

MEMORANDUM

TO: University Facilities Planning Board: Joe Fedock - Chair, Walt Banziger - Vice Chair, Jim Becker, Kurt Blunck, Allyson Bristor, Jeff Butler, ASMSU President, Michael Everts, Mandy Hansen, Jeff Jacobsen, Patricia Lane, Terry Leist, Tom McCoy, Jim Rimpau, Tom Stump, Joe Thiel – ASMSU, Jim Thull, Allen Yarnell, Brenda York

FROM: Victoria Drummond, Assoc. University Planner, Planning, Design & Construction

RE: **July 19, 2011**, meeting of the University Facilities Planning Board to be held in the **Facilities Meeting Quonset** at **3:30 pm**

ITEM No. 1 – APPROVAL OF NOTES

Approval of the draft notes from the July 5, 2011.

ITEM No. 2 – EXECUTIVE COMMITTEE REPORT

Report on any current Executive Committee actions.

ITEM No. 3 – CONSENT AGENDA -

ITEM No. 4 – INFORMATIONAL – LRBP Presentation and Discussion

Presenter – Walt Banziger (Presentation packet emailed July 8, 2011)

ITEM No. 5 – RECOMMENDATION – Part 1 - Recommendation for Wilson Writing Center presentation of project concept

Presenter – Joe Bleehash

Part 2 – Recommendation of Academic Building R&R Fund to fund the project

Presenter – Walt Banziger

HORIZON ITEMS

- External Building Signage Policy
- Staging Discussion
- Seminar Materials
- Master Planning Issues
- Revisit and Update Policies
- HBO5 Amendment for lab Facility
- Smoking Problems

VCD/aw

PC:

President Cruzado

ASMSU President

Bonnie Ashley, Registrar

Jody Barney, College of Agriculture

Pat Chansley, Provost Office

Julie Kipfer, Communications

Victoria Drummond, Facilities PDC

Lisa Duffey, College of Agriculture

Heidi Gagnon, VP Admin & Finance

Diane Heck, Provost Office

Jennifer Joyce, Planning & CIO Office

Linda LaCrone, VP Research Office

Shari McCoy, Presidents Office

Becky McMillan, Auxiliary Services

Robert Putzke, MSU Police

JoDee Palin, Arts & Architecture

Martha Potvin, Provost Office

Long Range Building Program Process Presentation



University Facilities Planning Board
July 19, 2011

State/Legislative LRBP Process



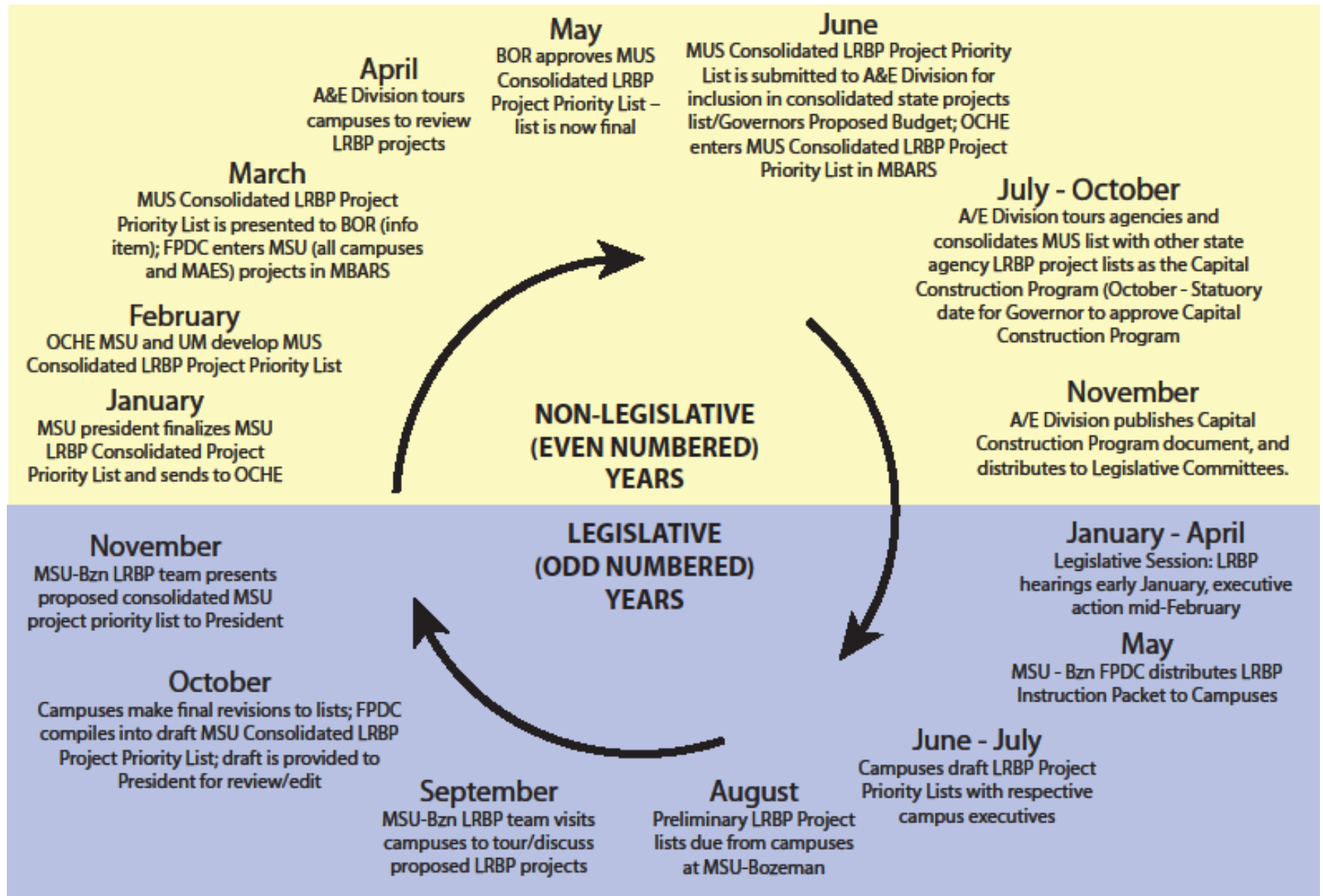
The Long Range Building Program is a continuous process.

MSU Facilities Planning, Design & Construction (FPDC) coordinates MSU's LRBP process with the four campuses and Montana Agricultural Experiment Station (MAES).

Key Points of LRBP Process

- OCHE expects MSU/UM to follow similar processes
- Each stage & all LRBP projects reviewed by MSU President
- FPDC centrally coordinates for MSU campuses & MAES
- OCHE/MSU LRBP Team tours each campus bi-annually
- FPDC submits MSU Consolidated LRBP Priority Project List to OCHE/BOR/A&E Division
- OCHE/MSU/UM negotiates *MUS Consolidated LRBP Project Priority List*
- FPDC submits MSU's 3-bienna list to A&E Division

LRBP Continuous Planning Process



MSU LRBP Process Schedule

2011



Legislative (Odd) Year

- **January – April:** Legislative Session. FPDC follows LRBP Bill development and respond to information requests
- **May:** FPDC sends instruction packet to campuses and MAES
- **June-July:** Campuses draft LRBP project priority inventory list with respective campus executives
- **August:** Campuses submit draft LRBP project priority inventory lists to FPDC; FPDC meets with President Cruzado to develop initial draft of MSU Consolidated LRBP Project Priority List (all campuses)
- **September:** OCHE/MSU LRBP Team tours all campuses and reviews projects with campus CEO/CFO
- **October:** Campuses make final revisions to priority lists; and President Cruzado revises draft MSU Consolidated LRBP Project Priority List with input from VP's
- **November:** President Cruzado presents draft MSU Consolidated LRBP Project Priority List to all MSU executives in conjunction with Cat/Griz BOR meeting in Bozeman

MSU LRBP Process Schedule

2012



Non-Legislative (Even) Year

- **January:** MSU LRBP Team submits final MSU Consolidated LRBP Project Priority List to OCHE
- **February:** OCHE MSU and UM develop *Draft MUS Consolidated LRBP Project Priority List*
- **March:** *Draft MUS Consolidated LRBP Project Priority List* is presented to BOR (info item); FPDC enters MSU (all campuses and MAES) projects in MBARS
- **April:** A&E Division tours campuses to review LRBP projects
- **May:** BOR approves *MUS Consolidated LRBP Project Priority List* – list is final
- **June:** *MUS Consolidated LRBP Project Priority List* is submitted to A&E Division for inclusion in consolidated state projects list/Governors Proposed Budget; OCHE enters *MUS Consolidated LRBP Project Priority List* in MBARS

LRBP Bozeman Campus Process

May – July 2011



- **May 13:** FPDC distributes MSU LRBP Instruction Packet to campuses and MAES
- **May 16-20:** LRBP Team meets with MAES Director to update previous project list
- **May 21-June 1:** FPDC collects and collates potential projects from available sources: Capital Projects List; Major Maintenance Lists; FCI Deficiency Reports; previous LRBP List; etc.
- **June 3-17:** FPDC meets with President Cruzado to develop initial project priority inventory list
- **June 20-27:** President Cruzado shares initial project priority inventory list with VP's at PEC
- **July 6:** President Cruzado presents initial project priority inventory list to University Council (as information/input item)
- **July 20:** FPDC presents MSU-Bozeman's initial LRBP project priority inventory list to Staff Senate (Faculty Senate, Professional Council, ASMSU & Facilities Advisory Committee may receive electronically since no scheduled meetings during summer or schedule September presentations)

