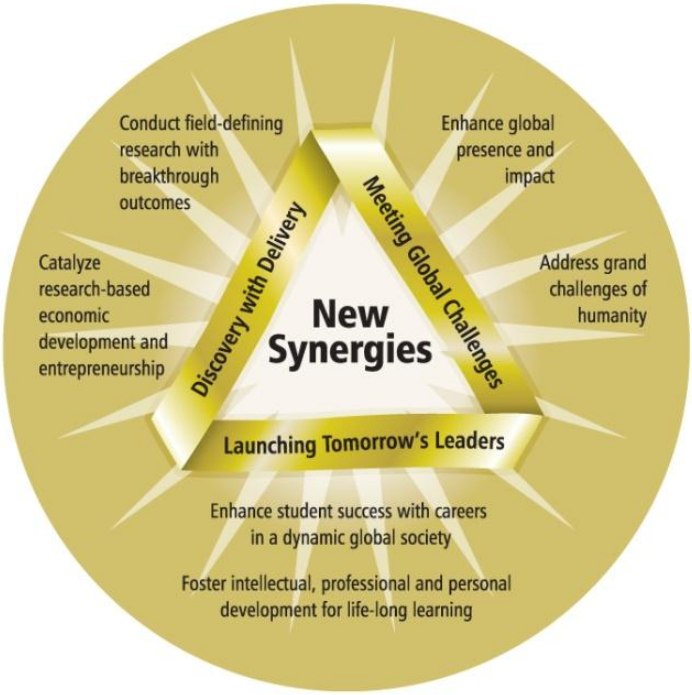
PFC Discussion item 1
May 7, 2012

PURDUE
UNIVERSITY



GOVERNANCE REPORT TO THE BOARD OF TRUSTEES

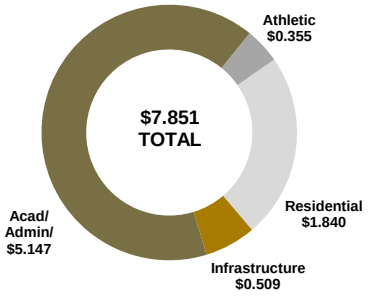
PHYSICAL FACILITIES

May 2012

SYSTEM-WIDE METRICS FALL 2011

	West Lafayette	Calumet	IPFW	North Central	System Total
Gross Square Feet (GSF)	15,907,022	917,815	1,037,391	344,483	18,206,711
Assignable Square Feet (ASF)	11,834,451	572,545	623,276	209,614	13,239,886
Acres	2,559	194	643	268	3,664
No. of buildings (> 10,000 GSF)	170	18	26	4	218
Average (weighted) age of buildings	45.1	31.0	24.0	35.1	42.2
Replacement Value (in billions)					
Buildings					
Academic/Administrative	$3.854	$0.379	$0.781	$0.133	$5.147
Athletic	0.355	0	0	0	0.355
Residential	1.840	0	0	0	1.840
Infrastructure	0.447	0.027	0.027	0.008	0.509
Total	**$6.496**	**$0.406**	**$0.808**	**$0.141**	**$7.851**

REPLACEMENT VALUE [IN BILLIONS]



LAND AREA

West Lafayette Campus	Acres
Airport	543
Gravel Pit	510
Golf Courses	344
Academics	341
Athletics	228
Service and Maintenance	191
University Residences	182
Recreational Sports	103
Campus Parks	94
Discovery Park	23
Total	**2,559**
Agricultural Land	**14,518**
Purdue Research Park	**725**
Regional Campuses	
Calumet	202
Fort Wayne	682
North Central	269
Total	**1,153**
Grand Total	**18,955**

WEST LAFAYETTE SPACE DISTRIBUTION BY AGE

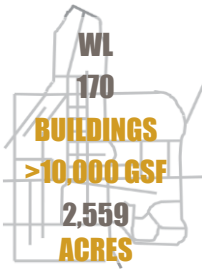
Year Constructed	Assignable Square Feet (ASF)	Percent of Total	Gross Square Feet (GSF)	Percent of Total	Cummulative Percent of Total (GSF)
Pre 1900	17,039	0.2%	34,000	0.2%	0.2%
1900-1909	136,202	1.4%	211,843	1.3%	1.5%
1910-1919	215,035	2.2%	317,982	2.0%	3.5%
1920-1929	370,602	3.8%	669,460	4.2%	7.8%
1930-1939	745,198	7.6%	1,262,414	7.9%	15.7%
1940-1949	570,002	5.8%	896,316	5.6%	21.3%
1950-1959	2,057,309	21.0%	3,169,490	19.9%	41.2%
1960-1969	1,938,652	19.8%	3,146,049	19.8%	61.0%
1970-1979	366,753	3.7%	570,767	3.6%	64.6%
1980-1989	848,027	8.7%	1,311,459	8.2%	72.9%
1990-1999	790,522	8.1%	1,313,661	8.3%	81.1%
2000-2009	1,580,558	16.1%	2,772,689	17.4%	98.5%
After 2009	160,811	1.6%	230,892	1.5%	100.0%
Total	9,796,710	100.0%	15,907,022	100.0%	

