

an integrated plan for education,
research, and health
IUPUI and IU Health

SMITHGROUP/JJR

February 17, 2011



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a master plan vision for the next 30 years



IUPUI and IU Health



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a distinctive history



walker theater



ball gardens



master plan criteria

create one academic medical campus

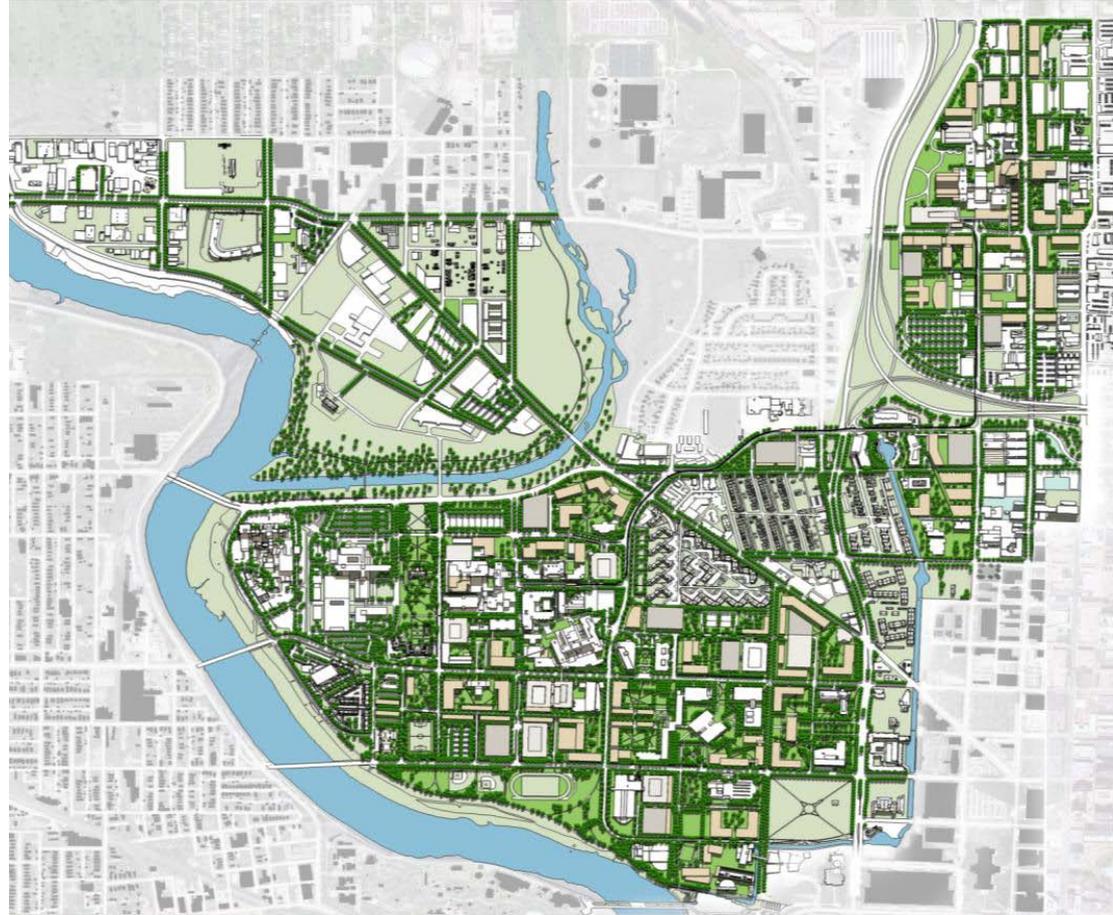
- *continue coordinated planning*
- *integrate functions of patient care, education and research*
- *coordinate parking strategy*
- *connect districts*
- *develop consistent way-finding*

use land strategically

- *acquire land to reinforce campus identity*

promote a strong sense of continuity

- *define clear campus boundaries*
- *link visible and accessible open spaces*





participants in the planning process

Executive Committee:

Michael McRobbie, President
Dan Evans, President & CEO
Tom Morrison, VP for Capital Projects and Facilities
Bill Stefan, VP for Engagement
Charles Bantz, Chancellor
Sam Odle, EVP & COO
Marvin Pember, EVP and CFO
Dr. Craig Brater, Dean

Indiana University
IU Health Partners, Inc.
Indiana University

IUPUI
IU Health Partners, Inc.
IU Health Partners, Inc.
Indiana University School of Medicine

Steering Committee:

Paul Sullivan, Deputy VP for Administration
Bob Meadows, University Architect
Mark Bode, Executive Director Real Estate
Emily Wren, Assoc. Vice Chancellor Facilities
Lynn Coyne, Director of Real Estate
David Doell, Project Manager

Indiana University
Indiana University
Clarian Health Partners, Inc.
IUPUI
Indiana University
IU Health

Additional Planning Partners:

IU Health Partners, Inc.

Donnie Reed, COO
Dr. Ora Pescovitz, former CEO
Dan Fink, COO
Dr. John Kohne, COO
Mela Miroff
Doug Morris, former VP of Facilities
Mark Mattes
Debra Uhl, CEO

Riley Hospital – Clinical Programs
Riley Hospital – Clinical & Research Programs
Riley Hospital
Methodist Hospital
Methodist Hospital – Clinical Programs
IU Health– Clinical Programs
IU Health– Education Programs
Indiana University Hospital

IUPUI

Joel Trammel
Karen Correll
Laura Lucas
Brian Carney

IUPUI – School of Medicine Programs
IUPUI – School of Medicine Programs
Indiana University
Wishard Hospital

Master Plan Consultants:

SmithGroup/JJR
Programming and Master Planning

CHANCE Management Advisors, Inc.
Parking and Transit Planning

Gorove/Slade Associates, Inc.
Transportation Planning

Hunt Construction
Cost Modeling



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IUPUI – challenges and opportunities

- *grow enrollment to 35,000*
- *provide more teaching labs and research space*
- *improve and expand classrooms and office space*
- *integrate academic, research and healthcare communities*
- *expand on campus housing and student amenities*
 - *modernize existing space*
- *improve the quality and quantity of campus open spaces*





program summary for IUPUI



<i>Academic needs: (classroom, teaching, labs, office, service)</i>	1,525,000 <i>(745,000)</i>
<i>Academic support : (library, admin, athletics/rec, assembly)</i>	515,000 <i>(265,000)</i>
<i>Auxiliary needs: (student center, health care)</i>	160,000 <i>(85,000)</i>
<i>Space demand subtotal:</i>	2,200,000
<i>Demolition replacement:</i>	<i>(1,095,000)</i>
Total need:	3,295,000

<i>Existing beds (3.7% of 30,000):</i>	1,107 beds
<i>Housing demolition candidates:</i>	<i>60 beds</i>

<i>Residential base year total:</i>	1,047 beds
<i>Proposed residential :</i>	2,453 beds
<i>Total residential (10% of 35,000)</i>	3,500 beds