LRBP Bozeman Campus Process

August 2011 – January 2012



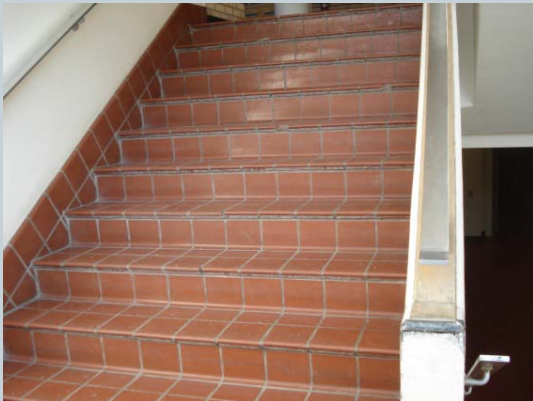
- **August 2:** FPDC presents initial MSU Bozeman Project List to UFPB (info item)
- **August 19:** FPDC receives a project list from each campus
- **September:** FPDC meets with President Cruzado to develop initial draft of MSU Consolidated LRBP Project Priority List (all campuses)
- **September:** OCHE/MSU LRBP Team conducts campus visit with MSU and MAES at Bozeman Campus
- **October:** President Cruzado refines draft MSU Consolidated LRBP Project Priority List with input from VP's
- **November 17-18:** President Cruzado presents draft MSU Consolidated LRBP Project Priority List to all MSU executives in conjunction with Cat/Griz BOR meeting in Bozeman
- **December-January 15:** President Cruzado receives input from campuses
- **January 20:** FPDC submits final MSU Consolidated LRBP Project Priority List to OCHE

LRBP Project Priority Ranking Guides



General hierarchy of project priority ranking rationale

1. Health and Life/Safety
2. Major Maintenance of Building/Utility Systems
3. Code Compliance
4. Operational Efficiency/Savings
5. Adaptive Renovation
6. New Construction
7. Planning (Preliminary Design, Construction Estimates)
8. Authority Only



MSU's 2011 Consolidated LRBP Top Projects



CASH Project List (\$15,004,500)

1. Cooley Lab Energy & HVAC Renovations – Bozeman Campus - \$1,500,000
2. MAES Field Research/Outreach Centers Projects – Statewide - \$1,000,000
3. Library Renovation – Billings Campus - \$1,620,000
4. Hagener Science Center Renovation – Havre Campus - \$2,100,000
5. Energy Conservation Projects – All Campuses - \$5,000,000
6. Classroom Renovations Projects – Bozeman Campus - \$2,000,000
7. Roof Replacement Priority 1 – Great Falls Campus - \$584,500
8. Roof Replacement /Maintenance – All Campuses & MAES - \$1,200,000

Potential Bonded Project List (\$66,100,000)

1. Science and Instructional Tech Center – Billings Campus - \$14,750,000
2. Auto Technology Center- Northern Campus - \$7,350,000
3. Reid Hall Adaptive Renovation – Bozeman Campus - \$38,000,000
4. MAES Field Research/Outreach Centers Projects – Statewide - \$4,000,000
5. Roof Replacement – Great Falls Campus - \$2,000,000

Historical Appropriations

1997 – 2011



MSU State Appropriated Cash & Bond LRBP Funds											
Legislative Session	Bozeman		MAES		Billings w/ COT		Northern		GF COT		Total
	\$	%	\$	%	\$	%	\$	%	\$	%	
1997 - 55th	\$6,814,913	33%	-	0.0%	\$8,767,400	42%	\$1,171,550	6%	\$4,012,350	19%	\$20,766,213
1999 - 56th	\$8,566,000	88%	-	0.0%	\$635,000	7%	\$536,000	6%	\$0	0%	\$9,737,000
2001 - 57th	\$3,829,029	31%	\$1,000,000	8%	\$3,331,298	27%	\$4,202,260	34%	\$18,700	0%	\$12,381,286
2003 - 58th	\$378,600	35%	-	0.0%	\$448,832	41%	\$228,358	21%	\$27,710	3%	\$1,083,500
2005 - 59th	\$6,497,468	21%	\$2,489,217	8%	\$10,065,050	32%	\$1,311,180	4%	\$11,042,000	35%	\$31,404,915
2007 - 60th	\$37,396,800	72%	\$5,000,000	10%	\$5,329,300	10%	\$948,400	2%	\$3,098,000	6%	\$51,772,500
2009 - 61st	\$9,224,820	56%	\$1,141,301	7%	\$2,486,757	15%	\$1,186,805	7%	\$2,358,817	14%	\$16,398,500
2011 - 62nd	\$875,000	100%	\$0	0%	\$0	0%	\$0	0%	\$0	0%	\$875,000
Total Funds	\$73,582,630	51%	\$9,630,518	7%	\$31,063,636	22%	\$9,584,553	7%	\$20,557,577	14%	\$144,418,914

State Supported FCI Sq Ft	54.4%		7.8%		21.5%		9.7%		6.7%	100%
Cost Replacement Value	54.7%		9.3%		20.2%		10.6%		6.2%	100%
Annual FTE (FY08)	61.8%		-		24.5%		6.5%		7.2%	100%

MSU State Appropriated Cash & Bond LRBP Funds											
Legislative Session	Bozeman		MAES		Billings w/ COT		Northern		GF COT		Total
	\$	%	\$	%	\$	%	\$	%	\$	%	
1997 - 55th	\$6,814,913	33%	-	0.0%	\$8,767,400	42%	\$1,171,550	6%	\$4,012,350	19%	\$20,766,213
1999 - 56th	\$8,566,000	88%	-	0.0%	\$635,000	7%	\$536,000	6%	\$0	0%	\$9,737,000
2001 - 57th	\$3,829,029	31%	\$1,000,000	8%	\$3,331,298	27%	\$4,202,260	34%	\$18,700	0%	\$12,381,286
2003 - 58th	\$378,600	35%	-	0.0%	\$448,832	41%	\$228,358	21%	\$27,710	3%	\$1,083,500
2005 - 59th	\$6,497,468	21%	\$2,489,217	8%	\$10,065,050	32%	\$1,311,180	4%	\$11,042,000	35%	\$31,404,915
2007 - 60th	\$37,396,800	72%	\$5,000,000	10%	\$5,329,300	10%	\$948,400	2%	\$3,098,000	6%	\$51,772,500
2009 - 61st	\$9,224,820	56%	\$1,141,301	7%	\$2,486,757	15%	\$1,186,805	7%	\$2,358,817	14%	\$16,398,500
2011 - 62nd	\$875,000	100%	\$0	0%	\$0	0%	\$0	0%	\$0	0%	\$875,000
Total Funds	\$73,582,630	51%	\$9,630,518	7%	\$31,063,636	22%	\$9,584,553	7%	\$20,557,577	14%	\$144,418,914

State Supported FCI Sq Ft	54.4%		7.8%		21.5%		9.7%		6.7%	100%
Cost Replacement Value	54.7%		9.3%		20.2%		10.6%		6.2%	100%
Annual FTE (FY08)	61.8%		-		24.5%		6.5%		7.2%	100%

2001 and 2003 MUS MSU Share estimated - split to campuses based on 2009 CRV estimates w/out MAES: 60.27% Bozeman; 22.29% Billings/COT; 10.64% Northern; 6.80% Great Falls COT

2001 does not include half of 150K master plan

2001, 2003, 2009 do not include statewide-A&E managed roof appropriations

2005 includes \$3.5 million for Gaines Hall Renovation

2005, 2007 includes MUS A&E Managed Roof funds used on the various campuses

2007 includes \$28.5 million for Gaines Hall Renovation

2011 does not include allocation of \$530K for Fire Protection Systems. \$875K for Hazard Mitigation is pending resubmittal of FEMA grant award.

MSU LRBP Appropriations History

Updated June 28, 2011

CAMPUS			LRBP Funds			Other Funds or Authority-Only	Grand Total
			Bonds	Cash	Total State Funds		
Bozeman	2001	57		3,663,286	3,663,286	10,059,455	13,722,741
	2003	58		133,000	133,000	17,650,000	17,783,000
	2005	59	3,500,000	2,997,468	6,497,468	37,250,000	43,747,468
	2007	60		37,396,800	37,396,800	8,500,000	45,896,800
	2009	61		9,224,820	9,224,820	14,003,700	23,228,520
	2011	62		875,000	875,000	7,075,000	7,950,000
Total			3,500,000	54,290,374	57,790,374	94,538,155	152,328,529
MSU-Billings	2001			3,270,000	3,270,000		3,270,000
	2003			358,000	358,000		358,000
	2005		9,000,000	1,065,050	10,065,050		10,065,050
	2007			5,329,300	5,329,300		5,329,300
	2009			2,486,757	2,486,757	556,050	3,042,807
	2011			0	0	0	0
Total			9,000,000	12,509,107	21,509,107	556,050	22,065,157
MSU-Northern	2001			4,173,000	4,173,000	3,000,000	7,173,000
	2003			185,000	185,000		185,000
	2005			1,311,180	1,311,180		1,311,180
	2007			1,558,400	1,558,400		1,558,400
	2009			1,186,805	1,186,805	265,375	1,452,180
	2011			0	0	0	0
Total			0	8,414,385	8,414,385	3,265,375	11,679,760
Great Falls COT	2001				0		0
	2003				0		0
	2005		11,000,000	42,000	11,042,000		11,042,000
	2007			3,098,000	3,098,000		3,098,000
	2009			2,358,817	2,358,817	669,675	3,028,492
	2011			0	0	0	0
Total			11,000,000	5,498,817	16,498,817	669,675	17,168,492
MAES	2001			1,000,000	1,000,000	1,000,000	2,000,000
	2003				0		0
	2005		500,000	1,989,217	2,489,217		2,489,217
	2007			5,000,000	5,000,000		5,000,000
	2009			1,141,301	1,141,301	255,200	1,396,501
	2011			0	0	0	0
Total			500,000	9,130,518	9,630,518	1,255,200	10,885,718
Grand Totals			24,000,000	89,843,201	113,843,201	100,284,455	214,127,656