Note: Excludes Farms and Parking Garages.

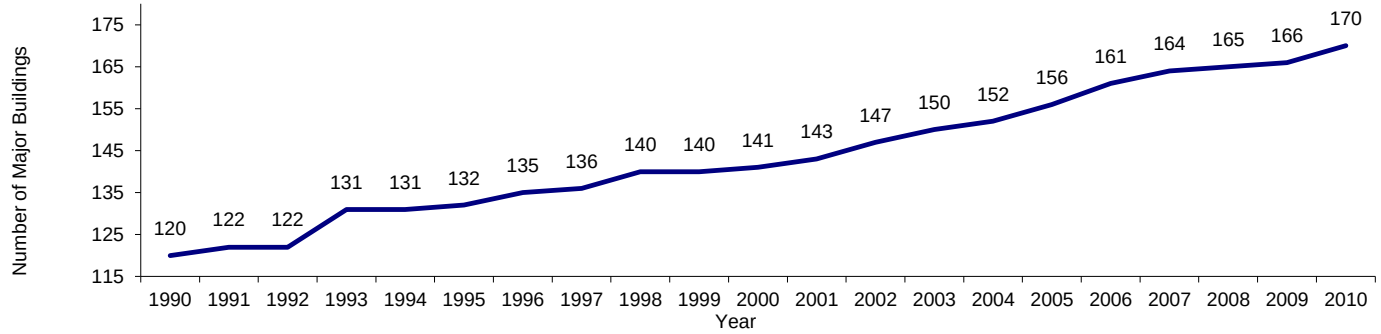
NUMBER OF BUILDINGS - SYSTEM WIDE

Campus	Major[1]	Other	Total
West Lafayette	170	211	381
Calumet	18	4	22
Fort Wayne	26	16	42
North Central	4	7	11
Total	**218**	**238**	**456**

[1]Major buildings are those with 10,000 or more gross square feet of area.



Growth in Number of Facilities - West Lafayette



Source: Space Management and Academic Scheduling unless otherwise noted.

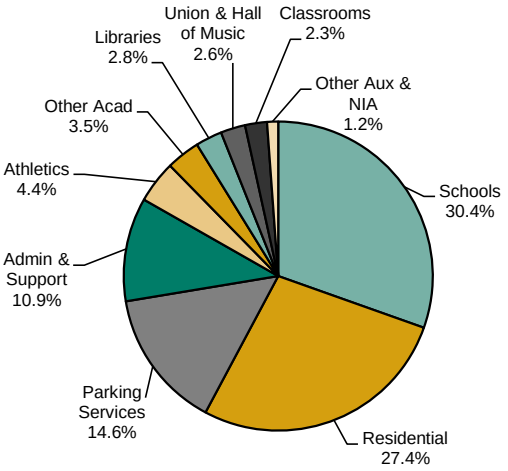
Distribution of Assignable Square Feet (ASF) by Organizational Units

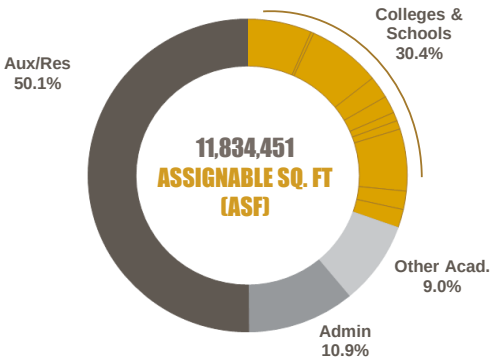
Academic Units	ASF	Percent of Grnd Total	Percent of Acad Total
Agriculture	773,001		16.7%
Education	40,972		0.9%
Engineering	883,775		19.1%
Health and Human Sciences[1]	268,225		5.8%
Liberal Arts[1]	215,854		4.7%
Management	108,648		2.4%
Pharmacy[1]	101,268		2.2%
Science	758,911		16.4%
Technology	225,096		4.9%
Veterinary Medicine	225,287		4.9%
Subtotal Academic Units	**3,601,037**	**30.4%**	**78.0%**
Libraries	328,852		7.1%
General Classrooms	271,270		5.9%
Other Academic[2]	417,531		9.0%
Total Academic Units	**4,618,690**	**39.0%**	**100.0%**

