

CORRIDOR

Anchors and transit spur growth of St. Louis corridor



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St. Louis and some inner suburbs lost population during the last decade, but countering that trend is the robust corridor that begins at the Arch and runs eight miles west.

That corridor is a narrow stretch from the riverfront to Interstate 170, roughly bounded by Delmar Boulevard to the north and Interstate 64 (Highway 40) to the south.

Yet this is where St. Louisans fill offices, run companies, conduct medical research, visit museums, attend plays and concerts, dine, study, go to court, ride mass transit and launch startups. They live in grand old homes, vintage or modern high-rises, lofts and modest houses.

In short, it's where St. Louis succeeds as a city. And it's growing, led by a boom in life-science research and health care. As elsewhere, St. Louis is benefiting from the changing perception that cities are good places to live.

The 2010 census shows that the corridor's population approached 60,000, an increase of more than 10 percent since 2000.

From busy downtown Clayton, the march to the Arch of institutions and neighborhoods includes the Moorlands, Claverach Park, Fontbonne University, the Delmar Loop, Parkview, Washington University, Forest Park, the BJC medical complex, Cortex, the Central West End, St. Louis University, Grand Center, Midtown Alley and downtown St. Louis, part of which had a triple-digit growth rate from 2000 to 2010.

Sarah Coffin, associate professor of public policy studies at SLU, and other urban experts said the corridor's growing vitality will continue to attract new residents who prefer to walk more and drive less.

"People's tastes are changing about how they want to live and where they want to live," Coffin said.

She and others said the presence of Ikea, which plans to open a store at Forest Park and Vandeventer avenues in 2015, will show that the corridor can lure a retail heavyweight.

"Ikea will change the tenor of the entire area," Coffin said. "Before Ikea, (city officials) would say yes to any developer for almost anything. Now they can ask developers for streetscape

improvements and other amenities. We used to be happy to have table scraps.”

Zack Boyers, chief executive of St. Louis-based U.S. Bancorp Community Development Corp., said the corridor’s future is bright because its anchor institutions are investing in themselves. A result is a “virtuous cycle” of more residents, workers, commercial activity and investment, he said.

For example, Cambridge Innovation Center, a leading business incubator, decided last year to establish a startup facility at the Cortex life sciences district, Boyers noted. The facility will be CIC’s first expansion from its home in Cambridge, Mass.

“Cambridge Innovation spent a lot of time looking all over the world where to open,” he said. “It looked at London, New York and San Diego but picked Cortex because of the support of the area’s anchors.”

PULL OF TRANSIT

Like many older U.S. cities, St. Louis developed along its streetcar lines. The streetcars are gone, but the MetroLink system traverses the east-west corridor with rail transit. The Central West End station, the system’s busiest, serves the BJC and Washington University School of Medicine complex, which is in the midst of a \$1 billion construction spree.

The Partnership for Downtown St. Louis is pushing a plan to increase the area’s rail transit options with a streetcar line between downtown and the Central West End. Boyers, chairman of the partnership’s board, said the streetcar would be an important new connector.

“The idea of a streetcar and fixed rail is not only important transit but is also a signal to developers that this is where we’re going to focus,” he said.

Peter Pollock, an urban planner and fellow at the Lincoln Institute of Land Policy, in Cambridge, Mass., said the presence of mass transit encourages development in the St. Louis corridor.

“As assets of access and transit and all these fantastic activities happen along this corridor, it’s no surprise that additional players would want to be in the corridor,” he said.

He pointed out that a similar corridor exists in Cleveland, where a nearly seven-mile bus rapid transit line on Euclid Avenue links downtown to University Circle, a hub of medical facilities and arts institutions. Cleveland officials have said that since the bus line began service in 2008, the formerly run-down Euclid corridor has experienced \$3.3 billion in new construction and \$2.5 billion in building rehabs.

Businesspeople, academics and residents of the St. Louis corridor said they pay scant attention to the Richmond Heights, Clayton, University City and St. Louis boundaries that overlay the area.

“It does all kind of blend in as an urban core,” said Tyler Stephens, a principal of CORE10, an architecture firm in the Central West End.

CORE10 relocated from Clayton in 2010. Stephens said most of the firm’s clients saw it as merely a move from one side of Forest Park to the other, adding that the rejuvenated park is the linchpin that connects the city to points west.

He said the Central West End's "fantastic building stock" is a factor in the residential growth, enhanced by the stability of BJC and the St. Louis County government center in Clayton.

Hank Webber, Washington University's executive vice chancellor of administration, said Forest Park is indispensable to the corridor's vitality.

"It went from being a great park in need of work to one of the great urban parks in the world," he said.

Webber, who spent 22 years at the University of Chicago before moving to St. Louis in 2008, said the concentration of business, education and culture centers along St. Louis' central spine forms the region's identity and provides much of its employment.

"For many of the major attractions, the last decade has been a time of strength," he said. "If you compare St. Louis to other cities, they're quite geographically disparate but they have the effect of driving demand. And the progress of the Cortex development in the past two years has been remarkable."

'TERRIFIC BUILDINGS'

Parts of the Central West End provide hard-to-top urban vibes, added Webber, who directs the university's building projects.

"Walking down Euclid (Avenue) in the Central West End compares very favorably with the urban experiences of about anywhere in the country," he said.

Successful cities do more than attract couples with kids, Webber added. They are magnets for young, creative, college-educated people who crave a wide variety of things to do.

"What core cities sell to residents and visitors is density — the opportunities and experiences of density," he said. "Cities can't compete with backyards and barbecues. What they can compete on is restaurants and music venues."

And coffee.

Blueprint Coffee, recently opened in the Delmar Loop, draws the crowd that will pay several dollars for lattes and other hand-crafted coffee drinks.

Mazi Razani, 26, who formerly managed a coffee bar near Washington University and is now one of Blueprint's owners, fits the demographic of young, college-educated businesspeople drawn to city living. He resides in the corridor neighborhood of Skinker-DeBaliviere and says he is a committed urbanist.