Notes

2001, 2003, 2009 Do not include allocations from statewide-A&E managed roof appropriations
 2009 Authority Only per Campus = the % of Stimulus Authority Only

Summary/Share Comparison

MSU CAMPUS	Total State Funds	% of Total (2001-11)	Campus % of Total FCI CRV
Bozeman	\$57,790,374	50.76%	54.68%
Billings/COT	\$21,509,107	18.89%	20.22%
MSU Northern	\$8,414,385	7.39%	9.65%
MSU-GTF-COT	\$16,498,817	14.49%	6.17%
MAES	\$9,630,518	8.46%	9.28%

LRBP FACTS

Funding:

The cash available for the 2011 Session HB5 was only \$2,420,000 [primarily from cigarette tax revenue]

Project Prioritization Considerations:

- Health/Life Safety
- Major/Deferred Maintenance
- Code Compliance
- Operational/Energy Efficiency/Savings
- Adaptive Renovations
- New Construction

Governor's Action:

The Governor is responsible for submitting a proposed Capital Construction Program (CCP) to the legislature. The CCP may propose relying solely on available cash revenues or may propose borrowing funds (bonded) that will require continuing debt service payments. [The CCP is compiled by the executive branch with assistance from the state Architecture & Engineering Division, with consideration given to the lists submitted by all government agencies – including the Montana University System.]

Legislative Action:

The legislature may work from the Governor's CCP, or construct its own list of projects. The legislature often chooses to substantially alter, increase, decrease or even eliminate the CCP.

Background

The state's Long Range Building Program (LRBP) is a statutorily-mandated, legislative process to develop and define the state's biennial Capital Construction Program (CCP). For MSU, the LRBP is a continuous, cyclical planning process. MSU Facilities Planning Design & Construction (FPDC) coordinates the LRBP process for MSU, its four campuses and the Montana Agricultural Experiment Station (MAES). Both the Montana University System and the legislature expect MSU and UM to follow similar LRBP processes. Projects that are eventually funded by the legislature are then executed by the state's Architecture & Engineering Division in collaboration with MSU FPDC.

Overall LRBP Process

- May (odd years) - FPDC sends the LRBP Instruction Packet to all MSU campuses and MAES.
- May-June (odd years) – All campuses follow their internal processes to develop and refine their proposed LRBP Project Priority Lists.
- August (odd years) – Campuses submit their draft LRBP Project Priority Lists to FPDC.
- Sept-Oct (odd years) - FPDC reviews the lists with President Cruzado to develop an initial draft MSU Consolidated LRBP Project Priority List (for all campuses).
- November (odd years) – President Cruzado presents draft MSU Consolidated LRBP Project Priority List to all MSU executives in conjunction with Cat/Griz Board of Regents (BOR) meeting in Bozeman.
- February (even years) – The Commissioner of Higher Education (CHE), MSU and UM meet to develop a draft Montana University System Consolidated LRBP Project Priority List for final approval by the BOR at their May meeting.
- June (even years) – Projects approved by the BOR are entered into the state's computer system for consideration by the Governor for the next legislative session.

MSU Bozeman Campus LRBP Process

- May-June (odd years) – FPDC collects and collates potential projects from available sources – e.g., Capital Projects Lists; Major Maintenance Lists; Facilities Condition Inventory Deficiency Reports; previous LRBP Lists; etc.
- June (odd years) – FPDC meets with President Cruzado to develop an initial/draft project inventory.
- June (odd years) – President Cruzado shares initial project inventory with VP's at the President's Executive Council (PEC).
- July (odd years) – President Cruzado presents initial project inventory to University Council (for information/input).
- July (odd years) – FPDC presents initial project inventory to other campus governance groups (electronically to groups that do not meet during the summer), including the University Facilities Planning Board, and collects feedback for consideration.
- August (odd years) – The MSU Bozeman Campus list is then blended into the overall MSU process with information from all MSU campuses as shown above.

LRBP 2013 - Preliminary Project Inventory

MSU-Bozeman Campus

University Council - July 6, 2011

Project Description Ref #	Project	Year Put on LRBP List	Student Impact Direct/ Indirect	Important Factors				Comments
				Life Safety	Deferred Maintenance	Compliance	Energy / Ops Efficiency	

Projects < \$2 Million

1	Campus - Energy Utility Infrastructure Master Plan	2007	I	X		X	X	I=Planning Rationale
2	Howard Hall- ADA Upgrades (Restrooms, Entry, Corridor Ramp)	2005	I	X	X	X		I=Safety
3	Visual Communications Building - ADA Renovation (Restrooms)	2005	I	X	X	X		I=Safety
4	Campus - LRCDP (Master Plan) Update	2009	I			X		I=Resource Efficiency; Planning Rationale
5	Campus - Wayfinding/Campus Directory Signage	2009	I	X		X		I=Safety; Planning Rationale
6	Campus - FEMA TIER 2 Seismic Study	2007	I	X		X		I=Safety; Planning Rationale
7	Campus - Utility Upgrades - Facilities Complex	2005	I	X	X	X	X	I=Service Continuity; Resource Efficiency
8	Marsh Labs - HVAC Retrofit and Control Improvements	2011	I		X		X	I=Research; critical assets
9	Campus - Masonry Repair (multiple, various buildings)	2005	I	X			X	I=Safety; Planning Rationale
10	Campus - Central Energy Management System	2005	I		X		X	I=Resource Efficiency; Planning Rationale
11	ROTC Field Facility	2005	D					D=New Construction, Centralize Operations and Expand Programs **Non Degree/Major - total enrolled in Army & AF ROTC program
12	Reid Hall - Elevator and Restrooms ^{1,4}	2007	I	X	X	X		I=Safety
13	Tietz Hall - Replace HVAC - Critical Care Engineered Systems	2011	I	X	X	X	X	I=Research; Safety of Critical Living Assets

Projects \$2-\$3.9 Million

14	Creative Arts Complex - Upgrades (Cheever, Haynes, Howard Halls) ⁵	2001	D/I	X	X	X		D=Add Instructional GSF; I=Seismic
15	Campus - Classrooms Renovation (Linfield Rm 125; Reid Rms 105, 452; Wilson Rms 1-119, 1-132, 1-143)	2001	D/I	X	X	X		D=Instructional Improvements
16	Campus - ADA Projects (multiple bldgs-some as separate LRBP projects)	2008	I	X		X		I=Safety; Planning Rationale
17	Wilson Hall - Chilled Water/Energy Plant Improvements	2005	I		X		X	I=Service Continuity; Resource Efficiency
18	Linfield Hall- Elevator/Restrooms ^{1,4}	2005	I	X	X		X	I=Safety
19	Cobleigh - ADA Upgrades (Restrooms, Entry, Elevator)	2005	I	X	X	X		I=Safety; Planning Rationale
20	Campus - Roof Replacements (Renne,MOR,AJMJ,EPS)	prior to 2001	I		X			I=Safety
21	Linfield Hall - Electrical Upgrades	2011	I	X	X	X		I=Safety
22	Campus - Site Work/Landscaping	2009	I		X	X	X	I=Resource Efficiency; Planning Rationale

Projects \$4-\$9.9 Million

23	Hamilton Hall - Renovation -3rd and 4th floor	2001	D/I	X	X	X		D/I=Instructional GSF Opportunities **Non Degree/Major - total enrolled in Army & AF ROTC program
24	Campus - Service Drives/Access Network Upgrades - Phase I	2005	I	X	X	X		I=Resource Efficiency; Planning Rationale
25	Heating Plant - Energy Conservation and Summer Boiler	2009	I		X		X	I=Service Continuity; Resource Efficiency
26	Campus - Code and Deferred Maintenance	prior to 2001	I	X	X	X		I=Safety
27	Campus - Central Cogeneration Expansion	2007	I		X		X	I=Services Continuity
28	Campus - Utility Upgrades - West of 19th	2007	I		X			I=Service Continuity; Resource Efficiency
29	Renne Library - Expansion Phase I	2005	D		X	X		D=Adaptive and New Construction
30	Campus - Fire Suppression Installment/Upgrade	2001	I	X		X		I=Safety
31	Campus - Utility Infrastructure Upgrades (Water and Sewer)	prior to 2001	I	X	X	X	X	I=Services Continuity; Planning Rationale

Projects > \$10 Million

32	Campus - Energy Conservation Projects - Campus Core Buildings	2007	I	X	X	X	X	I=Resource Efficiency
33	Renne Library - Expansion Phase II	2005	D	X	X	X		D=GSF Addition; Possible Instructional GSF Opportunities
34	Montana Hall - Building Renovation ²	2001	D/I	X	X	X	X	D/I=Instructional GSF Opportunities
35	Romney Gym - Adaptive Reuse/Renovation ²	2001	D	X	X	X		D/I=Instructional GSF Opportunities; Adaptive Reuse; NOTE ARCH151 moved - contact hours down by 540 for Fall 2011.
36	Linfield Hall- Renovation ²	1992	D/I	X	X	X		D/I= Safety; Renovated Instructional Spaces
37	Reid Hall - Renovation ²	2005	D/I	X	X	X		D=Renovated Instructional Spaces of the #1 Student Contact Building
38	Biomedical & Health Sciences Facility	2009	I					I=New Construction; Possible GSF Instructional Opportunities
39	ITC Building - Server Farm/Offices	prior to 2001	I					I=New Construction

