours; each study area should accommodate 16 students

Adjacencies

- locate adjacent to primary circulation

Special Requirements

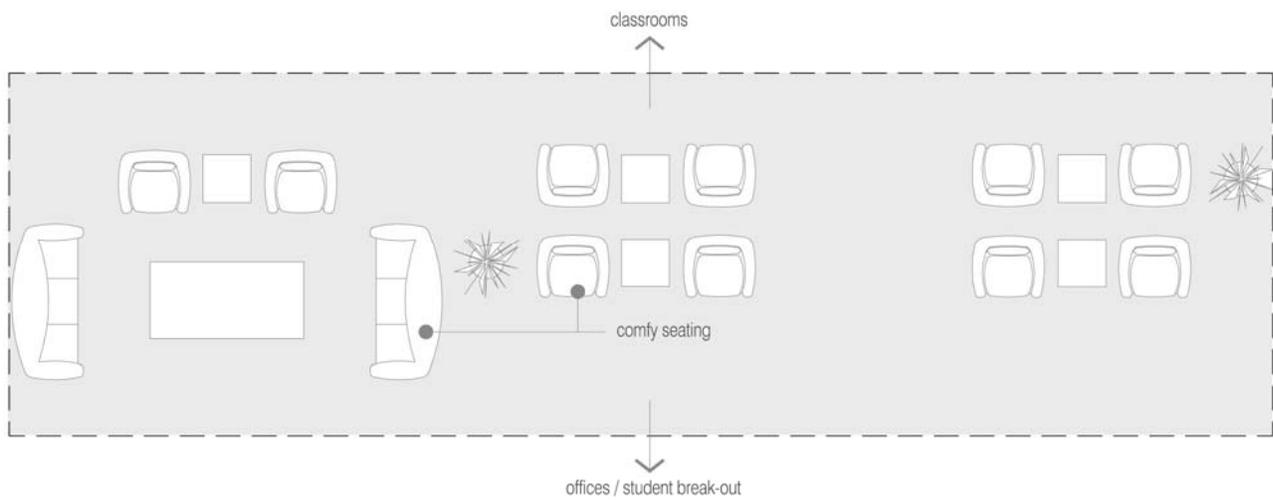
- lounge-type seating, low table and or / side tables; easy power access from each seat

Architectural Requirements

- floor: carpet - broadloom
- base: rubber
- walls: painted gypsum bd.
- ceiling treatment: acoustical lay-in
- ceiling height (a.f.f. min.): 13'-0" min.
- acoustic treatment:

Mechanical / Electrical Requirements

- refer to Section 6.0 Building Requirements
- natural lighting: preferred
- security:
- fire protection:
- plumbing: none required



1.2.3
 2.2.3 student spaces **casual social**

drawing scale: 1/8" per foot
 size: 850 sf phase 1, 425 sf phase 2
 notes: configuration may vary

Space Category: student spaces
I.D. Number: 1.2.4, 2.2.4
Room Type: food break vendor

General Requirements

- number required (phase 1): 2
- number required (phase 2): 0
- proposed nsf (each): 120
- proposed gsf (each): 192
- assigned capacity: 0
- unassigned capacity: 2
- frequency / hours of use:
- users:

Function / Activities

- small food / beverage satellite sales kiosk or room to serve areas remote from café location; possible general student access to microwave use

Adjacencies

- locate adjacent to open study and social areas, along primary circulation

Special Requirements

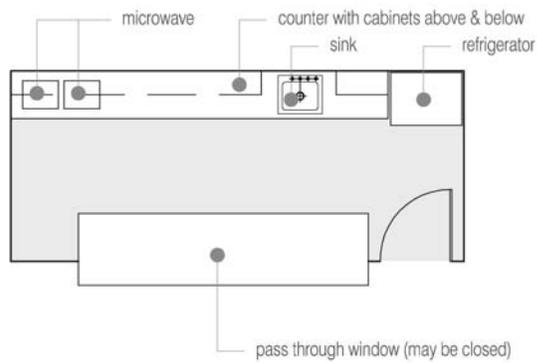
- counter and sink; lockable storage cabinets; refrigerator, power and space for 2 microwaves; pass through counter with securable overhead door

Architectural Requirements

- floor: ceramic tile
- base: ceramic tile
- walls: ceramic tile / painted gypsum board
- ceiling treatment: painted gypsum board
- ceiling height (a.f.f. min.): 10'-0" min.
- acoustic treatment: none

Mechanical / Electrical Requirements

- refer to Section 6.0 Building Requirements
- natural lighting: none required
- security:
- fire protection:
- plumbing: required



1.2.4
2.2.4 student spaces_ **food break vendor**

drawing scale: 1/8" per foot
size: 120sf
notes: configuration may vary

Space Category: student spaces
I.D. Number: 1.2.5
Room Type: coffee shop / café

General Requirements

- number required (phase 1): 1
- number required (phase 2): 0
- proposed nsf (each): 1000
- proposed gsf (each): 1600
- assigned capacity: 25
- unassigned capacity: 3
- frequency / hours of use:
- users:

Function / Activities

- accommodate 3-4 food / beverage sales machines, counter, and recycle / trash receptacle

Adjacencies

- locate adjacent primary circulation, adjacent to social / study areas

Special Requirements

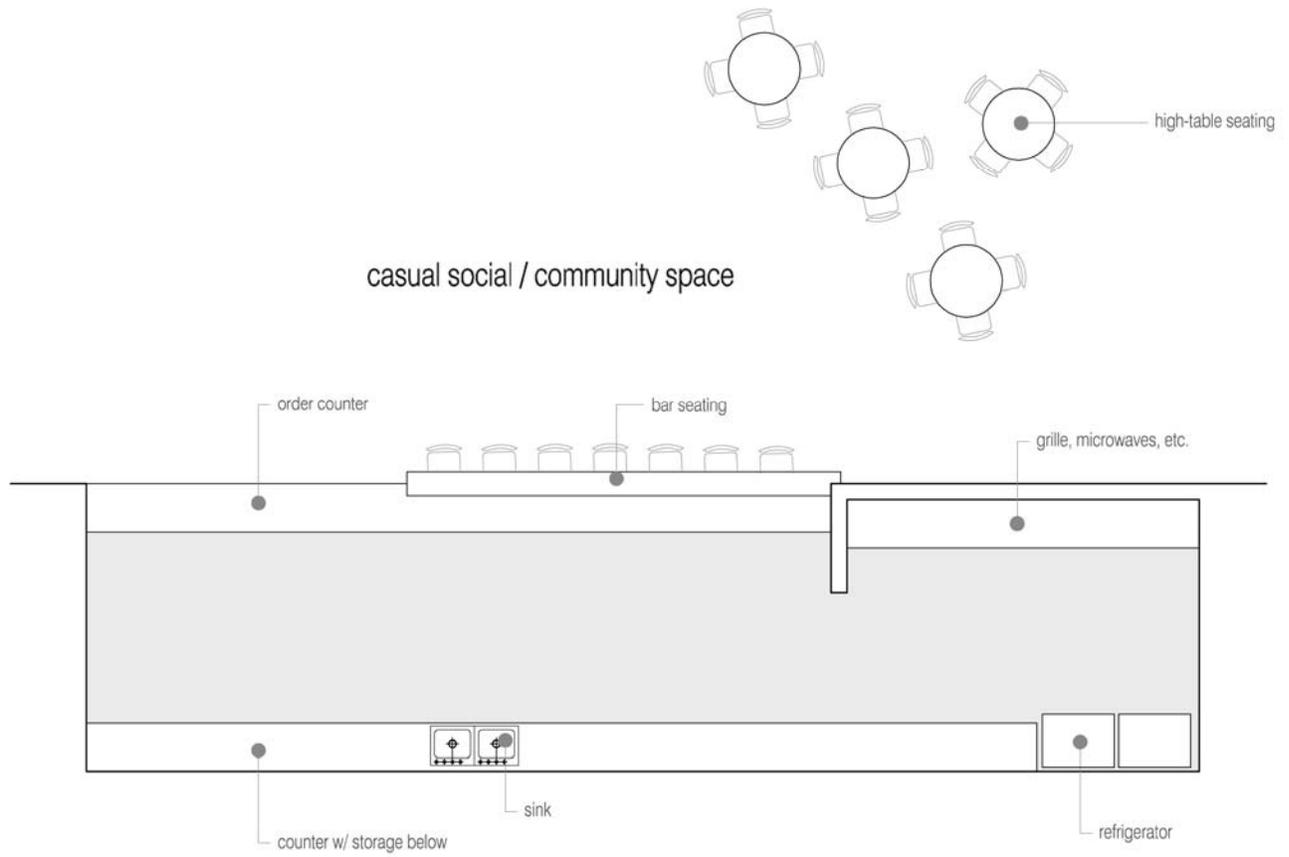
- visually obstructed from primary view, room signage, and proximity to circulation should be primary indicators of location

Architectural Requirements

- floor: stone tile
- base: stone tile
- walls: painted gypsum bd.
- ceiling treatment: acoustical lay-in
- ceiling height (a.f.f. min.): 13'-0" min.
- acoustic treatment:

Mechanical / Electrical Requirements

- refer to Section 6.0 Building Requirements
- natural lighting: required
- security:
- fire protection:
- plumbing: required



1.2.5 student spaces **coffee shop**

drawing scale: 1/8" per foot

net size: 750 sf

notes:

Space Category: student spaces
I.D. Number: 1.2.6, 2.2.5
Room Type: vending

General Requirements

- number required (phase 1): 2
- number required (phase 2): 1
- proposed nsf (each): 120
- proposed gsf (each): 192
- assigned capacity: 0
- unassigned capacity: 0
- frequency / hours of use:
- users:

Function / Activities

- food and drink vending machine area

Adjacencies

-

Special Requirements

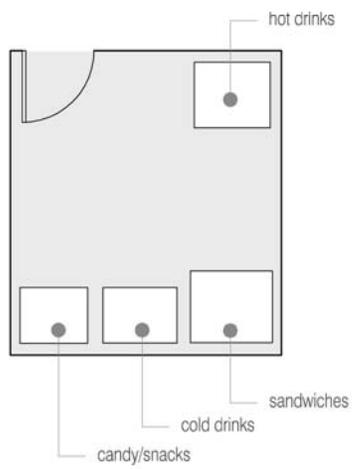
- additional power and HVAX for vending machines

Architectural Requirements

- floor: vinyl composition tile
- base: rubber
- walls: painted gypsum bd.
- ceiling treatment: acoustical lay-in
- ceiling height (a.f.f. min.): 10'-0" min.
- acoustic treatment:

Mechanical / Electrical Requirements

- refer to Section 6.0 Building Requirements
- natural lighting: none required
- security:
- fire protection:
- plumbing: none required



1.2.6
2.2.5 student spaces_ **vending**

drawing scale: 1/8" per foot
size: 120 sf
notes: configuration may vary

Space Category: student spaces
I.D. Number: 1.2.7
Room Type: student leadership
conference / office

General Requirements

- number required (phase 1): 1
- number required (phase 2): 0
- proposed nsf (each): 280
- proposed gsf (each): 448
- assigned capacity: 9
- unassigned capacity: 0
- frequency / hours of use:
- users:

Function / Activities

- general student work / copy station

Adjacencies

- locate adjacent to student areas; visibly supervised by I.S. staff station

Special Requirements

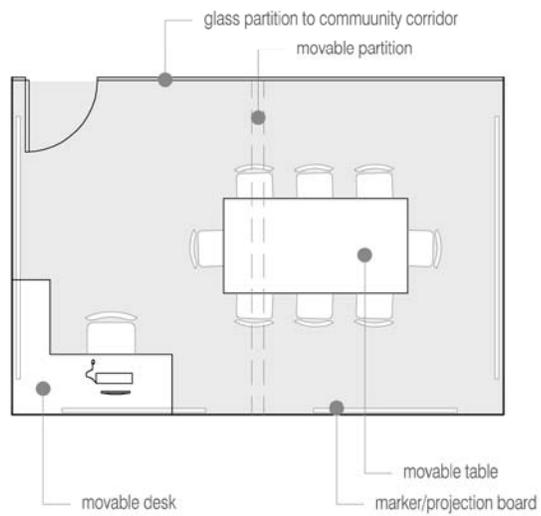
- securable area; printer copier fax, counter for collating and assembly, lockable cabinets for paper supply storage

Architectural Requirements

- floor: carpet - broadloom
- base: rubber
- walls: painted gypsum bd.
- ceiling treatment: acoustical lay-in
- ceiling height (a.f.f. min.): 10'-0" min.
- acoustic treatment:

Mechanical / Electrical Requirements

- refer to Section 6.0 Building Requirements
- natural lighting: none required
- security:
- fire protection:
- plumbing: none required



1.2.7 student spaces **student leadership conference**

drawing scale: 1/8" per foot

size: 280 sf

notes: part of 'flexible module system'

Space Category: student spaces
I.D. Number: 1.2.8
Room Type: trade floor

General Requirements

- number required (phase 1): 1
- number required (phase 2): 0
- proposed nsf (each): 1000
- proposed gsf (each): 1600
- assigned capacity: 9-15
- unassigned capacity: 0
- frequency / hours of use:
- users:

Function / Activities

- XX

Adjacencies

- XX

Special Requirements

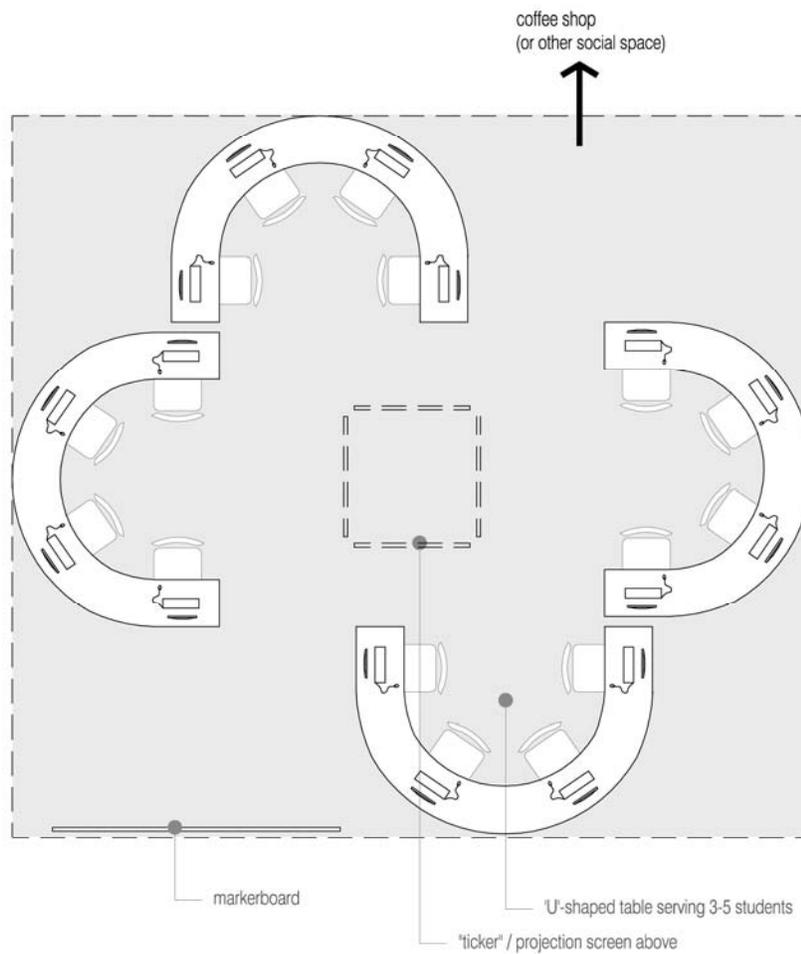
- XX

Architectural Requirements

- floor: carpet - broadloom
- base: rubber
- walls: painted gypsum bd.
- ceiling treatment: acoustical lay-in
- ceiling height (a.f.f. min.): 10'-0" min.
- acoustic treatment:

Mechanical / Electrical Requirements

- refer to Section 6.0 Building Requirements
- natural lighting: none required
- security:
- fire protection:
- plumbing: none required



1.2.8 student spaces trade floor

drawing scale: 1/8" per foot

size: 1000 sf

notes: laptop-based; instructor space one end of room; 'U-shaped tables seating 3-5 people. Room for large group discussion in center; trade floor adjacent first floor coffee shop /or other social space

Space Category: student spaces
I.D. Number: 1.2.9, 2.2.6
Room Type: data stations

General Requirements

- number required (phase 1): 50
- number required (phase 2): 30
- proposed nsf (each): 20
- proposed gsf (each): 32
- assigned capacity: 1 each
- unassigned capacity: 0
- frequency / hours of use:
- users:

Function / Activities

- variety of open student data stations in groupings of individual desks or continuous counters for individual laptop use and I.S. managed desktop station hardware

Adjacencies

- locate in a highly visible location adjacent to active zone of circulation and student areas; stations with I.S. managed hardware must be visibly supervised by I.S. staff station

Special Requirements

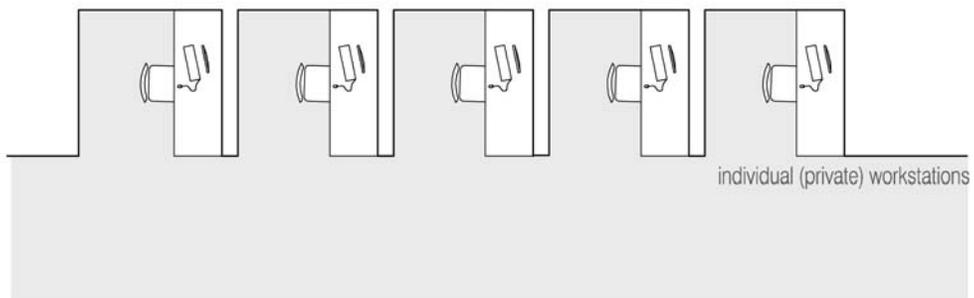
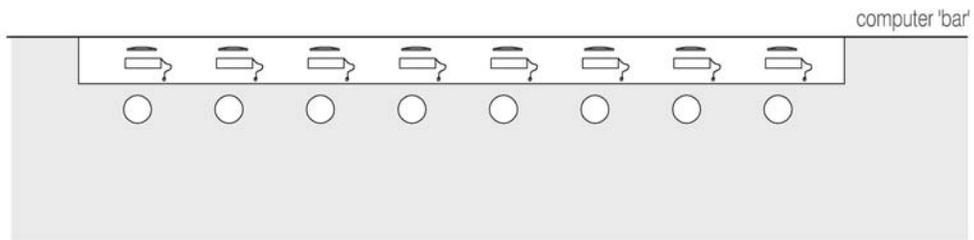
- stackable chairs, secure hardware

Architectural Requirements

- floor: carpet - broadloom
- base: rubber
- walls: painted gypsum bd.
- ceiling treatment: acoustical lay-in
- ceiling height (a.f.f. min.): 10'-0" min.
- acoustic treatment:

Mechanical / Electrical Requirements

- refer to Section 6.0 Building Requirements
- natural lighting: none required
- security:
- fire protection:
- plumbing: none required



1.2.9
 2.2.6 student spaces **student data stations**

drawing scale: 1/8" per foot
 size: 20 sf (average)
 notes: size/arrangement may vary (see examples above)

Space Category: student spaces
I.D. Number: 1.2.10, 2.2.7
Room Type: shared resource

General Requirements

- number required (phase 1): 2
- number required (phase 2): 2
- proposed nsf (each): 120
- proposed gsf (each): 192
- assigned capacity: 20
- unassigned capacity: 1
- frequency / hours of use:
- users:

Function / Activities

- general student work / copy station

Adjacencies

- locate adjacent to student areas; visibly supervised by I.S. staff station

Special Requirements

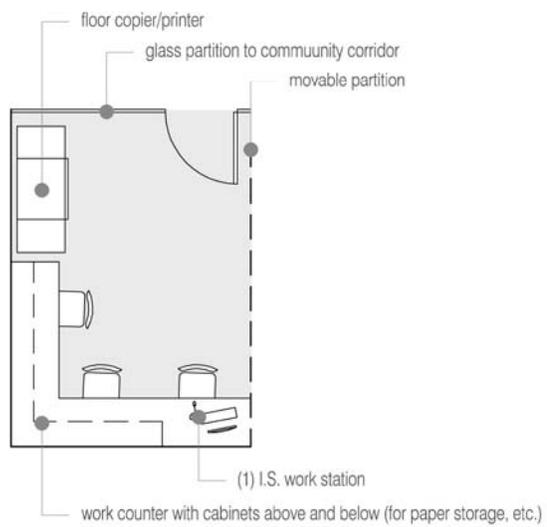
- securable area; printer copier fax, counter for collating and assembly, lockable cabinets for paper supply storage