"I don't know if I would have made it out in Chesterfield," he said. "Seeing the high rises makes me feel like I'm in a city."

Jeff Winzerling, co-developer of a project to fit 50 apartments in a 1940s factory west of SLU, said development of the east-west corridor "has been happening in St. Louis since 1875."

As factories, offices and warehouses went up near the Mississippi River, wealthy residents moved west, constructing — and sometimes discarding — institutions as they went, he said.

In Grand Center, for example, the Centene Center for Arts and Education was an early

20th-century showpiece for the Knights of Columbus. On Lindell Boulevard, the Moolah Temple of the Mystic Shrine, built in 1912, is now a movie theater, a bowling alley and apartments.

“What we’re seeing now is that the terrific buildings left behind are attractive to a new generation of development,” Winzerling said.

An overview of buildings by their age shows that the corridor was largely developed by 1900. It experienced a building boom after World War II. Another wave of construction began in 1992 between downtown and Forest Park.

SPREADING GROWTH

Underway now is a burst of new construction or building rehabilitation just south of the park and west of SLU.

Experts said that central corridor development is promoting overdue growth elsewhere, particularly south to the Botanical Heights and Shaw neighborhoods and through the Forest Park Southeast area to the Grove entertainment district.

“We’re finally creating a lot of opportunity in housing choices and job choices for people,” Coffin said.

Boyers said development is moving south along Tower Grove Avenue to the Missouri Botanical Garden, which is a Cortex partner. Development means growing areas will eventually merge.

“The idea of building off success instead of leaving it as an isolated instance is taking shape,” he said.

The improved development climate also is prompting fresh looks at a couple of long-stalled projects in the corridor.

In Clayton, Montgomery Development will decide soon whether to proceed with an apartment tower at South Central Avenue and Forsyth Boulevard.

On Laclede’s Landing downtown, Drury Development Corp. and Lawrence Group are considering construction of a 30-story apartment building on a parking lot next to the Eads Bridge. The developers said the Arch grounds renovation project is a catalyst for their plan.

Downtown’s residential population will continue to rise, but future developments might be a “new brand” of project that blends offices and live-work space, said Doug Woodruff, the downtown partnership’s president.

Webber applies what he calls “the kitchen test” to neighborhood development. “Lots of individual decisions” by residents can make or break a neighborhood, and a spate of kitchen remodelings indicate an upswing, he said.

“People who remodel their kitchens have either decided to stay or think they can get their investment back if they sell,” Webber said.

Telephone Numbers (Area Code 314)

Washington University School of Medicine	362-5000
660 S. Euclid Ave., St. Louis, MO 63110-1010 medicine.wustl.edu	
Admissions, Medical Student	362-6858
Fax: 362-4658 Email: wumscoa@wustl.edu	
Alumni and Development	935-9690
Alvin J. Siteman Cancer Center	747-7222
siteman.wustl.edu (800) 600-3606	
Continuing Medical Education	362-6891
Dean's Office	362-6827
Doctors' Access Line	(800) 252-DOCS (252-3627)
(24-hour access for referring physicians)	
EPNEC (Eric P. Newman Education Center)	747-6338
320 S. Euclid Ave., St. Louis, MO 63110-1024	
Financial Aid, Medical Student	362-6845
Fax: 362-3045 (888) 840-3239 Email: money@wustl.edu	
Human Resources	362-7196
jobs.wustl.edu	
Physician Referral (for patients)	
Adult	TOP-DOCS (867-3627)
Pediatrics	454-KIDS (454-5437)
WUPhysicians.wustl.edu	
Protective Services	362-HELP (362-4357)
Public Affairs and Media Relations	286-0100
Barnes-Jewish Hospital	747-3000
One Barnes-Jewish Hospital Plaza, St. Louis, MO 63110-1003 BarnesJewish.org	
St. Louis Children's Hospital	454-6000
One Children's Place, St. Louis, MO 63110-1002 StLouisChildrens.org	
BJC HealthCare	286-2000

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 **Washington University in St. Louis**
SCHOOL OF MEDICINE

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COVER: Medical student Philip Perez with Quintin Porter.

Washington University School of Medicine

FACTS

2013



 **Washington**
University in St. Louis
SCHOOL OF MEDICINE

Introduction

The School of Medicine has a rich, 122-year history of success in research, education and patient care. It pioneered bedside teaching and led in the transformation of empirical knowledge into scientific medicine. From the earliest days, there has been an understanding that “investigation and practice are one in spirit, method and object.”

The School of Medicine selects applicants who, in addition to possessing keen minds, demonstrate an ability to perceive and serve their patients’ best interests. An outstanding education from Washington University School of Medicine provides graduates with solid opportunities for highly sought-after residencies and fellowships, engaging and challenging research endeavors, and successful, rewarding careers in medicine, allied health and public health.



The White Coat Ceremony for new medical students.

WASHINGTON UNIVERSITY SCHOOL OF MEDICINE

- Founded: **1891**
- Executive Vice Chancellor for Medical Affairs, Dean and President of Washington University Medical Center: **Larry J. Shapiro, MD**
- Total Students: **1,364**
 - MD, MD/PhD, MA/MD: **598**
 - Audiology and Communication Sciences: **72**
 - Clinical Investigation: **104**
 - Genetic Epidemiology: **29**
 - Occupational Therapy: **274**
 - Physical Therapy: **274**
 - Population Health Sciences: **13**
- Faculty: **1,968**
- Non-faculty Assistants and Others: **174**
- Staff: **6,708**
- Total Employees: **8,850**
- Affiliated Private Practice Faculty: **1,349**
- Fellows and Trainees: **883**
- House Staff: **1,110**
- Tuition, MD (2012–13 academic year): **\$52,020** (first year; includes student health service, hospitalization and disability insurance, and microscope lending plan)
- Revenue (in billions, FY 2012): **\$1.6**

