WICHITA STATE UNIVERSITY MASTER PLAN
INNOVATION CAMPUS SUPPLEMENT

2017

WSU
Wichita State University

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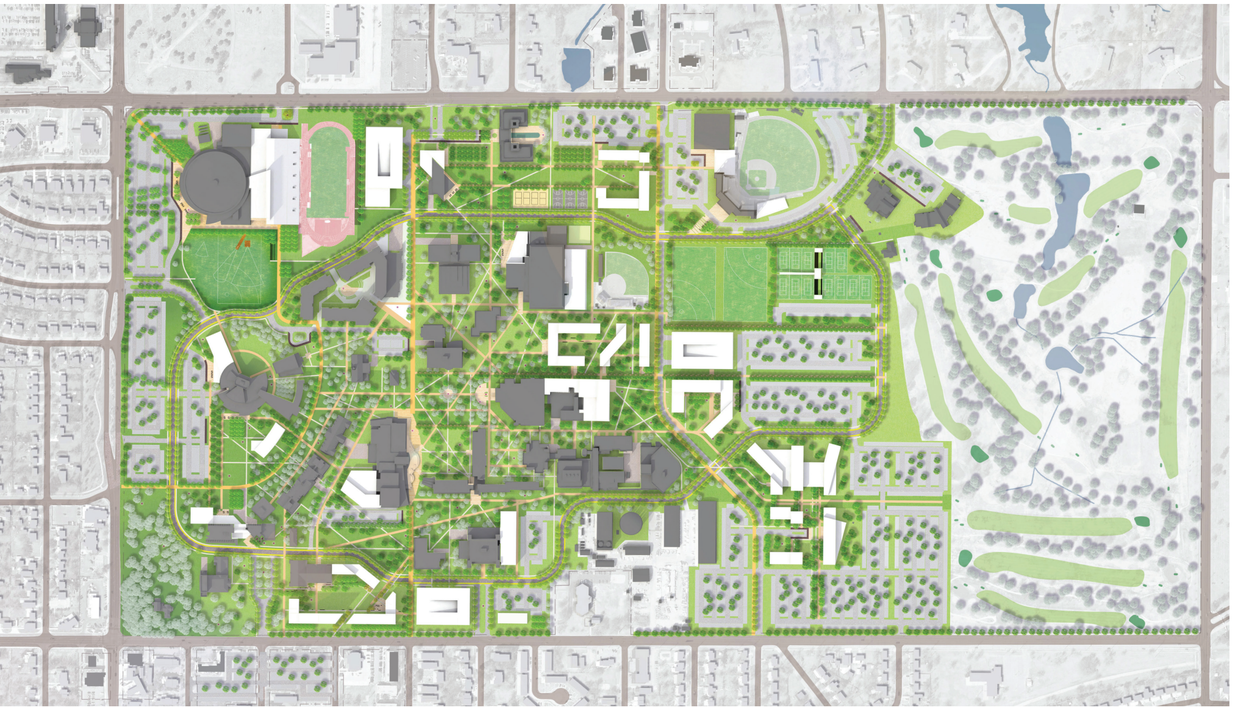
01 INTRODUCTION



2014 Master Plan

Prologue

A Master Plan was started in Fall 2012 for the purpose of focusing primarily on the future development of the main campus with the consultant team of Sasaki Associates, GLMV Architecture and PEC Engineering. The Master Plan was completed in Spring 2014 and serves as the backbone for current development on the main campus. In early 2014, as the original Master Plan was nearing completion, the University's strategic planning process shaped a new vision to be internationally recognized for applied learning and research.