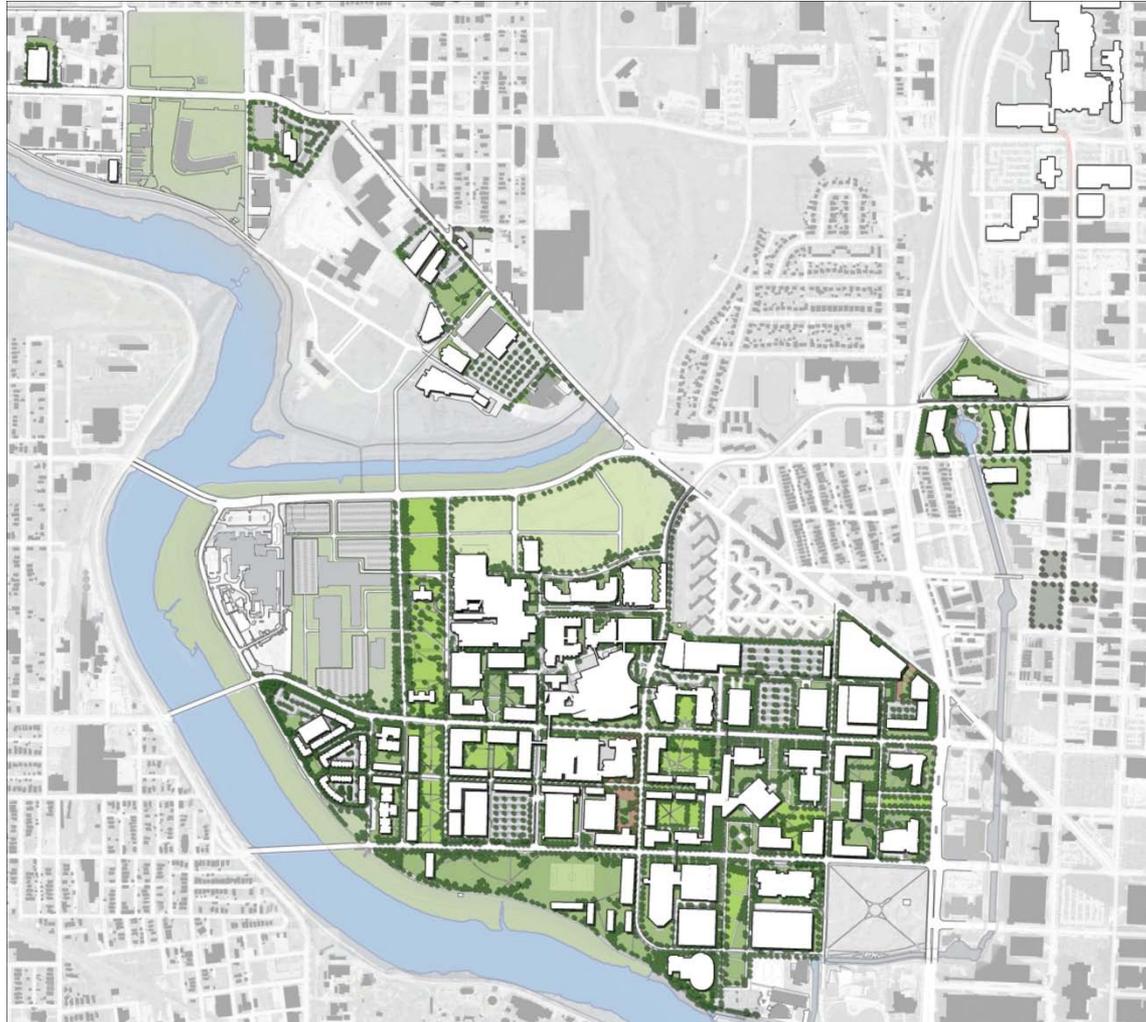
<i>Gathering spaces</i>	160,000
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Existing GSF: 9,900,000 GSF



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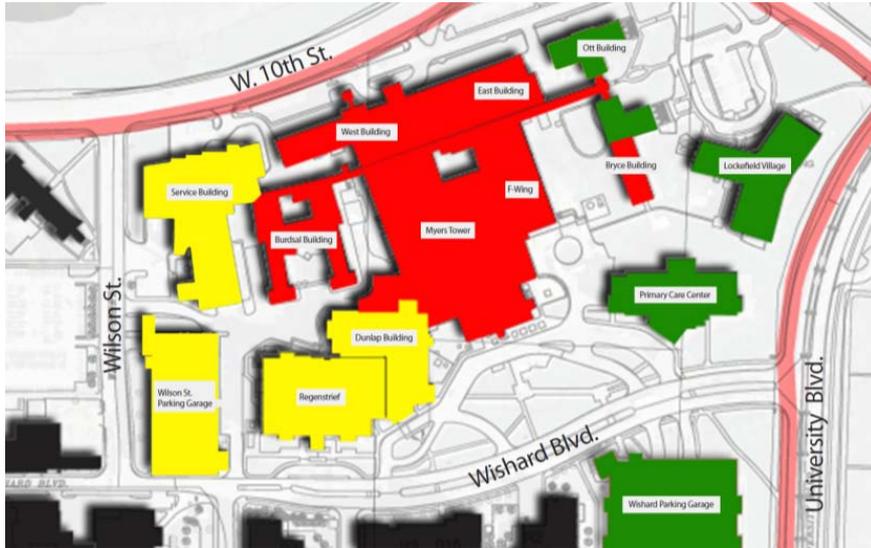
initial illustrative master plan



IUPUI and IU Health



acquisition of the Wishard property



strategic location
obsolete structures
difficult to adapt to modern programs
extensive demolition required

Primary Care Center	98,747	B	11	4 + Bsmt.	South / Stand Alone	Upgraded MEP minor upgrades required	Faculty Office
Ott Building	30,390	B	86	4	North / Connected	Fair Condition Upgraded MEP minor upgrades required, new roof and windows needed	Office
Service Building	67,038	B	16	2	West / Connected	Reuse chillers & steam minor upgrades	Central Utility as required
Duniap Building	135,479	I	22/6	4 +Bsmt	Central / Attached	Good Condition MEP systems some upgrades replacements	Office Education
Regenstrief	200,235	B	34	6 + Bsmt.	West / Attached	Fair Condition MEP Systems need replacement	Office Education
East Building	104,869	B	80	4 + Bsmt.	North / Attached	Fair-Poor Condition MEP Systems need replacement	Demolition
West Building	79,779	B	84	5	West / Attached	Poor Condition MEP Systems need replacement	Demolition
Myers Tower	394,176	I	40	7 + Bsmt.	Central / Attached	Poor Condition Central MEP distribution, upgrades required, roof replacement, plumbing replacement, FI to FI Height issues	Demolition
F-Wing	52,285	I	70	5 + Bsmt.	East / Attached	Fair Condition MEP Systems, Roof need Replacement	Demolition
Burdsal Building	69,700	I	95	5	West / Attached	Poor Condition MEP Systems need Replacement	Demolition
Bryce Building	48,818	B	85	5	East / Connected	Poor Condition MEP Systems need Replacement	Demolition Office
Wishard Garage	(1,200 cars)	P	5	7	East / Stand Alone		Retain Parking
Wilson St. Garage	(500 cars)	P			West / Stand Alone	Upgrading 10 year life	Retain Parking

Total Area **1,337,513**

Area for Reuse **233,952**

Potential Reuse **402,752**

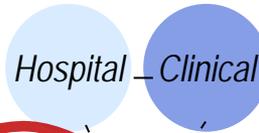
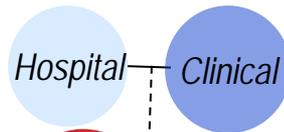
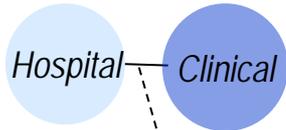
- Reuse
- Investigate
- Demolish



integrated planning in an era of constrained resources

- increases productivity
- reduces duplication
- supports knowledge management
- supports emerging disciplines
- supports development of evidence
- optimizes care delivery
- enhances quality & value