In Brief

Departments and Department Heads

Anatomy and Neurobiology, *Azad Bonni, MD, PhD*
Anesthesiology, *Alex S. Evers, MD*
Biochemistry and Molecular Biophysics, *John A. Cooper, MD, PhD (interim)*
Cell Biology and Physiology, *Robert Mecham, PhD (interim)*
Edward Mallinckrodt Dept. of Developmental Biology, *Lilianna Solnica-Krezel, PhD*
James S. McDonnell Dept. of Genetics, *Jeffrey D. Milbrandt, MD, PhD*
John T. Milliken Dept. of Medicine, *Victoria J. Fraser, MD*
Molecular Microbiology, *Stephen M. Beverley, PhD*
Neurological Surgery, *Ralph G. Dacey Jr., MD*
Neurology, *David M. Holtzman, MD*
Obstetrics and Gynecology, *George A. Macones, MD, MSCE*
Ophthalmology and Visual Sciences, *Michael A. Kass, MD*
Orthopaedic Surgery, *Richard H. Gelberman, MD*
Otolaryngology, *Richard A. Chole, MD, PhD*
Pathology and Immunology, *Herbert W. “Skip” Virgin, MD, PhD*
Edward Mallinckrodt Dept. of Pediatrics, *Alan L. Schwartz, PhD, MD*
Psychiatry, *Charles F. Zorumski, MD*
Radiation Oncology, *Dennis E. Hallahan, MD*
Mallinckrodt Institute of Radiology, *R. Gilbert Jost, MD*
Mary Culver Dept. of Surgery, *Timothy J. Eberlein, MD*

Degree Programs

- Doctor of Audiology
- Doctor of Medicine, four-year
- Doctor of Medicine, five-year
- Doctor of Medicine/Master of Arts joint program
- Doctor of Medicine/Doctor of Philosophy joint program (Medical Scientist Training Program)
- Doctor of Occupational Therapy
- Doctor of Physical Therapy
- Master of Population Health Sciences
- Master of Public Health, through *George Warren Brown School of Social Work at Washington University*
- Master of Science in Biostatistics
- Master of Science in Clinical Investigation
- Master of Science in Deaf Education
- Master of Science in Genetic Epidemiology
- Master of Science in Occupational Therapy



The Bernard Becker Medical Library serves as an information hub for the School of Medicine and Washington University Medical Center.

History

In 1891, responding to a national concern for improving doctors' training, the Washington University administration established a medical department. In 1909, Robert Brookings, a successful businessman turned philanthropist, set about transforming the department into a modern medical school with full-time faculty, adequate endowment, modern laboratories and associated teaching hospitals.

Brookings' dream of modern excellence centered on creating an outstanding faculty for teaching, research and patient care. Among the first four department heads recruited in 1910 was Joseph Erlanger, who went on to win the 1944 Nobel Prize in Physiology or Medicine.

In 1919, Evarts Graham was appointed the first full-time head of surgery. Fourteen years later, he performed the first successful lung removal. In 1910, George Dock established a tradition of distinguished clinical research in the Department of Medicine. Carl and Gerty Cori arrived at the School of Medicine in 1931 to join the Department of Pharmacology. In 1947, they won the Nobel Prize in Physiology or Medicine for research on the catalytic conversion of glycogen. Six other Nobelists received training under their auspices.

Women first gained admission to the student body in 1918; today, they make up half of each incoming class. African-American graduates of the medical school now number more than 300. Scholarship support for all students, including special fellowships for those entering the Medical Scientist Training Program, is a high priority.

The transmission of excellence from one generation to the next is a hallmark of this School. Dean Robert Moore's 1951 comment remains true today: "An institution is only as great as the individual men and women who compose it."

Faculty

Outstanding faculty achievements:

- 17 Nobel laureates have been associated with the School of Medicine.
- 13 faculty members are fellows of the prestigious National Academy of Sciences; 20 faculty members belong to its Institute of Medicine.
- 97 faculty members hold individual and/or institutional career development awards from the National Institutes of Health (NIH) (including direct-pay and pass-through awards).
- 51 faculty members hold career development awards from non-federal agencies.
- 13 faculty members have MERIT status, a special recognition given by the NIH that provides long-term, uninterrupted financial support to investigators.
- 4 faculty members are Howard Hughes Medical Institute investigators.

Students

First-Year Class

The School of Medicine received 4,337 applications for admission to the 2012–13 first-year class. The School enrolled 124 students, resulting in more than 35 applicants per position.

Graduates

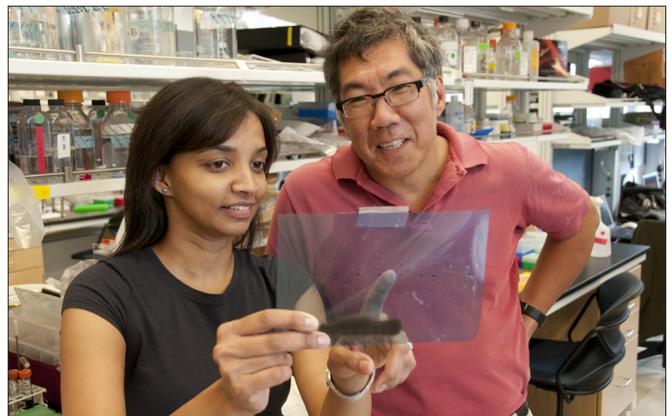
The School conferred the MD degree on 95 individuals in 2012. In addition, three students earned the MD/MSCI degrees, four students earned the MD/MA degrees and 25 students earned MD/PhD degrees.

Graduating seniors are highly successful in obtaining competitive residency training positions through national matching programs. Thirty-four percent of the graduating class of 2013 selected a primary care field (pediatrics, internal medicine or family medicine) for residency training; 24 percent matched into highly competitive specialty fields such as dermatology, neurosurgery, orthopaedic surgery, otolaryngology, plastic surgery, general surgery, urology and ophthalmology.