Architectural Requirements

- floor: vinyl composition tile
- base: rubber
- walls: painted gypsum bd.
- ceiling treatment: acoustical lay-in
- ceiling height (a.f.f. min.): 10'-0" min.
- acoustic treatment:

Mechanical / Electrical Requirements

- refer to Section 6.0 Building Requirements
- natural lighting: none required
- security:
- fire protection:
- plumbing: none required



1.2.10
 2.2.7 student spaces **_shared resource**

drawing scale: 1/8" per foot
 size: 140 sf
 notes: part of 'flexible module system'

Space Category: student spaces
I.D. Number: 1.2.11
Room Type: locker

General Requirements

- number required (phase 1): 1
- number required (phase 2): 0
- proposed nsf (each): 120
- proposed gsf (each): 192
- assigned capacity: 0
- unassigned capacity: 3
- frequency / hours of use:
- users:

Function / Activities

- (24) full height managed assignable lockers for student interview preparation

Adjacencies

- locate adjacent to career services and restrooms

Special Requirements

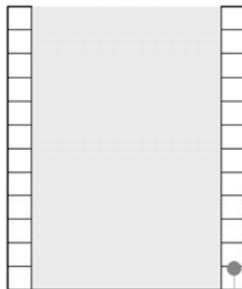
- preference is semi enclosed room with bench for sitting in middle of lockers

Architectural Requirements

- floor: vinyl composition tile
- base: rubber
- walls: painted gypsum bd.
- ceiling treatment: acoustical lay-in
- ceiling height (a.f.f. min.): 10'-0" min.
- acoustic treatment:

Mechanical / Electrical Requirements

- refer to Section 6.0 Building Requirements
- natural lighting: none required
- security:
- fire protection:
- plumbing: none required



24 full-height lockers or
48 half-height lockers

1.2.11 student spaces **locker**

drawing scale: 1/8" per foot

net size: 120 sf

notes:

Space Category: faculty
I.D. Number: 1.3.1, 2.3.1
Room Type: accounting, finance,
management,
marketing, faculty
auxiliary full time, new

General Requirements

- number required (phase 1): 69
- number required (phase 2): 20
- proposed nsf (each): 120
- proposed gsf (each): 192
- assigned capacity: 1
- unassigned capacity: 2
- frequency / hours of use:
- users:

Function / Activities

- office for one (1) full-time faculty member for research, teaching preparation, dialogue with up to 2 visitors

Adjacencies

- locate with access from quieter zone of circulation space, with good student access; close to some faculty offices, good access to faculty support spaces / departmental space

Special Requirements

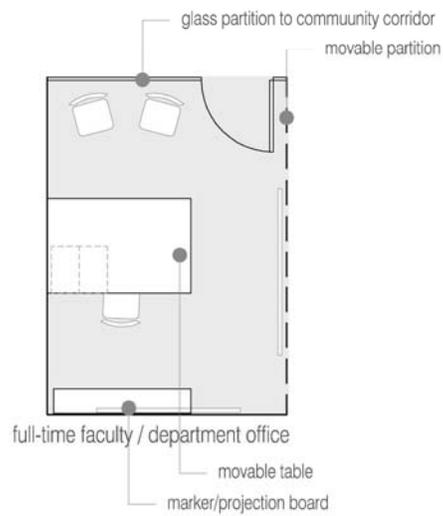
- movable file cabinet, desk, and shelf; view and natural light

Architectural Requirements

- floor: carpet - broadloom
- base: rubber
- walls: painted gypsum bd.
- ceiling treatment: acoustical lay-in
- ceiling height (a.f.f. min.): 10'-0" min.
- acoustic treatment:

Mechanical / Electrical Requirements

- refer to Section 6.0 Building Requirements
- natural lighting: required
- security:
- fire protection:
- plumbing: none required



1.3.1
2.3.1 faculty_ **full-time/department office**

drawing scale: 1/8" per foot
net size: 140 sf
notes: part of 'flexible module system'

Space Category: faculty
I.D. Number: 1.3.2, 2.3.2
Room Type: phd and associate /
visiting faculty office

General Requirements

- number required (phase 1): 46
- number required (phase 2): 14
- proposed nsf (each): 140
- proposed gsf (each): 224
- assigned capacity: 2
- unassigned capacity: 0
- frequency / hours of use:
- users:

Function / Activities

- shared space for two (2) phd students for research & teaching preparation; some work stations to be assigned as hoteling stations for auxiliary or visiting faculty

Adjacencies

- locate with access from quieter zone of circulation space; close to some faculty offices, good access to faculty support spaces, and open study spaces

Special Requirements

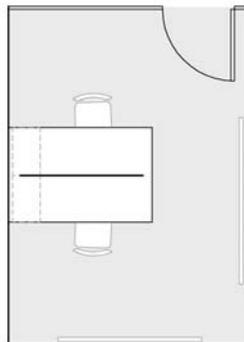
- (2) easily movable file cabinets, desks, and shelves; natural light if possible

Architectural Requirements

- floor: carpet - broadloom
- base: rubber
- walls: painted gypsum bd.
- ceiling treatment: acoustical lay-in
- ceiling height (a.f.f. min.): 10'-0" min.
- acoustic treatment:

Mechanical / Electrical Requirements

- refer to Section 6.0 Building Requirements
- natural lighting: if possible
- security:
- fire protection:
- plumbing: none required



Phd office (2 persons per room)

1.3.2 2.3.2 faculty_ **Phd office**

drawing scale: 1/8" per foot

net size: 140 sf

notes: part of 'flexible module system'

Space Category: faculty
I.D. Number: 1.3.3
Room Type: department admin /
waiting

General Requirements

- number required (phase 1): 12
- number required (phase 2): 0
- proposed nsf (each): 280
- proposed gsf (each): 448
- assigned capacity: 4
- unassigned capacity: 2
- frequency / hours of use:
- users:

Function / Activities

- office for one (1) faculty department director and an adjacent administrative space for two (2) staff

Adjacencies

- locate close to faculty offices, faculty support spaces, and quieter zone of circulation or open study space; admin workstations directly connected to departmental waiting area

Special Requirements

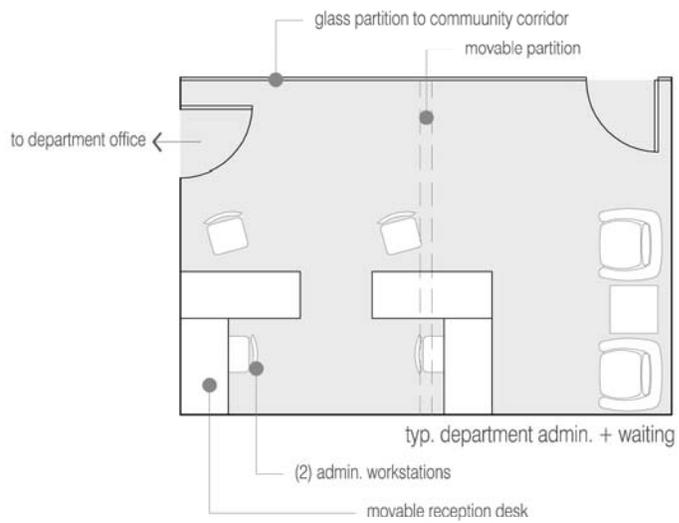
- office: easily movable file cabinet, desk, and shelf; view and natural light; admin: (2) separate staff workstations with view to waiting area and entry

Architectural Requirements

- floor: carpet - broadloom
- base: rubber
- walls: painted gypsum bd.
- ceiling treatment: acoustical lay-in
- ceiling height (a.f.f. min.): 10'-0" min.
- acoustic treatment:

Mechanical / Electrical Requirements

- refer to Section 6.0 Building Requirements
- natural lighting: none required
- security:
- fire protection:
- plumbing: none required



1.3.3 faculty_ **department admin./waiting**

drawing scale: 1/8" per foot

net size: 140 sf + 140 sf (department admin. + department waiting)

notes: part of 'flexible module system'

Space Category: faculty
I.D. Number: 1.3.4
Room Type: general conference room

General Requirements

- number required (phase 1): 1
- number required (phase 2): 0
- proposed nsf (each): 375
- proposed gsf (each): 600
- assigned capacity: 0
- unassigned capacity: 14
- frequency / hours of use:
- users:

Function / Activities

- faculty conference / meeting for 12-14 people; easy transition to scheduled presentation prep use

Adjacencies

- locate adjacent to quiet zone of circulation and faculty areas

Special Requirements

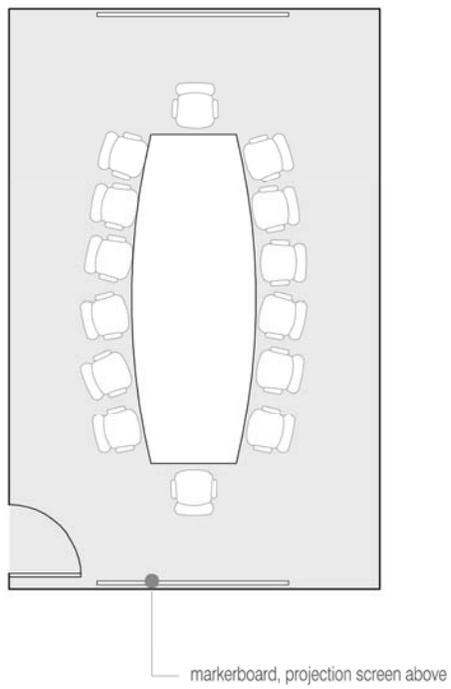
- loose chairs, table sections for alternate configurations; (1) screen / projector; whiteboards at (2) sides of the room
-

Architectural Requirements

- floor: carpet - broadloom
- base: rubber
- walls: painted gypsum bd.
- ceiling treatment: acoustical lay-in
- ceiling height (a.f.f. min.): 10'-0" min.
- acoustic treatment:

Mechanical / Electrical Requirements

- refer to Section 6.0 Building Requirements
- natural lighting: none required
- security:
- fire protection:
- plumbing: none required



1.3.4 faculty_ **general conference**

drawing scale: 1/8" per foot
size: 375 sf
notes: seats 14

Space Category: faculty
I.D. Number: 1.3.5, 2.3.5
Room Type: department workroom

General Requirements

- number required (phase 1): 3
- number required (phase 2): 2
- proposed nsf (each): 140
- proposed gsf (each): 224
- assigned capacity: 0
- unassigned capacity: 1
- frequency / hours of use:
- users:

Function / Activities

- faculty use workroom to print, copy, collate, access secured classroom supplies

Adjacencies

- locate adjacent to faculty lounges and central distance from classrooms

Special Requirements

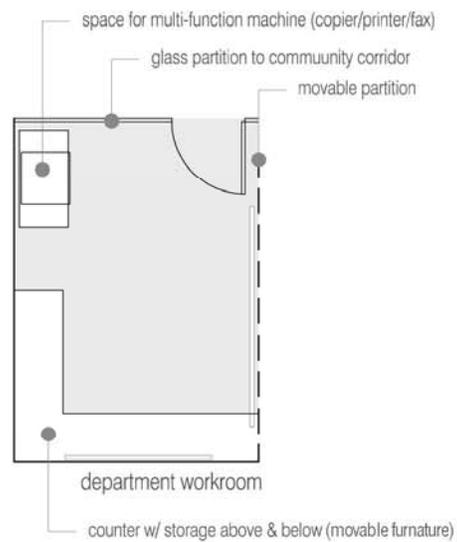
- lockable storage for supplies and paper; restricted access to staff and faculty

Architectural Requirements

- floor: vinyl composition tile
- base: rubber
- walls: painted gypsum bd.
- ceiling treatment: acoustical lay-in
- ceiling height (a.f.f. min.): 10'-0" min.
- acoustic treatment:

Mechanical / Electrical Requirements

- refer to Section 6.0 Building Requirements
- natural lighting: none required
- security:
- fire protection:
- plumbing: none required



1.3.5 2.3.5 faculty_ **department workroom**

drawing scale: 1/8" per foot

net size: 140 sf + 140 sf (department admin. + department waiting)

notes: part of 'flexible module system'

Space Category: faculty
I.D. Number: 1.3.6, 2.3.3
Room Type: storage

General Requirements

- number required (phase 1): 2
- number required (phase 2): 4
- proposed nsf (each): 100
- proposed gsf (each): 160
- assigned capacity: 0
- unassigned capacity: 0
- frequency / hours of use:
- users:

Function / Activities

- shared storage of pre-archived faculty material in electronic and hard copies, such as research, periodicals, and past student projects for reference

Adjacencies

- locate adjacent to faculty lounges or between core departmental offices

Special Requirements

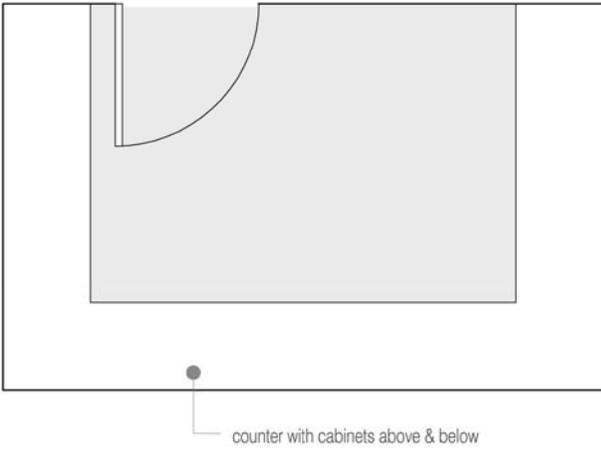
- lockable file cabinets and cabinets

Architectural Requirements

- floor: vinyl composition tile
- base: rubber
- walls: painted gypsum bd.
- ceiling treatment: acoustical lay-in
- ceiling height (a.f.f. min.): 10'-0" min.
- acoustic treatment:

Mechanical / Electrical Requirements

- refer to Section 6.0 Building Requirements
- natural lighting: none required
- artificial lighting:
- security:
- fire protection:
- plumbing: none required



1.3.6

1.4.8

2.3.3 **faculty_storage**

drawing scale: 1/4" per foot

size: 100 sf

notes:

Space Category: faculty
I.D. Number: 1.3.7
Room Type: lounge

General Requirements

- number required (phase 1): 3
- number required (phase 2): 0
- proposed nsf (each): 425
- proposed gsf (each): 680
- assigned capacity: 0
- unassigned capacity: 8-16
- frequency / hours of use:
- users:

Function / Activities

- lounge area to house faculty mailboxes and provide relaxed atmosphere for faculty and staff

Adjacencies

- locate adjacent to circulation areas and easily accessed from faculty office areas; one lounge per floor is recommended

Special Requirements

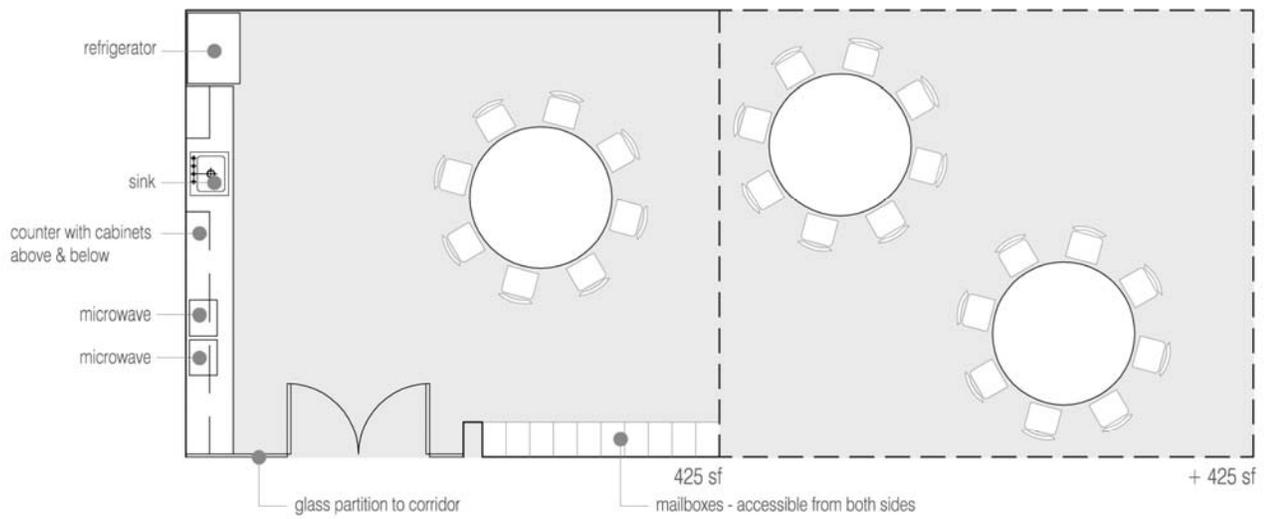
- variety of lounge seating, coffee table, counter with small sink, upper open shelf, microwave, and small refrigerator

Architectural Requirements

- floor: vinyl composition tile
- base: rubber
- walls: painted gypsum bd.
- ceiling treatment: acoustical lay-in
- ceiling height (a.f.f. min.): 10'-0" min.
- acoustic treatment:

Mechanical / Electrical Requirements

- refer to Section 6.0 Building Requirements
- natural lighting: preferred
- security:
- fire protection:
- plumbing: required



1.3.7 lounge

drawing scale: 1/8" per foot
 size: 425 sf
 notes: configuration may vary

Space Category: faculty
I.D. Number: 1.3.8
Room Type: I.S. printing center

General Requirements

- number required (phase 1): 1
- number required (phase 2): 0
- proposed nsf (each): 425
- proposed gsf (each): 680
- assigned capacity: 0
- unassigned capacity: 0
- frequency / hours of use:
- users:

Function / Activities

- copy / work area for faculty, staffed by I.S.

Adjacencies

- locate adjacent to faculty areas

Special Requirements

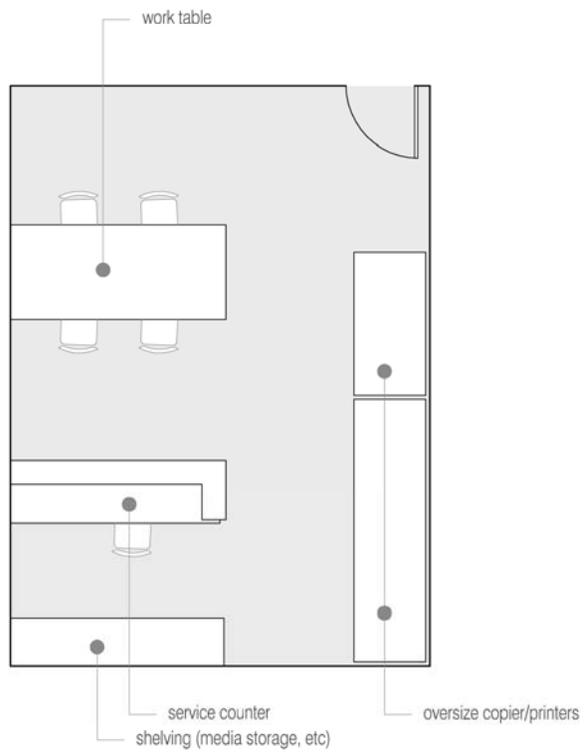
- should accommodate two large format copier / printers and should include a service counter, open counter work area for faculty self serve collating, etc.; perimeter shelving for paper and lockable storage for small items; could contain faculty mailboxes; adequate ventilation required

Architectural Requirements

- floor: static dissipative tile
- base: rubber
- walls: painted gypsum bd.
- ceiling treatment: acoustical lay-in
- ceiling height (a.f.f. min.): 10'-0" min.
- acoustic treatment:

Mechanical / Electrical Requirements

- refer to Section 6.0 Building Requirements
- natural lighting: none required
- security:
- fire protection:
- plumbing: none required



1.3.8 faculty **printing center**

drawing scale: 1/8" per foot

size: 425 sf

notes: to accommodate (2) large-format copier/printers (existing equip. includes 3'x6' Xerox 65 and 3'x11' Xerox Nuvera; service counter, open counter work area, perimeter shelving, lockable storage; adequate ventilation

Space Category: faculty
I.D. Number: 2.3.4
Room Type: conference
visiting scholars/
phd / graduate

General Requirements

- number required (phase 1): 0
- number required (phase 2): 2
- proposed nsf (each): 280
- proposed gsf (each): 448
- assigned capacity: 12
- unassigned capacity: 0
- frequency / hours of use:
- users:

Function / Activities

- faculty conference / meeting for 8-10 people; easy transition to scheduled presentation prep use