Patient Care

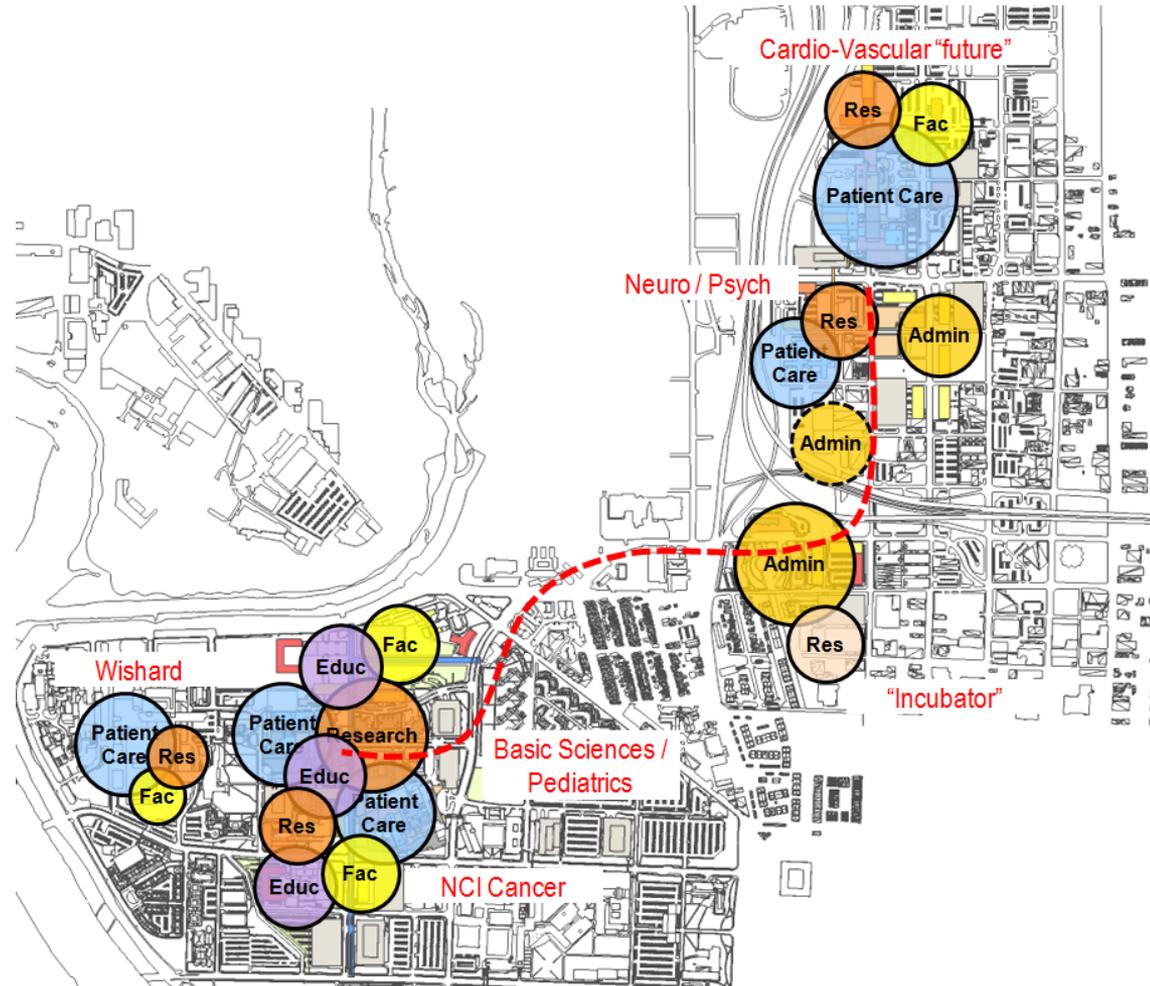




an integrated health sciences center

projected program = 4,176,680 gsf

- **Research** is INTEGRATED with patient care environment.
 - NCI University Hospital
 - Neuro / Psych
 - Pediatrics / Basic Sciences
 - Cardio-Vascular
- **Education** is CONSOLIDATED at Peninsula Campus – a New Integrated Health Sciences Center
- **Administration / Faculty Offices** are DISTRIBUTED depending on need.
- **Corporate Administration** is DISTRIBUTED
- **Incubator labs** are CONSOLIDATED at Canal District
- **Patient Parking** is DISTRIBUTED at Patient Care Setting





pursuing NCI recognition

34 AMC-affiliated NCI Comprehensive Cancer Centers

MD Anderson	Houston	Fred Hutchinson	Seattle
Case Western	Cleveland	Yale	New Haven
Dana-Farber	Boston	Alvin Siteman	St Louis
Pitt	Pittsburgh	Chao Family	Irvine
Helen Diller	San Francisco	Karmanos	Detroit
Herbert Irving	New York	Masonic	Minneapolis
Ohio State	Columbus	Holden	Iowa City
Abramson	Philadelphia	Lineberger	Chapel Hill
CCI New Jersey	Piscataway	Mayo Clinic	Rochester
Robert Lurie	Chicago	Moores	San Diego
Michigan	Ann Arbor	Paul Carbone	Madison
UAB	Birmingham	Sidney Kimmel	Baltimore
Vanderbilt Ingram	Nashville	Wake Forest	Winston-Salem
USC / Norris	Los Angeles	Arizona	Tucson / Phoenix
Colorado	Denver / Aurora	Lombardi	Washington DC
U Chicago	Chicago	Norris Cotton	Hanover
Duke	Durham	UCLA/ Jonsson	Los Angeles



		Total Hospital Revenue (Millions) (AHD 2010)	Total NCI Research (Millions) (NCI 2009)	TOTAL (millions)
1	University of Texas Medical School at Houston NCI - MD Anderson Cancer Center	\$ 13,421	\$ 135.3	\$ 13,556
2	Case Western Reserve University School of Medicine NCI - Case Comprehensive Cancer Center	\$ 11,756	\$ 37.1	\$ 11,793
3	Harvard Medical School NCI - Dana-Farber Cancer Institute	\$ 10,353	\$ 230.6	\$ 10,584
4	University of Pittsburgh School of Medicine NCI - University of Pittsburgh Cancer Institute	\$ 9,846	\$ 63.6	\$ 9,910
5	UCSF, School of Medicine NCI - Helen Diller Family Comprehensive Cancer Center	\$ 6,962	\$ 74.0	\$ 7,036
6	Columbia University College of Physicians and Surgeons NCI - Herbert Irving Comprehensive Cancer Center	\$ 6,808	\$ 33.3	\$ 6,841
7	Ohio State University College of Medicine NCI - Comprehensive Cancer Center	\$ 5,680	\$ 57.3	\$ 5,737
8	University of Pennsylvania School of Medicine NCI - Abramson Cancer Center	\$ 5,396	\$ 66.4	\$ 5,462
9	UMDNJ-Robert Wood Johnson Medical School NCI - Cancer Center Institute of New Jersey	\$ 4,622	\$ 14.7	\$ 4,637
10	Northwestern University The Feinberg School of Medicine NCI - Robert Lurie Comprehensive Cancer Center	\$ 4,419	\$ 39.6	\$ 4,459
11	Indiana University School of Medicine	\$ 4,301	\$ 14.8	\$ 4,316
12	University of Michigan Medical School NCI - UofM Comprehensive Cancer Center	\$ 3,724	\$ 88.1	\$ 3,812
13	University of Alabama School of Medicine NCI - UAB Comprehensive Cancer Center	\$ 3,705	\$ 36.8	\$ 3,742
14	Vanderbilt University School of Medicine NCI - Vanderbilt-Ingram Cancer Center	\$ 3,564	\$ 77.2	\$ 3,641
15	Keck School of Medicine, USC NCI - USC / Norris Comprehensive Cancer Center	\$ 3,579	\$ 44.0	\$ 3,623
16	University of Colorado Denver School of Medicine NCI - University of Colorado Cancer Center	\$ 3,364	\$ 28.1	\$ 3,392