Degree Programs

Washington University School of Medicine offers several programs and combined medical degree programs: a regular four-year MD program, a five-year MD program, the combined MD/MA program, the combined MD/MSCI program and the combined MD/PhD program. MD students may also elect to complete the MPHS degree while enrolled in the MD program, which extends the course of study one year.

The MD/PhD degree program, known as the Medical Scientist Training Program (MSTP), is the largest in the country. It is designed for students interested in academic careers at major medical schools and research institutions.



Andrey Shaw, MD, Howard Hughes Medical Institute investigator, right, and graduate student Shuba Srivatsan review data.

Community Service

School of Medicine students participate in student organizations such as the American Medical Student Association, the American Medical Women's Association and the Student National Medical Association. Highlights of other activities:

- Health Outreach Program works to improve health outcomes among the underserved. Areas of active work include screenings, patient navigation and nutrition.
- The Student-Organized Clinics, established by medical students and staffed by students and faculty, provide free medical care to needy people in the St. Louis community.
- Students Teaching AIDS to Students puts medical students in junior high schools to teach AIDS awareness.
- Community CPR teaches regular classes at public schools, churches, shelters and community education centers.
- The Young Scientist Program promotes science and careers in science to high school students from disadvantaged backgrounds.

Graduate Medical Education Consortium

Washington University School of Medicine, with Barnes-Jewish Hospital and St. Louis Children's Hospital, sponsors a consortium for graduate medical education. The group has 85 training programs accredited by the Accreditation Council for Graduate Medical Education (ACGME) and approximately 40 non-accredited specialties that continue the institutions' long histories of successfully training outstanding residents and clinical fellows. The GME Consortium and all of its sponsored training programs are in good standing with the ACGME and are fully committed to providing a quality educational experience to the residents and clinical fellows training in these programs. To learn more, visit the group's website at gme.wustl.edu.

Gifts and Grants

Grants and contracts totaling more than \$536.6 million supported faculty research efforts at the School of Medicine during the fiscal year ending June 30, 2012. Substantial additional support was provided directly to faculty investigators by the Howard Hughes Medical Institute. Gifts and grants from 11,184 private sources, including alumni, individuals, foundations, corporations and other organizations, totaled \$137.4 million.

During the Washington University fiscal year ending June 30, 2012, the School of Medicine received \$375.8 million from the National Institutes of Health (NIH), coming in 686 separate grants.

Research Highlights

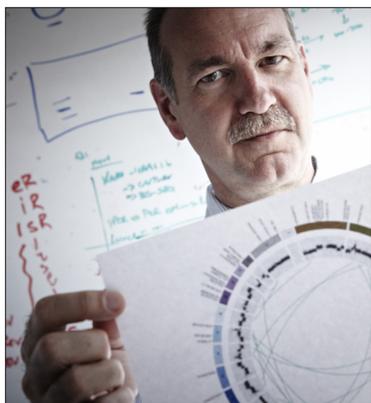
The many firsts at the School of Medicine include:

- Served as a major contributor of genome sequence data to the Human Genome Project, providing the foundation for personalized medicine.
- Developed a genetic test that detects whether an individual will develop a form of thyroid cancer and would benefit from thyroid removal — the first surgical prevention of cancer based on genetic test results.
- Developed screening tests used worldwide to diagnose Alzheimer's disease.
- Created the first positron emission tomography (PET) scanner, a device that images the brain at work.
- Helped pioneer the use of insulin to treat diabetes.
- Proposed the now-common practice of taking aspirin to help prevent heart attacks.
- Performed the world's first nerve transplant using nerve tissue from a cadaver donor.
- Developed a blood test that quickly and safely identifies whether a patient needs invasive treatment for a heart attack.
- Decoded the entire genome of a cancer patient and used the results to alter the course of treatment, which put the cancer into remission.
- Demonstrated that severely malnourished children given antibiotics along with a therapeutic peanut-butter based food are far more likely to recover and survive than children who only receive the therapeutic food.

Ongoing research includes:

- Participating in the National Children's Study, the largest U.S. study of child and human health ever conducted.
- Seeking new ways to diagnose and treat stroke as part of a national network of state-of-the-art stroke treatment centers.
- Decoding the genomes of thousands of cancer patients and their tumors to understand the genetic roots of the disease and to find better treatments.
- Leading an international research collaboration to study inherited forms of Alzheimer's disease and one of the first clinical trials to evaluate whether the disease can be prevented before memory loss and dementia develop.
- Developing and using nanoparticles for molecular imaging and targeted drug delivery for cancer and heart, lung and vascular diseases.
- Mapping the major circuits in the human brain to understand normal brain function and connectivity errors involved in alcoholism, autism and schizophrenia.
- Exploring the links that connect obesity and malnutrition to the community of microbes that live in the gut.
- Searching for clues in the brain and spinal cord to help physicians diagnose Alzheimer's disease before symptoms develop.

- Leading research, teaching and community engagement to improve population health through Washington University's Institute for Public Health.
- Investigating changes to the brain in soldiers exposed to roadside bomb blasts and athletes who have suffered repeated concussions to understand their long-term mental and physical consequences.
- Exploring the genetic influences at play in alcohol, smoking and drug addiction.
- Leading research to improve care for heart failure and cardiovascular disease, including clinical trials to evaluate mechanical assist devices and studies to look at the link between diabetes and aggressive heart disease.



Richard Wilson, PhD, is Director of the The Genome Institute at Washington University School of Medicine, one of only three NIH-funded, large-scale sequencing centers in the U.S.