MSU-Bozeman Campus

1. Campus – Energy Utility Infrastructure Master Plan \$250,000

Bozeman Campus- (Planning/Code Compliance/Life Safety/Operational Efficiency Savings)
(An MSU-Bozeman Energy Conservation project)

The Utilities Infrastructure Master Plan is a high priority and required for planning, evaluating site requirements and is an essential tool to budget and construct utilities in an efficient and comprehensive manner instead of haphazardly locating infrastructure as buildings are being built. MSU is at a crossroads in its energy evolution. While MSU-Bozeman is the largest consumer of natural gas of all State agencies and, as a research institution, emits over 77,000 metric tons of carbon dioxide annually, there is tremendous opportunity for substantial reduction of energy use. MSU’s infrastructure preparation through the last two decades has positioned the campus to implement a unique and powerful energy strategy to dramatically reduce energy expenditures while reducing environmental impact. This planning effort would quantify the conceptual synergy of establishing a geothermally based infrastructure while developing a high efficiency cogeneration system. These strategies may be combined with the purchase of low carbon energy and aggressive energy conservation to achieve dramatic emissions reduction and economic benefit. This plan would be the basis for implementation of energy related infrastructure projects.

2. Howard Hall - ADA Upgrades (Restrooms, Entry, Corridor Ramp).....\$250,000

Bozeman Campus- (Deferred Maintenance/Code Compliance/Life Safety)

Constructed in 1974, Howard Hall is the School of Music building, with the University’s premier performance space, is deficient in terms of accessibility issues at building entries, restrooms, and interior corridor ramp are non-compliant. These issues take on additional importance due to the fact that this building hosts music performances.

3. Visual Communications - ADA Upgrades (Restrooms)\$250,000

Bozeman Campus- (Deferred Maintenance/Code Compliance/Life Safety)

The Visual Communications building was constructed in 1983; it houses the School of Film and Photography, classrooms, media laboratories, and the University television station and studio. This building is heavily utilized by not only students but also persons coming to the building to participate in work associated with the television studio. Restrooms in the building are seriously deficient in terms of accessibility, both the university and the community will benefit from accessibility upgrades.

4. Campus – LRCDP (Master Plan) Update \$450,000

Bozeman Campus- (Planning/Code/Life Safety)

The Long Range Campus Development Plan was developed through an inclusive and participatory process. Since its adoption, planning efforts have already extensively drawn on the elements and principles of the framework plan and begun implementation. Built into the LRCDP is a scheduled review in five years. The regular review and updating of the master plan is essential to keep the plan relevant and viable in guiding the decisions pertaining to the campus’ physical environment. The university will benefit by having more carefully planned development and expansion that is in keeping with the overall vision as well as being flexible enough to adapt quickly to changing environments in the university’s aspirations, state direction, economic markets, campus community needs, and community trends. The update will require similar planning processes including consultant involvement.

5. **Campus – Wayfinding/Campus Directory Signage..... \$750,000**
Bozeman Campus - (Planning/Code/Life Safety)
Critical to recruitment and retention efforts is a strong campus identity, and of impact to all campus constituents and visitors is a navigable and obvious campus layout. MSU has three entry signs (one temporarily removed for MDT road improvement project) and all buildings are signed; however MSU does not have a comprehensive, integrated signage program that provides safe, inclusive and aesthetically appropriate wayfinding. Facilities Planning is developing a signage plan (including an inventory and needs analysis) and signage standards to comply with ADA requirements, and that enhances the experience of the campus. Comprehensive signage includes information kiosks, graphical directional signage, and building and floor directories.
6. **FEMA TIER 2 Seismic Study\$750,000**
Bozeman Campus – (Code/Life Safety/Planning)
Estimate consists of ~30 major buildings at ~\$25K each. The MSU campus is within UBC Seismic Zone 3, which is adjacent to the only Zone 4 area in the US (Big Sky, Montana) that is outside California or Alaska. In 2005, MSU completed a FEMA Tier 1 Seismic Study which identified a list of 36 major (state-funded) facilities that required additional in-depth structural analysis. (Approximately 20 of MSU’s existing facilities scored high enough on the initial review that no further analysis is required.)
7. **Campus – Utility Upgrades - Facilities Complex..... \$750,000**
Bozeman Campus- (Deferred Maintenance/Code/Life Safety/Operational Efficiency Savings)
Facilities Complex includes land and structures of the former Faculty Court area that cannot have any more facilities added until the utilities are upgraded to meet the service demands. Current priority could escalate to high priority depending on land use decision for that area.
8. **Mash Labs – HVAC Retrofit and Control Improvements..... \$850,000**
Bozeman Campus- (Deferred Maint/Operational Energy Efficiency Savings)
This project replaces Marsh Labs HVAC systems and controls that are well beyond their service life, operate inefficiently, and represent significant deferred maintenance. This project would remove the steam fire heating system, consolidate rooftop equipment to laboratory-grade equipment, and improve controls for the building.
9. **Campus – Masonry Repair- various buildings \$1,000,000**
Bozeman Campus- (Planning/Health/Life Safety/Operational Efficiency Savings)
- a) Cobleigh Hall - repair roof parapet on south side; seal brick wall/precast window shroud joints: \$80,000.
 - b) Taylor Hall - tuckpoint and repair historic brick; rebuild brick arches at windows: \$50,000.
 - c) Wilson Hall – repair bridge and exterior stairs; repair retaining wall on north side: \$460,000.
 - d) Renne Library - tuckpoint brick and stone joints; replace mortar joints at precast front entry: \$45,000.
 - e) Romney Gym - tuckpoint brick, granite and terra cotta joints: \$165,000.
 - f) Roberts Hall - tuckpoint brick, granite and terra cotta joints: \$80,000.
 - g) Heating Plant - tuckpoint brick, granite and terra cotta joints: \$35,000.
 - h) Herrick Hall – tuckpoint brick, granite and terra cotta joints: \$40,000.

- 10. Campus – Central Energy Management System \$1,500,000**
Bozeman Campus- (Planning/Deferred Maint/Operational Energy Efficiency Savings)
 The CEM system is a high-priority project is achieving MSU-Bozeman’s energy conservation efforts. The CEM system consists of a centralized campus energy metering/management system that completes the current campus metering with the installation of a central automated real time meter reading and data management system that includes built-in expansion capacity for future interface with building management systems. The new system will automate and improve monitoring and management of energy consumption and generate energy savings.
- 11. ROTC Field Facilities\$1,500,000**
Bozeman Campus - (New Construction)
 ROTC’s field functions currently occupy an old farm building on a piece of land that is owned by the MSU Foundation and currently is up for sale. A new facility for ROTC would comprise 8,000 gross square feet and include a classroom, offices, combat room, cannon garage, equipment storage, uniform storage, and uniform assignment areas. ROTC practices field exercises can appear threatening to onlookers and therefore need to be situated away from the main university campus and its neighbors. Field exercises require ten unbounded acres. Since a move is imminent, this new structure should be built before the existing one is sold to ensure continuity of program for the ROTC.
- 12. Reid – ADA Upgrades (Elevator, Restrooms) \$1,500,000**
Bozeman Campus - (Deferred Maint/Code Compliance/Life Safety)
 Reid Hall, constructed in 1957, houses the College of Business and the College of Education/Health & Human Development as well as several of the largest and most heavily used registrar-scheduled classrooms and lecture halls on campus. The original elevator has served beyond its useful life expectancy and does not comply with ADA accessibility requirements. MSU has commissioned the design of a new replacement elevator using university major maintenance funds. This project will install the new replacement elevator and renovate several restrooms.
- 13. Tietz Hall – Replace HVAC and Critical Care Engineered Systems\$1,700,000**
Bozeman Campus - (Health and Life Safety)
 Originally occupied in 1985, the 20,389gsf building was formerly known as the Animal Research Center (ARC) connected to Lewis Hall. The project will retrofit air handling, heating, cooling, and humidification of the building as needed for the health and comfort of the human and animal occupants. As a priority the project will increase reliability and redundancy of systems critical to protect living assets and research continuity. No other alternatives are available or feasible. These HVAC improvements reduce the buildings deferred maintenance.
- 14. Creative Arts Complex – Upgrades (Howard, Cheever, Haynes Halls) \$2,000,000**
Bozeman Campus - (Deferred Maint/Code/Life Safety)
 Originally constructed in 1974, the Creative Arts Complex (three buildings of a combined ~135, 012gsf) houses the College of Arts and Architecture, School of Art and the School of Music, and College of Agriculture and Technology Education programs (Cheever Hall), as well as campus registrar-scheduled classrooms and lecture/performance halls. The buildings have not been significantly renovated or updated since original construction and are in need of upgrades to facilitate continued services to the campus community and as public venues. The current average FCI deficiency ratio for the three buildings is 5.8% and is considered fair by the APPA. The upgrades will significantly reduce or eliminate areas of deficiency. In addition the upgrades will

extend the useful life of the building and prolong the need for a future full scale renovation. The project would include needed Americans with Disability Act (ADA) compliance improvements, elevator upgrades, building circulation enhancements, expansion of classroom, studio, and gallery space, and infrastructure updates. The project is intended to be performed concurrent with the Seismic Improvement project approved in the 62nd legislative session in an effort take advantage of economic and space efficiencies created by the retrofit as well as minimize building disruption to building occupants and services through a consolidated construction effort.