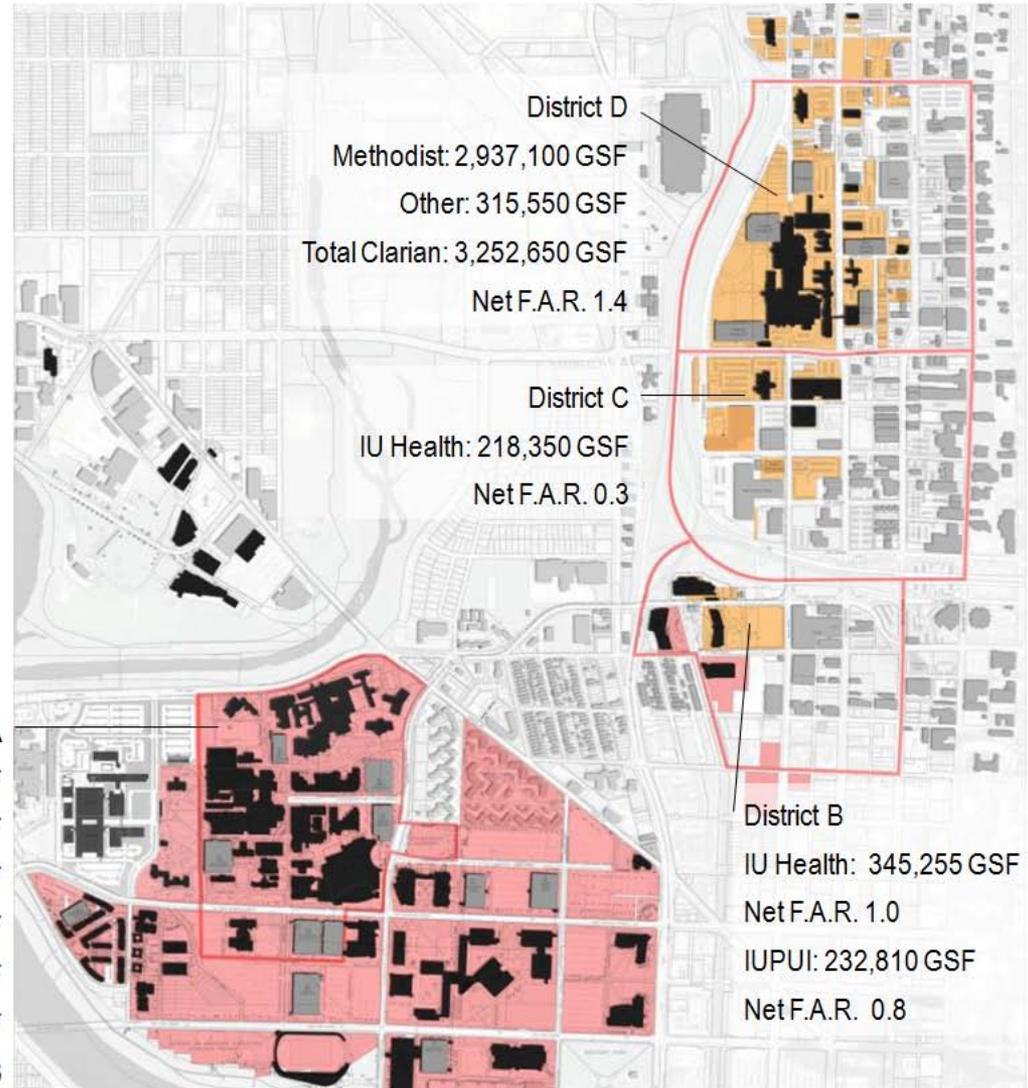


existing development - IHSC

- approx. 3.81 million GSF IU Health facilities
- approx. 5.31 million GSF IUPUI facilities
- 9.12 million GSF IUPUI and IU Health facilities
- 1.46 million GSF existing Wishard campus
- 10.58 million GSF total with Wishard
- F.A.R. range from 0.3 to 1.6

District A

IU Hospital: 1,400,360 GSF
 Riley Hospital: 1,083,940 GSF
 Simon Family Tower: 675,000 GSF
 IUSM, IUPUI Facilities: 1,917,750 GSF
 Wishard Facilities: 1,461,000 GSF
 Total Facilities: 6,538,050 GSF
 Net F.A.R. 1.6





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program summary for integrated health sciences

	Existing NSF All Districts	Proposed NSF Growth	Proposed Demolitions	Demo GSF To Be Replaced	Total Required New GSF
IUPUI Academic SOM	1,185,765	509,275		280,810	1,360,910
Administration	490,985	112,250			157,600
			Long Replaced	55,500	
			Fesler Hall Replaced	61,400	
			Riley Research Bldg.	61,400	
Research	537,415	391,025			781,920
Education	115,650	6,000			8,580
Clinical	29,745		Clinic Bldg. Replaced	102,510	64,000
Other	11,970		Gatch Replaced by Glick		68,000
SOH&RS	15,820	24,780			45,050
SOD	109,973	78,898			143,450
SOPH	7,040	16,360			29,750
SON	77,397	84,594			153,800
	1,388,955			Subtotal IUPUI	1,732,960

IUPUI/IU Health space needs – Peninsula 1.73M
 IUPUI non-health science, academic, and support 2.25M
 Gathering 160K
 Total – Peninsula 4.14M