Alumni

Medical and Graduate Medical: 8,570
 Former House Staff: 7,548
 Health Administration Program (1946-2008): 1,320
 Program in Occupational Therapy: 2,102
 Program in Physical Therapy: 2,367
 Nursing Program (1905-69): 901

To complement the aims of the School of Medicine, the Washington University Medical Center Alumni Association sponsors various programs for MD alumni, former house staff and current students:

- The Distinguished Alumni Scholarship Program provides four-year, full-tuition scholarships to four incoming medical students each year. The scholarships are named after alumni who have distinguished themselves as Washington University faculty. Created in 1989, this program has provided scholarships for 98 medical students to date.
- Members of the William Greenleaf Eliot Society and other annual donors contribute funds aimed at endowing a chair in each department in the School of Medicine through the Alumni Endowed Professorship Program. Nine have been established.
- The WUMC Alumni Association provides funds to support student community-service projects, transition-to-residency loans to students, academic societies (faculty and students), primary care preceptorships and other student-related initiatives.



Victoria Fraser, MD, is head of the John T. Milliken Department of Medicine, the largest department in the School of Medicine.

The Division of Biology and Biomedical Sciences

Organized in 1973, the Division of Biology and Biomedical Sciences (DBBS) is a graduate educational consortium of faculty affiliated with 37 basic science and clinical departments in the School of Medicine, the School of Engineering and the College of Arts & Sciences. DBBS programs are designed to provide a broad, collaborative, interdisciplinary approach to graduate education, emphasizing investigation into many of today's most important biological questions.

Graduate study in the DBBS is highly individualized and focuses on the needs and interests of students, each of whom is free to choose a mentor for laboratory and dissertation research from more than 450 faculty members in the division.

Currently, 655 students are enrolled in the DBBS, 194 of whom are pursuing a combined MD/PhD degree under the auspices of the Medical Scientist Training Program. Nearly 85 percent of MSTP graduates who have completed their residencies are actively involved in research programs at leading institutions.

Washington University Medical Center

Washington University School of Medicine, Barnes-Jewish Hospital, St. Louis Children's Hospital and the Alvin J. Siteman Cancer Center are all located on the Washington University Medical Center campus.

The medical center generates an annual economic impact of nearly \$4.9 billion for the St. Louis area, according to an economic model maintained by the St. Louis Regional Chamber. With more than 21,000 employees, the combined medical center institutions are among the largest employers in the metropolitan area.

The 164-acre Washington University Medical Center, spread over portions of 17 city blocks, is located along the eastern edge of Forest Park in St. Louis, in a vibrant urban community known as the Central West End. At the western boundary of the park is the 169-acre Danforth Campus of Washington University in St. Louis.

Facilities

Facilities that have opened recently include:

- Siteman Cancer Center at South County (2013)
- Alzheimer's Disease Research Center (ADRC) (2013)
- Data Center for Research Computing (2012)
- Barnes-Jewish Center for Outpatient Health (2012)
- The BJC Institute of Health at Washington University School of Medicine (2010)

The 680,000 square-foot BJC Institute of Health at Washington University School of Medicine, located at Euclid Avenue and Children's Place, is an 11-story research building housing laboratories and support facilities for BioMed 21, Washington University's research initiative to rapidly translate basic research findings into advances in medical treatment. The top five floors are wet labs to support multidisciplinary research centers associated with BioMed 21 along with lab space for the departments of Pathology and Immunology, Obstetrics and Gynecology, and Orthopaedic Surgery and the divisions of Pediatric Surgery and Bone and Mineral Health. Barnes-Jewish Hospital occupies the first five floors.

The Barnes-Jewish Center for Outpatient Health, located at Forest Park Avenue and Euclid Avenue, houses clinics from five sites around the medical center campus on three dedicated floors, including dermatology, neurology, obstetrics and gynecology, primary care, psychiatry, specialty care and surgical and wound care. The 12-story building is connected via an enclosed walkway to the Center for Advanced Medicine.

The School of Medicine has announced plans to construct an energy-efficient, multistory research building on McKinley Avenue just west of Taylor Avenue. Dedicated to interdisciplinary research on some of the most complex problems in human biology, the six-story building will eventually house 138,000 square feet of highly flexible, open laboratories. The building's target completion date is June 2015.

In the aggregate, the School of Medicine occupies more than 4.8 million gross square feet on campus. Research and instructional endeavors occupy more than 2.1 million gross square feet.



Construction on the School of Medicine's new research building begins this summer with a June 2015 target date for completion.

Faculty Physicians

Washington University Physicians are full-time faculty at the School of Medicine. The clinical practice group — one of the five largest academic clinical practices in the nation — is made up of 1,242 university-employed physicians representing more than 76 specialties and subspecialties in medicine and surgery. Washington University Physicians provide comprehensive care at more than 49 clinical sites in St. Louis and surrounding counties. In fiscal year 2012, they provided care at 941,849 outpatient visits.



Mario Castro, MD, professor of medicine and of pediatrics, provides care for patients with asthma, lung cancer and pulmonary disease.

WASHINGTON UNIVERSITY MEDICAL CENTER

Washington University Medical Center Institutions:

- Alvin J. Siteman Cancer Center
- Barnes-Jewish Hospital
- The Rehabilitation Institute of St. Louis
- St. Louis Children's Hospital
- Washington University School of Medicine

• Beds: **1,573**

• Employees: **21,600** (approximate for all medical center institutions)

WASHINGTON UNIVERSITY PHYSICIANS

CLINICAL ACTIVITIES (2012)

- Physician Outpatient Visits: **941,849**
- Hospital Admissions (BJH/SLCH): **67,779**
- Patient Services Revenue (WUSM): **\$747 million**

In Brief

Hospitals/Affiliates

Barnes-Jewish Hospital, licensed for 1,315 beds, is the largest hospital in Missouri. With a premier reputation in patient care, medical education and community service, the hospital has been ranked among an elite group of the nation's best academic hospitals on the *U.S. News & World Report* Honor Roll since 1993. In 2003 it was the first adult hospital in Missouri to receive Magnet status, nursing's highest honor for clinical excellence, and was given Magnet status again in 2008. Barnes-Jewish Hospital provides clinical experience for medical students in all clinical departments except pediatrics. The medical staff is composed exclusively of Washington University full-time or voluntary School of Medicine faculty physicians.