Adjacencies

- locate adjacent to quiet zone of circulation and visiting faculty areas

Special Requirements

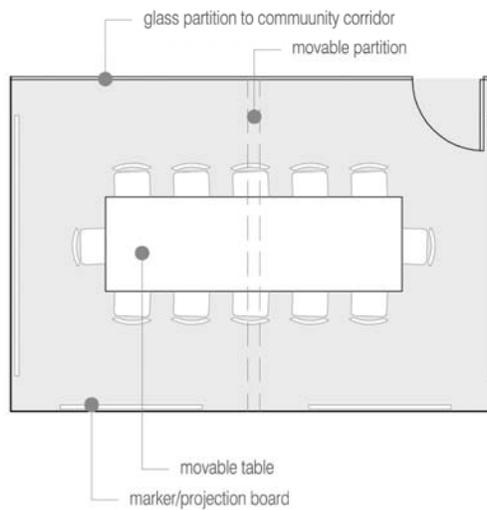
- loose chairs, table sections for alternate configurations; (1) screen / projector; whiteboards at (2) sides of the room

Architectural Requirements

- floor: carpet - broadloom
- base: rubber
- walls: painted gypsum bd.
- ceiling treatment: acoustical lay-in
- ceiling height (a.f.f. min.): 10'-0" min.
- acoustic treatment:

Mechanical / Electrical Requirements

- refer to Section 6.0 Building Requirements
- natural lighting: none required
- security:
- fire protection:
- plumbing: none required



2.3.4 faculty_visiting scholars conference, Phd/graduate conference

drawing scale: 1/8" per foot

size: 280 sf

notes: part of 'flexible module system', 12-person conference room

Space Category: student services
I.D. Number: 1.4.1
Room Type: UPO director office
undergrad, graduate
new advising offices
staff advising
MPO director office

General Requirements

- number required (phase 1): 18
- number required (phase 2): 0
- proposed nsf (each): 120
- proposed gsf (each): 192
- assigned capacity: 1
- unassigned capacity: 0
- frequency / hours of use:
- users:

Function / Activities

- enclosed office for one (1) full-time advising director or staff member; dialogue with up to 2 visitors

Adjacencies

- main level access to entire advising suite, with good student access from open student social space; general close adjacency to student one-stop services counter

Special Requirements

- easily movable file cabinet, desk, and shelf; indirect natural light if possible

Architectural Requirements

- floor: carpet - broadloom
- base: rubber
- walls: painted gypsum bd.
- ceiling treatment: acoustical lay-in
- ceiling height (a.f.f. min.): 10'-0" min.
- acoustic treatment:

NO DIAGRAM

Space Category: student services
I.D. Number: 1.4.2
Room Type: reception / open office
undergrad advising
graduate advising

General Requirements

- number required (phase 1): 2
- number required (phase 2): 0
- proposed nsf (each): 500
- proposed gsf (each): 800
- assigned capacity: 6
- unassigned capacity: 12
- frequency / hours of use:
- users:

Function / Activities

- two (2) open reception work stations and waiting area for 4-8 people; this space will serve as the "face" of the undergraduate programs advising suite

Adjacencies

- directly adjacent to open social student spaces and student services one-stop services counter

Special Requirements

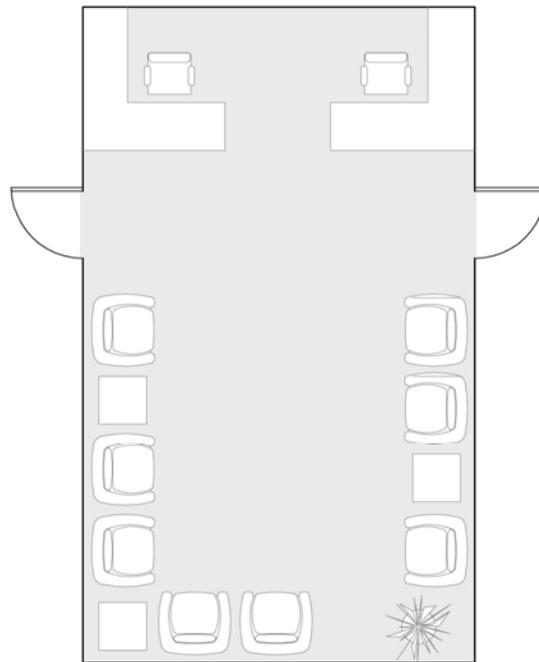
- seating for up to 8 people, end table(s) or coffee table; visibility from reception desks to entry visibility to waiting area from circulation space; indirect natural light if possible

Architectural Requirements

- floor: carpet - broadloom
- base: rubber
- walls: painted gypsum bd.
- ceiling treatment: acoustical lay-in
- ceiling height (a.f.f. min.): 10'-0" min.
- acoustic treatment:

Mechanical / Electrical Requirements

- refer to Section 6.0 Building Requirements
- natural lighting: preferred
- security:
- fire protection:
- plumbing: none required



1.4.2 student services_ **advising reception / open office**

drawing scale: 1/8" per foot

size: 500 sf

notes: (2) workstations; waiting for 8 people

Space Category: student services
I.D. Number: 1.4.3
Room Type: recruit interview rooms

General Requirements

- number required (phase 1): 6
- number required (phase 2): 0
- proposed nsf (each): 80
- proposed gsf (each): 128
- assigned capacity: 2
- unassigned capacity: 0
- frequency / hours of use:
- users:

Function / Activities

- individual interview rooms for one candidate and one interviewer

Adjacencies

- close access from one-stop student services counter and adjacent open / social waiting area; also close adjacency to student lockers

Special Requirements

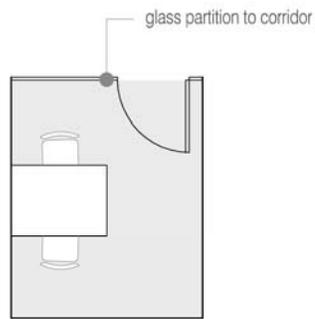
- table and (3) chairs; small whiteboard; doors with glass lites for visibility from adjacent circulation areas

Architectural Requirements

- floor: carpet - broadloom
- base: rubber
- walls: painted gypsum bd.
- ceiling treatment: acoustical lay-in
- ceiling height (a.f.f. min.): 10'-0" min.
- acoustic treatment:

Mechanical / Electrical Requirements

- refer to Section 6.0 Building Requirements
- natural lighting: none required
- security:
- fire protection:
- plumbing: none required



1.4.3 student services_ **recruit interview room**

drawing scale: 1/8" per foot

net size: 80 sf

notes:

Space Category: student services
I.D. Number: 1.4.4
Room Type: recruit office storage

General Requirements

- number required (phase 1): 1
- number required (phase 2): 0
- proposed nsf (each): 80
- proposed gsf (each): 128
- assigned capacity: 0
- unassigned capacity: 0
- frequency / hours of use:
- users:

Function / Activities

- shared storage of records material in electronic and hard copies

Adjacencies

- immediate access behind career services post at one-stop student services counter

Special Requirements

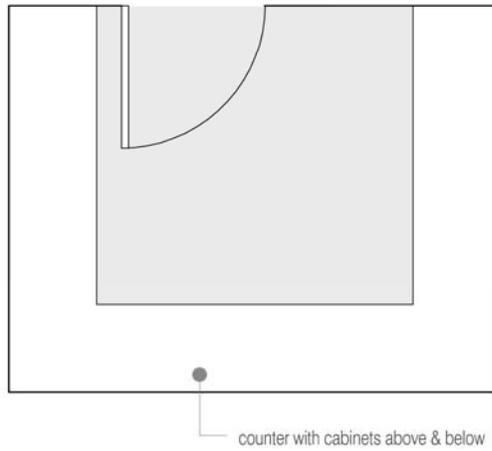
- lockable file cabinets and open shelves

Architectural Requirements

- floor: vinyl composition tile
- base: rubber
- walls: painted gypsum bd.
- ceiling treatment: acoustical lay-in
- ceiling height (a.f.f. min.): 10'-0" min.
- acoustic treatment:

Mechanical / Electrical Requirements

- refer to Section 6.0 Building Requirements
- natural lighting: none required
- security:
- fire protection:
- plumbing: none required



1.1.6

1.4.4

1.6.2

2.1.4 classroom **storage @ tiered classroom**

drawing scale: 1/4" per foot

size: 80 sf

notes:

Space Category: student services
I.D. Number: 1.4.5
Room Type: one-stop service counter

General Requirements

- number required (phase 1): 1
- number required (phase 2): 0
- proposed nsf (each): 500
- proposed gsf (each): 800
- assigned capacity: 12
- unassigned capacity: 0
- frequency / hours of use:
- users:

Function / Activities

- open counter with up to 5 staff service stations, to serve student general registration and degree programs information / services, career and advising information for existing and prospective students

Adjacencies

- adjacent and visible from open social / circulation area

Special Requirements

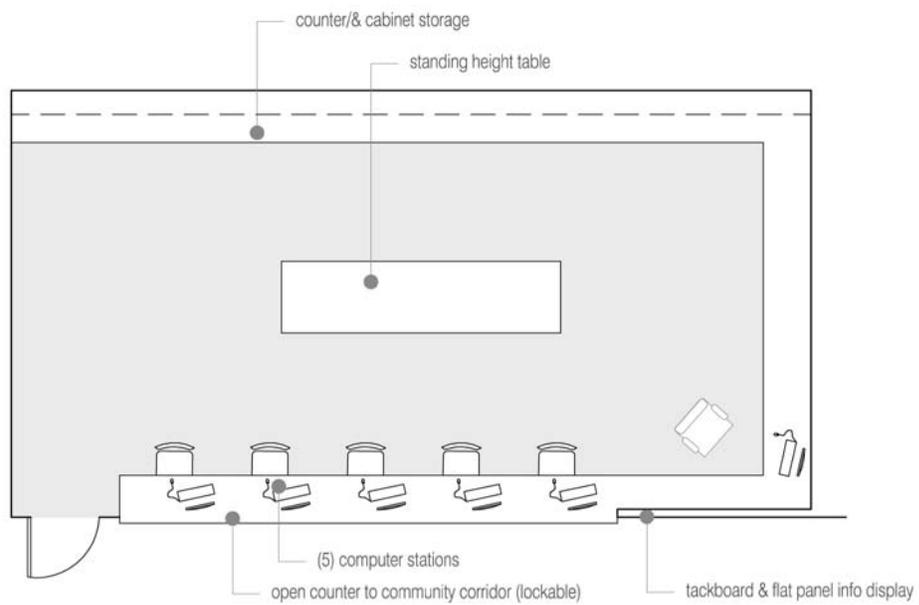
- lockable file cabinets and open shelves, and computer hardware at each staff station; front of counter to accommodate brochure display; locate a tackboard immediately adjacent and visible to waiting area; flat panel information display adjacent to waiting area

Architectural Requirements

- floor: carpet - broadloom
- base: rubber
- walls: painted gypsum bd.
- ceiling treatment: acoustical lay-in
- ceiling height (a.f.f. min.): 10'-0" min.
- acoustic treatment:

Mechanical / Electrical Requirements

- refer to Section 6.0 Building Requirements
- natural lighting: preferred
- security:
- fire protection:
- plumbing: none required



1.4.5 student services **one stop service counter**

drawing scale: 1/8" per foot

size: 500 sf

notes:

Space Category: student services
I.D. Number: 1.4.6
Room Type: shared conference room

General Requirements

- number required (phase 1): 2
- number required (phase 2): 0
- proposed nsf (each): 240
- proposed gsf (each): 384
- assigned capacity: 12
- unassigned capacity: 0
- frequency / hours of use:
- users:

Function / Activities

- faculty conference / meeting for 6 - 8 people; easy transition to scheduled presentation prep use

Adjacencies

- locate with easy access from career services and advising suites; immediate adjacency between both student services conference rooms; consider dividable wall between the two for larger meeting capability

Special Requirements

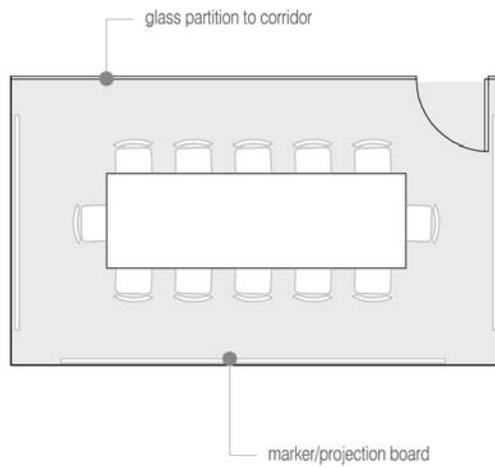
- loose chairs, table sections for alternate configurations; (1) screen / projector; whiteboards at (2) sides of the room

Architectural Requirements

- floor: carpet - broadloom
- base: rubber
- walls: painted gypsum bd.
- ceiling treatment: acoustical lay-in
- ceiling height (a.f.f. min.): 10'-0" min.
- acoustic treatment:

Mechanical / Electrical Requirements

- refer to Section 6.0 Building Requirements
- natural lighting: none required
- security:
- fire protection:
- plumbing: none required



1.4.6 student services_ **shared conference room**

drawing scale: 1/8" per foot
size: 240 sf
notes: seats 12

Space Category: student services
I.D. Number: 1.4.7
Room Type: shared break
kitchenette

General Requirements

- number required (phase 1): 1
- number required (phase 2): 0
- proposed nsf (each): 160
- proposed gsf (each): 256
- assigned capacity: 0
- unassigned capacity: 4
- frequency / hours of use:
- users:

Function / Activities

- kitchenette shared between staff of advising and career services for storing and warming prepared lunches and food from home

Adjacencies

- immediate adjacency to career services, MPO advising, and UPO advising suites

Special Requirements

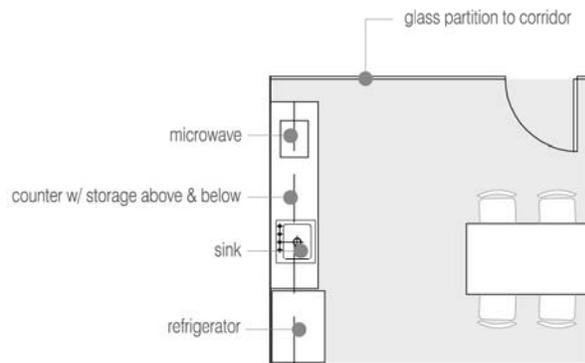
- counter and sink; lockable storage cabinets; refrigerator, power and space for 2 microwaves

Architectural Requirements

- floor: vinyl composition tile
- base: rubber
- walls: painted gypsum bd.
- ceiling treatment: acoustical lay-in
- ceiling height (a.f.f. min.): 10'-0" min.
- acoustic treatment:

Mechanical / Electrical Requirements

- refer to Section 6.0 Building Requirements
- natural lighting: none required
- security:
- fire protection:
- plumbing: required



1.4.7 student services **shared break/kitchenette**

drawing scale: 1/8" per foot

net size: 160 sf

notes:

Space Category: student services
I.D. Number: 1.4.8
Room Type: shared storage

General Requirements

- number required (phase 1): 2
- number required (phase 2): 0
- proposed nsf (each): 100
- proposed gsf (each): 160
- assigned capacity: 0
- unassigned capacity: 0
- frequency / hours of use:
- users:

Function / Activities

- shared storage of records material in electronic and hard copies

Adjacencies

- between MPO and UPO advising reception, for easy secure access by staff

Special Requirements

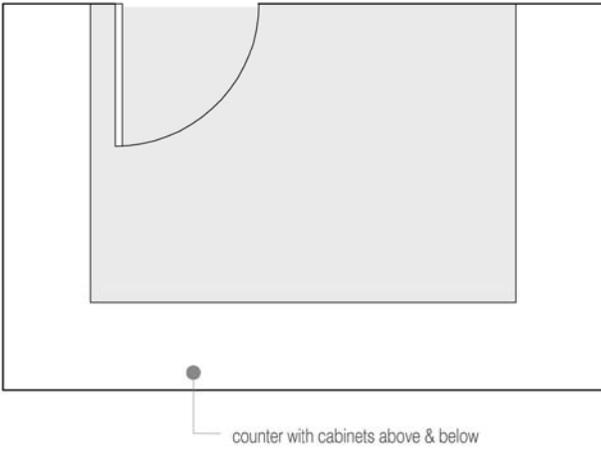
- lockable file cabinets and open shelves

Architectural Requirements

- floor: vinyl composition tile
- base: rubber
- walls: painted gypsum bd.
- ceiling treatment: acoustical lay-in
- ceiling height (a.f.f. min.): 10'-0" min.
- acoustic treatment:

Mechanical / Electrical Requirements

- refer to Section 6.0 Building Requirements
- natural lighting: none required
- security:
- fire protection:
- plumbing: none required



1.3.6

1.4.8

2.3.3 **faculty_storage**

drawing scale: 1/4" per foot

size: 100 sf

notes:

Space Category: common
I.D. Number: 1.5.1
Room Type: lobby / reception

General Requirements

- number required (phase 1): 1
- number required (phase 2): 0
- proposed nsf (each): 3000
- proposed gsf (each): 4800
- assigned capacity: 150
- unassigned capacity: 0
- frequency / hours of use:
- users:

Function / Activities

- main level space that will welcome and orient public and students; feature an information / reception point; able to hold an event or gathering of up to 150 occupants

Adjacencies

- adjacent to and part of primary entry sequence and circulation system of the building; immediate adjacency and access to exterior plaza; also adjacent to student spaces

Special Requirements

- information / reception point should be designed as a movable or easily demountable for event use of the lobby; natural light; highly durable and cleanable floor finish material

Architectural Requirements

- floor: carpet - broadloom
- base: rubber
- walls: painted gypsum bd.
- ceiling treatment: acoustical lay-in
- ceiling height (a.f.f. min.): 13'-0" min.
- acoustic treatment:

Mechanical / Electrical Requirements

- refer to Section 6.0 Building Requirements
- natural lighting: none required
- security:
- fire protection:
- plumbing: none required

NO DIAGRAM

Space Category: common
I.D. Number: 1.5.2, 2.5.2
Room Type: general business
conference

General Requirements

- number required (phase 1): 1
- number required (phase 2): 1
- proposed nsf (each): 500
- proposed gsf (each): 800
- assigned capacity: 0
- unassigned capacity: 20
- frequency / hours of use:
- users:

Function / Activities

- general use conference / meeting for up to 20 people; able to be used for board and donor presentations

Adjacencies

- locate adjacent to quiet zone of circulation and staff areas

Special Requirements

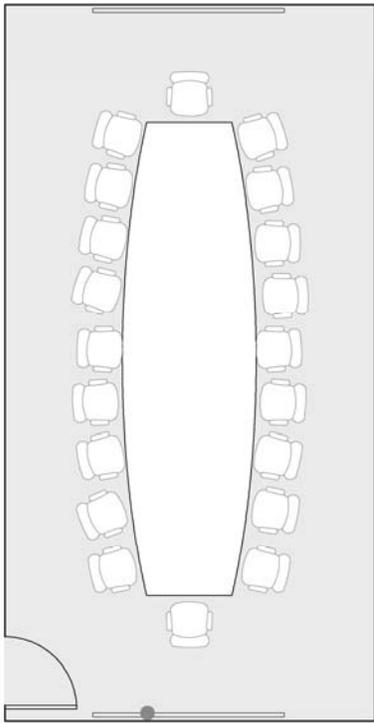
- loose chairs, table sections for alternate configurations; (1) screen / projector; whiteboards at (2) sides of the room; nice level of finishes

Architectural Requirements

- floor: carpet - broadloom
- base: rubber
- walls: painted gypsum bd.
- ceiling treatment: acoustical lay-in
- ceiling height (a.f.f. min.): 10'-0" min.
- acoustic treatment:

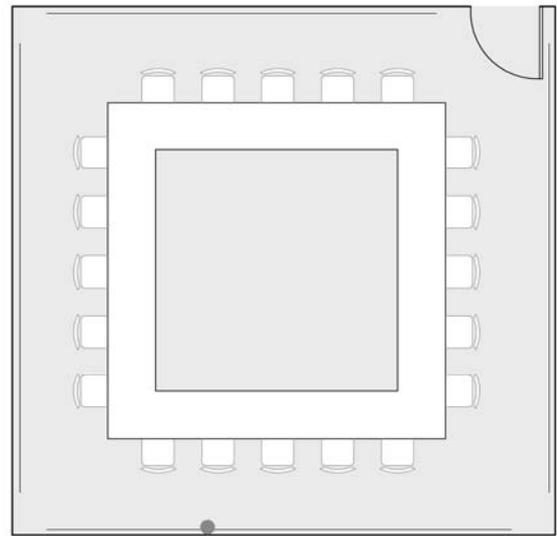
Mechanical / Electrical Requirements

- refer to Section 6.0 Building Requirements
- natural lighting: preferred
- security:
- fire protection:
- plumbing: none required



layout 1

markerboard, projection screen above



layout 2

markerboard, projection screen above

1.5.2

2.1.3

2.5.2 common_ **general business conference**

drawing scale: 1/8" per foot

size: 460-500 sf

notes: seats 20

Space Category: common
I.D. Number: 1.5.3
Room Type: building general receiving & storage, general receiving office, and I.S. secure storage