Administrative and Academic Support Units		
Administrative Units	958,418	
Recreational Sports	273,427	
Warehouses	52,774	
Total Admin/Acad Support	**1,284,619**	**10.9%**
Total Academic/Administrative	**5,903,309**	**49.9%**

Auxiliary, Residential and Non-institutional Agency Units		
Residential	3,239,287	27.4%
Parking Services	1,725,583	14.6%
Intercollegiate Athletics	523,762	4.4%
Union & Elliott Hall of Music	305,374	2.6%
Other[3]	137,136	1.2%
Total Auxil, Resd'l & NIA	**5,931,142**	**50.1%**
Grand Total	**11,834,451**	**100.0%**

ASF by Organizational Unit Function





[1] The College of Health and Human Sciences was formed administratively on July 1, 2010. Students officially will be enrolled January 2011. The new college brings together nine academic units including all programs from the College of Consumer & Family Sciences; Health and Kinesiology, Psychological Sciences, and Speech, Language and Hearing Sciences from the College of Liberal Arts; and the Health Sciences and Nursing programs from the College of Pharmacy, Nursing and Health Sciences (renamed the College of Pharmacy).
[2] Includes Med'l Ed, Discovery Park, Continuing Education and Conferences, Mil Sciences, Bands, Cancer Rsch, PMU Mtg Rms, IT Teach & Lrng, Gen Acad Lab, Gen Univ, Commons, Acad Undevel, and Acad Resrv.
[3] Includes Airport Operations, Purdue Research Foundation Property, and other Non-institutional agencies.

WEST LAFAYETTE DISTRIBUTION OF SQUARE FOOTAGE

Area	Fall 2001	Percent of Total	Fall 2010	Percent of Total	Percent Change
Agriculture	729,050	8.5%	773,001	6.5%	6.0%
Consumer and Family Sciences	100,752	1.2%	-	NA	NA
Education	39,511	0.5%	40,972	0.3%	3.7%
Engineering	594,297	6.9%	883,775	7.5%	48.7%
Health and Human Sciences	-	NA	268,225	2.3%	NA
Liberal Arts	299,350	3.5%	215,854	1.8%	-27.9%
Management	70,756	0.8%	108,648	0.9%	53.6%
Pharmacy	114,119	1.3%	101,268	0.9%	-11.3%
Science	665,172	7.8%	758,911	6.4%	14.1%
Technology	200,277	2.3%	225,096	1.9%	12.4%
Veterinary Medicine	206,923	2.4%	225,287	1.9%	8.9%
Libraries	333,477	3.9%	328,852	2.8%	-1.4%
Classrooms	236,111	2.8%	271,270	2.3%	14.9%
Other Academic	263,439	3.1%	417,531	3.5%	58.5%
Total Academic	3,853,234	45.0%	4,618,690	39.0%	19.9%
Administrative and Academic Support	1,070,705	12.5%	1,284,619	10.9%	20.0%
Subtotal Total Academic and Administrative	*4,923,939*	*57.5%*	*5,903,309*	*49.9%*	*19.9%*
Residential	2,821,125	32.9%	3,239,287	27.4%	14.8%
Intercollegiate Athletics	404,366	4.7%	523,762	4.4%	29.5%
Other Auxiliary	418,734	4.9%	2,168,093	18.3%	417.8%
Total	8,568,164	100.0%	11,834,451	100.0%	38.1%

Source: Space Management and Academic Scheduling unless otherwise noted.