St. Louis Children's Hospital, also staffed exclusively by Washington University faculty physicians, is on the *U.S. News & World Report* Roll of America's

Best Children's Hospitals. The hospital provides a full range of medical services for children and their families across a 300-mile service area and beyond. The school's comprehensive pediatric specialty services at Children's Hospital include one of the country's top pediatric transplant programs and the region's only American College of Surgeons (ACS) verified Pediatric Level 1 Trauma Center. St. Louis Children's Hospital provides extensive community outreach services, including a Critical Care Transport Team, mobile health care units, affiliations with regional hospitals and physicians, support groups and a free child health information line staffed by pediatric registered nurses.

Barnes-Jewish West County Hospital is an 84-bed facility with a medical staff of more than 740 physicians, offering a model that is a mix of Washington University, BJC Medical Group and private-practice physicians; its Washington University physicians number 481. The Alvin J. Siteman Cancer Center has an outpatient center on the campus with more treatment space and a linear accelerator for advanced radiation therapy. Washington University-employed faculty physicians now staff the emergency room and hospitalist service at Barnes-Jewish West County Hospital and provide pediatric outpatient services there in association with St. Louis Children's Hospital.

The Alvin J. Siteman Cancer Center at Barnes-Jewish Hospital and Washington University School of Medicine is composed of the combined cancer-related programs of Washington University School of Medicine and Barnes-Jewish Hospital. Siteman is an

international leader in cancer treatment, research, prevention, education and community outreach. It is the only cancer center in Missouri to hold the prestigious Comprehensive Cancer Center designation from the National Cancer Institute and membership in the National Comprehensive Cancer Network. Siteman offers the expertise of more than 350 Washington University research scientists and physicians who provide care for about 8,000 newly diagnosed cancer patients each year. These scientists and physicians hold about \$160 million in cancer research and related training grants. At any time, Siteman has more than 240 therapeutic clinical trials under way. In addition to its main facilities at Washington University Medical Center in St. Louis' Central West



Colorful characters welcome visitors to St. Louis Children's Hospital.



To improve the convenience of mammography, the Alvin J. Siteman Cancer Center operates a mobile mammography van that offers screenings by appointment in the St. Louis area.

End, Siteman has satellite facilities at Barnes-Jewish West County Hospital in west St. Louis County, at Barnes-Jewish St. Peters Hospital in St. Charles County, and in south St. Louis County.

Created in 2001 through a partnership between BJC HealthCare and HealthSouth and an affiliation with Washington University School of Medicine, **The Rehabilitation Institute of St. Louis** is a state-of-the-art, 96-bed rehabilitation hospital. As the first freestanding acute rehabilitation hospital in the St. Louis area, it is a leader in rehabilitative care, research, education and community service. It provides a full range of inpatient, outpatient and community rehabilitation services focused on limiting disability and restoring function to patients.

Washington University faculty physicians provide some limited specialty services at other area hospitals: Christian Hospital, Missouri Baptist Medical Center, Shriners Hospital for Children, Progress West HealthCare Center, Veterans Administration Medical Center, Phelps County Regional Medical Center (Rolla, Mo.) and Parkland Health Centers (Bonne Terre, Mo., and Farmington, Mo.).

WUMC CAMPUS RENEWAL PROJECT



Campus Renewal is a long-term project to renew BJC’s academic medical center campus on Kingshighway Boulevard encompassing Barnes-Jewish Hospital and St. Louis Children’s Hospital along with Washington University School of Medicine. Over the next 10 years, the campus will be transformed through renovations and new construction, creating an environment and experience for patients that match the excellence in medical care they expect. Private inpatient rooms are a key component of the overall project along with major improvements to open and public areas and to patient/visitor parking, arrival and departure.

Barnes-Jewish Hospital – north campus

Square Feet: 545,000

Stories: 12

New Parking Spaces: 402

ADULT INPATIENT

New Beds: 182

Operating Rooms: 12

Interventional Rooms: 5

WOMEN & INFANTS

New Obstetrics Inpatient Beds: 52

Labor & Delivery Rooms: 18

Women’s Assessment Rooms: 12

C-section Rooms: 3

St. Louis Children’s Hospital expansion

Square Feet: 214,000

Stories: 12

New Valet Parking Spaces: 50

New Pediatric Beds: 96

New/Renovated NICU Beds: 97

PHASE 1

Phase 1 demolition started in mid-2013 and includes: Jewish Hospital School of Nursing, and the Kingshighway, Steinberg and Yalem buildings – approximately 510,000 square feet of demolition. Demolition will be completed spring 2014 with phase 1 construction starting soon thereafter. Occupancy is scheduled for late 2017/early 2018.

Barnes-Jewish Hospital – north campus

- Consolidates and expands clinical care at the Siteman Cancer Center as well as other surgical services and programs
- Consolidates and modernizes the Women and Infants program; labor and delivery is co-located with the St. Louis Children’s Hospital neonatal intensive care unit (NICU)
- Includes diagnostics and support space

St. Louis Children’s Hospital expansion

- Expands the neonatal intensive care unit (NICU), which connects to Barnes-Jewish labor & delivery
- Expands private inpatient beds
- Includes diagnostics and outpatient clinic space

PHASE 2

Renovation and construction on the south end of the campus will focus on Barnes-Jewish Hospital’s expanding heart and vascular program, neurology and neurosurgery programs, transplant, trauma and critical care, and general medicine programs.