General Requirements

- number required (phase 1): 1
- number required (phase 2): 0
- proposed nsf (each): 1,000 (general receiving & storage), 120 (general receiving office), 200 (I.S. secure storage)
- proposed gsf (each): 1,667, 200, 333
- assigned capacity: 0
- unassigned capacity: 0
- frequency / hours of use:
- users:

Function / Activities

- general building storage with open receiving space, and lockable storage
- office receiving desk and staff workstation
- permanent secure storage for I.S. equipment
- secure mail drop-off

Adjacencies

- exterior receiving area / loading dock; interior designated elevator to be used for service
- serves building general receiving & storage

Special Requirements

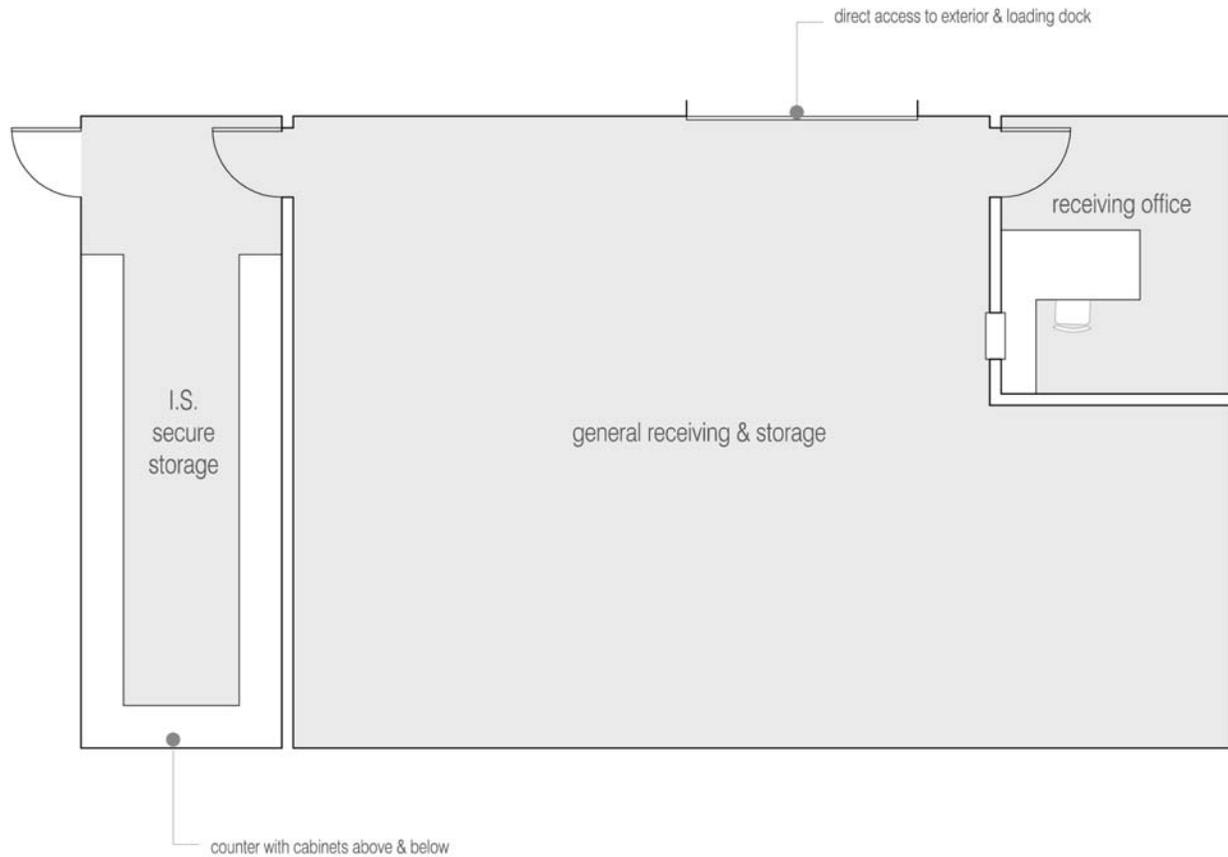
- floor drain; staging and lockable storage for 220 laptops and desktop hardware for annual distribution, and other items that must be secured as staging occurs
- visibility to receiving staging and storage
- if located on a basement level, floor drain

Architectural Requirements

- floor: vinyl composition tile
- base: rubber
- walls: painted gypsum bd.
- ceiling treatment: acoustical lay-in
- ceiling height (a.f.f. min.): 10'-0" min.
- acoustic treatment:

Mechanical / Electrical Requirements

- refer to Section 6.0 Building Requirements
- natural lighting: none required
- security:
- fire protection:
- plumbing: none required



1.5.3 common_ **building general receiving & storage, general receiving office, I.S. secure storage**

drawing scale: 1/8" per foot

net size: 1000 sf (building general receiving & storage), 120 sf (general receiving office), 200 sf (I.S. secure storage)

notes:

Space Category: common
I.D. Number: 2.5.1
Room Type: lobby / donor exhibit

General Requirements

- number required (phase 1): 0
- number required (phase 2): 1
- proposed nsf (each): 600
- proposed gsf (each): 960
- assigned capacity: 20
- unassigned capacity: 1
- frequency / hours of use:
- users:

Function / Activities

- main level space that will welcome and orient public and students; beginning place for an integrated donor exhibit

Adjacencies

- adjacent to and part of primary entry sequence and circulation system of the building; immediate adjacency and access to exterior plaza; (note: existing donor statue to be reincorporated into design of new exterior plaza)

Special Requirements

- information flat panel display for building and school events; natural light; highly durable and cleanable floor finish material

Architectural Requirements

- floor: carpet - broadloom
- base: rubber
- walls: painted gypsum bd.
- ceiling treatment: acoustical lay-in
- ceiling height (a.f.f. min.): 13'-0" min.
- acoustic treatment:

Mechanical / Electrical Requirements

- refer to Section 6.0 Building Requirements
- natural lighting: preferred
- artificial lighting:
- security:
- fire protection:
- plumbing: none required

NO DIAGRAM

Space Category: common
I.D. Number: 2.5.3
Room Type: server room

General Requirements

- number required (phase 1): 0
- number required (phase 2): 1
- proposed nsf (each): 270
- proposed gsf (each): 432
- assigned capacity: 0
- unassigned capacity: 1
- frequency / hours of use:
- users:

Function / Activities

- house main data server currently housed in BUC, and one staff work station managed by I.S.

Adjacencies

- serves entire phase 1 and phase project, central location to both phases of the project

Special Requirements

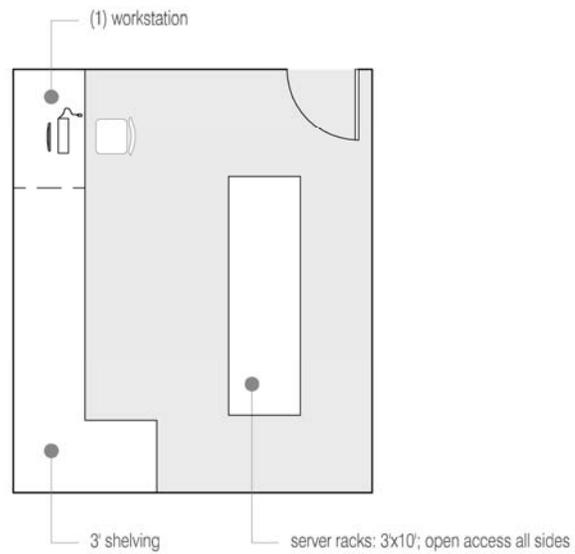
- Equipment: servers 3'x10', open access all sides. Accommodate 3' deep shelving around perimeter of room, and one work station. Existing inventory of shelving from BUC will be used. Adequate ventilation to this room is required.; if basement location, floor drain

Architectural Requirements

- floor: static dissipative sdt
- base: rubber
- walls: painted gypsum bd.
- ceiling treatment: acoustical lay-in
- ceiling height (a.f.f. min.): 10'-0" min.
- acoustic treatment:

Mechanical / Electrical Requirements

- refer to Section 6.0 Building Requirements
- natural lighting: none required
- security:
- fire protection:
- plumbing: none required



2.5.3 common_ **server room**

drawing scale: 1/8" per foot

net size: 270 sf

notes: servers 3'x10' with open access all sides; 3'
deep shelving; (1) workstation; adequate ventilation

Space Category: common
I.D. Number: 2.5.4
Room Type: building general
receiving & storage

General Requirements

- number required (phase 1): 1
- number required (phase 2): 0
- proposed nsf (each): 500
- proposed gsf (each): 833
- assigned capacity: 0
- unassigned capacity: 1
- frequency / hours of use:
- users:
- security

Function / Activities

- ability to stage, unpack, and distribute 220 laptops at a time, once each year

Adjacencies

- XX

Special Requirements

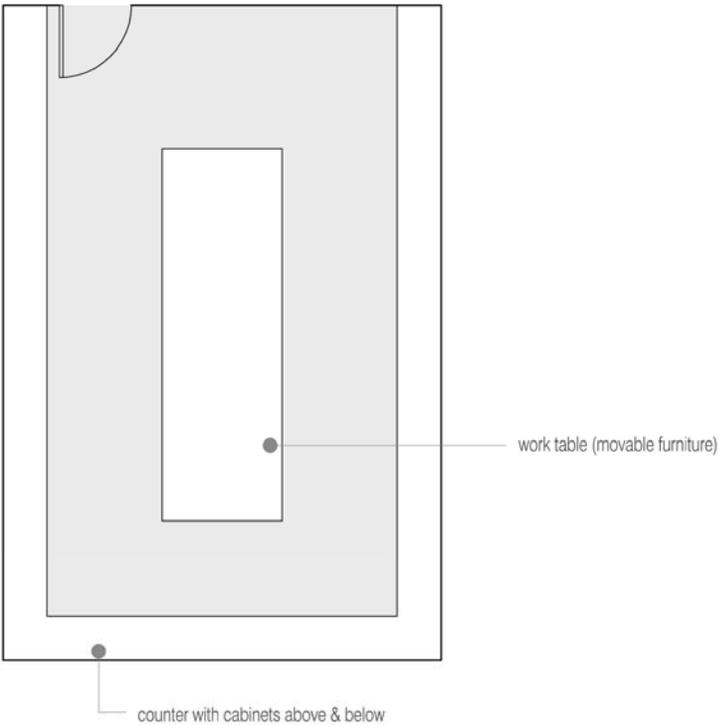
- XX

Architectural Requirements

- floor: concrete, sealed
- base: rubber
- walls: painted gypsum bd.
- ceiling treatment: exposed struct.
- ceiling height (a.f.f. min.): 10'-0" min.
- acoustic treatment:

Mechanical / Electrical Requirements

- refer to Section 6.0 Building Requirements
- natural lighting: none required
- security:
- fire protection:
- plumbing: none required



2.5.4 common_building general receiving & storage

drawing scale: 1/8" per foot
net size: 500 sf
notes:

Space Category: administration
I.D. Number: 1.6.1
Room Type: I.S. support server /
FTE staff station

General Requirements

- number required (phase 1): 2
- number required (phase 2): 0
- proposed nsf (each): 280
- proposed gsf (each): 448
- assigned capacity: 4
- unassigned capacity: 1
- frequency / hours of use:
- users:

Function / Activities

- I.S. managed, student use area to print, copy, collate, and receive technical assistance

Adjacencies

- locate adjacent to student social and study areas; equally distribute these spaces through building

Special Requirements

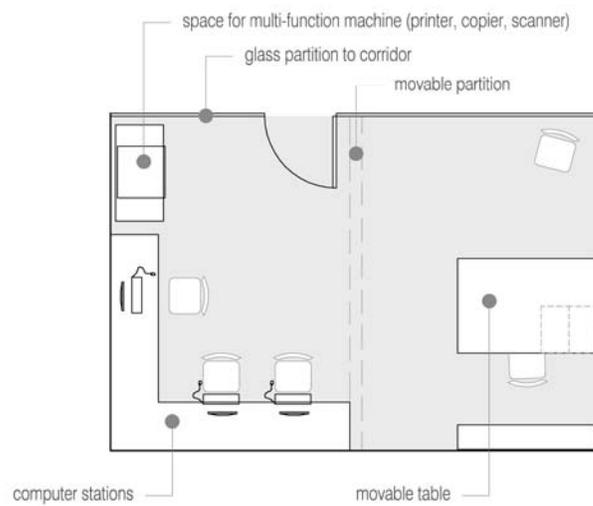
- lockable storage for supplies and paper; restricted access to staff and faculty.

Architectural Requirements

- floor: carpet - broadloom
- base: rubber
- walls: painted gypsum bd.
- ceiling treatment: acoustical lay-in
- ceiling height (a.f.f. min.): 10'-0" min.
- acoustic treatment:

Mechanical / Electrical Requirements

- refer to Section 6.0 Building Requirements
- natural lighting: none required
- security:
- fire protection:
- plumbing: none required



1.6.1 common_I.S. support/printing + FTE staff station

drawing scale: 1/8" per foot

net size: 280 sf

notes: part of 'flexible module system'

Space Category: administration
I.D. Number: 1.6.2
Room Type: I.S. dedicated storage

General Requirements

- number required (phase 1): 2
- number required (phase 2): 0
- proposed nsf (each): 80
- proposed gsf (each): 128
- assigned capacity: 0
- unassigned capacity: 0
- frequency / hours of use:
- users:

Function / Activities

- I.S. dedicated storage for equipment

Adjacencies

- locate adjacent to I.S. support / FTE staff station; equally distribute these spaces through building

Special Requirements

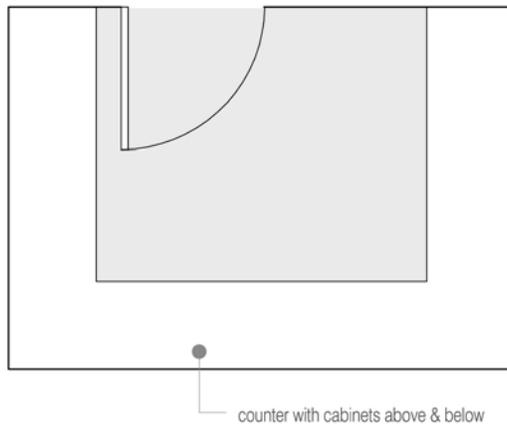
- restricted access to I.S. staff

Architectural Requirements

- floor: vinyl composition tile
- base: rubber
- walls: painted gypsum bd.
- ceiling treatment: acoustical lay-in
- ceiling height (a.f.f. min.): 10'-0" min.
- acoustic treatment:

Mechanical / Electrical Requirements

- refer to Section 6.0 Building Requirements
- natural lighting: none required
- security:
- fire protection:
- plumbing: none required



1.6.2 common **I.S.** dedicated storage

drawing scale: 1/4" per foot
size: 80 sf
notes:

Space Category: administration
I.D. Number: 2.6.1
Room Type: dean's office

General Requirements

- number required (phase 1): 0
- number required (phase 2): 1
- proposed nsf (each): 300
- proposed gsf (each): 480
- assigned capacity: 20
- unassigned capacity: 1
- frequency / hours of use:
- users:

Function / Activities

- office for the dean of the school of business

Adjacencies

- close adjacency to admin reception+waiting area

Special Requirements

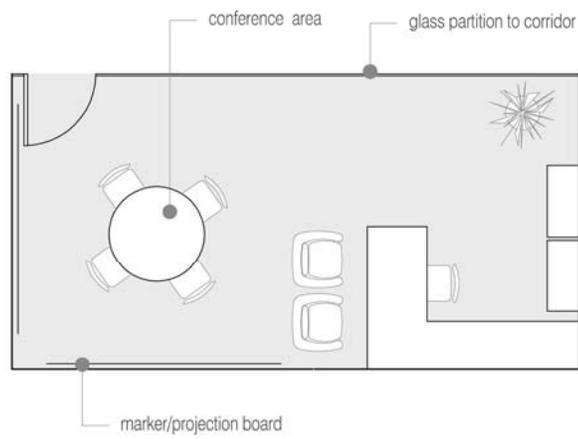
- office: desk, open storage shelves, lockable file cabinet; small conference table for four people; view and natural light if possible

Architectural Requirements

- floor: carpet - broadloom
- base: rubber
- walls: painted gypsum bd.
- ceiling treatment: acoustical lay-in
- ceiling height (a.f.f. min.): 10'-0" min.
- acoustic treatment:

Mechanical / Electrical Requirements

- refer to Section 6.0 Building Requirements
- natural lighting: preferred
- artificial lighting:
- security:
- fire protection:
- plumbing: none required



2.6.1 administration **dean's office**

drawing scale: 1/8" per foot

size: 300 sf

notes:

Space Category: administration
I.D. Number: 2.6.2
Room Type: offices - dean's staff,
external relations, I.S.,
FTE's

General Requirements

- number required (phase 1): 0
- number required (phase 2): 25
- proposed nsf (each): 120
- proposed gsf (each): 192
- assigned capacity: 1
- unassigned capacity: 2
- frequency / hours of use:
- users:

Function / Activities

- office for one (1) full time staff member for administrative work, and dialogue with up to 2 visitors

Adjacencies

- locate with access from quieter zone of circulation space, with good student access; close to some faculty offices, good access to faculty support spaces, and core departmental space

Special Requirements

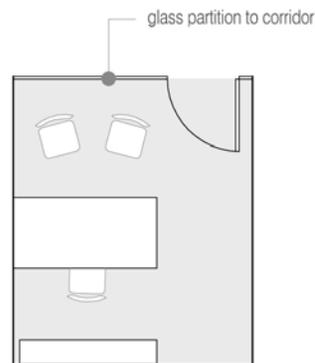
- easily movable file cabinet, desk, and shelf; view and natural light

Architectural Requirements

- floor: carpet - broadloom
- base: rubber
- walls: painted gypsum bd.
- ceiling treatment: acoustical lay-in
- ceiling height (a.f.f. min.): 10'-0" min.
- acoustic treatment:

Mechanical / Electrical Requirements

- refer to Section 6.0 Building Requirements
- natural lighting: preferred
- artificial lighting:
- security:
- fire protection:
- plumbing: none required



2.6.2 administration **staff admin. offices**

(dean's staff / external relations / I.S. / FTE's)

drawing scale: 1/8" per foot

net size: 120 sf

notes:

Space Category: administration
I.D. Number: 2.6.2a
Room Type: reception / waiting

General Requirements

- number required (phase 1): 0
- number required (phase 2): 1
- proposed nsf (each): 320
- proposed gsf (each): 512
- assigned capacity: 2
- unassigned capacity: 4
- frequency / hours of use:
- users:

Function / Activities

- two (2) open staff work stations and waiting area for 4-6 people; this space will be the visible face of the administration suite

Adjacencies

- staff workstations should have direct line of sight to primary entry and waiting area

Special Requirements

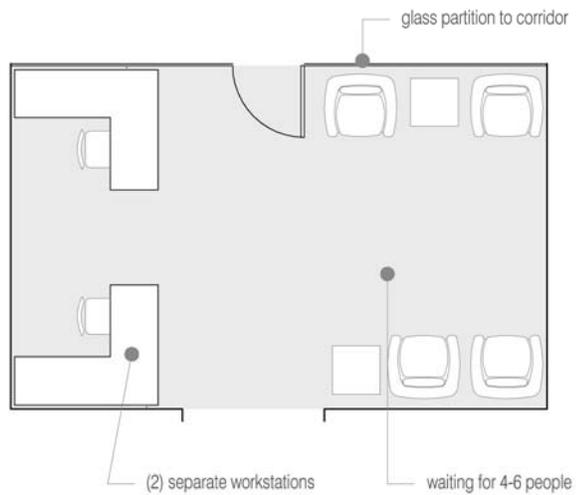
- seating for up to 6 people, end table(s) or coffee table; indirect natural light if possible

Architectural Requirements

- floor: carpet - broadloom
- base: rubber
- walls: painted gypsum bd.
- ceiling treatment: acoustical lay-in
- ceiling height (a.f.f. min.): 10'-0" min.
- acoustic treatment:

Mechanical / Electrical Requirements

- refer to Section 6.0 Building Requirements
- natural lighting: preferred
- artificial lighting:
- security:
- fire protection:
- plumbing: none required



2.6.2a administration **reception/waiting**

drawing scale: 1/8" per foot

size: 320 sf

notes: visible 'face' of admin. suite; waiting area for 4-6 people;
 (2) staff workstations; workstations should have direct line of
 sight to primary entry and waiting area;

Space Category: administration
I.D. Number: 2.6.3
Room Type: conference

General Requirements

- number required (phase 1): 0
- number required (phase 2): 2
- proposed nsf (each): 300
- proposed gsf (each): 480
- assigned capacity: 0
- unassigned capacity: 12
- frequency / hours of use:
- users:

Function / Activities

- administration conference / meeting for 12-14 people; easy transition to scheduled presentation prep use