15. Campus – Classrooms Renovation \$2,000,000

Bozeman Campus - (Deferred Maint/Code/Life Safety)

The project will renovate and modernize classrooms as determined by recommendation from the UFPB Classroom Committee and based on deficiency audits of Registrar-controlled classrooms (i.e. badly outmoded and dysfunctional in terms of configuration, accessibility, electrical and audio/visual capabilities, finishes and lighting). A classroom renovation project will change configuration of some classrooms for current teaching methods and code compliance, make alterations for ADA accessibility, provide additional electrical outlets, upgrade data access, upgrade writing surfaces, upgrade finishes, update HVAC components and replace lighting with energy-efficient fixtures with variable level capabilities.

- a) Linfield Hall Rm 125 \$ 700,000 large 115+ classroom
- b) Reid Hall Rm 105 \$ 700,000 large 115+ classroom
- c) Wilson Hall Rm 1-119 \$ 500,000 medium 51-114 classroom
- d) Wilson Hall Rm 1-143 \$ 500,000 medium 51-114 classroom
- e) Wilson Hall Rm 1-132 \$ 150,000 small 1-50 classroom
- f) Reid Hall Rm 452 \$150,000 small 1-50 classroom

16. Campus ADA Projects.....\$2,000,000

Bozeman Campus – (Code/Life Safety/Planning)

MSU is committed to improving accessibility to campus facilities in an effort to meet Americans with Disability (ADA) standards and comply with Office of Civil Rights and Department of Justice campus reviews. The purpose of this project is to perform specific renovations, upgrades, and modifications to existing campus facilities based on the MSU ADA Transition Plan. The projects will improve accessibility to and within building and include site work upgrades, improved building entries, elevator and toilet room modifications, ADA signage, and technology upgrades. Projects will have minimal disruption to building occupants during construction. The integrity and architectural features of the historic buildings will be protected. The project addresses academic buildings impacting most if not all students and many faculty and staff.

- a) Creative Arts Complex
(Howard, Cheever, Haynes Halls) \$ 600,000
- b) Linfield Hall \$ 750,000
- c) Cobleigh and Roberts Halls \$ 650,000
\$2,000,000

17. Wilson Hall – Chilled Water/Energy Plant Improvements \$2,000,000

Bozeman Campus- (Deferred Maint/Operational Energy Efficiency Savings)

Capture significant energy savings and reduce deferred maintenance by replacing the steam-fired absorption chiller with a heat recovery heat pump or chiller system. Connection of Wilson Hall to the energy plant (chilled water/heating water) being installed in Leon Johnson Hall will be analyzed. This connection would greatly reduce the operating equipment required for the two

buildings and result in an energy-sharing strategy that reduces total energy input and facilitates conversion of the building to a geothermal-based approach.

18. Linfield Hall – Elevator/Restrooms\$2,000,000
Bozeman Campus - (Deferred Maint/Code/Life Safety)

Constructed in 1910, houses the College of Agriculture. Originally designed for a male-dominated curriculum, the building has woefully inadequate and malfunctioning restroom facilities which are now significantly deteriorated. The four story building has no elevator. MSU has commissioned the design of new restrooms to meet modern gender demographics and a new elevator using university major maintenance funds. This project will construct new restrooms and install a new elevator to meet codes and accessibility requirements.

19. Cobleigh- ADA Upgrades (Restrooms, Entry, Elevator)\$2,000,000
Bozeman Campus - (Adaptive Reuse/Renovation/Deferred Maintenance/Code/Life Safety)

Constructed in 1970, the six-story building adjoins historic Roberts Hall and extended the College of Engineering operations. The building provides classrooms and labs, including a state of the art cold chamber completed in 2008 to advance cold-regions research and costing over 2 million dollars – funded mostly by grants (NSF, Murdock and WTI). The building is seriously deficient with respect to accessibility issues. The building entries, restrooms, stairwells and elevator currently make this a very difficult building for individuals with accessibility needs. This project will make the building fully accessible and in compliance with current ADAAG standards.

20. Campus - Roof Replacement.....\$2,400,000
Bozeman - (Deferred Maintenance)

These roofs are out of warranty and have lived considerably beyond their intended service life. They are beyond repair and are failing. These roofs must be replaced to avoid continued damage to the interiors of these facilities. The failure of these roofs was documented by the MSU Facilities Condition Inventory. Examples of possible roofs:

- a) Renne Library \$ 700,000
- b) Museum of Rockies \$1,000,000
- c) AJM Johnson Hall \$ 300,000
- d) EPS Building \$ 400,000
- \$2,400,000

21. Linfield Hall – Electrical Upgrades\$3,000,000
Bozeman Campus - (Deferred Maint/Code Compliance/Life Safety)

The electrical systems serving Linfield Hall North and South buildings are obsolete, poorly arranged, and have inadequate capacity for current and future needs. There are several systems and arrangements that do not meet current electrical codes, including high voltage primary electrical systems located in the basement and knob-and-tube branch circuit wiring throughout much of the north building. This project would replace most of the building electrical systems downstream of the existing transformer serving the two buildings, and would include new building disconnects, building feeders, main distribution panels, branch panels, panel feeders, and branch circuit wiring. The project would also include new systems to reduce safety concerns associated with the high voltage primary systems in the basement.

The current estimate for this work, including design, construction, administration, and contingencies based on a preliminary design and estimate performed by Scott Ritter in 2008 (report in PPA#07-0098). No other alternatives exist.

22. Campus – Site Work/ Landscaping..... \$3,000,000

Bozeman Campus- (Planning/Deferred Maint/Code/Life Safety/Operational Resources Efficiency Savings)

The aesthetic and functional aspects of campus landscaping are directly related to the experience while on campus and the positive interaction with the university community and surrounding community. Comprehensive, interconnected, attractive and well maintained landscapes and exterior spaces/places are critical to recruitment and retentions. Exterior spaces require site work to develop logically placed and safe pedestrian plazas and outdoor classrooms. Site work and site specific landscape plans will follow the LRCDP (completed in 2008) and the Landscape Master Plan, in its early development by Facilities Planning.

23. Hamilton Hall – Renovation 3rd and 4th Floors\$4,000,000

Bozeman Campus - (Major Maintenance/Code Compliance/Health and Life Safety)

Constructed in 1910 by Fred Willson, Hamilton Hall has significant value as a historic structure. This project will complete the balance renovations on the third and fourth floor the building and addresses deferred maintenance identified through the Facilities Condition Inventory (FCI) process. This project will includes building infrastructure upgrades, Fire and Life safety improvements, corridors and stair well modifications, as well as ADA considerations. Exterior and 1st and 2nd floors renovation were completed in 2010, ADA compliant elevator addition construction underway (June 2011), leaving upper two levels and attic (~13,900nsf) requiring renovation.

24. Campus – Service Drives/Access Network Upgrades – Phase I \$4,000,000

Bozeman Campus- (Planning/Deferred Maintenance/Code/Life Safety)

To reconstruct those streets and service drives which are approaching or have exceeded their life expectancy. MSU streets require redesign and enhancements to improve their safety, accessibility and efficiency as transportation for vehicles, bicyclists, transit, and pedestrians. Service drives require similar consideration as well as improvements for efficient building operations and maintenance use and as staging areas for construction projects. Example of possible projects:

Streets

- a) 7th Street, from Kagy to Grant
- b) Garfield Street, from 11th to 19th
- c) 15th Street, from Garfield to College
- d) College Street, from 8th to 19th - - possible cost sharing with City
- e) Lincoln Street, from 11th to 19th - - possible cost sharing with City
- f) 6th Street, from Grant to Cleveland- - possible cost sharing with City
- g) 11th Street, from Kagy to Lincoln- - possible cost sharing with City

Service Drives

- a) Gaines/Vis Com/Traphagen/Reid/Sherrick
- b) Renne/SUB/AJM
- c) Fieldhouse/Tennis/Fitness Center
- d) Herrick/Hamilton/Wilson
- e) Creative Arts Complex

25. Heating Plant – Energy Conservation and Summer Boiler \$4,000,000

Bozeman Campus - (Deferred Maintenance/Operational Energy Efficiency Savings)

Boiler controls installed in 1994/98 are being replaced (majority of work completed in February 2009) on all three steam boilers, which is central heating source for all campus state buildings. A

once-through domestic water supply currently serves many pieces of equipment that require cooling water in the Heating Plant. Water is quickly becoming an increasingly expensive resource and installing a closed loop cooling system would provide considerable water consumption savings.

26. Campus – Code/Deferred Maintenance.....\$4,700,000
Bozeman - (Deferred Maintenance/Code/Life Safety/)

State funding is needed to address life safety, code and accessibility problems that have been identified during thorough Facilities Condition Inventory inspections performed at each campus, and by various state and city agencies. These projects are necessary to meet requirements of the International Building Code, Americans with Disabilities Act. ANSI Guidelines, Uniform Fire Code, Life Safety Code, citations from OSHA, citations from the Department of Labor and Industry, etc. They include items such as fire alarms, fire sprinklers, fire doors and separation assemblies, stair enclosures, guardrails, emergency lighting, egress lighting, ventilation systems, and other noted deficiencies.