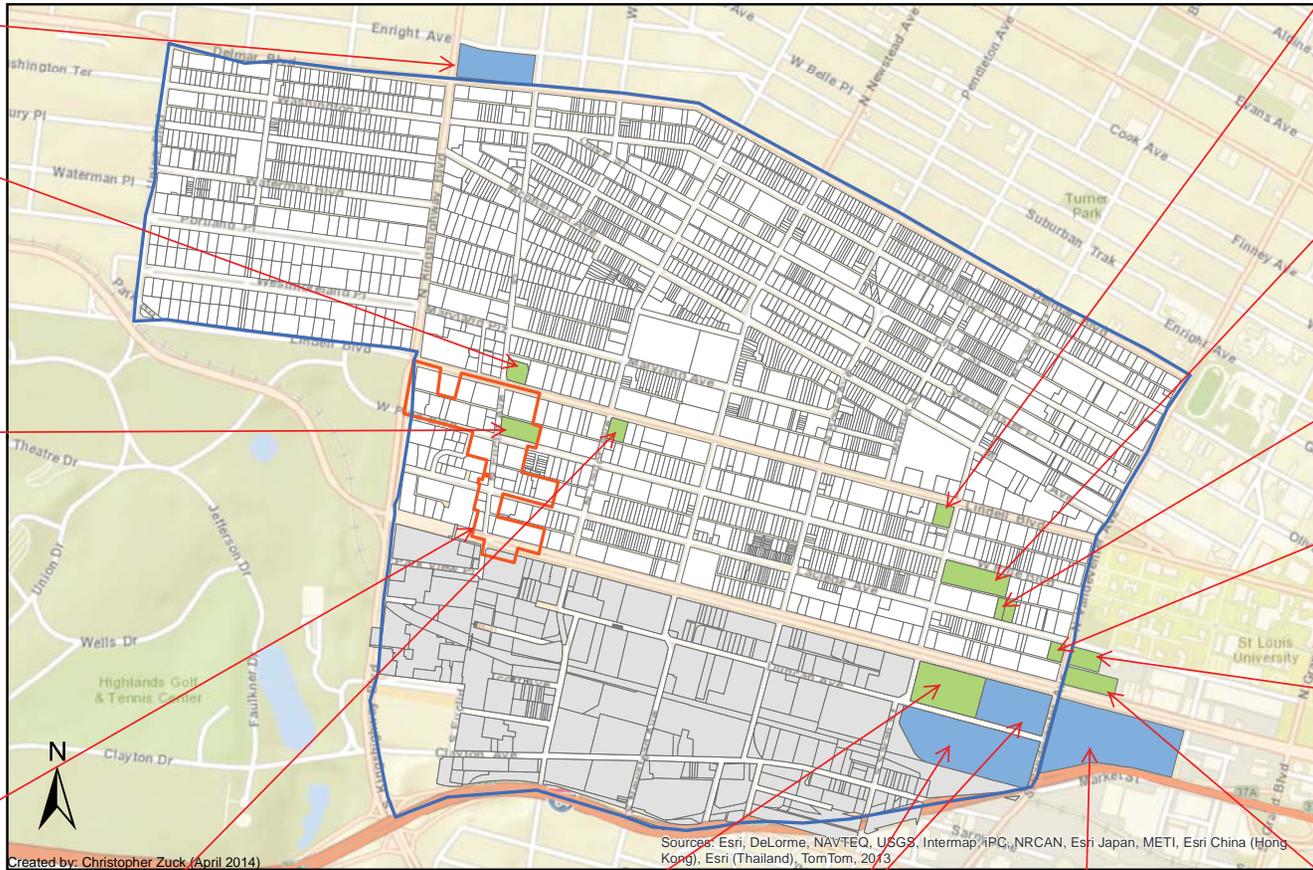
www.BJCCConstruction.org

BJC HealthCare

April 2014

Central West End Development Update

CWE CID Boundary
 Residential Development
 Retail and Commercial Development
 WUMC and CORTEX



Kingshighway & Delmar, Phase 1 of retail center. Aldi's Grocery store completed 2013. Phase 2 completion: TBD

4643 Lindell: Opus Development is developing a 217 unit 12 story luxury apartment bldg. with 10K of ground floor retail. The project will have 291 parking spaces. Est. Cost. \$68m, Est. Completion: 2015-16

City Walk: Mills Development is developing a 7-story 177 unit luxury apartment building at Euclid & West Pine. The ground floor will contain a 38K sq. ft. Whole Foods Grocery. Est. Cost: \$72m Est. Completion: 2015

Euclid South Community Improvement District: Efforts are underway to create a CID along the Euclid-Lindell corridor from Lindell to Forest Park Avenue. The CID will collect a 1% sales tax to be used for infrastructure, security, marketing and beautification efforts. If the district is approved, it will begin operations in early 2015.

4490-94 Lindell: Covington Realty Partners are in the early stages of proposing the demolition of the existing optimist international HQ in order to construct a new luxury residential tower. Est. Completion: TBD

Silo Lofts RFP: CORTEX Innovation District has issue an RFP for the construction of market rate 300 apartments. Est. Completion: TBA

IKEA STL: Developing a new retail store in the CORTEX District. Est. Completion 2015

Midtown Station: Pace properties is proposing at 166,200 sq. ft. retail center at Forest Park & Vandeventer (Former Federal Mogul Site). 812 space surface lot Completion: TBD

4100-08 Lindell: Lawrence Group is redeveloping the former STL Housing Authority HQ building into a mixed use development. Market rate apartments on the upper 2 floors and a bank on the ground level. Expected Completion 2015

Hallmark Development is building a 260 Unit Market Rate Rental development at West Pine & Sarah Street. The four story bldg. will have at 230 space surface lot. Expected Completion 2015. Est. Cost: \$26.7m

Laclede Lofts 3965 Laclede: Historic Rehab of former 3-story warehouse into 50 market rate apartments by Pete Rothschild and Jeff Winzerling. Expected Completion April 2014

Gerhart Lofts: Capstone Development is proposing a \$8m historic rehab of 17 market rate units with 11K square feet of ground floor commercial. Est. Completion: 2015

Laclede-Vandeventer: Mixed-use new construction. 7-story. 81 market rate units with 8960 sq. ft. of retail. Podium Parking. Expected Completion 2015-16