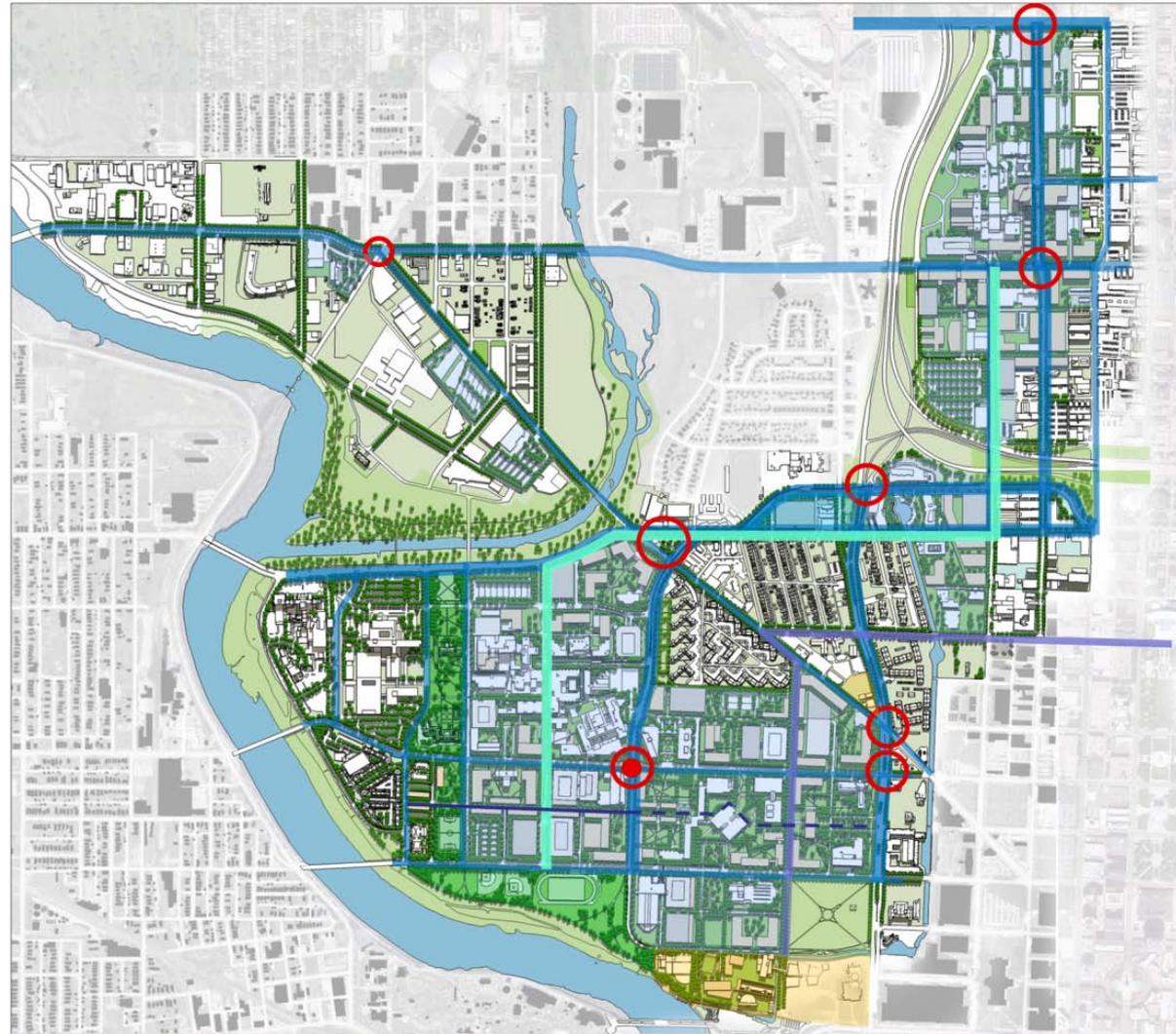
Clarian Health					
Riley		833,800			450,000
Hospital				Simon Tower Fit-out	(182,000)
				Phase 2-Flrs 2-4 Renov	(58,400)
				Phase 3 Mother Baby	(135,000)
				Clinic Faculty Office	150,000
				Simon Tower addition	300,000
Outpatient					
University		1,077,200			-
Hospital				Bed Floor Reno	(139,000)
				Cancer Center fit-out	(57,500)
				Ed Expansion	(4,000)
				D&T renovation	(17,000)
				Clinic Renovation	(30,000)
				ICU/ACU Renovation	(48,500)
Outpatient					
Methodist		2,259,300			1,400,400
Hospital				Bed Floor Renovation	(324,000)
				South Expansion	122,000
				NE Bed Tower 1	601,000
				NE Bed Tower Exp.	72,000
				West Bed Tower Exp.	215,600
				MOB Faculty Office	116,000
				Neuro Ambulatory	211,300
				Neuro Expansion	62,500
Outpatient					
Administrative		782,000	154,000	Lease Exits NSF	339,694
Corporate				Gateway	103,577
				1815 Demo	13,057
				2039 Demo	7,327
				Safeco Exp.	43,770
				Bldg. B&C	52,396
				South Madison	54,051
				Independence	54,364
				Methodist Tower	11,152
Integrated Services					
Other Programs					
		4,952,300		Subtotal Clarian	2,443,720
Parking Decks					
Total				Required	4,176,680



framework plan

legend:

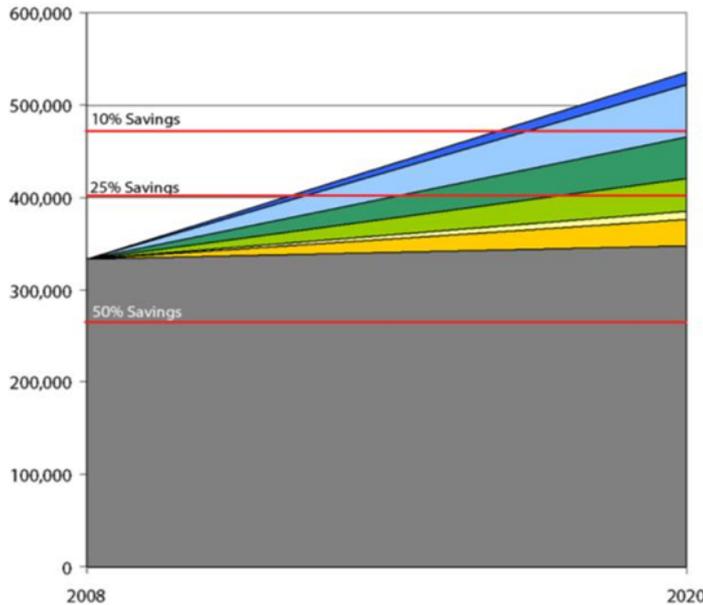
-  IUPUI / IU Health academic medical campus
-  primary gateways
-  campus center
-  primary corridors and streetscapes
-  secondary corridors
-  primary open space
-  walk of life
-  cultural trail
-  IUPUI cultural trail link





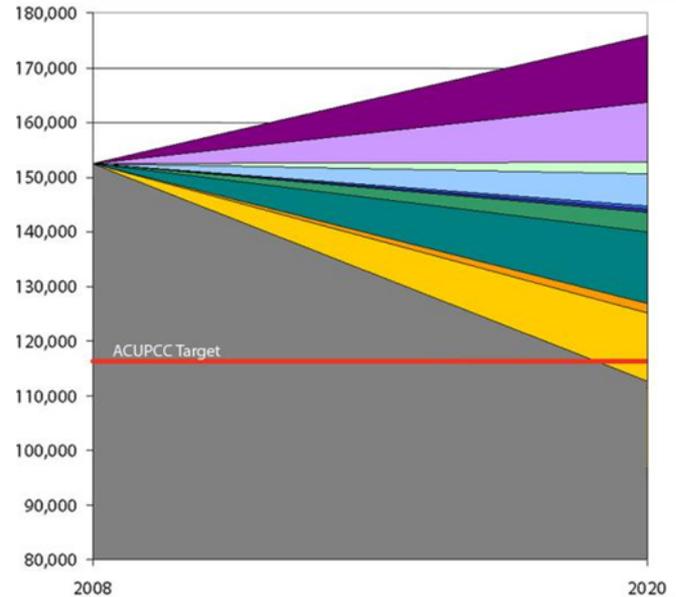
sustainability

Adding it Up: Indoor Water Use



- 1. Use efficient toilets and urinals in all new construction
- 2. Retrofit existing fixtures with efficient toilets and urinals
- 3. Use efficient faucets and showers in all new construction
- 4. Retrofit existing fixtures with efficient faucets and showers
- 5. Use Greywater Recovery in all new construction
- 6. Reduce Process Water Use by 10%
- 1a. All new work earns 10 points in LEED 2009 EA1
- 1b. All new work earns 19 points in LEED 2009 EA1
- 2. Occupancy Sensors in Offices
- 3. Replace all standard fume hoods with high-efficiency fume hoods
- 4a. Renovate 7.83% of existing building stock up to LEED 2009 standards
- 4b: Renovate 7.83% of existing buildings to earn 10 points in LEED 2009 EA1
- 4c: Renovate 7.83% of existing buildings to earn 19 points in LEED 2009 EA1
- 5. Of the remaining building stock, take on 1 funded energy savings project / year
- 6. Retrofit Commission the remaining building stock
- 7. Change winter setpoint from 70° to 68°
- 8. Purchase green power for 15% of remaining electricity use