27. Campus – Central Cogeneration Expansion \$5,000,000
Bozeman Campus- (Deferred Maint/Operational Energy Efficiency Savings)

Expansion of the combined cycle cogeneration, central backup electrical, and base loading steam; and establish increased on-site generation of electricity to allow MSU to implement peak shaving and extensive backup electrical generation while co-producing heat for campus distribution. Cogeneration of electricity is an effective way to maximize the value of purchased natural gas. The precise size of the cogeneration plant will be determined in the Energy Utility Infrastructure master planning process. The plant is expected to be approximately 5MW in capacity.

28. Campus – Utility Upgrades – West of 19th Ave \$5,000,000
Bozeman Campus- (Planning/Deferred Maintenance)

Install utility infrastructure on MSU property west of 19th Street. The MSU property west of 19th Street has historically supported agriculture-related activities and was surrounded by County-regulated lands; however, in recent years the adjoining private properties have been annexed into the City of Bozeman, and through the LRCDP process some of the land (at the MSU/private property boundaries) has been identified as feasible for future development. Before any additional facilities can be built in that area the utilities need to be installed. Installation would be in phases.

29. Renne Library – Expansion Phase I \$6,000,000
Bozeman Campus- (Adaptive Renovation/New Construction/Deferred Maintenance/Code)

Built in 1949, Renne Library received its first and only substantial addition in 1961. It is ~142,000gsf, and houses MSU’s central library facilities and ITC services. MSU’s student to library square footage ratio is significantly lower compared to peer institutions and upgrades are necessary to provide appropriate services in support of teaching and research. Phase I of the renovation includes adding approximately 12,000gsf to the 4th floor of the existing facility. Goals for the addition include; group and collaborative learning space, dual-use classroom and technology lab space, additional stack space, enhancing workspace, improving utilization of existing space, expanding library services, and improve wayfinding.

30. Campus – Fire Suppression Installment/Upgrade.....\$6,300,000
Bozeman Campus - (Life Safety/Code Compliance)

Install new or upgrade and expand current fire suppression system to cover the entire building as required by code. Projects will have minimal disruption to building occupants during construction.

The integrity and architectural features of the historic buildings will be protected. The project addresses academic buildings impacting most if not all students and many faculty and staff.

a) Leon Johnson Hall	\$ 750,000 (priority carried forward)
b) AJM Johnson Hall	\$ 260,204
c) Cobleigh Hall	\$ 591,857
d) Culbertson Hall	\$ 308,189
e) Herrick Hall	\$ 56,385
f) Leon Johnson Hall	\$ 255,808
g) Lewis Hall	\$ 748,202
h) Linfield Hall	\$ 266,448
i) McCall Hall	\$ 420,742
j) Montana Hall	\$ 606,032
k) Plew Building	\$ 119,707
l) Roberts Hall	\$1,090,586
m) Romney Gym	\$ 348,082
n) Traphagen Hall	\$ 232,008
o) Visual Comm Bldg	\$ 245,105
	<u>\$6,299,355</u>

31. Campus – Utility Infrastructure Upgrades (Water and Sewer)..... \$6,800,000
Bozeman Campus- (Planning/Major Maintenance/Code Compliance/Life Safety/Operational Efficiency Savings)

The purpose of this project is to perform needed upgrade and deferred maintenance work on existing campus infrastructure based on a engineering assessments (condition and capacity) completed in FY06-07 resulting in Water and Sanitary Sewer Facility Plans. A first phase of critical improvements was completed in FY08-09 and for system integrity all remaining upgrades should be installed within 3-5 years. This project addresses infrastructure capacity and rehabilitation improvements. MSU’s water and sanitary sewer requires extensive upgrade in select areas of the system to maintain reliable service with appropriate capacity. Approximately 3500 feet of water line will be 100 years old within the next century. This phase includes replacement of lines that are in poor condition and in many cases do not have the capacity required for fire protection; and extensive replacement of sanitary sewer sections of poor condition or deficient capacity. This project reduces the campuses deferred maintenance and O&M expenses as a new system, and significantly improves the reliability of these critical services to campus. No other alternatives are available and without this project, substantial failure of water or sewer systems is likely causing some operations to cease.

a) Sewer Infrastructure: \$2,000,000
 Example capacity and rehabilitation sewer projects: 15Avenue/College to Glacier Court; 10 Street vicinity of Hamilton and Leon Johnson Halls.

b)Water Infrastructure: \$4,800,000
 Example water projects: replace services, add mains; add and replace fire flow restricting lines and fire hydrants, meter housing, add fire redundancy and inter connections.

32. Campus – Energy Conservation Projects - Campus Core Buildings.....\$10,000,000
Bozeman - (Deferred Maintenance/Code/Life Safety/Operational Efficiency Savings)

About 90% of MSU-Bozeman’s state-operated building energy is consumed in 23 campus core buildings. Several of these builds have recently undergone some level of energy conservation; however, significant operational efficiency and unaddressed potential savings still exists. This project would further implement energy related projects in MSU’s continuing effort to reduce operating cost and reduce deferred maintenance. A list of buildings to be addressed in this phase is being developed.

33. Renne Library – Expansion Phase II \$18,000,000

Bozeman Campus- (Planning/Deferred Maintenance/Code/Life Safety)

Constructed in 1949, addition in 1961. Phase II of the renovation includes adding a ~27,500gsf four-story addition along the south side of the building. Goals for the addition include: expansion of ITC support space, ITC customer service facility, group and collaborative learning space, dual-use classroom and technology lab space, improved public space and ADA access, additional stack space, enhancing workspace, improving utilization of existing space, expanding library services and space, and improve wayfinding.

34. Montana Hall – Renovation\$21,500,000

Bozeman Campus - (Deferred Maint/Code/Life Safety)

Construction on Montana Hall (39,725gsf/ 32,144nasf) was begun in 1896 and completed in 1898. Although not the oldest structure on campus, Montana Hall continues to be MSU’s flagship historic structure and focal point of the campus. The building originally housed classrooms, laboratory spaces, offices for the president, registrar, library, and an assembly hall. Even though numerous (and sometimes insensitive) alterations have occurred, the building retains its character and most of the original detailing. The iconic building is in the center of the university’s historic core and while not the largest building on campus – its location and recognizable façade position it as the most prominent building on campus. A comprehensive study was performed on Montana Hall in 2001, and demonstrated that the building is in need of significant repairs and upgrading including deferred maintenance, adaptive renovation, life safety corrections, structural repairs, building code and ADA renovation. Montana Hall’s current FCI Deficiency Ratio is 17% - considered in the poor range by APPA, and the renovation project will significantly reduce or eliminate areas of deficiency in the building and address safety issues including fire and ADA code compliance regarding egress and interior circulation. A comprehensive renovation project will include major structural repairs, installation of mechanical HVAC system, and replacement of the electrical systems to provide up-to-date ventilation, power and data distribution and replacement of the obsolete plumbing system. Adaptive renovations will provide modern offices and administrative areas including restoring elements of the historically significant building.

35. Romney Gym– Adaptive Reuse/Renovation\$25,000,000

Bozeman Campus - (Adaptive Re-Use/Renovation/Deferred Maintenance/Code/Life Safety)

Constructed in 1922 as MSU’s original state-funded health and physical education building, (~53,074gsf) it is now obsolete. With the exception of some EHHD programs, all of the health and physical educations programs have migrated to the Marga Hosaeus Fitness Center. The Romney pool was closed and decommissioned in 2006 and the main locker/shower facilities were closed and decommissioned in 2008. Some spaces are currently in use, while others remain unusable, such as the pool; or have low utilization, such as the basketball court and suspended running track. Romney is historically significant and structurally sound which makes the building a good candidate to be adapted for reuse. Romney’s current FCI Deficiency Ratio is 13.6% - considered in the poor range by APPA, and the renovation project will facilitate a comprehensive adaptive reuse of the building, reduce or eliminate areas of deficiency in the building’s HVAC, plumbing and

electrical systems, and address safety issues including fire and ADA code compliance regarding egress and interior circulation.

36. Linfield Hall - Renovation\$29,000,000

Bozeman Campus - (Deferred Maintenance/Code/Life Safety)

Constructed in 1910, houses the College of Agriculture Animal and Range Sciences and the COA Dean and Montana Agricultural Experiment Station Director offices. Originally designed for a male-dominated curriculum, the building has woefully inadequate and malfunctioning restroom facilities which are now significantly deteriorated. The four-story building (~65,563gsf) has no elevator. MSU has commissioned the design-only of new restrooms to meet modern gender demographics and a new elevator using university major maintenance funds. This project will construct new restrooms and install a new elevator to meet codes and accessibility requirements and adapt the building to accommodate modern teaching needs. Linfield Hall’s current FCI Deficiency Ratio is 15% - considered in the poor range by APPA, and the renovation project will significantly reduce or eliminate areas of deficiency in the building’s HVAC, plumbing and electrical systems, and address safety issues including fire and ADA code compliance regarding egress, interior circulation of the four-story building, as well provide gender-sufficient and accessible restrooms.