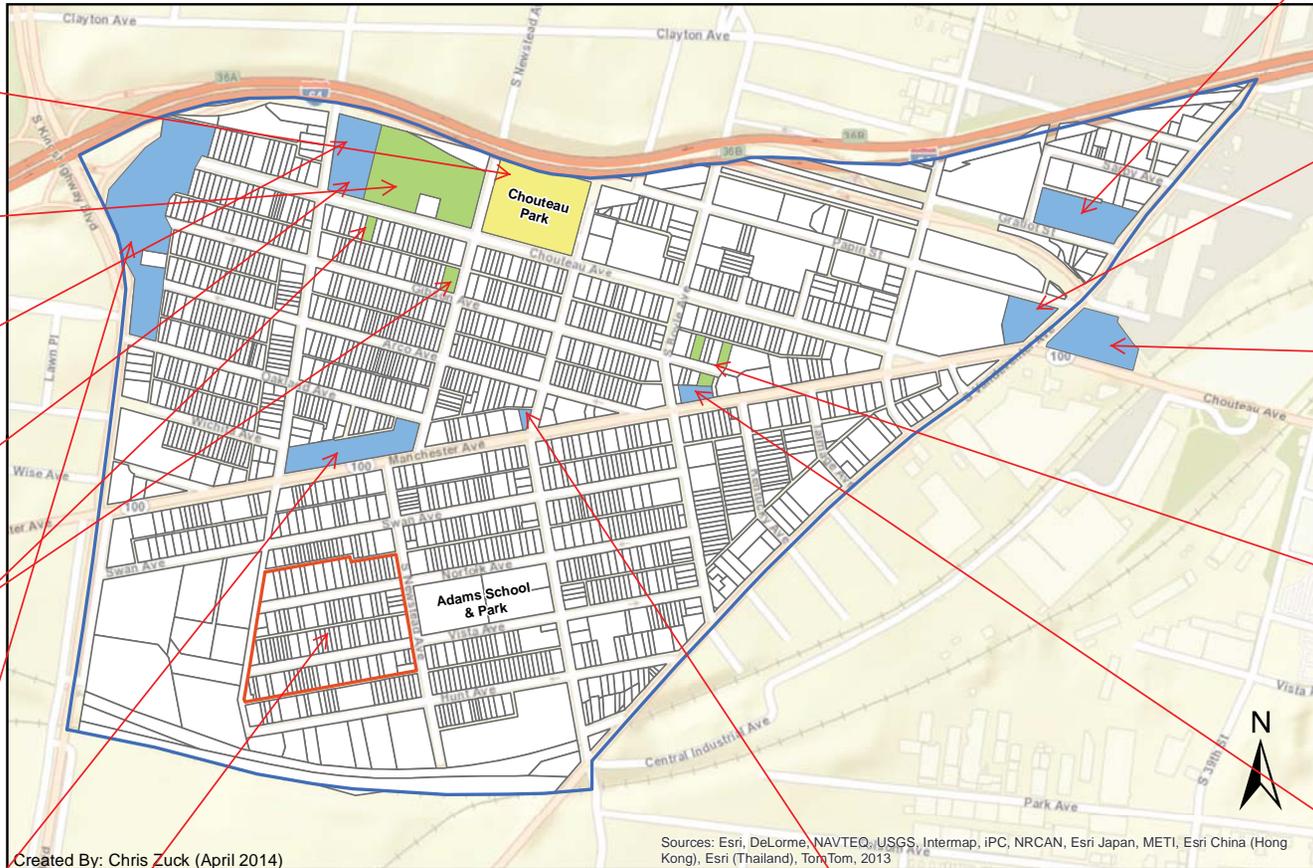
The Standard: 3853 Forest Park; Landmark Properties/Sangita is developing a 164 unit (465 bed) market-rate apartment complex on the former Mobile Station site. 400 structured parking spaces, 5-story building. Completion Aug. 2015

Created by: Christopher Zuck (April 2014)
Sources: Esri, DeLorme, NAVTEQ, USGS, Intermap, iPC, NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, 2013

April 2014

Forest Park Southeast Development Update

RFP Boundary
 Residential Development
 Commercial and Retail Development
 Infrastructure Development



Chouteau Park Phase 2: sprinkler installation, New playground equipment and sod. Spring/ Summer 2014

Taylor-Papin LLC is completing construction on Aventura (150-unit apartments) Completion May 2014

Hilton Hotels are developing a 100 room H2Home Suite Hotel. Building permits are in dispute over the WUMC CUP. Proposed Construction start May 2014

Taylor-Papin LLC is proposing the development of a 3-story speculative office building at Taylor and Chouteau Avenues. Proposed construction start 2015

Houlihan Development is planning 4 new construction for-sale townhouses. Avg. projected sales price \$250K: Est. Completion 2014-2015

Drury Hotels are in preliminary planning stages for a hotel at the intersection of S. Kingshighway and I-64. Est. completion: TBD

Urban Chestnut Brewery, located at Manchester and Taylor Avenues completed its \$10m renovation. The building contains a Beer Hall/ Restaurant and MO largest craft brewery production facility.

FWP is in early planning stages of issuing an RFP for the development of scattered sites single family housing. FWP is a subsidiary of WUMC.

FPSE Form-Based Planning Code: Park Central is completing a Form-Based planning effort to create a new zoning overlay in the neighborhood. Est. Completion: Early 2015

Reliance Bank is rehabilitating 4301 Manchester for a new banking facility. Expected opening 2015

Kaldi's Coffee is relocating their HQ and roasting facility to a 30,000 foot warehouse at 3983 Gratiot St. Est. completion: 2015

Commerce Bank is building a new branch at Vandeventer and Chouteau Avenues. Ground breaking will occur 3-17-2014. The new facility will be operational in 2015

Quick Trip is completing construction of a new gas station and store at Vandeventer and Chouteau Avenue. Expected opening is May 2014

Urban Improvement Company (UIC) are planning the development of single family homes on the 4200 block of Gibson Avenue. Average sales price \$320K

The Ready Room, a new 8,000 square foot music venue at 4191 Manchester is now complete. The facility has a max. capacity of 700. 2 commercial bays facing the street are being white boxed for future development.