Adding it Up: GHG Reductions - IUPUI



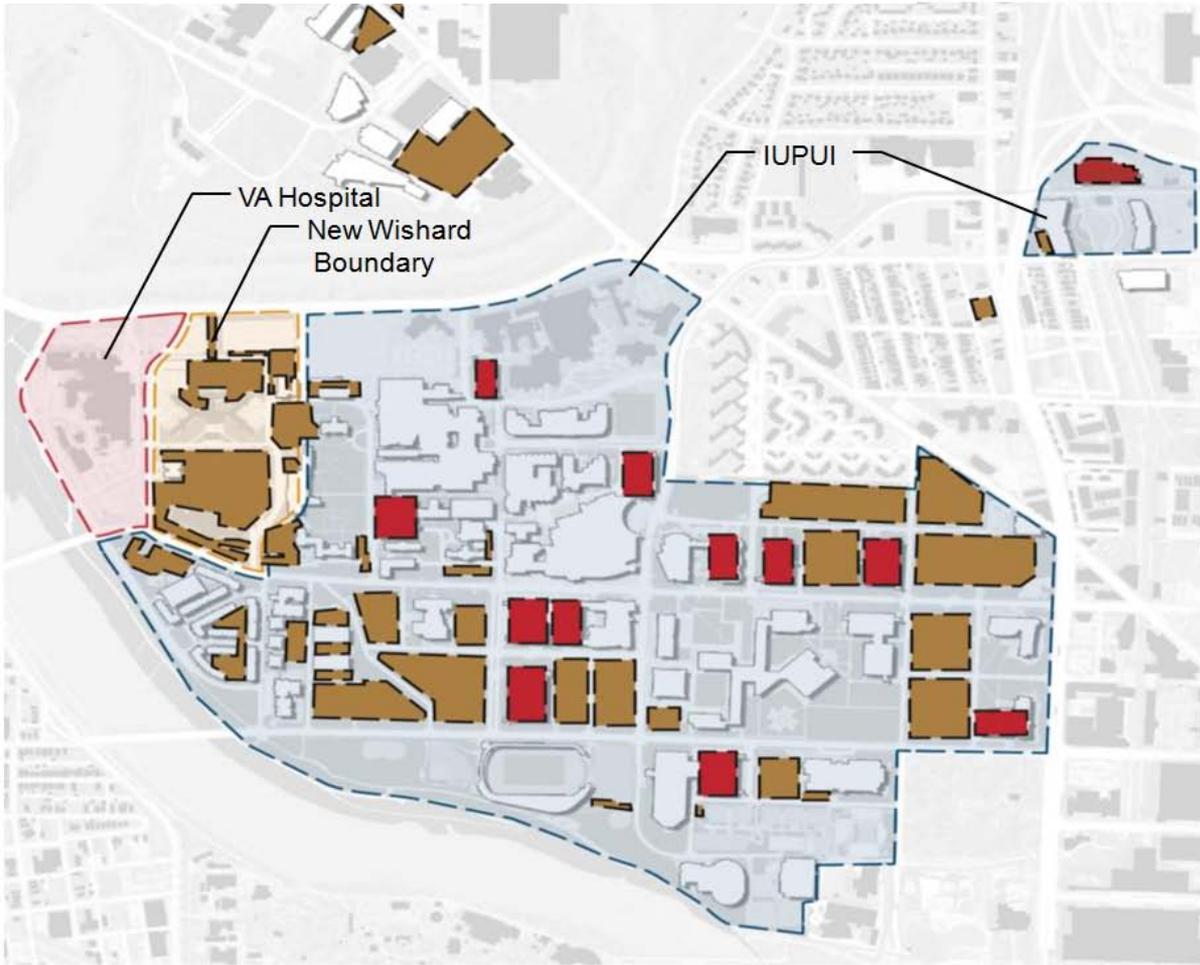
- The strategies combined would result in a water savings of 187.6 millions gallons/yr.
- IUPUI could grow by over 50% while increasing its water consumption by only 4%.
- The strategies result in a 35% reduction in water use from the baseline campus use.

- The energy savings from the combined strategies (Wedges 1-8) result in a GHG emissions reduction of 62,430 MT eCO₂, allowing the campus to grow in size by over 50% while at the same time reduce its emissions by over 25%



existing parking on the peninsula

- Surface Parking Lots
- Parking Decks



- 18,450 total spaces
- half surface - half structured
- 28% visitor spaces
- 46% student spaces
- three parking districts
medical, east (majority), west
- replace 1,760 with Wishard move

existing parking utilization:

- a permit = 94% full
- b permit = 96% full
- e permit = 93% full
- housing = 100% full
- other = 83% full



parking and circulation

two complex and interrelated issues:

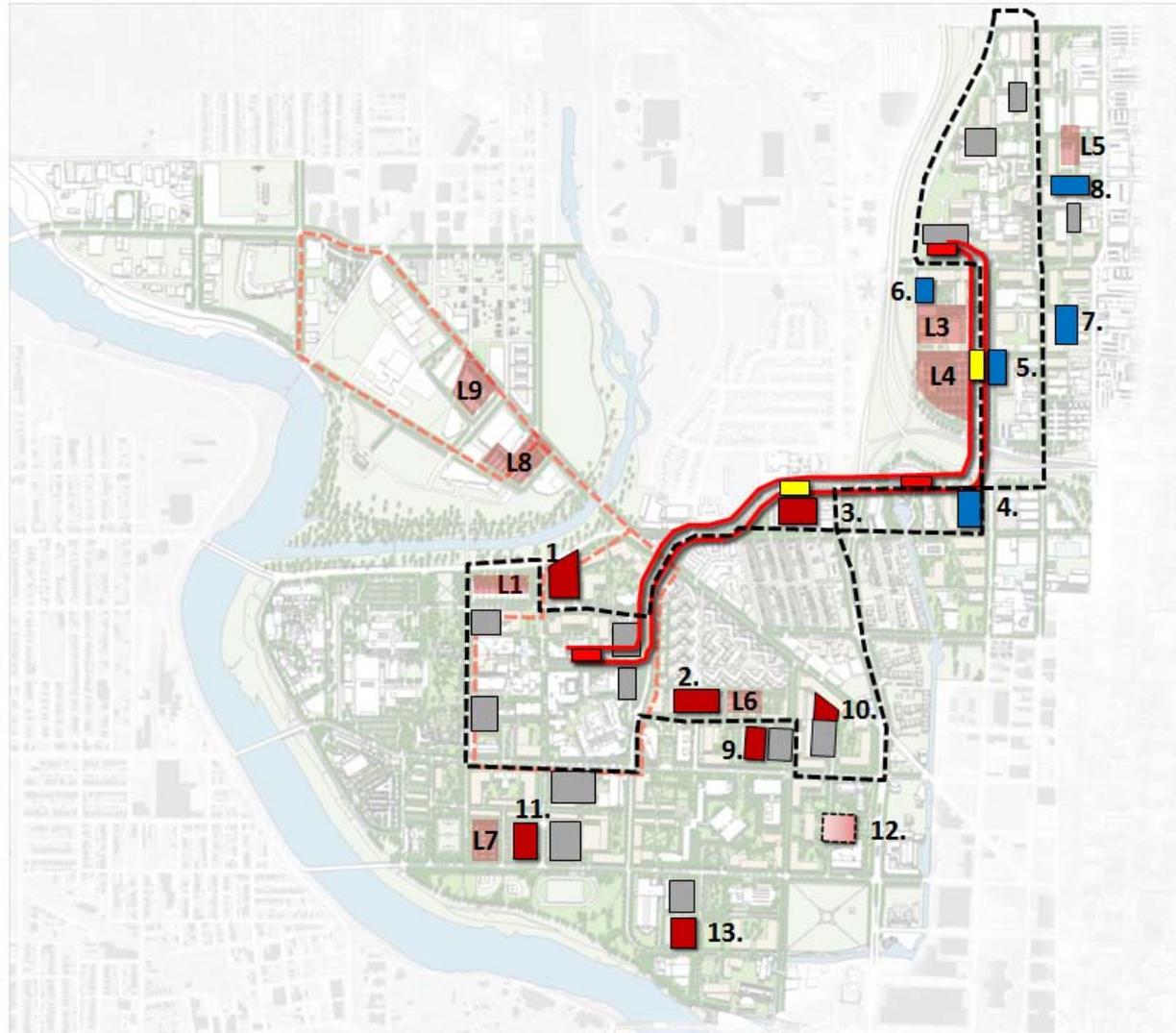
- *parking demand*
- *connectivity*

parking demand:

- *patients and visitors*
- *commuters*

connectivity:

- *proximate parking for patients, visitors, key staff*
- *circulation from commuter parking to work location*
- *daily collaborative circulation among districts*



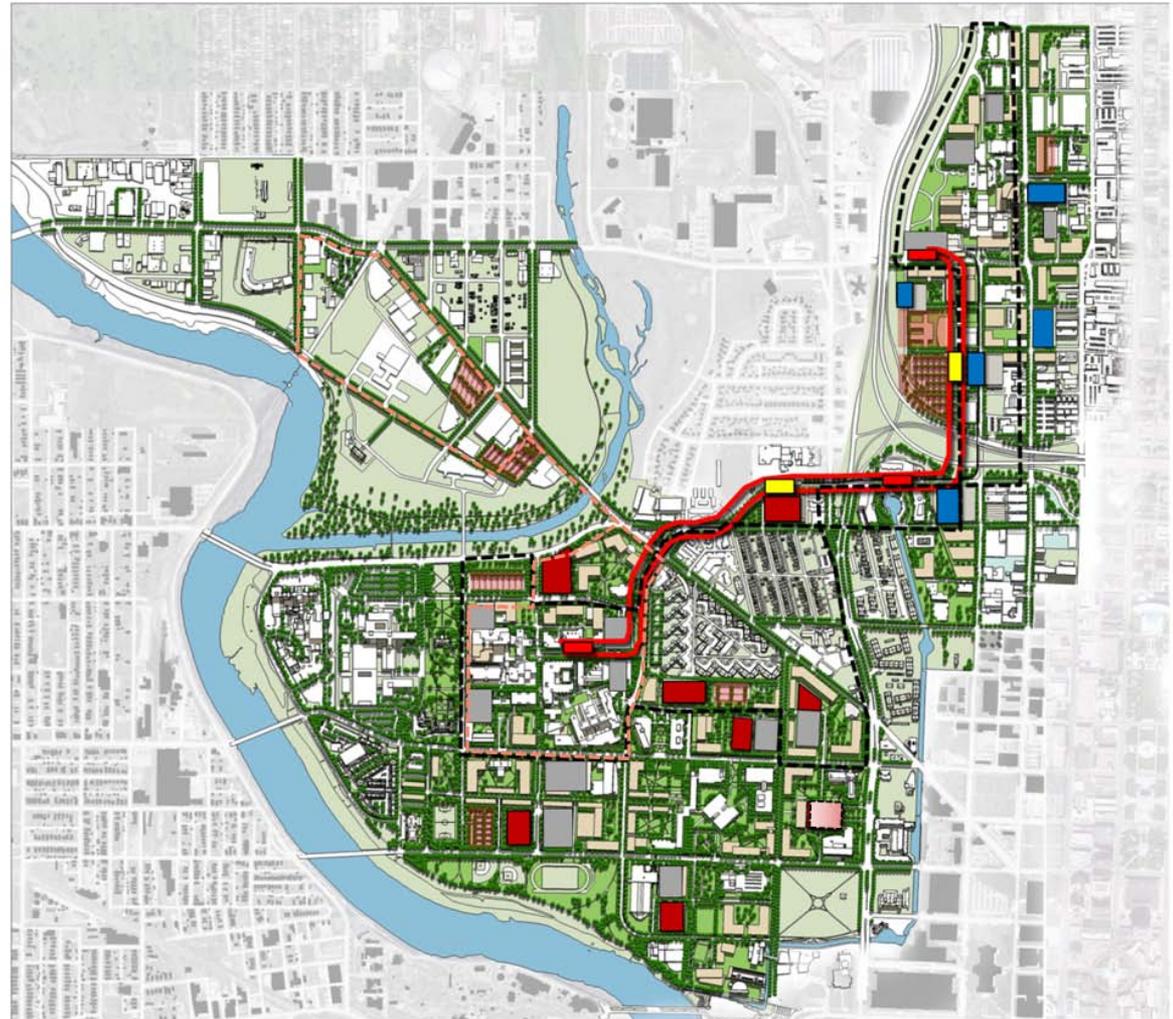


parking and circulator improvements

18,450 existing spaces
22,210 future demand
3,760 net gain

legend:

-  existing garages
-  proposed surface lots
-  IUPUI/IU Health provided garages
-  proposed underground parking
-  private developer garages
-  new people mover infill stations
-  new district bus circulator links parking
-  existing bus circulator