37. Reid Hall - Renovation \$38,000,000

Bozeman Campus - (Major Maintenance/Code Compliance/Life Safety)

Originally constructed in 1957, Reid Hall (~91,167gsf) houses the College of Business (COB) and the College of Education, Health & Human Development (CEHHD) as well as several of the largest and most intensely utilized registrar-scheduled classrooms and lecture halls on campus. Improvements will have a positive impact on the ~1,100 COB students, and on ~1,000 students enrolled in CEHHD. The renovation of the entire building includes replacing the building elevator and altering the restrooms to comply with the Americans with Disabilities Act, installing a fire suppression system and fire alarm system, upgrading the secondary electrical system (including branch panels and select circuits) to handle required current load and expansion capability, replacing the building heating and ventilation system, providing building cooling, addressing code deficiencies and deferred maintenance as well as modernizing building finishes and improving space utilization. Alternatives include addressing individual systems/components issues separately and over time; but, this may result in costly overlapping of construction and longer periods of disruption to the buildings occupants and programs that will be relocated temporally during construction. Reid Hall’s current FCI Deficiency Ratio is 14% - considered in the poor range by APPA, and the renovation project will significantly reduce or eliminate areas of deficiency in the building’s envelope, HVAC, and electrical system; and address safety issues including fire and ADA code compliance regarding egress, interior circulation of the four-story building and accessible restrooms.

38. Biomedical & Health Sciences Facility – New Facility\$40,000,000

Bozeman Campus - (New Construction)

The need for biomedical and health sciences academic programs has grown significantly over the past decade. There is a large and expanding student interest in pursuing careers in biomedicine and health professions, whether it be MD’s, nursing, biomedical R&D, graduate school, biotechnology or other allied health professions. Academic offerings in biotechnology, immunology, microbiology, pre-med and pre-vet have increased significantly. In addition MSU is working to expand the WWAMI program to include covering the second year of medical school training at MSU instead of at UW. MSU is the biomedical campus of the MUS.

In addition to the large health sciences teaching programs, MSU also has the largest biomedical related research enterprise in the state. Of the approximately \$100 million in research expenditures annually each of the last five years, more than 40% (over \$40 million per year) is spent on biomedical research on campus. However, MSU has a critical shortage of space for biomedical academic programs, and of the space that is available, much of it is out-dated or occupied on a temporary basis.

The return on the investment in a new Biomedical and Health Sciences Academic Facility at MSU would be far-reaching. Beyond the impact on the quality of the academic opportunities we offer our students, there would be immense contributions to workforce development and economic enhancement of the largest sector of Montana’s economy, namely biomedical/biotechnology and health sciences and all of the related industries and services.

**39. ITC Building – Server Farm & Offices.....\$40,000,000
Bozeman Campus - (New Construction)**

Relocate ITC server operations out of the campus core to a peripheral site, possibly a designated enterprise zone. Explore private-public collaborative alternatives for the new data center that expands computer services to MSU and beyond. Design may include elements from the Enterprise Systems Services Center (ESSC) Project elements constructed in Helena. New facility will have raised floors, enhanced security, limited access, future expansion capacity, and since these types of facilities generate heat – include a waste heat recovery system to reuse the heat. Will include some office space, but most public interface operations and service center would remain located in campus core.

Measure	MSU-BZN		MSU-BIL/COT		MSU-N		MSU-GTF-COT		MAES ²	
	Value	% Share	Value	% Share	Value	% Share	Value	% Share	Value	%Share
GSF (State-Supported FY09)	1,889,972	52.7%	697,860	19.5%	321,774	9.0%	216,177	6.0%	458,613	12.8%
FCI GSF (State/FY09)	1,746,088	54.4%	689,999	21.5%	309,092	9.6%	214,177	6.7%	251,704	7.8%
CRV (State FCI)	\$327,838,897	54.7%	\$121,241,333	20.2%	\$57,864,994	9.7%	\$36,984,084	6.2%	\$55,670,542	9.3%
FCI (State, Cat 1 & 2)	\$28,824,141	54.5%	\$12,859,459	24.3%	\$9,144,798	17.3%	\$2,068,350	3.9%	na	na
FCI Def Ratio (1&2)	8.8%	na	10.6%	na	15.8%	na	5.6%	na	na	na
Annual FTE (FY08)	10,467	61.8%	4,154	24.5%	1,096	6.5%	1,213	7.2%	0	0.0%
GSF/Student FTE	181	na	168	na	294	na	178	na	na	na

TOTALS
(MAES included where appropriate)

3,584,396
3,211,060
\$599,599,850
\$52,896,748
8.8%
16,930
204

LRBP Item Number	MSU-BZ		MSU-BIL/COT		MSU-N		MSU-GTF-COT		MAES		Item No.	Comments
	Project Name	Dollars	Project Name	Dollars	Project Name	Dollars	Project Name	Dollars	Project Name	Dollars		
1	Energy Conservation Projects	\$3,600,000	Energy Conservation Projects	\$1,320,000	Energy Conservation Projects	\$660,000	Energy Conservation Projects	\$420,000			1	(\$6M Total)
2									AES Stations	\$2,000,000	2	
3			Sci/Inst Tech- Planning/Design	\$500,000							3	
4	Montana Hall - Planning/Design	\$750,000									4	
5	Classroom Renovations	\$2,000,000									5	
6								Roof Priority #1	\$584,500		6	
7			Library Renovation	\$1,620,000							7	
8					Hagener Science Center	\$2,100,000					8	
9	Campus Wayfind/Directory Signage	\$750,000									9	
10	Campus Utility Infrastructure Upgr	\$1,500,000									10	
11	COT New Facility Planning	\$150,000									11	
12			Liberal Arts Building Ph2	\$1,600,000							12	
13					Metals Tech Envelope	\$550,000					13	
14									AES Stations	\$1,500,000	14	
15	Classroom Renovations	\$2,000,000									15	
16	All Campus-Code/Def Maint.	\$2,185,000	All Campus-Code/Def Maint.	\$809,000	All Campus-Code/Def Maint.	\$386,000	All Campus-Code/Def Maint.	\$247,000	All Campus-Code/Def Maint.	\$373,000	16	(\$4M Total)
17	All Campus-Roofs	\$850,000	All Campus-Roofs	na	All Campus-Roofs	\$1,405,000	Roof Priority #3	\$335,000	Roofs - Various Stations	\$125,000	17	(\$2.715M Total)
18	Hamilton Hall	\$4,000,000									18	
19	Utility Infrastructure Master Plan	\$250,000									19	
20			Cisel Hall Renovation	\$1,200,000							20	
21	Central Energy Management Sys	\$750,000									21	
22			Campus Master Plan Update	\$250,000							22	
	Subtotal Requests	\$18,785,000		\$7,299,000		\$5,101,000		\$1,586,500		\$3,998,000		\$36,769,500
	\$ per FTE	\$1,795		\$1,757		\$4,654		\$1,308		na.		\$2,172
	% of Subtotal Requests	51.1%		19.9%		13.9%		4.3%		10.9%		100.0%
	\$ per GSF	\$10.76		\$10.58		\$16.50		\$7.41		\$15.88		\$11.45
23	FEMA Teir 2 Studies	\$750,000									23	
24	Utility-Irrigation Reservoir	\$1,200,000									24	
25	Campus Master Plan Update	\$450,000									25	
26					Physical Plant Heating Sys	\$175,000					26	
27					Brockman Envelope Upgrade	\$900,000					27	
28							Replcae Balance of Roof	\$900,000.00			28	
29									AES Stations	\$2,500,000	29	
30	Linfield - ADA/RR/Elevator	\$2,000,000									30	
31	Library Expansion Ph1	\$6,000,000									31	
32	Campus Vehicle Access Ph1	\$4,000,000									32	
33	ROTC Field Facility	\$1,500,000									33	
34			Allied Health Building	\$10,600,000							34	
	Total Requests	\$34,685,000		\$17,899,000		\$6,176,000		\$2,486,500		\$6,498,000		\$67,744,500
	\$ per FTE	\$3,314		\$4,309		\$5,635		\$2,050		na.		\$4,001
	% of Total Requests	51.2%		26.4%		9.1%		3.7%		9.6%		100.0%
	\$ per GSF	\$18		\$26		\$19		\$12		\$14		Comments

Authority Only:
MSU-Bozeman Authority ?? MSU-GTF COT Authority ?? MSU-All Campuses Authority ??
MSU-Billings Authority \$15,250,000.00 MAES Authority ??
MSU-Northern Authority \$8,225,146.00

KEY
MAES Montana Agricultural Experiment Station
MSU-BZ Montana State University, Bozeman Campus
MSU-BIL/COT Montana State University Billings/College of Technology
MSU-N Montana State University-Northern, Havre
MSU-GTF-COT Montana State University Great Falls College of Technology

Enrollment	MSU-BZN		MSU-BIL/COT		MSU-N		MSU-GTF-COT	
	Total FTE	Change from Prior Year	Total FTE	Change from Prior Year	Total FTE	Change from Prior Year	Total FTE	Change from Prior Year
FY98	10,209		3,873		1,490		705	
FY99	10,374	1.62%	3,844	-0.75%	1,500	0.67%	750	6.38%
FY00	10,402	0.27%	3,884	1.04%	1,451	-3.27%	766	2.13%
FY01	10,411	0.09%	3,838	-1.18%	1,418	-2.27%	834	8.88%
FY02	10,444	0.31%	3,919	2.11%	1,489	5.01%	952	14.15%
FY03	10,674	2.21%	3,962	1.10%	1,446	-2.89%	1,053	10.62%
FY04	10,665	-0.09%	4,162	5.05%	1,431	-1.04%	1,098	4.26%
FY05	10,528	-1.29%	4,151	-0.26%	1,319	-7.83%	1,093	-0.47%
FY06	10,642	1.09%	4,220	1.39%	1,255	-4.85%	1,186	8.52%
FY07	10,555	-0.26%	4,133	-0.70%	1,207	-4.49%	1,212	0.90%
FY08	10,467	-1.64%	4,154	0.07%	1,096	-12.67%	1,213	2.28%
Five Year Trend: Change from '04 - '08		-1.89%		-0.19%		-30.57%		9.48%