Space Used by Academic-Administrative Departments

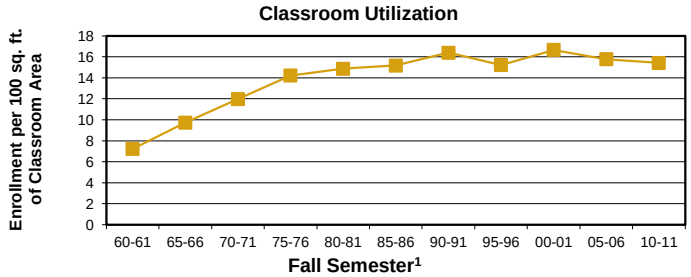
Major Room Type Categories	Assignable Square Feet	Percent of Total	Types of Rooms or Space Included (Excludes Space Under Construction)
100 Classrooms	274,058	4.6%	Classrooms and classroom service spaces
200 Teaching Labs	547,677	9.3%	Class laboratories and individual study laboratories
250 Research Labs	1,377,702	23.3%	Nonclass laboratories and research laboratory office areas
300 Offices	1,862,705	31.6%	Offices, conference rooms, interview rooms, and departmental commons spaces
400 Study	355,411	6.0%	Study rooms, carrel areas, open stack areas, and library processing spaces
500 Special Use	537,809	9.1%	Armory, athletic and ath. stg areas, tchg clinics, demonstration facil, field bldgs, animal qrtrs, and grnhses
600 General Use	235,760	4.0%	Assembly, exhibition, food service, day care, lounge, merchandise, recreation, and meeting room facilities
700 Support	559,324	9.5%	Central computing, shops, storage, vehicle storage, service, and hazardous materials storage facilities
800 Health Care	76,981	1.3%	Patient rooms, patient bath, surgery, treatment, diagnostic labs, cntrl supplies, public wtg, and on-call facilities
900 Residential	1,069	0.0%	Resident sleeping rooms, sleeping rooms with bath, common bath, guest rooms, apartments, and houses
000 Unclassified	74,813	1.3%	Space that is inactive, undergoing remodeling, or is unfinished
Total	5,903,309	100.0%	

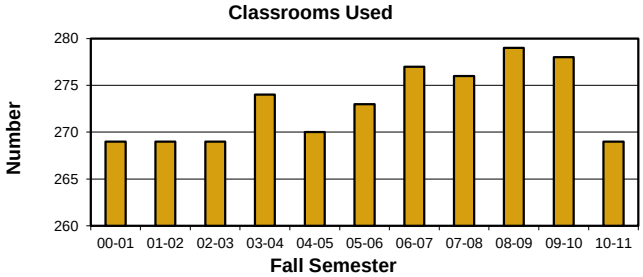
[1]By major room type categories.
[2]Does not include auxiliaries.

Classroom Utilization

Fall Semesters Past Fifty Years	1960-61	1965-66	1970-71	1975-76	1980-81	1985-86	1990-91	1995-96	2000-01	2005-06	2010-11	50 Year Percent Change
Headcount Enrollment	15,160	20,176	25,582	28,923	32,366	31,987	35,647	34,685	37,871	38,712	39,726	162%
Classroom Area (ASF)[1]	210,100	207,600	213,741	203,538	217,752	210,886	217,433	228,093	227,424	245,488	257,704	23%
Headcount Enrollment per 100 Square Feet	7.2	9.7	12.0	14.2	14.9	15.2	16.4	15.2	16.7	15.8	15.4	114%

Fall Semesters Past Ten Years	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
Number of Classrooms Used[2]	269	269	269	274	270	273	277	276	279	278	269
Average Weekly Hours of Room Use	39.7	38.6	38.8	37.1	37.5	37.9	38.7	37.4	37.0	36.5	37.6





[1]The classroom area values for 1960-61 and 1965-66 are estimates. Classroom area (assignable square feet) does not include classroom service space.
[2]Includes daytime and evening use.

Assignable Square Feet by Major Function and Building Age Categories

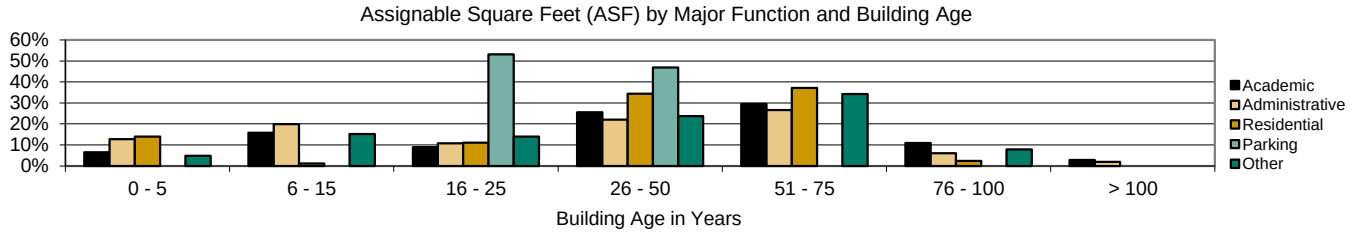
Assignable Square Feet (ASF)