Adjacencies

- locate adjacent to quiet zone of circulation and administration areas

Special Requirements

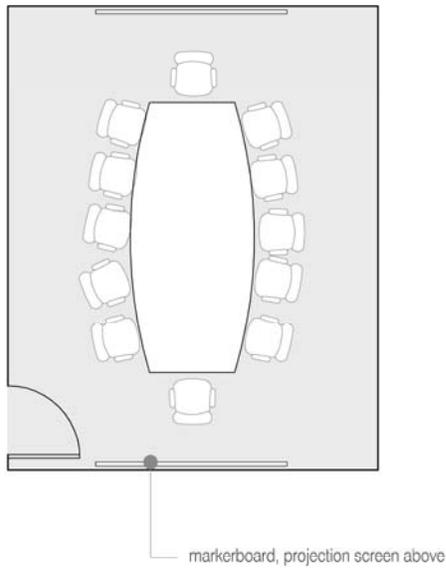
- loose chairs, table sections for alternate configurations; (1) screen / projector; whiteboards at (2) sides of the room

Architectural Requirements

- floor: carpet - broadloom
- base: rubber
- walls: painted gypsum bd.
- ceiling treatment: acoustical lay-in
- ceiling height (a.f.f. min.): 10'-0" min.
- acoustic treatment:

Mechanical / Electrical Requirements

- refer to Section 6.0 Building Requirements
- natural lighting: preferred
- artificial lighting:
- security:
- fire protection:
- plumbing: none required



2.6.3 administration **conference**

drawing scale: 1/8" per foot
size: 300 sf
notes: seats 12

Space Category: administration
I.D. Number: 2.6.4
Room Type: I.S. support / staff station

General Requirements

- number required (phase 1): 0
- number required (phase 2): 2
- proposed nsf (each): 140
- proposed gsf (each): 224
- assigned capacity: 20
- unassigned capacity: 1
- frequency / hours of use:
- users:

Function / Activities

- XX

Adjacencies

- XX

Special Requirements

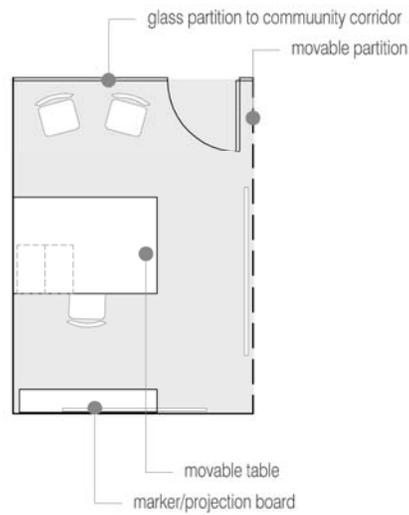
- XX

Architectural Requirements

- floor: carpet - broadloom
- base: rubber
- walls: painted gypsum bd.
- ceiling treatment: acoustical lay-in
- ceiling height (a.f.f. min.): 10'-0" min.
- acoustic treatment:

Mechanical / Electrical Requirements

- refer to Section 6.0 Building Requirements
- natural lighting: none required
- security:
- fire protection:
- plumbing: none required



2.6.4 common **I.S.** support/staff station

drawing scale: 1/8" per foot

net size: 140 sf

notes: part of 'flexible module system'

Space Category: administration
I.D. Number: 2.6.5
Room Type: office / I.S. dedicated storage

General Requirements

- number required (phase 1): 0
- number required (phase 2): 3
- proposed nsf (each): 85
- proposed gsf (each): 136
- assigned capacity: 0
- unassigned capacity: 0
- frequency / hours of use:
- users:

Function / Activities

- XX

Adjacencies

- XX

Special Requirements

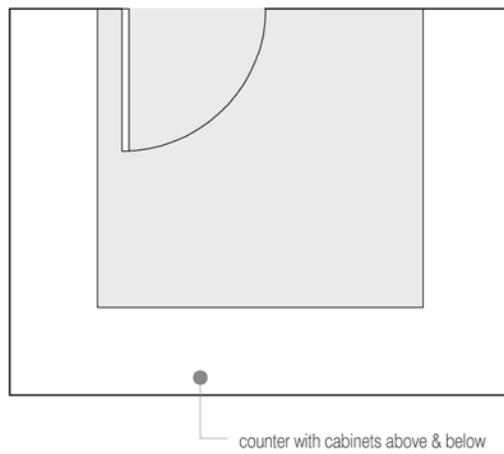
- XX

Architectural Requirements

- floor: vinyl composition tile
- base: rubber
- walls: painted gypsum bd.
- ceiling treatment: acoustical lay-in
- ceiling height (a.f.f. min.): 10'-0" min.
- acoustic treatment:

Mechanical / Electrical Requirements

- refer to Section 6.0 Building Requirements
- natural lighting: none required
- security:
- fire protection:
- plumbing: none required



2.6.5 administration **offices storage** / **I.S. dedicated storage**

drawing scale: 1/4" per foot

size: 85 sf

notes:

Space Category: centers
I.D. Number: 2.7.1
Room Type: behavioral research

General Requirements

- number required (phase 1): 0
- number required (phase 2): 1
- proposed nsf (each): 1800
- proposed gsf (each): 2880
- assigned capacity:
- unassigned capacity:
- frequency / hours of use:
- users:

Function / Activities

- applied research and collaboration with a full time professional staff and part-time student research

Adjacencies

- locate adjacent to high traffic area where visibility from visitors is maximized

Special Requirements

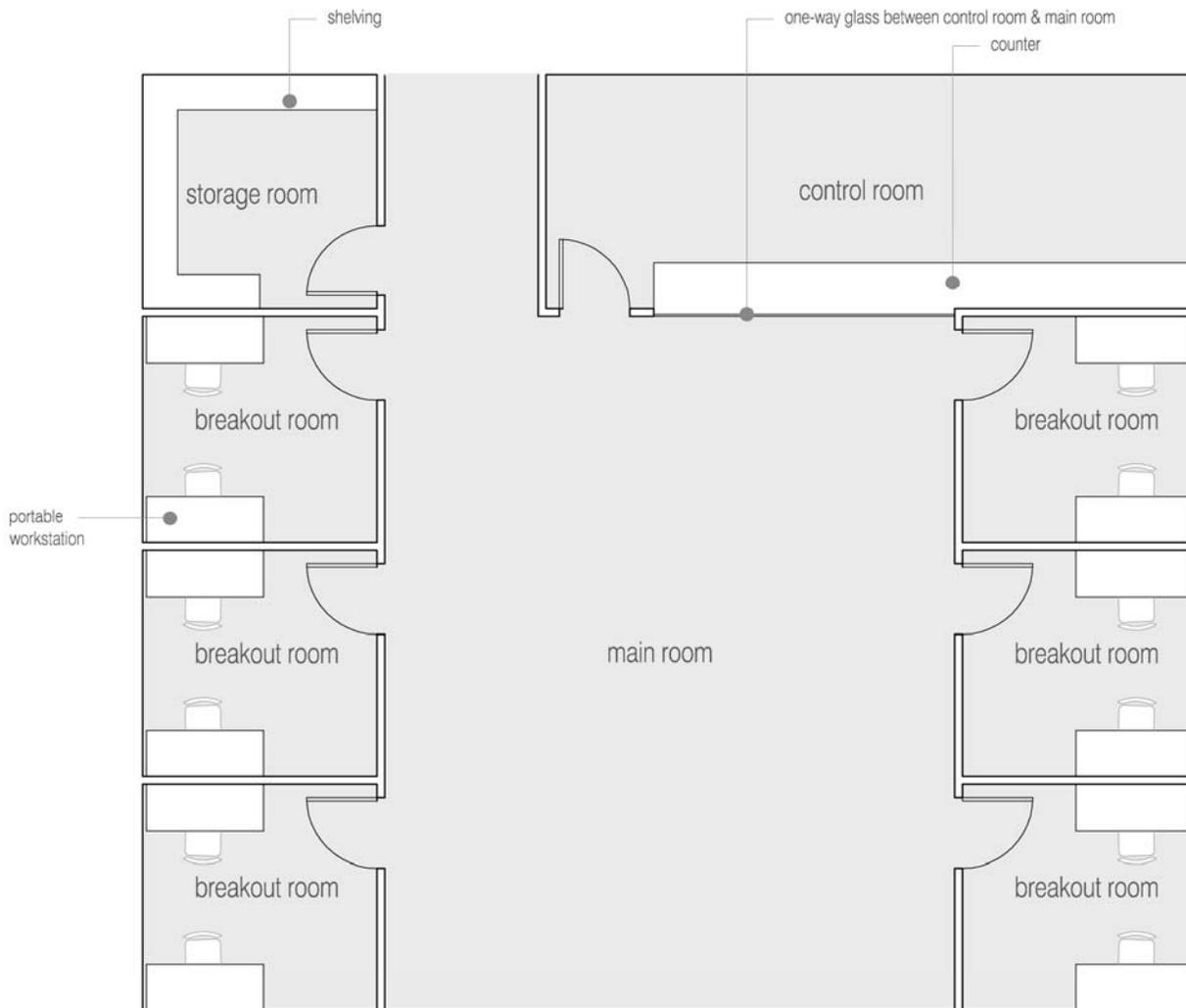
- offices same finishes as faculty offices; glazed storefront system at main room to circulation; projector, screen, and whiteboard in conference; large one-way mirror and intercom; large flat screen monitor

Architectural Requirements

- floor: carpet - broadloom
- base: rubber
- walls: painted gypsum bd.
- ceiling treatment: acoustical lay-in
- ceiling height (a.f.f. min.): 10'-0" min.
- acoustic treatment:

Mechanical / Electrical Requirements

- refer to Section 6.0 Building Requirements
- natural lighting: preferred
- artificial lighting:
- security:
- fire protection:
- plumbing: none required



2.7.1 centers **Behavioral Research Lab**

drawing scale: 1/8" per foot

net size: 1800 sf

notes:

Space Category: centers
I.D. Number: 2.7.2
Room Type: flexible center

General Requirements

- number required (phase 1): 0
- number required (phase 2): 5
- proposed nsf (each): 750
- proposed gsf (each): 1200
- assigned capacity:
- unassigned capacity:
- frequency / hours of use:
- users:

Function / Activities

- applied research and collaboration with a full time faculty professional staff and part-time student research

Adjacencies

- locate adjacent to high traffic area where visibility from visitors is maximized

Special Requirements

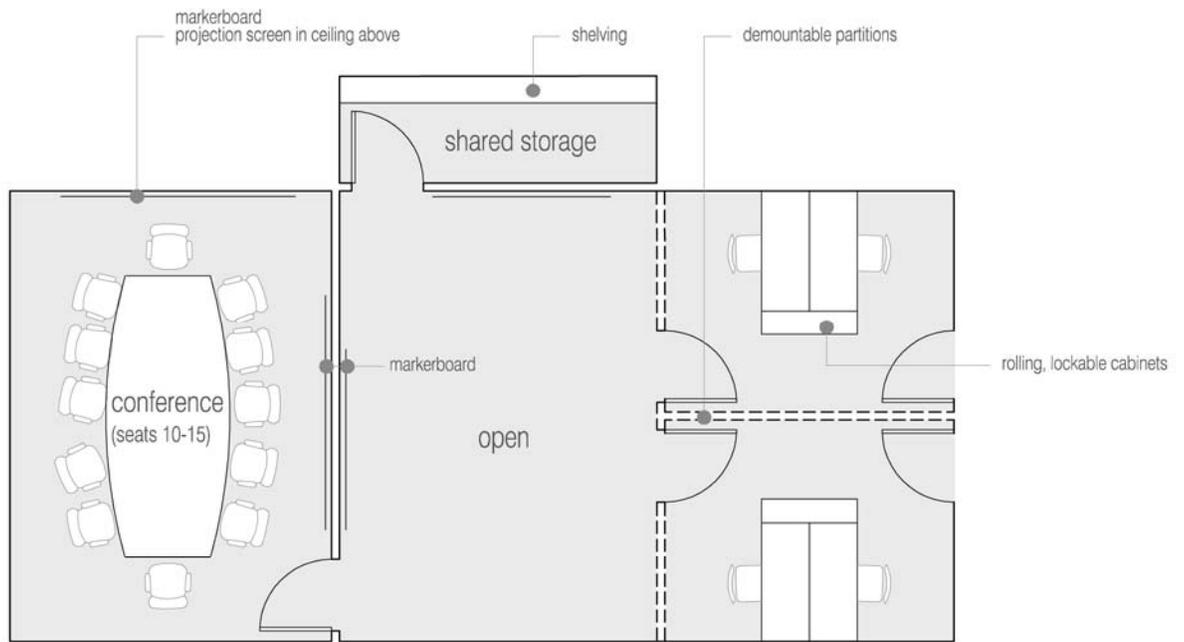
- highly flexible interior construction; offices same finishes as faculty offices; glazed storefront system at main room to circulation; projector, screen and whiteboard in conference if desired; design phase to determine internal required components of each flexible center

Architectural Requirements

- floor: carpet - broadloom
- base: rubber
- walls: painted gypsum bd.
- ceiling treatment: acoustical lay-in
- ceiling height (a.f.f. min.): 10'-0" min.
- acoustic treatment:

Mechanical / Electrical Requirements

- refer to Section 6.0 Building Requirements
- natural lighting: preferred
- artificial lighting:
- security:
- fire protection:
- plumbing: none required



2.7.2 centers **flexible center**

drawing scale: 1/8" per foot

net size: 700-800 sf average

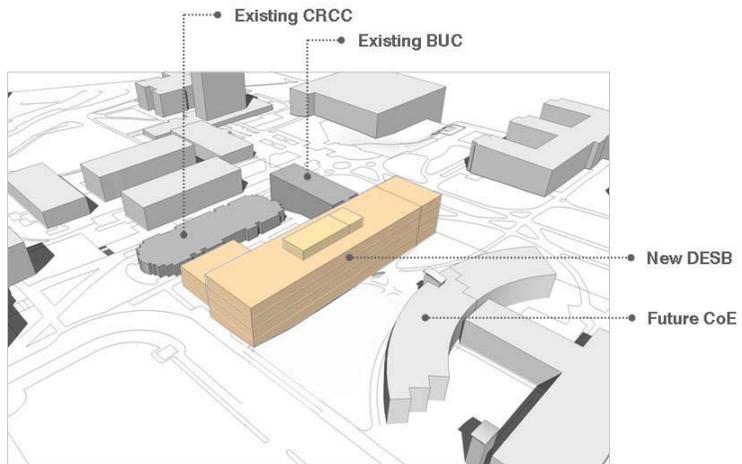
notes: centers are designed to be flexible research centers that generally will accommodate staff, meeting & collaboration space for visiting researchers. Technology needs will be data & video heavy, and should be easily retrofitted to meet transitory research and exhibit needs as they change.

6.0 Building Requirements

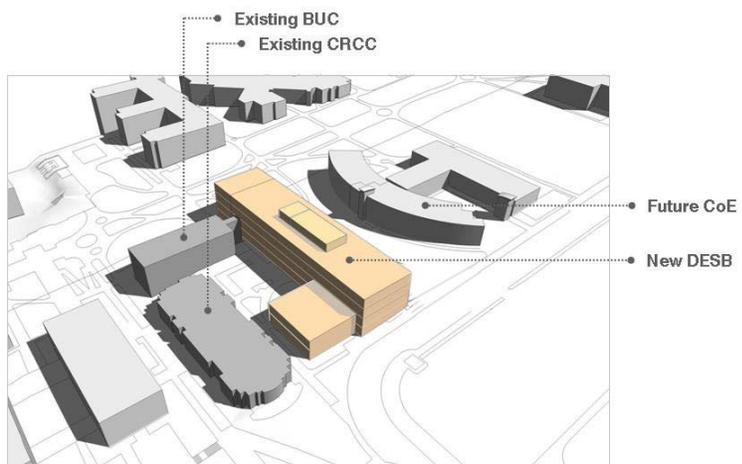
Architectural - Massing

Massing study heights are based on a typical tiered classroom with a 13'-0" ceiling height, plus 5'-6" of structural, mechanical, and lighting, for a projected floor-to-floor height of 18'-6". Studies take into consideration a massing concept for the neighboring College of Education to the east.

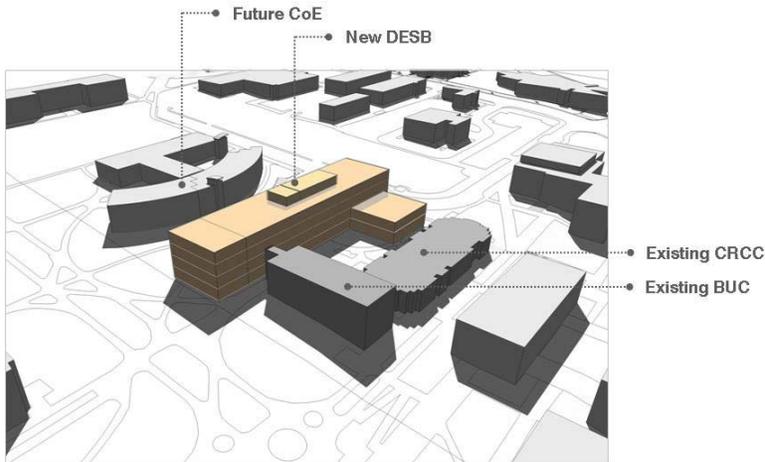
Phase 1 + 2 Aerial and Eye-Level Views:



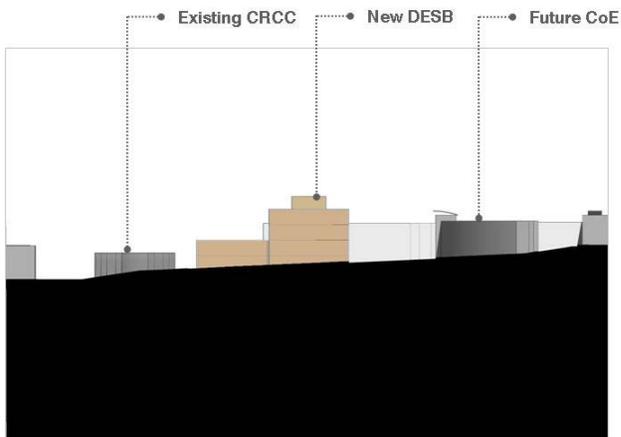
View from southeast



View from southwest



View from northwest



South elevation



View from southwest



View from southeast



View from northeast



View from northwest

Architectural - Sustainability

It is the desire of the David Eccles School of Business to exceed the State of Utah DFCM High Performance Building Energy Design Standards and Requirements.

There is an opportunity that specific donor funding may enable the new project to be designed to USGBC standards. This funding would allow the DESB expansion to apply for a minimum certification level of LEED Gold. Specific sustainability goals should be established by the DESB prior to the beginning of the Design Phase of the project.

Primary sustainable challenges / opportunities are anticipated to be site orientation and building footprint constraints. All sustainable opportunities should align with those outlined in the LEED-NC checklist, and include: additional site opportunities, water efficiency, energy & atmosphere, materials & resources, and indoor air quality.

Exterior Material Possibilities

Exterior material selection should be appropriate for an institutional building with the durability and energy performance characteristics required for a life-span of 50 -100 years. Materials proposed should reflect the image, aspirations, and stature of the David Eccles School of Business, properly and exuberantly expressing the ideals of higher learning, with the underlying idea of substance over style.

The University of Utah does not have specific architectural design standards regarding campus context. The design team is asked to propose materials that are complimentary to surrounding material colors, textures, and types, for review and approval during the process.

Building Systems

General Building systems will be required to meet University of Utah and State of Utah DFCM Design Standards. As a classroom building type, long spans will be required for column-free spaces.

Two elevators will be required: one passenger elevator running from basement level to level 4; and one service elevator running from basement level to the mechanical penthouse at roof level.

In general, all materials and systems should be selected for durability, aesthetics, energy, and sustainability performance as a whole. See the specific discussions and requirements which follow.

Code Analysis / Independent Testing

Independent Testing: Before demolition of existing buildings, a Hazardous Materials Report, completed by the University of Utah, will be required, and necessary removal and protection of materials will occur.

Note: A full code analysis as required by DFCM Design Standards will be required during the course of design.

Applicable Building Code: 2006 IBC
Other Applicable codes include but are not limited to:
University of Utah Design Standards
DFCM Design Criteria
DFCM CADD Criteria
ADA, Americans with Disabilities Act
NFPA, National Fire Protection Association (applicable sections)
UL, Underwriter's Laboratories
Utah State Fire Marshal Laws, Rules, and Regulations

Proposed Floor Areas:

	Phase 1	Phase 2	Totals
Basement	18,685 sf	4,000 sf	22,685 sf
Floor 1	26,621 sf	18,160 sf	44,781 sf
Floor 2	26,621 sf	18,160 sf	44,781 sf
Floor 3	18,685 sf	18,160 sf	36,845 sf
Floor 4	18,685 sf	18,160 sf	36,845 sf
TOTALS	109,297 sf	76,640 sf	185937 sf

Occupancy Type: B, A-3
Construction Type: Type II-A, Fully Sprinklered
Basic Allowable Area = 46,500 sf / floor
Allowable Stories = 4 plus basement

The Phase 1 + 2 Building is allowed as Type II-A Fully Sprinklered single building.