Sources: MUS Enrollment Data and Reports, *Average Annual Student FTE, FY 1998-2009*, accessed May 18, 2009
FCI-Facilities Condition Inventory as of October 4, 2007
Confirmation from Institution

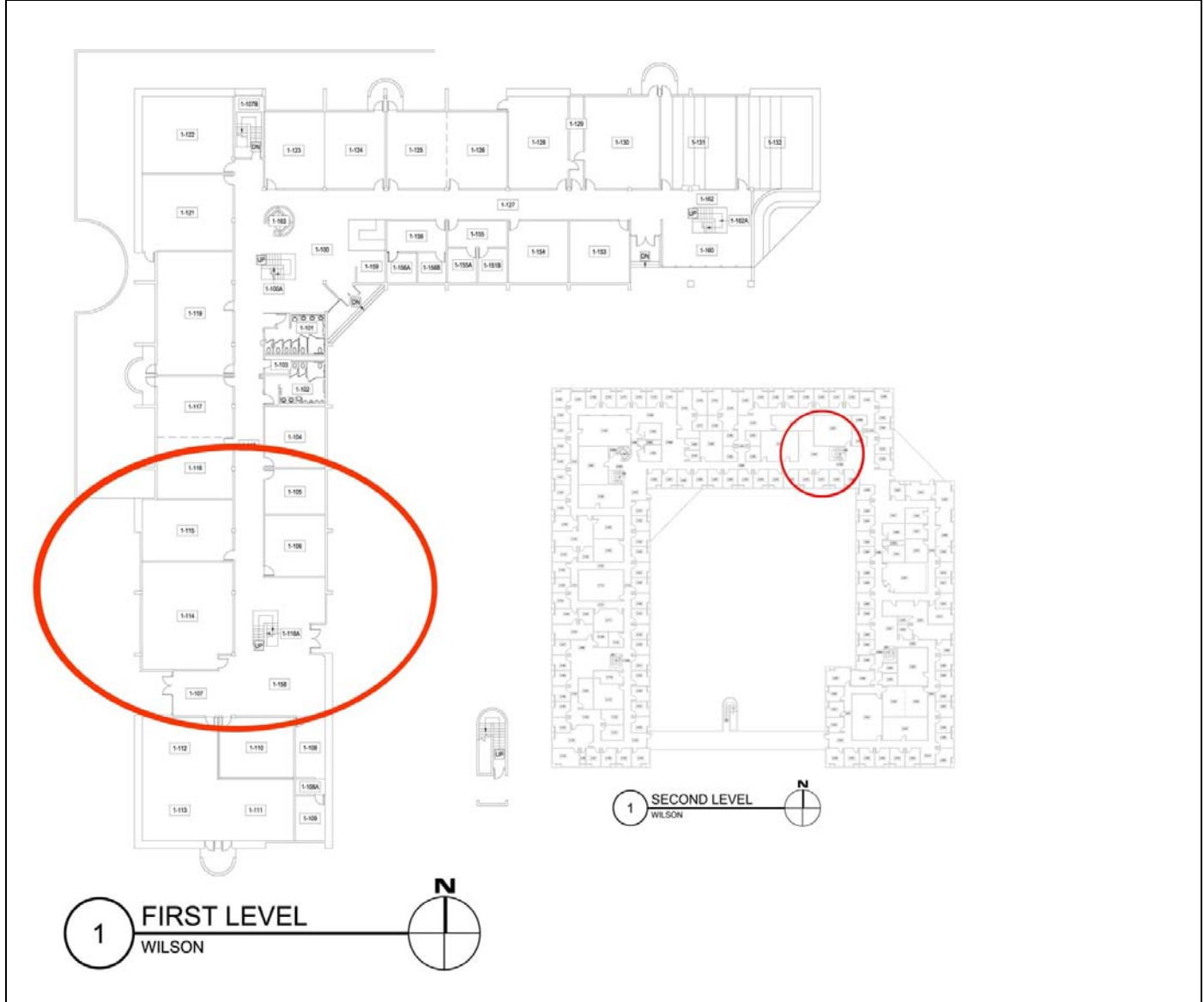
ITEM #	WILSON HALL WRITING CENTER
---------------	-----------------------------------

PRESENTERS:

WALT BANZIGER, JOE BLEEHASH

PROJECT PHASE:	PLANNING	X	SCHEMATIC	DESIGN DOCUMENTS	CONSTRUCTION DOCUMENTS
-----------------------	-----------------	----------	------------------	-------------------------	-------------------------------

VICINITY MAP:



STAFF COMMENTS:

This project is being introduced in its preliminary planning and programming stages for consideration of creating a new, improved, and more visible writing center location on the first floor of Wilson Hall.

Several areas will be impacted, including relocation of tutoring carrels into rooms 1-105, 1-106, and 2-268 second floor. The new writing center will occupy rooms 1-114 and 1-115. The project also includes possible reconfiguration of interior partitions separating room 1-114, the entrance lobby (1-107) and common area hallway (1-158) ceiling, wall, and floor finishes will be updated in all areas being impacted for aesthetic and energy efficiency concerns.

New windows to match existing units on the first level of Wilson Hall are proposed in the exterior wall of rooms 1-114 and 1-115 to allow for better day lighting.

The client is Dr. Paula Lutz.

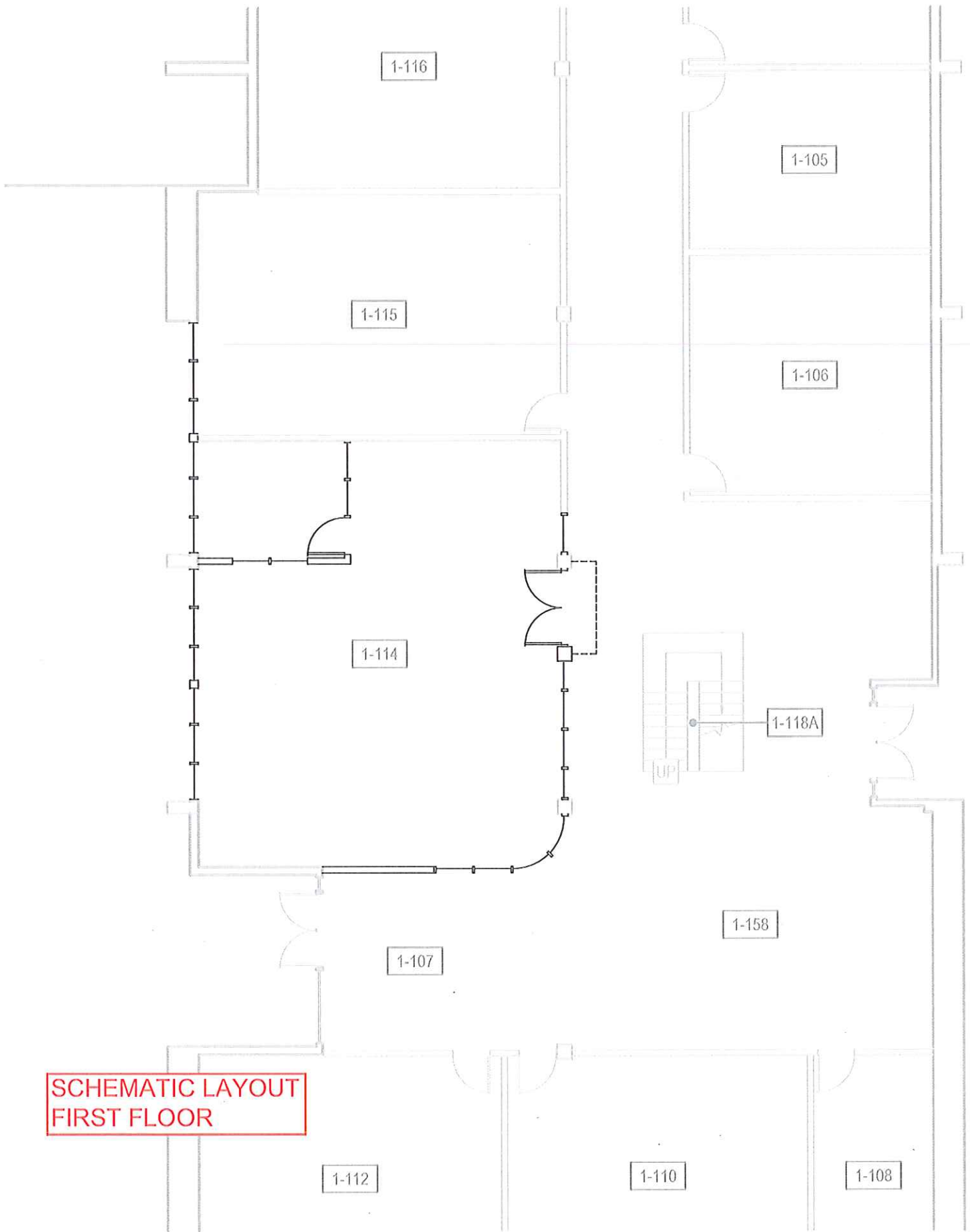
Plans and photographic renderings attached.

COMPLIANCE:	YES	NO
MSU POLICIES	X	
COMMITTEE OR APPROPRIATE REVIEW	X	
MASTER PLAN	X	

BOARD ACTION REQUIRED:

Part 1 - "Recommend approval of project concept"

Part 2 - "Recommend funding of the project from Academic Building R&R Fund"



SCHEMATIC LAYOUT
FIRST FLOOR

SCHEMATIC LAYOUT
SECOND FLOOR