Major Function Categories	Building Age in Years 0 - 5	6 - 15	16 - 25	26 - 50	51 - 75	76 - 100	> 100	Total
Academic[1]	302,033	726,341	413,457	1,179,270	1,365,939	503,207	128,443	4,618,690
Administrative and Academic Support[2]	163,162	256,555	137,906	283,275	341,471	77,452	24,798	1,284,619
Residential	453,050	36,272	356,961	1,113,787	1,200,629	78,588	0	3,239,287
Parking Services	0	0	917,484	808,099	0	0	0	1,725,583
Other Auxiliary[3] and Non-institutional Agency Units	46,580	147,390	135,647	229,317	330,837	76,501	0	966,272
All	964,825	1,166,558	1,961,455	3,613,748	3,238,876	735,748	153,241	11,834,451

Percent of Assignable Square Feet (ASF)

Major Function Categories	Building Age in Years 0 - 5	6 - 15	16 - 25	26 - 50	51 - 75	76 - 100	> 100	Total
Academic[1]	6.5%	15.7%	9.0%	25.5%	29.6%	10.9%	2.8%	100.0%
Administrative and Academic Support[2]	12.7%	20.0%	10.7%	22.1%	26.6%	6.0%	1.9%	100.0%
Residential	14.0%	1.1%	11.0%	34.4%	37.1%	2.4%	0.0%	100.0%
Parking Services	0.0%	0.0%	53.2%	46.8%	0.0%	0.0%	0.0%	100.0%
Other Auxiliary[3] and Non-institutional Agency Units	4.8%	15.3%	14.0%	23.7%	34.2%	7.9%	0.0%	100.0%
All	8.2%	9.9%	16.6%	30.5%	27.4%	6.2%	1.3%	100.0%

[1]Includes Academic Schools, Discovery Park, Libraries, IT Teach & Learn, Mil Sciences, Bands, Med'l Ed, Continuing Ed and Conferences, Gen Acad Labs and Classrooms, and Other Related Units.
[2]Includes Administrative Departments, Recreational Sports Facilities, and Warehouses.
[3]Includes Airport Operations, Union, Hall of Music, and Athletics.



Source: Space Management and Academic Scheduling unless otherwise noted.

WEST LAFAYETTE ADJUSTED DEFERRED REPAIR BACKLOG - FY 2007-FY 2011 (BY CATEGORY)

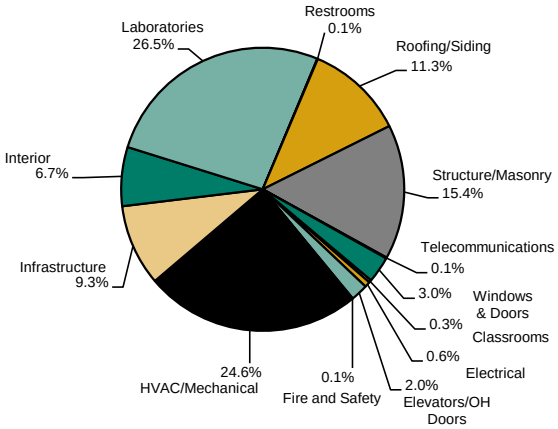
Category	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Deferred Repair	$ 42,001,540	$ 57,109,501	$ 77,907,642	$ 83,809,776	$ 86,873,707
Deferred Rehabilitation	395,930,186	371,423,433	361,678,447	344,845,134	352,171,980
Deferred R&R	$437,931,726	$428,532,934	$439,586,089	$428,654,910	$439,045,687

Source: R&R Database

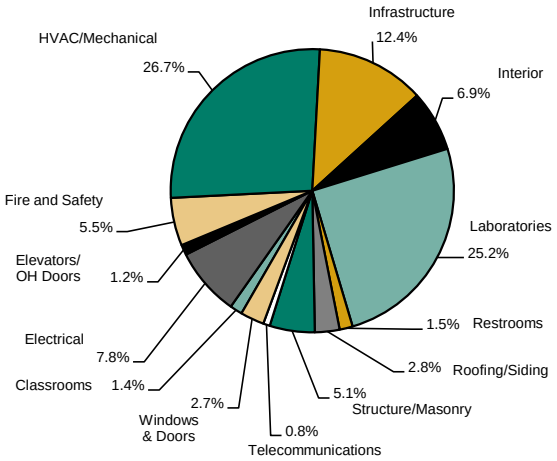
WEST LAFAYETTE DEFERRED REPAIR BACKLOG - FY 2006 (BY CATEGORY)