1-HR Fire Resistance required at Structural Frame, Bearing Walls, Floor and Roof construction. No rated corridors required. No point in the building will be more than 150' from a rated exit enclosure.

IBC 1025.12. Seat Stability. In places of assembly, seats shall be securely fastened to the floor. Exception 4: In places of assembly where flexibility of the seating arrangement is an integral part of the design and function of the space and seating is on tiered levels, a maximum of 200 seats shall not be required to be fastened to the floor. Plans showing seating, tiers, and aisles shall be submitted for approval.

Structural Requirements

Foundation System:

Phase I is a multistory structure of about 112,000 total square feet that will be located where the FAMB Building is currently. The foundations for Phase I will be designed to accommodate the new foundations needed for the multistory Phase 2. Phase 2 is of about 76,000 total square feet and will be located where the KDGB Building is currently. The foundations for Phase 2 will be designed to accommodate the new building that will replace the existing KDGB Building.

A soils report for the project is not yet available. However, it is anticipated that the foundation system will be of conventional spot and continuous footings bearing on suitable, natural, undisturbed soils or on compacted fill extending to suitable, natural, undisturbed soils. The allowable soil bearing pressure will likely range from about 2,000 psf to 3,000 psf. The actual allowable soil bearing pressure will be determined by the Soils Engineer. The frost cover to be provided from final exterior grades to the bottom of exterior footings will be a minimum of 36 inches (per University of Utah Design Standards). Interior footings will likely have a minimum embedment depth of about 18 inches below final interior slab on grade elevations.

The interior slabs on grade will be a minimum of 4" thick and will be 5" to 6" thick where needed to resist the inward acting soil loads surrounding the basement area and to also accommodate the loads of mechanical equipment located in the basement. Where mechanical equipment is located, an additional 4" concrete housekeeping curb, attached to the slab on grade, will be placed beneath the equipment. Where needed due to equipment vibrations, an isolation joint is to be placed around the mechanical equipment pads. The slabs on grade will be reinforced with at least 0.001 ratio of deformed reinforcing steel in two directions based upon the gross section of concrete. The slab will likely be placed over 4" of free draining granular fill and appropriate moisture barriers. Slabs will be designed and detailed with control and construction joints spaced such that cracking is minimized.

Elevator pits will need to be incorporated into the foundation design.

The foundation walls surrounding the basement area are expected to be up to about 18' tall and will need to be between 14" thick and 16" thick and have a heavy layer of reinforcing at the inside face. A major utility tunnel is located to the east of the new building. Soldier pile columns and shoring will need to be placed at the west side of the utility tunnel to prevent movement of the existing tunnel

and shallow electrical ductbank during excavation of soils and placement of new foundations.

Although a soils report and an additional trenching study for the specific site is not yet available, a review of past soils reports and trenching studies surrounding the proposed building site indicate that an active fault zone through the proposed building site is unlikely. The fault which is noted as possibly passing through the building site is the East Campus Fault. A final decision as to whether to locate the new building as currently proposed is dependant upon the results of the trenching studies. The new building cannot be placed over the fault.

Cementitious materials for the concrete in the foundations will be required to contain 20% flyash.

Floor System:

The suspended floors of the new building will be of 3.1/2" of lightly reinforced normal weight concrete over 3" composite phosphatized / painted steel deck (6.1/2" total thickness) supported by composite steel beams. The steel beams will range in depth from 16" to 18" for 30' spans. The girders will range in depth from 24" to 27" for 30' spans. There will be an area of long span structure over the classroom areas for the entire length of the building. For these spans of 60', wide flange beams varying in depth from 30" to 36" spaced at 10' o.c. will be used. The beams are deep enough that some mechanical ductwork could be passed through the webs of the beams. The floors are to be designed to limit vibrations to those expected for typical office and educational floors. The steel beams will be supported on steel columns. It is anticipated that the floors will need to be designed to support some heavy miscellaneous loads. The floors will also need to accommodate openings for elevators and mechanical shafts.

Mechanical / Plumbing Requirements

Conform to the latest edition of the following codes and standards, or the requirements defined in this program, whichever is more restrictive:

2006 IBC
2006 IMC
2006 IPC
2006 IFC
2006 IECC

University of Utah Design Standards, April 2006, or most current at beginning of design.

Division of Facilities Construction and Management (DFCM) Design
Criteria, March, 2006
DFCM CADD Criteria, August 2001

AVAILABLE UTILITIES

HIGH TEMPERATURE WATER

High temperature water from the central campus system is available from a 4" main that extends south from manhole L1-1. Note that the portion of this line that extends from the manhole is direct buried, and is scheduled to be replaced in the summer of 2007. Starting at the breezeway that connects Building 074 and 075, the 4" pipe is routed in a tunnel as it continues south towards the existing Building 076.

This pipe will need to be removed and replaced as part of the tunnel demolition.

The main distribution tunnel from the high temperature generators to the campus passes to the east of the building site. Maintain required clearance from the tunnel, and investigate re-locating the expansion loops to the north and south of the buildings so that there is more room to build to the east.

Reference University of Utah Design Standards, Chapter 8, for specific requirements for connections to or modifications of the University's High Temperature Water System.

CULINARY WATER

Extend a 3" culinary line and an 8" fire protection line to the project site from a new 8" line.

Because these lines are on the middle campus zone, it is anticipated that the water pressure is approximately 80 psig.

SANITARY SEWER

A 6" sanitary line serves is presently connected to Building 075, and routes around Building 077. This line should be adequate for the new building.

STORM SEWER

Storm water will be routed to the west and the south.

NATURAL GAS

There is no natural gas demand anticipated for the new building.

GENERAL REQUIREMENTS

TEMPERATURE

Reference University of Utah Design Standards, 6.2.6.1.

Outdoor design temperatures:

winter	0 °F
summer	97 _{DB} / 62 _{WB} °F
cooling tower	70 _{WB} °F

Indoor design temperatures:

Reference Mechanical Space Summary Sheets

HUMIDITY

Humidification is not required in normally occupied spaces, but the spaces should be maintained at 45% maximum in the summer.

SUSTAINABILITY

The University desires that the new David Eccles School of Business demonstrate sustainable design, construction and operation principles. High performance mechanical systems are central to this vision, not only because they directly affect energy consumption, but also water consumption, indoor air quality and thermal comfort. Additionally, those systems, in order to function at their highest level, require commissioning and on-going measurement and verification. This program lists steps that the mechanical designer must take to exceed code-minimum standards in each of those categories, through an integrated design process with all design team members, and a commitment to high-performance design.

PROJECT DOCUMENTATION

Provide a design narrative that includes the following:

- Basis of design, including all information required to prepare the design
- Sequence of operation of all systems, as well as their interaction with other systems
- System description, including operating parameters and assumptions
- Acceptance testing requirements, in tabular form, for use by the installing contractor and verification by the design engineer. This may be incorporated into the commissioning documentation.
- A description of the methods used by the design team to achieve sustainability, including the integrated design process; and a description of the results, i.e. a description of

the sustainable elements included in the design. Include in this section how the requirements of this program were met.

- Results of the energy simulation, with a design energy performance standard for the building

ENERGY EFFICIENCY

Comply with Section 5: High Performance Building Rating System of the DFCM Design Requirements.

DFCM will engage a separate Energy Specialist to perform an energy analysis of the proposed building according to Appendix G of Standard 90.1. The analysis will consider reducing energy use in each of the following categories: lighting, cooling, heating, pumps / cooling tower, internal loads, and external loads.

The design team will be required to attend a Design and Technology Charrette, to evaluate the building design and consider technologies such as daylighting, natural ventilation, evaporative cooling, demand-controlled ventilation using CO₂ or occupancy sensors, green roof, spectrally selective glazings, and other technologies and techniques.

BUILDING ENVELOPE

Reference IECC 2006, Climate Zone 5 for minimum envelope requirements

INTERNAL LOADS

Use the following loads if more specific design information is not available:

People: 250 Btuh, sensible
200 Btuh, latent

Lights: 1.5 watts / ft², overhead

Equipment: 1 laptop PC per person in lecture halls and classrooms
1 desktop PC per seat in offices
1 copier per 10 people in office groups

Modify internal load calculations as required when more specific design information becomes available, in order to maintain indoor design temperatures.

POTABLE WATER CONSUMPTION

Comply with the requirements of University of Utah Design Standards, Chapter 6.

Waterless urinals are not acceptable.

VENTILATION / INDOOR AIR QUALITY

Comply with ASHRAE Standard 62.1-2004, Ventilation for Acceptable Indoor Air Quality, for minimum ventilation requirements. Reset the outdoor air intake flow and / or space or zone airflow as operating conditions change, in accordance with Section 6.2.7 of the Standard, for the zones noted as DCV in the space summaries. Design a ventilation system that results in an air-change effectiveness greater than or equal to 0.9 as determined by ASHRAE 129-1997. Follow recommended design approaches in ASHRAE 2005 Fundamentals, Chapter 32.

Develop and implement an IAQ Construction Management Plan that includes the use of high efficiency filters (Minimum Efficiency Reporting Value (MERV) = 8, as determined by ASHRAE 52.2-1999), at each return air grille for systems used during construction. Provide MERV 5 pre-filters and MERV 13 final filters at central air handlers upon completion of project.

In addition to toilet exhaust, provide separate exhaust system for janitor closets and dedicated copy rooms at the rate of 0.5 cfm / ft², and demonstrate that the rooms are maintained at a negative pressure of 0.03" wg relative to adjoining spaces.

COMMISSIONING

Reference University of Utah Design Standards, Chapter 6, Section 6.2.18, and DFCM Design Requirements for commissioning. Coordinate with commissioning agent retained for the project, and comply with requirements for building commissioning detailed in DFCM Solicitation for Commissioning Services

MEASUREMENT AND VERIFICATION

Install continuous metering equipment for the following uses:

High temperature water Btu consumption at building
Domestic cold water

The University of Utah requires an ultrasonic flow meter, with clamp-on (out of flow) transducers for the high temperature water. The preferred vendor is Panametrics, Model DF868

GENERAL MECHANICAL SYSTEMS DESCRIPTION

Provide central station custom or field built-up air handlers with cooling and heating coils as required to meet minimum ventilation standards. Use backward-inclined centrifugal fans with variable speed control. Locate air handling equipment indoors in a penthouse mechanical room with adequate service clearance. Locate prime-source mechanical equipment (i.e. chillers, pumps) in penthouse mechanical room.

Provide single duct air distribution, with VAV reheat boxes in all zones. Use minimum two row coils in perimeter zones, and single row coils in interior zones. Provide a ducted return air system, and use variable speed return / relief fans.

At a minimum, use constant volume primary, variable volume secondary pumping for the heating water system, variable volume primary only pumping for chilled water, and constant volume primary only pumping for condenser water. Use redundant pumps for all systems.

Provide HOA switches on all pumps and fans

AIR HANDLER

Provide two custom air handlers, for installation in a roof penthouse, as follows:

AH-1: 4" double wall construction

120,000 cfm

5.5" TSP

MERV 7 filter bank, face area = 300 ft²

2 each backward inclined, direct drive plenum fans, 75 HP ea

Heating coil: 5/8" diameter 0.035" thick tubes, 2 rows, 6 fpi,
300 ft² face area

Indirect cooling coil: 5/8" diameter 0.035" thick tubes, 6 rows,
8 fpi, 300 ft² face area

Chilled water coil: 5/8" diameter 0.035" thick tubes, 4 rows,
10 fpi, 300 ft² face area

Direct Evaporative Media: 12" GlasDeck, stainless steel
sump, 240 ft² face area

AH-2: 4" double wall construction

80,000 cfm

5.5" TSP

MERV 7 filter bank, face area = 200 ft²

2 each backward inclined, direct drive plenum fans, 50 HP ea

Heating coil: 5/8" diameter 0.035" thick tubes, 2 rows, 6 fpi,
200 ft² face area

Indirect cooling coil: 5/8" diameter 0.035" thick tubes, 6
rows, 8 fpi, 200 ft² face area

Chilled water coil: 5/8" diameter 0.035" thick tubes, 4 rows,
10 fpi, 200 ft² face area

Direct Evaporative Media: 12" GlasDeck, stainless steel
sump, 160 ft² face area

HEATING WATER

Serve building from campus high temperature water system, with shut off valve and vents and drains as detailed in Chapter 8 of the University of Utah Design Standards. Locate building service, isolation valves and heat exchanger in basement mechanical room,

inside ventilated reinforced concrete vault. Install all pumps and drives outside the vault..

Generate building heating hot water through a shell and tube heat exchanger. Maximum allowable pressure drop on each side of the heat exchanger is 10 ft w.c.

Design heating water transport energy consumption as follows:

Load	Maximum Water Transport Energy (bhp / 1,000,000 Btuh)
Full Load	2.50
50% Load	1.15

CHILLED WATER

Chilled water for the Business Complex is presently provided by a chiller located in the Museum of Fine Arts, with distribution through Building 077, then through 074 and then to 075. Remove Building 075 from the distribution loop, and provide a new chiller that serves both new Building 1 and Building 2.

Provide a single variable speed centrifugal water-cooled chiller, approximately 275 tons capacity, with efficiency detailed below, when tested according to ARI 550 / 590-98 with 44° leaving chilled water, 85° entering condenser water and 3.0 gpm / ton condenser flow rate:

Measure	Chiller Efficiency
COP	4.20
IPLV	4.65

Report equivalent efficiency at actual entering chilled water and entering condenser water temperatures

Design the chilled water transport energy consumption as follows:

Load	Maximum Water Transport Energy (bhp / ton)
Full Load	0.05
50% Load	0.04

COOLING TOWER

Provide ceramic-fill cooling tower, with full load efficiency per table 803.3.2(6) of 2006 IECC, to cool 825 gpm from 90°F to 80°F with 70°F ambient wet bulb temperature.

Locate the tower on grade, potentially between the new building and the existing education building to the east. Design the tower and associated piping so that the tower can be expanded to serve a potential future phase of the Business School if needed, as well as serve the college of education building as part of a future project. Provide constant volume pumping of the condenser water in order to maintain adequate flow over the ceramic media.

Provide chemical water treatment for scale and biological growth in accordance with University Design Guides.

AIR DISTRIBUTION

Document fan sizing calculations with zone by zone load calculations

Document critical path supply duct pressure loss, and show process used to review fittings and duct sizing in order to minimize fan pressure requirements.

Use automatic dampers on exhaust fans in lieu of barometric dampers.

Document that transport energy consumption meets the following criteria:

Load	Maximum Air Transport Energy (bhp / 1,000 cfm)
Full Load	1.0
50% Load	0.30

Require pressure testing of all duct systems in accordance with 2006 IMC

Reference University of Utah Design Standards, 6.2.6.13 – Provide each space with individual room temperature control. Provide zoning plan during schematic design review that indicates proposed zoning plan for review and approval by Campus Planning staff.

SNOWMELT

Provide hot water snowmelt system for steps and approach paths, with dedicated heat exchanger and 40% propylene glycol heat transfer solution.

PLUMBING

Reference University of Utah Design Standards, Chapter 6 for plumbing requirements.

No automatic lavatory or flush valves are allowed.

Provide electric storage heaters for domestic water heating. Do not use high temperature water system as heat source.

Provide water softener for all chilled water and heating water makeup, as well as for domestic hot water. If softener is located in an inaccessible location, provide remote filling option for salt brine.

FIRE PROTECTION

Provide fire sprinkler protection throughout building. System to comply with NFPA, campus fire marshal and State of Utah Fire Marshal requirements.

A fire pump is not anticipated, because the flow and pressure requirements can likely be met from the campus system. Conduct a fire flow analysis per DFCM criteria during the design phase to confirm this assumption.

Provide individual floor control assembly, including zone check assembly, at each floor.

Sprinkler Occupancy Hazard Classifications are as follows:

Office and Public Areas:	Light Hazard.
Large Lecture Hall:	Ordinary Hazard, Group 1
Service Areas:	Ordinary Hazard, Group 1
Mechanical Equipment Rooms:	Ordinary Hazard, Group 1
Building Service Areas:	Ordinary Hazard, Group 1
Electrical Equipment Rooms:	Ordinary Hazard, Group 1
General Storage Areas:	Ordinary Hazard, Group 1

Minimum Density for Automatic-Sprinkler Piping Design: As follows:
(Reduce Design areas with quick response heads when applicable and increase design area as required for pitched ceilings.

Light-Hazard Occupancy:

0.10 gpm over 1500 ft². area

Ordinary-Hazard, Group 1 Occupancy:

0.15 gpm over 1500 ft². area

Ordinary-Hazard, Group 2 Occupancy:

0.20 gpm over 1500 ft². area

Special Occupancy Hazard:

As determined by authorities having jurisdiction.

Maximum Protection Area per Sprinkler: As follows (except as modified by authorities having jurisdiction)

Office Space: 225 / 400 ft²

Storage Areas: 130 / 400 ft²

Mechanical Equipment Rooms: 130 ft²

Electrical Equipment Rooms: 130 ft²

Other Areas: According to NFPA 13 recommendations, unless otherwise indicated

Components and Installation: Capable of producing piping systems with 175-psig minimum working-pressure rating, unless otherwise indicated. All piping and components are Schedule 40 minimum, and of domestic manufacture.

Class I, standpipe system design shall be designed assuming 150 psi available at fire department connection. Pressure and required flow shall be provided by fire pumper truck.

Provide fire sprinkler protection throughout building. System to comply with NFPA 13, campus fire marshal and State of Utah Fire Marshal requirements.

CONTROLS

Provide Direct Digital Control (DDC) system. Reference University of Utah Design Standards, Chapter 6 for general DDC requirements. Integrate the mechanical and electrical systems. Provide microprocessor to microprocessor communication between the DDC and variable frequency drives, chiller, cooling tower, air handler(s), electrical distribution, lighting, emergency generators, UPS system and building power. Additional points shall be made available for non-mechanical / electrical monitoring that may be required by the engineering department.

Provide written sequence of operation on drawings for all systems controlled by the DDC system.

Provide temperature sensors at airside inlet and outlet of all terminal units.

Assume 185 zones in Building 1, and 110 zones in Building 2.