proposed mixed use infill garage

two new people mover infill station

'outboard' platforms

mixed use garage at 10th/11th streets

residential and retail

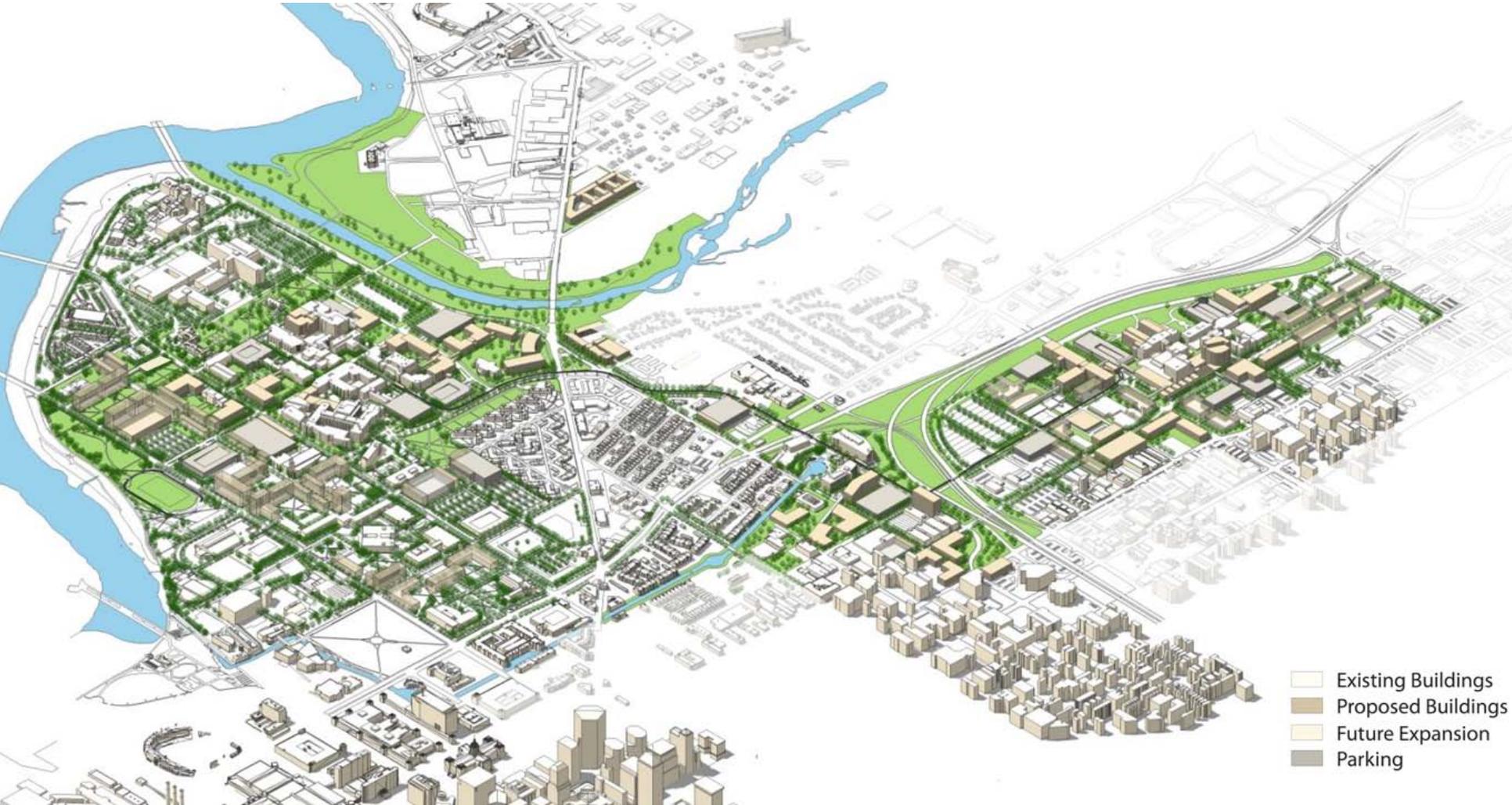
easy highway access





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illustrative plan

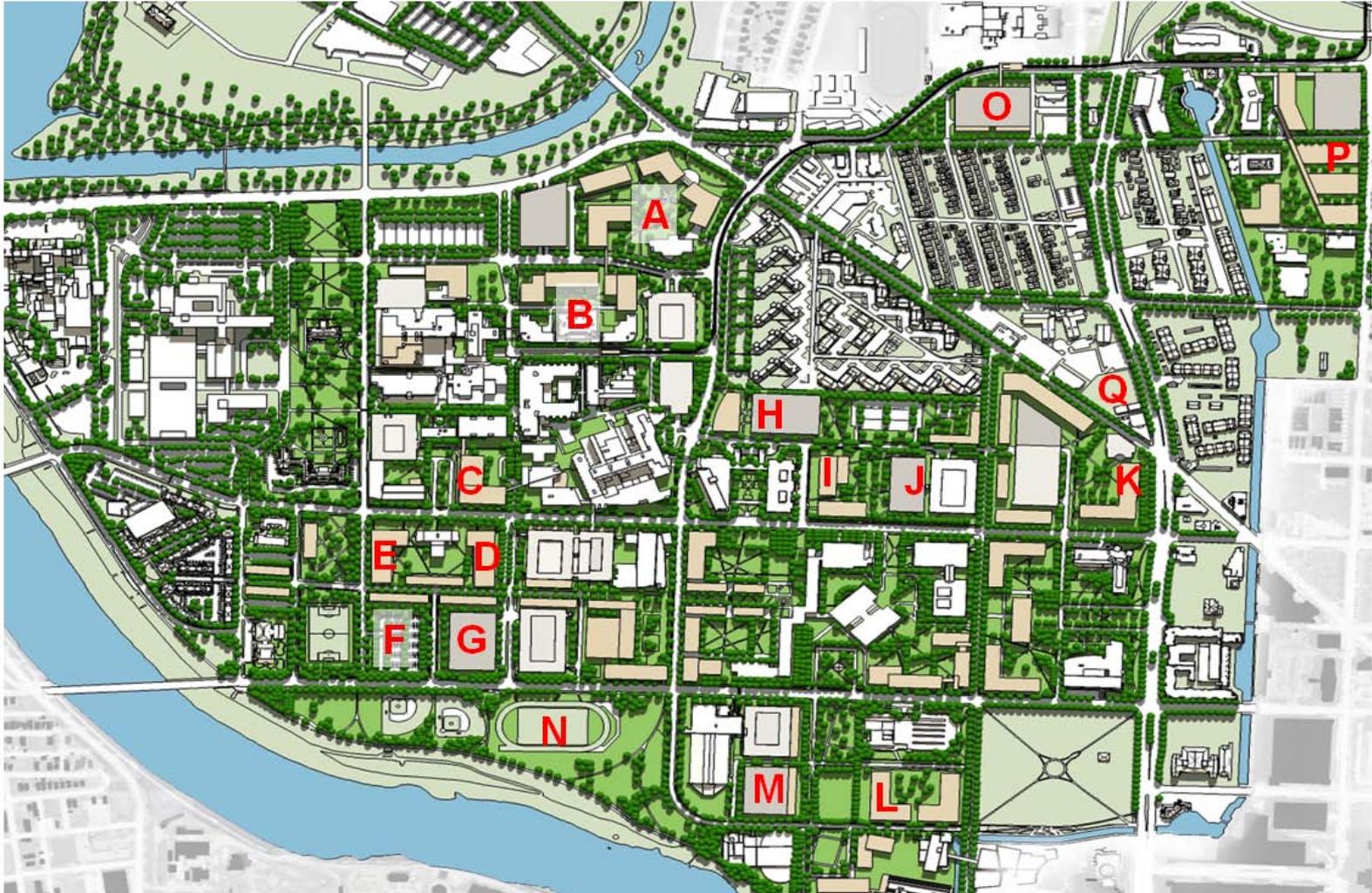


IUPUI and IU Health



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plan enlargement - IUPUI



IUPUI and IU Health



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view of the campus from the south



Wishard

Riley & IU

campus center

conference center

library

Military Park

'Methodist'

canal



INDIANA UNIVERSITY

view of the campus from the south



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INDIANA UNIVERSITY

looking south at University and Michigan



natatorium

conference center & hotel

campus center

cancer center

IU hospital



INDIANA UNIVERSITY

looking south at University and Michigan



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IUPUI and IU Health



INDIANA UNIVERSITY

looking east at Michigan and Vermont



hospital

cancer center

campus center

natatorium

IUPUI and IU Health



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rendering



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redevelopment of Wishard at 10th



campus center hospital people mover

Riley hospital fall creek



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the masterplan



IUPUI and IU Health



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the masterplan



IUPUI and IU Health



conclusions:

- *one institution – one plan*
- *a fully integrated approach*
- *connecting multiple districts*
- *a 30-year vision*



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