Category	Deferred Repair	Deferred Rehabilitation	Total
Classrooms	$ 275,000	$ 5,023,000	$ 5,298,000
Electrical	550,000	27,435,311	27,985,311
Elevators/OH Doors	1,705,500	4,133,100	5,838,600
Fire and Safety	100,000	19,282,451	19,382,451
HVAC/Mechanical	21,411,511	93,901,000	115,312,511
Infrastructure	8,082,800	43,665,499	51,748,299
Interior	5,849,691	24,471,159	30,320,850
Laboratories	23,004,810	88,713,390	111,718,200
Restrooms	54,240	5,268,975	5,323,215
Roofing/Siding	9,786,445	9,932,355	19,718,800
Structure/Masonry	13,365,670	18,120,020	31,485,690
Telecommunications	90,000	2,680,300	2,770,300
Windows & Doors	2,598,040	9,545,420	12,143,460
Total	86,873,707	352,171,980	439,045,687

Deferred Repair



Deferred Rehabilitation

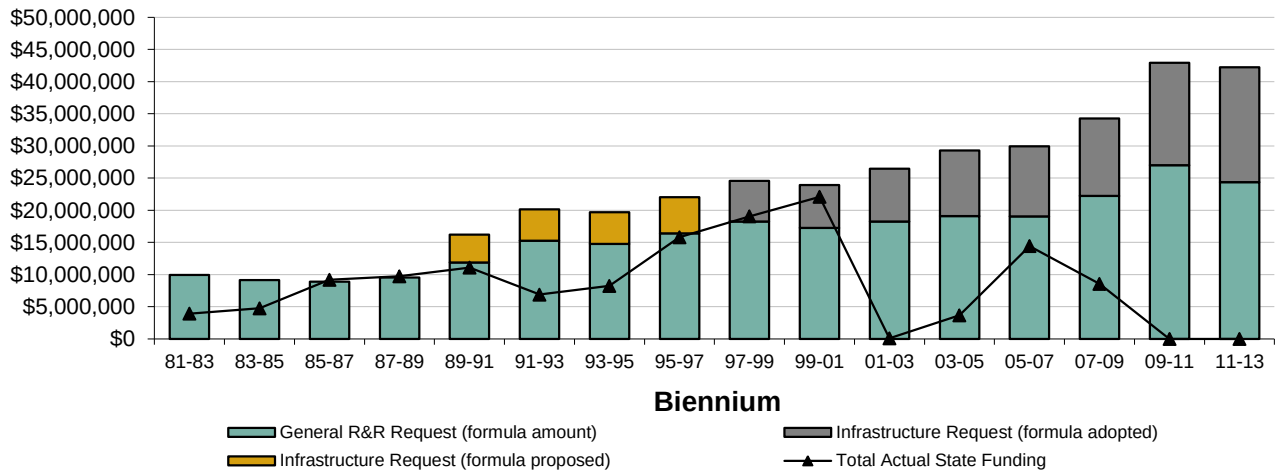


WEST LAFAYETTE BUILDING SUMMARY - TEN HIGHEST IN TOTAL DEFERRED REPAIR & REHABILITATION - FY 2011

Facility	Deferred Repair	Deferred Rehabilitation	Total Deferred R&R	Facilities Condition Index	Current Replacement Value
Lilly Hall Of Life Sciences	$19,989,670.00	$52,217,046.00	$72,206,716.00	0.50	$143,285,604.36
Robert E. Heine Pharmacy Building	$3,848,880.00	$24,971,420.00	$28,820,300.00	0.49	$59,372,870.95
Veterinary Pathobiology Research Building	$335,800.00	$4,086,000.00	$4,421,800.00	0.46	$9,689,665.77
University Hall	$701,900.00	$4,105,400.00	$4,807,300.00	0.44	$10,917,860.12
Charles J. Lynn Hall Of Vet Medicine	$6,001,254.00	$43,699,146.00	$49,700,400.00	0.35	$140,161,897.10
Richard Benbridge Wetherill Lab Of Chemistry	$19,059,550.00	$10,958,720.00	$30,018,270.00	0.34	$88,107,939.45
Chaffee Hall	$280,000.00	$1,420,800.00	$1,700,800.00	0.33	$5,087,785.69
Center For Paralysis Research	$28,760.00	$555,040.00	$583,800.00	0.29	$2,014,305.34
Forestry Building	$940,780.00	$2,115,320.00	$3,056,100.00	0.29	$10,546,255.03
Veterinary Pathology Building	$877,920.00	$2,306,880.00	$3,184,800.00	0.29	$11,152,056.16

Source: Physical Facilities unless otherwise noted.