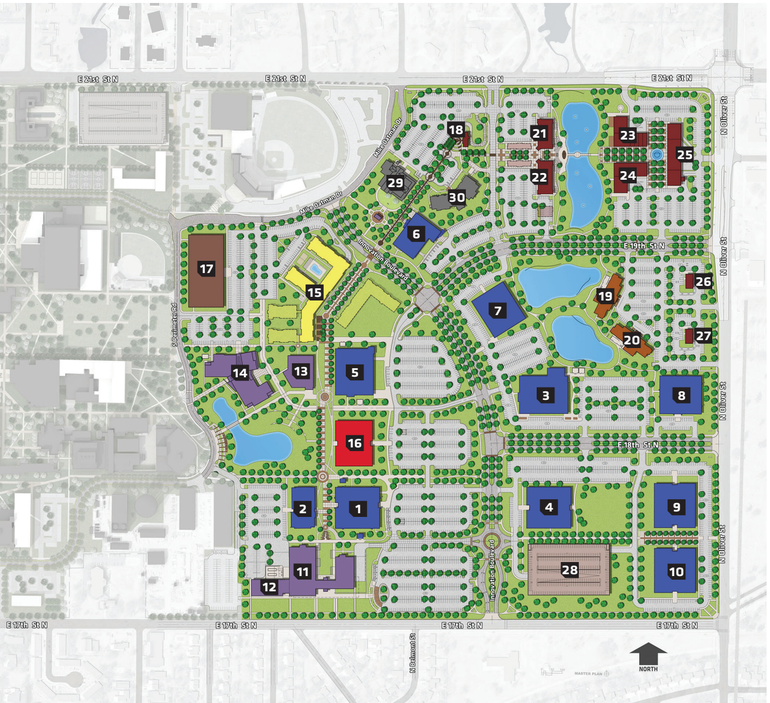
A number of projects from the 2014 Master Plan have been implemented and the plan continues to be relevant for the main campus. Examples include the completion of Alumni Walk; a major portion of Yale Walk; a parking garage for the Arts & Applied Sciences corridor to be completed in August 2017; and fundraising for a new School of Business is well underway.

The Innovation Campus serves as the inspiration for the new strategic planning process for applied learning and research needed to foster relationships between those businesses and students by providing expansion of the University's infrastructure and the land for high-profile businesses to locate on campus.

The Innovation Campus Supplement 2017 expands the scope of the original Master Plan to fully include the development of the former Braeburn Golf Course. GLMV Architecture, a principal member of the earlier plan, was retained in order to provide continuity and an understanding of the University's goals and objectives.

History

The Innovation Campus is situated on 150 acres that was originally a nine-hole golf course for Crestview Country Club in 1921. The University purchased the property in 1967 with the intention to use it for campus expansion. Additions such as Eck Stadium, Woodman Alumni Center and the Marcus Welcome Center changed the course layout over the years and reduced it to approximately 120 acres. The University announced in late October that the course would be closing on November 3, 2014 to move ahead with the Innovation Campus.



2017 Innovation Campus Master Plan

PARTNERSHIP
1. AIRBUS
2. PARTNERSHIP BUILDING 2
3. PARTNERSHIP BUILDING 3
4. PARTNERSHIP BUILDING 4
5. PARTNERSHIP BUILDING 5
6. PARTNERSHIP BUILDING 6
7. PARTNERSHIP BUILDING 7
8. PARTNERSHIP BUILDING 8
9. PARTNERSHIP BUILDING 9
10. PARTNERSHIP BUILDING 10

EDUCATION/RESEARCH
11. EXPERIENTIAL ENGINEERING
12. COMMUNITY MAKER SPACE
13. INNOVATION CENTER
14. W. FRANK BARTON SCHOOL OF BUSINESS

STUDENT HOUSING
15. THE FLATS

STUDENT SUPPORT
16. STUDENT COMMUNITY CENTER

PUBLIC FACILITY
17. RECREATION CENTER

MIXED-USE/RETAIL
18. STARBUCKS COFFEE
19. ELEMENT HOTEL
20. HOTEL 2
21. MIXED-USE 1
22. MIXED-USE 2
23. MIXED-USE 3
24. MIXED-USE 4
25. RETAIL 2
26. RETAIL 3
27. RETAIL 4

PARKING
28. PARKING GARAGE 3

EXISTING FACILITIES
29. MARCUS WELCOME CENTER
30. WOODMAN ALUMNI CENTER

Process

The planning process for the Innovation Campus was initially introduced in the 2014 Master Plan to include a small section of the southwest corner of the Innovation Campus and 9 holes of the golf course to remain initially. As the pace quickened for additional development, representatives from the Administration, the City of Wichita and various others initiated additional planning of the entire Innovation Campus.