Mechanical Space Summary Sheet Phase 1

Gen	HVAC Requirements										Plumbing Requirements								
	Operating Schedule		Heating Setpoint (°F)	Cooling Setpoint (°F)	Noise Criteria (NCB)	ASHRAE 62.1-2004 Table 6-1 Occupancy Category	DCV	Ventilation			Comments	HW	CW	W/V					
	Days	Hours						(cfm/para)	(cfm/ft²)	Total									
Space List																			
CLASSROOMS																			
200-seat auditorium	Mon - Fri	8:00 a.m. - 4:00 p.m.	72	74	30 - 35	Lecture Classroom	yes	7.5	0.06	1,970									
90-seat tiered case method class	Mon - Fri	8:00 a.m. - 4:00 p.m.	72	74	30 - 35	Lecture Classroom	yes	7.5	0.06	4,940									
40-seat tiered case method class	Mon - Fri	8:00 a.m. - 4:00 p.m.	72	74	30 - 35	Lecture Classroom	yes	7.5	0.06	860									
90-seat flat floor multi-use classroom	Mon - Fri	8:00 a.m. - 4:00 p.m.	72	74	25	Lecture Classroom	yes	7.5	0.06	2,460									
20-seat seminar	Mon - Fri	8:00 a.m. - 4:00 p.m.	72	74	30 - 35	Lecture Classroom	yes	10	0.12	600									
classroom support space	Mon - Fri	8:00 a.m. - 4:00 p.m.	72	74	25	Classrooms (see 9 plus)	yes	5	0.06	130									
STUDENT SPACES																			
study - flexible break-out module	Mon - Fri	8:00 a.m. - 4:00 p.m.	72	74	35 - 40	Office space													
study - dedicated open area	Mon - Fri	8:00 a.m. - 4:00 p.m.	72	74	35 - 40	Office space													
social areas	Mon - Fri	8:00 a.m. - 4:00 p.m.	72	74	25 - 35	Office space													
information exchange	Mon - Fri	8:00 a.m. - 4:00 p.m.	72	74	25 - 35	Office space													
student support spaces	Mon - Fri	8:00 a.m. - 4:00 p.m.	72	74	25 - 35	Office space													
FACULTY																			
accounting faculty	Mon - Fri	8:00 a.m. - 4:00 p.m.	72	74	25 - 35	Office space													
finance faculty	Mon - Fri	8:00 a.m. - 4:00 p.m.	72	74	25 - 35	Office space													
management faculty	Mon - Fri	8:00 a.m. - 4:00 p.m.	72	74	25 - 35	Office space													
marketing faculty	Mon - Fri	8:00 a.m. - 4:00 p.m.	72	74	25 - 35	Office space													
auxiliary full time faculty	Mon - Fri	8:00 a.m. - 4:00 p.m.	72	74	35 - 40	Conference/meeting	yes	5	0.06	500									
phd & associating fac. offices	Mon - Fri	8:00 a.m. - 4:00 p.m.	72	74	35 - 45	Office space													
core departmental offices	Mon - Fri	8:00 a.m. - 4:00 p.m.	72	74	25 - 35	Office space													
faculty support space	Mon - Fri	8:00 a.m. - 4:00 p.m.	72	74	25 - 35	Office space													
STUDENT SERVICES																			
undergrad program advising suites	Mon - Fri	8:00 a.m. - 4:00 p.m.	72	74	23 - 35	Conference/meeting	yes	5	0.06	240									
masters program advising suite	Mon - Fri	8:00 a.m. - 4:00 p.m.	72	74	35 - 45	Lobbies													
career services	Mon - Sat	8:00 a.m. - 10:00 p.m.	72	74	n/a	Storage rooms													
student services shared space	Mon - Sat	8:00 a.m. - 10:00 p.m.	60	60	n/a	Storage rooms													
COMMON																			
public & shared spaces	Mon - Fri	8:00 a.m. - 4:00 p.m.	72	72	n/a	Computer Lab													
general building support																			
ADMINISTRATION																			
information services																			

Mechanical Space Summary Sheet Phase 2

General Description		HVAC Requirements										Plumbing Requirements						
		Quantity	Net Area, Each (ft ²)	Gross Area, Total (ft ²)	Occupants (Per Room)	Operating Schedule		Heating Setpoint (°F)	Cooling Setpoint (°F)	Noise Criteria (NCB)	ASHRAE 62.1-2004 Table 6-1 Occupancy Category	DCV	Ventilation		Comments	HW	CW	W/V
						Days	Hours						(cfm/ft ²)	Outdoor Air Rate (cfm/pers)				
CLASSROOMS																		
80-seat flat floor multi-use classroom	2	2,192	7,307	80	Mon - Fri	8:00 a.m. - 4:00 p.m.	72	74	30 - 35	Lecture Classroom	yes	7.5	0.06	1,640				
110-seat tiered case method classroom	6	2,861	28,610	110	Mon - Fri	8:00 a.m. - 4:00 p.m.	72	74	30 - 35	Lecture Classroom	yes	7.5	0.06	6,670				
20-seat seminar	1	500	833	20	Mon - Fri	8:00 a.m. - 4:00 p.m.	72	74	25	Classrooms (age 9 plus)	yes	10	0.12	300				
classroom support space - Phase 2	8	30	400	1	Mon - Fri	8:00 a.m. - 4:00 p.m.	72	74	35 - 40	Office space		5	0.06	60				
STUDENT SPACES																		
study - flexible break-out module	18	140	4,200	4	Mon - Sat	8:00 a.m. - 10:00 p.m.	72	74	25 - 35	Conference/meeting	yes	5	0.06	610				
study - dedicated open area	4	200	1,333	20	Mon - Sat	8:00 a.m. - 10:00 p.m.	72	74	35 - 40	Office space		5	0.06	480				
social areas	1	1,720	2,867	35	Mon - Sat	8:00 a.m. - 10:00 p.m.	72	74	35 - 45	Lobbies		5	0.06	350				X
information exchange	1	600	1,000	17	Sun - Sat	12:00 a.m. - 12:00 p.m.	72	72	n/a	Computer Lab		5	0.06	150	1			
student support spaces	2	120	400	4	Mon - Sat	8:00 a.m. - 10:00 p.m.	72	74	35 - 45	Lobbies		5	0.06	60				
FACULTY																		
new faculty offices	20	140	4,667	1	Mon - Fri	8:00 a.m. - 4:00 p.m.	72	74	25 - 35	Office space		5	0.06	380				
phd & assoc/visiting fac. offices	7	140	1,633	1	Mon - Fri	8:00 a.m. - 4:00 p.m.	72	74	25 - 35	Office space		5	0.06	130				
faculty support space	1	1,200	2,000	46	Mon - Fri	8:00 a.m. - 4:00 p.m.	72	74	35 - 40	Conference/meeting	yes	5	0.06	350				X
COMMON																		
public & shared spaces	1	1,100	1,833	10	Mon - Sat	8:00 a.m. - 10:00 p.m.	72	74	35 - 45	Lobbies		5	0.06	160				X
general building support	1	770	1,283	-	Mon - Sat	8:00 a.m. - 10:00 p.m.	60	80	n/a	Storage rooms		0	0.12	150				X
ADMINISTRATION																		
deans' offices	13	134	2,900	1	Mon - Fri	8:00 a.m. - 4:00 p.m.	72	74	25 - 35	Office space		5	0.06	240				
information services	10	120	2,000	1	Mon - Fri	8:00 a.m. - 4:00 p.m.	72	72	n/a	Computer Lab		5	0.06	170				
administration office suites	3	340	1,700	5	Mon - Fri	8:00 a.m. - 4:00 p.m.	72	74	25 - 35	Office space		5	0.06	190				
administration general	2	600	2,000	5	Mon - Fri	8:00 a.m. - 4:00 p.m.	72	74	35 - 40	Office space		5	0.06	170				X
administration storage	1	255	425	-	Mon - Fri	8:00 a.m. - 4:00 p.m.	60	80	n/a	Storage rooms		0	0.12	50				
CENTERS																		
centers	6	925	9,250	10	Mon - Sat	8:00 a.m. - 6:00 p.m.	72	74	25 - 35	Conference/meeting	yes	5	0.06	860				X

Electrical System Requirements

Existing Conditions

Site Power service and distribution

Power service and transformer vaults located in the BUC building serves the BUC, KDGB, FAMB building and the CRCC buildings as well as the water pump station immediately north of the BUC building. Since the BUC is intended to be demolished, the existing feeder can be replaced and new transformer vaults can be constructed for the new facilities. However, the CRCC building and the water pump station must be maintained throughout the construction, and any impact to the existing feeder will affect the existing operation.

The transformers for the CRCC building will remain, as they are fed with new 12470 volt system installed in 2000. However, the transformers feeding the KDGB, BUC, and FAMB buildings and the water pump station must be replaced with new as part of the project, to convert from 4160 volt to 12470 volt.

There is a vault in the basement of the BUC #74, with three sets of service transformers that feed the water vault north of the complex, and buildings 74 and 75 (Kendall Garff Building). A service feeder continues through the basement of BUC to the FAMB building vault, where another set of transformers feeds this building, located in the basement of the FAMB. A new service feeder at 12470 volt also passes through the vault of BUC #74 and continues to a vault at the new CRCC building #77, where transformers feed that new facility.

There is a feeder that feeds the museum that is routed from the HTW Plant that may be extended north to the CRCC building, to facilitate construction and demolition. This refeed of the CRCC building should be accomplished early in the Business Building complex, prior to major construction activities.

The Business Building Complex demand loads are as follows:

<i>Building Name/Number</i>	<i>Date of Max Demand</i>	<i>Demand Reading</i>
<i>BUC and KDGB / 74 and 75</i>	07-31-02	266 kW
<i>FAMB / 76</i>	05-31-02	48 kW
<i>CRCC / 77</i>	03-31-03	34 kW

Existing Condition - Telecommunications

The existing telecommunications service originates from a ductbank running northwest of the BUC building, and also west of the CRCC building. The service from the CRCC was installed directly west of the CRCC building, and is not in the way of expansion or demolition plans. Services for the KDGB and FAMB buildings go through the BUC building, so they will need to be relocated prior to demolition of the BUC building. Telephone services originates from a Qwest owned Central switching station located on 1100 east. The phone service is provided through Qwest, through the campus owned ductbank system. The data services are provided through a campus owned fiber optic system, with the data node originating at Marriott Library, north and west of the Business building complex.

Existing Condition – Site Lighting

The site lighting consists of old Sterner hinged base poles, with Globe tops. This old campus standard has recently changed, with newer developments choosing more modern and more efficient luminaries.

Existing Condition – Lighting and controls

The old Business building complex is largely manually switched. There are no lighting control systems.

Existing Condition – Fire Alarm

The existing fire alarm system in the old facilities are old and inadequate.

New Building

Code requirements

The codes and laws that apply to the electrical systems are the latest versions of the following:

National Electric Code (NEC) 2005 (NEC 2008 is expected to be adopted in January 2009)
International Energy Conservation Code (IECC) 2006
International Building Code (IBC) 2006
International Fire Code (IFC) 2006
International Mechanical Code (IMC) 2006
National Fire Code (NFPA) 72 2007
American's with Disabilities Act (ADA) 1991
ADA Application Guide (latest edition)
Underwriters Laboratories (UL)
State of Utah Fire Marshal's requirements R710-4
American National Standards Institute (ANSI) A117.1
University of Utah Design Standards – latest version

The building complex is a mix of assembly and business occupancies. The International Fire Code, for "A3" occupancies, requires a manual fire alarm system with 300 or more. The IFC for "B" occupancies, requires a manual fire alarm system for 500 or more. There is an exception that allows no manual fire alarm if the building is sprinkled with notification appliances that notify occupants during sprinkler flow. However, in the University environment, and because smoke detectors are required by the State Fire Marshall for State owned buildings, the cost of adding manual fire alarm boxes is minimal, and is normally done at the University in these types of occupancies.

The State Fire Marshall requires smoke detectors in all corridors, and in paths of egress.

The IMC requires smoke detection on fan systems, and fan shutdown.

Power service to new facility

It is proposed that a new electrical service be installed for each new building. The new facilities shall be designed for 15 watts per square foot minimum. The University design guidelines require a minimum of 50% space and capacity. 277 / 480 volt service is desired. Dual transformers for 120 / 208 volt and 277 / 480 volt service may be considered.

The service can originate in one of the new manholes recently installed as part of the 12470 volt system improvements project. Manhole MH31-1, located at the northwest corner of the proposed building site, has a new 6 way RAM style vault switch, with 2 spare ways. MH32A, located just south of Orson Spencer Hall, has a new 12470 volt feeder, however, the existing switches are largely full.

A new pad mounted vacuum fault interrupter (VFI) switch, with dielectric medium, shall be installed near the transformer(s). Oil switches and gas switches are not acceptable.

A new transformer(s), should be installed to serve each new facility. The transformers and pad VFI switch must be screened from the public view. Concealed underground vaults under the building are discouraged by the University Electric Shop.

The designer shall include a selective coordination study for the medium voltage service, to determine the overcurrent protection settings at the vacuum fault interrupter. The contractor shall adjust the overcurrent protection settings as part of the commissioning process.

Conduits running from the manholes to the transformer, and from the transformer into the building, shall be concrete encased ductbank, 5 inch size conduit encased in concrete, with red dye, buried a minimum of 36 inches. Provide at least one spare conduit in all runs.

Power Service Accessories

Metering equipment shall be provided at main service switchboard per campus standards.

Phase failure protection shall be provided for motor circuits.

Transient Voltage Surge suppression shall be provided at the main switchboard and the emergency switchboard, and at other selected locations through the facility as determined by the design engineer.

Telecommunications Service to new facility

The telecommunications manhole to the northwest of the facility, which is the original service location and provides direct access to the Marriott Library, is the closest location to obtain phone and fiber service to the new facility.

In addition to the site service, it is proposed that a conduit link be connected between facilities. This conduit link would not be used as the main telecommunications service, but could be used for server connections within the school of Business, or for security intrusion systems or camera systems within the complex buildings. A minimum of (2) 4 inch conduits shall run between the CRCC building and the new buildings.

Conduits running from manhole to the new building shall be concrete encased ductbank – buried at a minimum of 36 inches.

Telecommunications shall terminate in a main distribution frame closet, or in intermediate distribution frame closets, sized according to University guidelines, with a dedicated cooling system that can run 24 hours per day.

Cable tray or conduit homeruns shall distribute horizontal cabling throughout the facility. Open plenum wiring will not be allowed.

For upper floors, a smaller telecommunication closet may be located, preferred to be stacked with 1st floor or basement main telecommunications closet. At a minimum, provide one closet per floor. No telecommunications closet shall be more than 100 meters from all outlet locations.

Wireless access outlets shall be provided so there are reliable wireless access points in all student study areas.

Grounding conductors shall be installed to each telecommunications closet, complete with grounding bus. Provide grounding jumpers to all metal raceways entering the closet. Provide spare holes on grounding bus for campus Netcom to ground their equipment.

Power distribution

Electrical rooms shall be stacked where possible to facilitate future changes and minimize the initial cost of feeder runs. Electrical closets shall have unused wall space for future growth, minimum of 25% free wall space.

All power distribution feeders shall be in conduit, with copper conductors, full size neutrals, with isolated ground and equipment ground conductors per University Design Guidelines. Power panels shall be located within electrical closets, where possible. Electrical closets shall be stacked, and centrally located. Electrical service shall be located as near as possible to the largest mechanical loads, for efficiency and cost savings.

All outlet circuits shall have dedicated neutrals. Shared neutrals are not allowed.

Power outlets shall be installed at student seating areas in each classroom for laptop connections. Power outlets may either be located in fixed millwork, or in the floor, as applicable.

Variable Frequency Drives

The designer shall understand special requirements for Variable Frequency Drives at the University. Refer to design guidelines for further information.

Emergency Power

Batteries are not allowed on new facilities at the University. A new, diesel generator will be required as part of the project. The generator will run egress lighting, telecommunications closet power including 24 hour HVAC for the closets, and the water pump vault. Since the load of the water pump vault is substantial, the campus may fund a portion of the generator cost that relates to the water pump vault. It is proposed that some spare capacity be included in the generator for future expansion into the CRCC building. In addition, the campus is looking at a possible shared cost with the Milton Bennion Hall project -- a feasibility study is currently underway to see if that project can share the same generator.

The generator may be located in the transformer yard area, screened from public view.

The tank shall have a minimum of 12 hours of backup fuel at 100% rated load.

A minimum of two ATS switches is required, one for life safety egress lighting, and the other for auxiliary equipment such as the computer data rooms.

UPS Systems

It is expected that small, rack mounted UPS systems will be provided by the College of Business to backup telephone and data systems for the building. The UPS systems will be backed up by the building diesel engine generator. The UPS systems will be maintained by the department and not by the University Electric Shop.

Outlets

The number and location of outlets shall be coordinated with each space with users and comply with their needs and requirements.

For Instructional Spaces, outlets of sufficient quantity for laptops shall be provided where desired by owner. All data / power outlets in tables in classrooms are to be wired. For Student spaces, outlets shall be provided at all study spaces for laptop connections.

GFI outlets shall be provided for all vending machines and for break rooms, restrooms, roof outlets, and other locations within 6 feet of a sink.

Provide dedicated outlets for all copy machines, laser printers, vending outlets, microwaves, and other high-use equipment.

Provide at least one outlet in each storage and mechanical closet.

Lighting

Wherever possible, the designer shall utilize long life, energy efficient lighting solutions. Four foot T8 or T5 fluorescent lamps, with electronic ballasts, are preferred. T8 lamps shall be premium, greater than 3100 lumens. T8 ballasts shall be premium, high efficiency, with ballast factor less than 0.8.

For smaller fixtures, Biaxial fluorescent, or compact triple tube fluorescent lamps are preferred. Incandescent lamp sources shall be minimized. Where specified, long life low voltage halogen sources, or dimming systems that extend life of the lamps and save energy are preferred.

Lighting solutions shall incorporate automated controls per the latest version of the energy code. This can be timeclock switching systems, or occupancy based switching systems. If occupancy sensors are used, an override switch mounted on the wall will allow the user to turn off the lights for appropriate presentations. In addition, if the occupancy sensors fail, the University can have the immediate option of bypassing the sensor and using the switch only for control purposes. Dual technology occupancy sensors are preferred to help prevent false off and false on operation of the lights. Design Engineer shall include commissioning specifications in the design to commission all lighting control systems, and provide required owner training.

Daylighting controls may be considered in selected areas of the facility.

Touch Screen lighting controls, integrated with audio / visual and window shades, shall be provided. Electrical designer shall carefully coordinate with Technology designer to ensure smooth, problem free, operation.

Provide egress illumination and illuminated exit signs complying with all required codes. As a minimum, 1 footcandle shall be provided for all egress pathways. In addition, provide some illumination on backup generator in restrooms, mechanical rooms, electrical rooms, and communications closets.

Classrooms will require lighting zones organized from the front to the back of the room, and not allowed across the room from side to side.

Conference rooms shall allow darkening of front of room, separate from main lighting controls, to allow for video or other light sensitive presentations.

Illumination levels shall follow the published guidelines of the Illumination Engineering Society, North America (IESNA), and its recommended practices. Specifically, refer to RP1-93 "Office Lighting", RP3-00 "Lighting for Educational Facilities", and RP33-99 "Lighting for Exterior Environments.

Fire Alarm systems

The fire alarm system will consist of manual pullstations, smoke detectors down corridors and paths of egress, and smoke detection on the fan systems exceeding 2000 CFM. Notification devices will be provided per code guidelines. Sprinkler system will be monitored

for flow and tamper. The elevator shall be recalled according to ANSI guidelines.

Card Access and Security Systems

Card Access systems will be specified on select doors, using the Johnson Controls standard at the University. U Card will be involved in all decisions on card access.

CCTV cameras are not part of the project.

Intrusion Detection Security Systems shall be provided at exterior exits, including door contacts on all exterior doors and motion sensors near ground floor entries.

Grounding

Provide grounding equipment conductors in all feeder and branch circuits. Conduit ground is not acceptable. Provide an additional isolated ground conductor in all 120 / 208 branch power panelboard feeders, complete with isolated ground bus, as per University standards.

Provide grounding riser system for all telecommunications closets, complete with grounding bus bars.

Lightning Protection Systems

The designer shall provide a full lightning protection analysis per NFPA guidelines. It is anticipated that with the importance of the facility, an east bench location, and the overall square footage of the facility, the analysis may suggest a lightning protection system be added to the project. The final cost of such a system depends heavily on the construction materials used on the facility. The designer shall consult with the owner to determine if the system is desirable.

Clocks

Provide battery operated, radio frequency self correcting clocks in all public areas.

Sustainable principals

It is desired that where economically feasible, sustainable practices and design shall be employed. Many of the above system descriptions already use energy efficient design practices. The designer shall meet with the DFCM energy coordinator and meet all requirements of the DFCM energy standard.

Electrical designer shall include all commissioning requirements in the electrical specifications required for measurement and verification.

Technology Systems Requirements

Audio / Video Technology

In general, audio and visual systems shall be designed and specified as part of the building construction work, yet coordinated with campus Information Technologies and the College of Business to ensure usability and best practice. Specified systems will be similar in design, function, and operation to other campus facilities to facilitate user friendly operation by faculty as they travel from room to room.

Classroom Technology

Training rooms, classrooms, and gathering places shall incorporate automated learning technologies, with overhead projectors, and central lighting and screen controls. The audio/video equipment will be provided by Instructional Media Services, a department of the University. Lighting and screen controls will be specified by the architect/engineer. Lighting controls shall be located at the teachers lecture area as well as at each entry to each classroom. Lighting circuits shall be zoned or dimmed, to allow some lighting in the audience during overhead projector use.

Cabinets or closets shall be designed for each large lecture hall to house sound / A/V equipment rack. Location shall be nearest the teaching station to allow access to control volume, place source material such as DVD / VHS, etc into the station, and to allow for touch screen control and lap-top plug-in access.

Wireless lapel microphones and lectern mounted microphones shall be provided for instructors. Overhead speakers shall be provided. Surround sound systems are not required. Where audio enhancement systems are specified, ADA wireless listening system headsets shall be provided.

Document cameras are not desired as part of the project, however, plans for future document cameras shall be provided.

Smart whiteboards are not desired in the project.

Motorized window shades are desired where open windows or skylights introduce natural light into the rooms. Motorized shades are also desired for larger windows opening into hallways.

Wireless access shall be provided in addition to wired outlets for student use. In general today, students are using on average 25 wireless connections in each lecture hall in the existing CRCC building. Others are still plugging in.

Student Spaces

Students will be studying / collaborating throughout the building. Small LCD flat screens may be provided in selected locations as information display devices. Wireless access shall be provided throughout these spaces in multiple locations.

Staff Spaces

Staff spaces shall all have wired outlets. Some wireless access shall also be provided.

A location shall be provided for previewing DVD's and VHS tapes outside of the classroom spaces. This faculty space shall include a DVD / VHS player, and flat screen monitor for viewing. Headsets shall be provided.

At least one conference room shall be provided with distant teleconferencing capability, including lighting controls, overhead projector, audience camera, and sound system. This room shall include touch screen controls integrated to all systems.