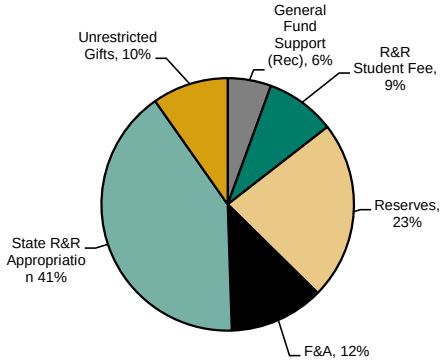
WEST LAFAYETTE REPAIR AND REHABILITATION FUNDING



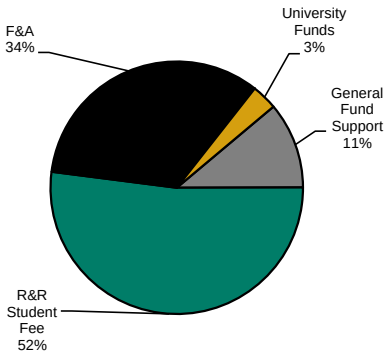
WEST LAFAYETTE REPAIR AND REHABILITATION AND DEFERRED REPAIR AND REHABILITATION (ANNUAL TARGET)

Source	FY 2007	FY 2012
Recurring R&R Support		
Current General Fund Support	$1,000,000	$1,542,124
R&R Student Fee (Split)	800,000	2,435,445
Facilities/ Admin. Reimb. Revenue (Half of Growth)	2,175,000	4,675,000
Reserves	3,705,467	457,876
State R&R Appropriation (50% of Formula)	7,319,533	0
Subtotal Recurring R&R Support	**$15,000,000**	**$9,110,445**
Deferred Repair Catch-Up		
R&R Student Fee (Split)	800,000	4,814,555
Reserves	403,639	
Available for Debt Service Payments	**$1,203,639**	**$4,814,555**
Overall Total	**$17,952,953**	**$13,925,000**

FY 2007



FY 2012



WEST LAFAYETTE REPAIR AND REHABILITATION FUNDING

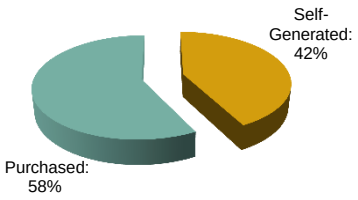
Source of Funding	2007	2008	2009	2010	2011	AVE
Total $ Spent from Bond Proceeds	5,700,000	18,775,500	14,713,000	7,759,670	9,290,314	**11,247,697**
Other Funding Allocated for R&R	15,727,478	14,477,134	21,372,035	37,932,292	38,642,280	**25,630,244**
Total $ Spent Including Bond Proceeds	21,427,478	33,252,634	36,085,035	45,691,962	47,932,594	**36,877,941**
Total Deferred R&R	437,931,726	428,532,934	439,586,089	428,654,910	439,045,707	

Source: Physical Facilities unless otherwise noted.

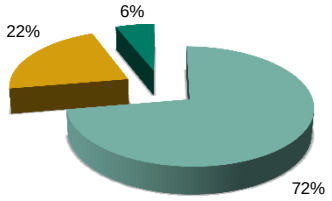
WEST LAFAYETTE FACILITIES UTILITY UTILIZATION BY MAJOR FUNCTION

		Academic & Administration		Housing & Food Service		Intercollegiate Athletics (ICA)	
FY 2011	Units	% of Total Use	Quantity	% of Total Use	Quantity	% of Total Use	Quantity
Steam	BTU	72%	1,193,191	22%	358,122	6%	99,020
Chilled Water	Ton-hours	75%	72,555,704	20%	19,348,188	5%	4,837,047
Electricity	kWh	73%	218,746,029	17%	50,940,856	10%	29,965,210
Storm & Sanitary	K Gallons	59%	360,165	39%	239,208	2%	14,222
Potable Water	K Gallons	69%	714,417	29%	298,266	1%	14,488

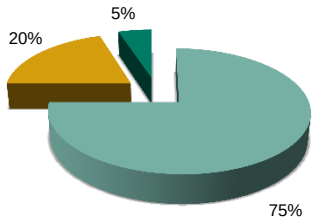
FY 2011 University Electric = kWh
Total Electricity Used = 299,652,095



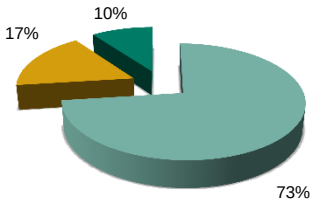
FY 11 Steam = BTU
Total Steam to Campus = 1,650,334



FY 11 Chilled Water = Ton-hrs
Total CHW to Campus = 96,740,939



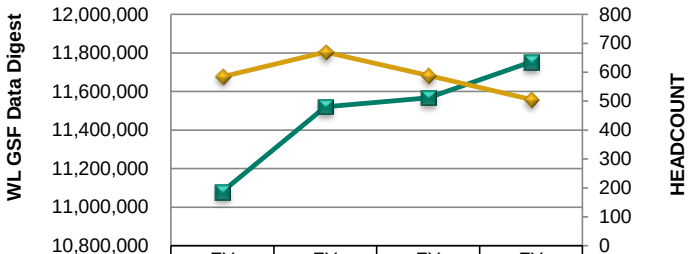
FY 11 Electricity = kWh
Total Electricity to Campus = 299,652,095



ACAD / ADMIN HFS Athletics

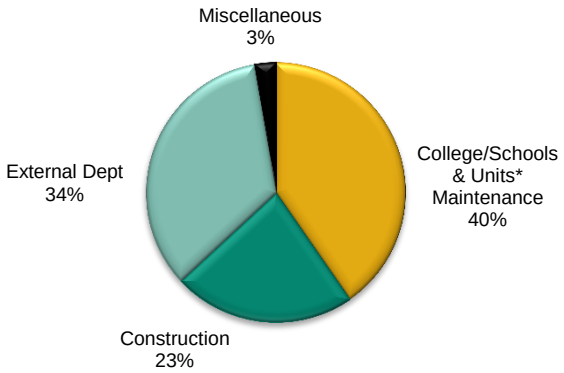
WEST LAFAYETTE GSF IN RELATION TO POSTIONS FILLED BY BUILDING SERVICES, OPERATIONS & MAINTENANCE STAFF

GSF vs FTE Building Services & Operations & Maintenance



	FY 08	FY 09	FY 10	FY 11
GROSS SQ FT	11,080,4	11,520,8	11,568,0	11,752,5
FTE	585	670	589	506

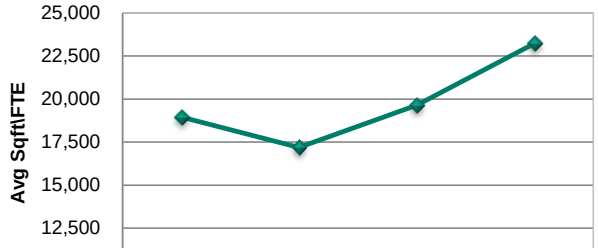
FY11 Operations & Maintenance Work Allocation %



*Units does not include auxilaries

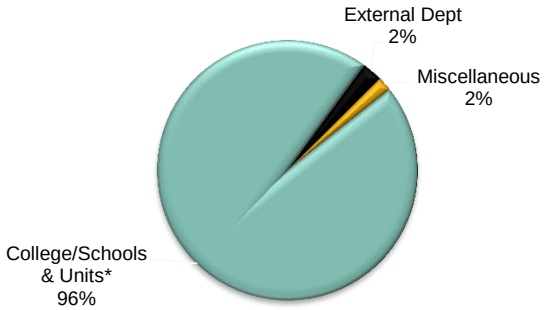
WEST LAFAYETTE SERVICE, ADMINISTRATIVE PROFESSIONALS & CLERICAL STAFFING LEVELS (filled only) FOR BUILDING SERVICES, OPERATIONS & MAINTENANCE

SQFT/FTE Building Services & Operations & Maintenance



	FY 08	FY 09	FY 10	FY 11
Sqft\fte	18,950	17,195	19,640	23,226

FY11 Building Services Work Allocation %



*Units does not include auxilaries

Source: Physical Facilities unless otherwise noted.