Information Exchange (trading floor)

Provide technology for a mock trading floor, complete with display for DOW industrial and NASDAQ indexes, small LCD flat screens for showing CNN and other national news channels, and computers at all support spaces.

Wireless access shall be provided throughout the trading floor.

Interview rooms

Provide Wireless access at all interview rooms, in addition to one wired outlet.

At least one interview room shall be provided with video camera taping, and sound recording.

7.0 Cost Model

Introduction

This CBE Budget was based on estimated construction costs prepared by Faithful+Gould, cost consultant, from documents received from Gould-Evans associates, architects as well as conversations with the consultants and owner as to inclusion or exclusions within their scope of work.

This estimate is based upon the measurement of quantities where possible. For the remainder, parametric measurements were used in conjunction with references from similar projects recently estimated by Faithful+Gould.

The construction period for this project assumes a 18-month construction period with escalation time period factors to the start and mid point of construction.

Faithful+Gould has no control over the cost of labor and material, the general contractor's or any subcontractor's method of determining prices, or competitive bidding and market conditions. This opinion of probable cost of construction is made on the basis of experience, qualifications, and best judgment of a professional construction consultant familiar with the construction industry. Faithful+Gould cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from this or subsequent cost estimates.

8.0 Appendix

Contents:

Cost Model Detail



for: Gould Evans Associates

June 29, 2007

PROGRAM ESTIMATE

Salt Lake City Campus, Utah

David Eccles School of Business Replacement and Expansion

Area	TRADE/ DESCRIPTION	UOM	QTY	\$/UOM	\$/SF		SUBTOTAL COST
PHASE 1 CORE and SHELL							
CIVIL AND SITE							
1	Demolition						
	Building demolition FAMB	sf	23,727	\$ 12.75	\$ 2.77		\$ 302,519
							\$ -
1	Sitework						\$ -
	Site Development at new DESB	sf	42,000	\$ 17.15	\$ 6.59		\$ 720,300
	Site Development Basement premium	sf	18,676	\$ 12.00	\$ 2.05		\$ 224,112
	Site Utilities (All are assumed to be within 50lf)						
✓	Domestic Water 10" DIP	Allowance	1	\$ 150,000.00	\$ 1.37		\$ 150,000
✓	Domestic Water 3" PVC	Allowance	1	\$ 50,000.00	\$ 0.46		\$ 50,000
✓	Sewer 6"	Allowance	1	\$ 50,000.00	\$ 0.46		\$ 50,000
✓	Fireline 8" DIP	Allowance	1	\$ 50,000.00	\$ 0.46		\$ 50,000
✓	Utility Tunnel Retrofit allowance (incl elect. & telecom relocate)	Isum	1	\$ 500,000.00	\$ 4.57		\$ 500,000
LANDSCAPE							
2	Landscape and Irrigation						
✓	Landscape and irrigation (included w/ site development)						w/site development
STRUCTURAL							
3	Foundations (concrete spread footings and foundation wall)						
	Basement at 4 story building						
	Assume a continuous 48" x18" footing and 16" x 16'						
✓	Foundation wall w/ 16" x16" pilasters at 30' oc.	lf	590	\$ 750.00	\$ 4.09		\$ 442,500
	Structural Pilaster and Footing at Steel Columns 16" x16"						
✓	pilasters at 30' oc. w/8'x8' x2' pad footing. Also 2 @ ea end wall for intermediate columns.	ea	20	\$ 4,300.00	\$ 0.79		\$ 86,000
✓	Column Pad Footings at interior Columns Long Span 10'x10'x2'	ea	6	\$ 3,700.00	\$ 0.20		\$ 22,200
✓	Column Pad Footings at interior Columns Short Span 6'x6'x2'	ea	6	\$ 1,300.00	\$ 0.07		\$ 7,800



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Area	TRADE/ DESCRIPTION	UOM	QTY	\$/UOM	\$/SF		SUBTOTAL COST
	Assume a continuous 48" x18" footing and 12" x 48"						
✓	Foundation wall	lf	265	\$ 333.33	\$ 0.81	\$	88,333
✓	Pan Stair fill	ea	354	\$ 24.69	\$ 0.08	\$	8,752
3 Slab on Grade							
✓	Basement Slab (assume 5" on 4" gravel fill)	sf	18,724	\$ 5.40	\$ 0.93	\$	101,133
✓	Mechanical Slab (assume 5" on 4" gravel fill)	sf	5,617	\$ 5.40	\$ 0.28	\$	30,340
✓	SOG at 2 story (assume 5" on 4" gravel fill)	sf	8,000	\$ 5.40	\$ 0.40	\$	43,210
3 Slab on Structural Deck							
✓	Lvl 1 - Lvl 4 (assume 6.5" on 3" deck)	sf	74,896	\$ 4.45	\$ 3.09	\$	333,287
✓	Roof (assume 6.5" on 3" deck)	sf	18,676	\$ 4.45	\$ 0.77	\$	83,108
Slab on Structural Deck at 2 story							
✓	Lvl 1 - Lvl 2 (assume 6.5" on 3" deck)	sf	16,000	\$ 4.45	\$ 0.66	\$	71,200
3 Structural Steel							
Columns							
✓	Exterior Columns (W12x120)	tn	101	\$ 3,150.00	\$ 2.95	\$	317,520
✓	Interior Columns (W12x120)	tn	69	\$ 3,150.00	\$ 2.02	\$	217,728
Columns at 2 story							
✓	Exterior Columns (W12x120)	tn	19	\$ 3,150.00	\$ 0.56	\$	60,480
✓	Interior Columns (W12x120)	tn	5	\$ 3,150.00	\$ 0.14	\$	15,120
Girder Beams							
✓	Girder Beams (W 30*108 at 30' oc)	tn	159	\$ 3,150.00	\$ 4.65	\$	500,774
✓	Roof Beams (W30x108 at 30' oc)	tn	40	\$ 3,150.00	\$ 1.16	\$	125,194
Girder Beams at 2 story							
✓	Girder Beams (W30*108 at 10' oc)	tn	41	\$ 3,150.00	\$ 1.21	\$	130,637
Steel Floor Beams							
✓	Floor Beams (W 18*35 at 10' oc)	tn	168	\$ 3,150.00	\$ 4.92	\$	529,200



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June 29, 2007

PROGRAM ESTIMATE

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Area	TRADE/ DESCRIPTION	UOM	QTY	\$/UOM	\$/SF	SUBTOTAL COST
✓	Roof Beams (W18x35 at 10' oc)	tn	42	\$ 3,150.00	\$ 1.23	\$ 132,300
	Steel Beams at 2 story					
✓	Girder Beams (W18*35 at 10' oc)	tn	32	\$ 3,150.00	\$ 0.92	\$ 99,225
	Penthouse Frame					
✓	Columns	tn	12	\$ 3,150.00	\$ 0.37	\$ 39,312
✓	Perimeter Beam	tn	8	\$ 3,150.00	\$ 0.24	\$ 26,208
✓	Intermediate Frame	tn	8	\$ 3,150.00	\$ 0.24	\$ 26,208
	Perimeter Beams					
✓	LVL 2-LVL 4 (W36x280)	tn	330	\$ 3,150.00	\$ 9.67	\$ 1,040,760
✓	Roof (W36x280)	tn	83	\$ 3,150.00	\$ 2.42	\$ 260,190
	Perimeter Beams at 2 story					
✓	LVL 2-LVL 4 (W36x280)	tn	77	\$ 3,150.00	\$ 2.26	\$ 243,432
	Seismic Bracing / Frames					
✓	Brace Frames (K braces)	tn	48	\$ 3,150.00	\$ 1.41	\$ 151,200
	Deck					
✓	Floor Deck Lvl 1-Lvl 4 (3" UU deck)	csf	822	\$ 650.00	\$ 4.96	\$ 534,134
✓	Roof Deck (3" UU Deck)	csf	205	\$ 650.00	\$ 1.24	\$ 133,533
	Deck at 2 story					
✓	Floor Deck Lvl 1-Lvl 2 (3" W deck)	csf	176	\$ 650.00	\$ 1.06	\$ 114,400
✓	Deck at Penthouse roof (1.5" B deck)	csf	40	\$ 650.00	\$ 0.24	\$ 25,740
	Miscellaneous Steel					
	Stairs and Railings					
✓	Riser	ea	354	\$ 750.00	\$ 2.43	\$ 265,846
	Misc Structural Steel Fabrication/Erection					
✓	Allowance	allow	1	\$ 125,000.00	\$ 1.14	\$ 125,000
3	Fireproofing					
✓	Fireproofing all steel and deck (2 hr)	sf	112,898	\$ 4.00	\$ 4.13	\$ 451,592



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June 29, 2007

PROGRAM ESTIMATE

Salt Lake City Campus, Utah

David Eccles School of Business Replacement and Expansion

Area	TRADE/ DESCRIPTION	UOM	QTY	\$/UOM	\$/SF	SUBTOTAL COST
4	Exterior Closure					
	Masonry					
✓	Brick Veneer (common bond) w/ 6" metal stud backup / Dens glas sheathing	sf	24,264	\$ 32.00	\$ 7.10	\$ 776,448
	Glass and Glazing					
✓	1' Solar Gray insulating glass in 4 1/2" x 1 1/2" clear anodized aluminum	sf	16,985	\$ 40.00	\$ 6.22	\$ 679,392
✓	1' Solar Gray insulating glass in Curtain wall frame clear anodized aluminum	sf	7,279	\$ 85.00	\$ 5.66	\$ 618,732
	Metal Siding					
✓	Vertical Panel Metal Siding	sf	3,900	\$ 25.00	\$ 0.89	\$ 97,500
	Roofing					
✓	40Mil EPDM roof on tapered insulation	sf	22,612	\$ 16.00	\$ 3.31	\$ 361,792
✓	Misc. Sheet metal parapet caps and flashings	lf	854	\$ 22.00	\$ 0.17	\$ 18,788
	Waterproofing					
✓	Waterproofing sealant at basement walls to 14'	sf	9,440	\$ 5.00	\$ 0.43	\$ 47,200
4	Vertical Transportation					
	Passenger Elevator					
✓	Basement LVL to LVL 4 70' travel 5 stops	stops	5	\$ 65,000.00	\$ 2.97	\$ 325,000
	Freight Elevator				\$ -	\$ -
✓	Basement Level to Penthouse 88' travel / 6 stops	stops	6	\$ 70,000.00	\$ 3.84	\$ 420,000
						\$ -
5	Mechanical (Core and shell rough in only)					
	Plumbing					
✓	Interior waste and vent, Water main rough in to 5' outside building.	sf	112,039	\$ 6.00	\$ 6.00	\$ 672,234
	HVAC					
✓	Wet Side piping, valves, insulation, specialties, etc.	sf	112,039	\$ 3.00	\$ 3.00	\$ 336,117



for: Gould Evans Associates

June 29, 2007

PROGRAM ESTIMATE

Salt Lake City Campus, Utah

David Eccles School of Business Replacement and Expansion

Area	TRADE/ DESCRIPTION	UOM	QTY	\$/UOM	\$/SF		SUBTOTAL COST
✓	Dry side ductwork, accessories, insulation, diffusers, etc.	sf	112,039	\$ 5.00	\$ 5.00		\$ 560,195
✓	Controls	sf	112,039	\$ 1.50	\$ 1.50		\$ 168,059
✓	General: layout, balance, test, startup, etc.(TI Phase \$)	sf	112,039	\$ 3.00	\$ 3.00		\$ 336,117
✓	275Ton Chiller (screw)	ton	275	\$ 400.00	\$ 1.00		\$ 110,000
✓	825 gpm Cooling Tower (ceramic)	gpm	825	\$ 60.60	\$ 0.46		\$ 49,995
✓	120,000cfm AHU1	cfm	120,000	\$ 4.00	\$ 4.39		\$ 480,000
✓	80,000cfm AHU2	cfm	80,000	\$ 4.00	\$ 2.93		\$ 320,000
	Fire Protection						
✓	Stand Pipes and Mains Bsmt-Lvl 4	sf	112,039	\$ 1.50	\$ 1.50		\$ 168,059
6 Electrical	(Core and shell rough in only)						
	Site Electrical						
✓	Area Lighting and bollard walkway lighting	sf	42,000	\$ 4.00	\$ 1.54		\$ 168,000
	Building Electrical						
✓	Emergency Power/ Generator 750KW w/ 2ea ATS switch	kw	750	\$ 420.00	\$ 2.92		\$ 315,197
✓	Primary Power Distribution	sf	112,039	\$ 3.00	\$ 3.00		\$ 336,117
✓	Secondary Power Distribution	sf	112,039	\$ 4.50	\$ 4.50		\$ 504,176
✓	Lighting and Power core and shell	sf	112,039	\$ 1.70	\$ 2.00		\$ 190,466
✓	Grounding	sf	112,039	\$ 1.50	\$ 1.50		\$ 168,059
✓	Life Safety core and shell	sf	112,039	\$ 1.50	\$ 1.50		\$ 168,059
	Special Systems				\$ -		\$ -
✓	Lightning Protection system	sf	112,039	\$ 3.90	\$ 2.00		\$ 436,952
✓	Audio/Visual core and shell	sf	112,039	\$ 1.50	\$ 1.50		\$ 168,059
✓	Data Communications	sf	112,039	\$ 1.50	\$ 1.50		\$ 168,059
CORE AND SHELL SUB TOTAL			109,298	sf	\$ 165.60		\$ 18,099,296



for: Gould Evans Associates

June 29, 2007

PROGRAM ESTIMATE

Salt Lake City Campus, Utah

David Eccles School of Business Replacement and Expansion

Area	TRADE/ DESCRIPTION	UOM	QTY	\$/UOM	\$/SF		SUBTOTAL COST
PROGRAM SPACE TENANT IMPROVEMENT S							
ARCHITECTURAL PROGRAM			GSF	\$/GSF			SUBTOTAL COST
CLASSROOMS							
✓	200-seat auditorium	sf	5,092	\$ 225.00	\$ 10.48		\$ 1,145,625
✓	80-seat tiered case method classroom	sf	22,350	\$ 180.00	\$ 36.81		\$ 4,023,000
✓	40-seat tiered case method classroom	sf	4,810	\$ 180.00	\$ 7.92		\$ 865,800
✓	80-seat flat floor multi-use classroom	sf	10,960	\$ 140.00	\$ 14.04		\$ 1,534,400
✓	20-seat seminar	sf	1,667	\$ 110.00	\$ 1.68		\$ 183,370
✓	classroom support space - phase 1	sf	1,800	\$ 50.00	\$ 0.82		\$ 90,000
STUDENT SPACES							
✓	study - flexible break-out module	sf	2,333	\$ 90.00	\$ 1.92		\$ 209,970
✓	study - dedicated open area	sf	2,067	\$ 90.00	\$ 1.70		\$ 186,030
✓	social areas - phase 1	sf	8,267	\$ 110.00	\$ 8.32		\$ 909,370
✓	information exchange - phase 1	sf	2,917	\$ 100.00	\$ 2.67		\$ 291,667
✓	student support spaces - phase 1	sf	600	\$ 50.00	\$ 0.27		\$ 30,000
FACULTY							
✓	accounting faculty - phase 1	sf	3,033	\$ 80.00	\$ 2.22		\$ 242,640
✓	finance faculty - phase 1	sf	3,033	\$ 80.00	\$ 2.22		\$ 242,640
✓	management faculty - phase 1	sf	4,667	\$ 80.00	\$ 3.42		\$ 373,360
✓	marketing faculty - phase 1	sf	2,100	\$ 80.00	\$ 1.54		\$ 168,000
✓	auxilliary full time faculty - phase 1	sf	3,267	\$ 80.00	\$ 2.39		\$ 261,360
✓	phd & assoc/visiting fac. offices - phase 1	sf	5,367	\$ 80.00	\$ 3.93		\$ 429,360
✓	core departmental offices - phase 1	sf	2,800	\$ 80.00	\$ 2.05		\$ 224,000
✓	faculty support space - phase 1	sf	3,783	\$ 80.00	\$ 2.77		\$ 302,640



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Area	TRADE/ DESCRIPTION	UOM	QTY	\$/UOM	\$/SF	SUBTOTAL COST	
STUDENT SERVICES							
✓	undergrad. program advising suite - phase 1	sf	2,993	\$ 70.00	\$ 1.92	\$ 209,533	
✓	masters program advising suite - phase 1	sf	2,993	\$ 70.00	\$ 1.92	\$ 209,533	
✓	career services - phase 1	sf	933	\$ 70.00	\$ 0.60	\$ 65,333	
✓	student services shared spaces - phase 1	sf	2,233	\$ 70.00	\$ 1.43	\$ 156,333	
COMMON							
✓	public & shared spaces - phase 1	sf	5,833	\$ 180.00	\$ 9.61	\$ 1,050,000	
✓	general building support - phase 1	sf	2,200	\$ 50.00	\$ 1.01	\$ 110,000	
ADMINISTRATION							
✓	information services - phase 1	sf	1,200	\$ 100.00	\$ 1.10	\$ 120,000	
CENTERS							
✓	centers - phase 1	sf	0	\$ -	\$ -	\$ -	
PROGRAM SPACE TENANT IMPROVEMENTS SUBTOTAL			112,039	sf	\$ 121.69	\$/sf	\$ 13,633,965
TOTAL PROGRAM CONSTRUCTION COST / CORE-SHELL W/ TENANT IMPROVEMENTS					\$ 283.23	\$/sf	\$ 31,733,261
LEED "GOLD" Project certification LEED "GOLD" project certification cost added to the base cost at a range of 4-6% of construction cost		%	5			\$ 1,586,663	
TOTAL PROGRAM CONSTRUCTION COST w/ LEED "GOLD" CERTIFICATION					\$ 297.40	\$/sf	\$ 33,319,924
Escalation Building 1							
		2007 @ 8%				1,777,063	



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Area	TRADE/ DESCRIPTION	UOM	QTY	\$/UOM	\$/SF	SUBTOTAL COST
		2008 @ 10%				3,509,699
		2009 @ 8%				1,029,512
		2010 @ 8%				-
Building 1 Escalated Value					\$ 353.77	39,636,196
	General Conditions/Requirements					3,963,515
TOTAL CONSTRUCTION COST					\$ 389.15	43,599,711



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Area	TRADE/ DESCRIPTION	UOM	QTY	\$/UOM	\$/SF	SUBTOTAL COST	
PHASE 2 CORE and SHELL							
	Demolition	sf	76,642		\$ 5.50	\$ 421,531	
	Sitework	sf	76,642		\$ 18.00	\$ 1,379,556	
	Add relocation for 10" water main	lf	76,642	\$ 104.00	\$ 0.28	\$ 21,460	
	Landscape and Irrigation	sf	76,642		\$ -	Inc	
	Foundations	sf	76,642		\$ 11.35	\$ 869,887	
	Structural Steel	sf	76,642		\$ 47.00	\$ 3,602,174	
	Fireproofing	sf	76,642		\$ 4.13	\$ 316,531	
	Exterior Closure	sf	76,642		\$ 23.71	\$ 1,817,182	
	Vertical Transportation	sf	76,642		\$ 6.79	\$ 520,399	
	Mechanical (Core and shell rough in only)	sf	76,642		\$ 21.12	\$ 1,618,679	
	Fire Protection		76,642		\$ 1.50	\$ 114,963	
	Electrical (Core and shell rough in only)	sf	76,642		\$ 21.64	\$ 1,658,533	
CORE AND SHELL SUB TOTAL			76,642		\$ 161.02	\$ 12,340,895	
PROGRAM SPACE TENANT IMPROVEMENT S							
	ARCHITECTURAL PROGRAM						
	Gross square footage		76,642		\$ 124.74	\$ 9,560,416	
PROGRAM SPACE TENANT IMPROVEMENTS SUBTOTAL			76,642	sf	\$ 121.69	\$ 9,560,416	
TOTAL PROGRAM CONSTRUCTION COST / CORE-SHELL W/ TENANT IMPROVEMENTS					\$ 285.76	\$/sf	\$ 21,901,311
	LEED "GOLD" Project certification						
	LEED "GOLD" project certification cost added to the base cost at a range of 4-6% of construction cost	%	5			\$ 1,095,066	
TOTAL PROGRAM CONSTRUCTION COST w/ LEED "GOLD" CERTIFICATION					\$ 300.05	\$/sf	\$ 22,996,376



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Area	TRADE/ DESCRIPTION	UOM	QTY	\$/UOM	\$/SF	SUBTOTAL COST
	Escalation Building 2					
	2007 @ 8%					1,226,473
	2008 @ 10%					2,422,285
	2009 @ 8%					2,131,611
	2010 @ 8%					2,302,140
	2011 @ 8%					1,243,155
	Building 2 Escalated Value				\$ 421.73	32,322,041
	General Conditions/Requirements					3,232,715
	TOTAL CONSTRUCTION COST				\$ 463.91	35,554,756