The process involved members mentioned above, the planning team and engineering consultants to develop concept alternatives based on possible long-term private partnerships that were in line with the WSU strategic plan. The current Master Plan is a living, breathing guideline with an established infrastructure framework that is undergoing updates to accommodate applied learning or research experiences for students and future business partners.

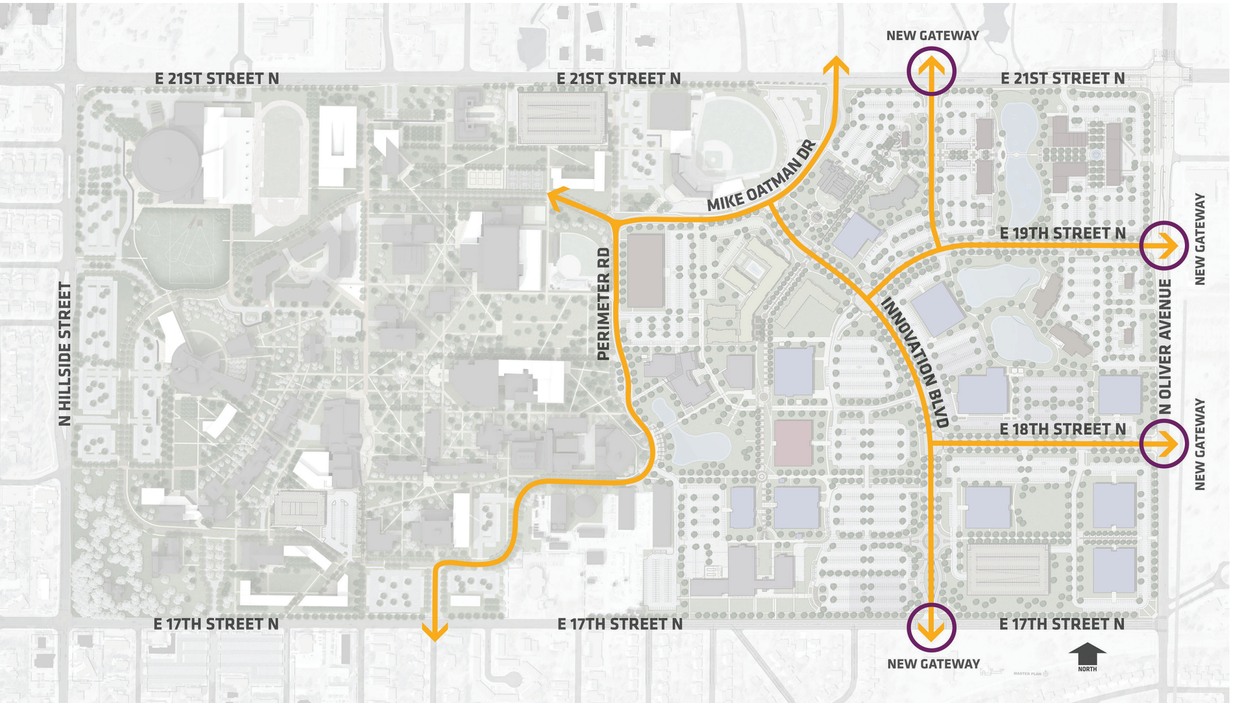
Goals

The additional Goals for the development of the Innovation Campus are built around the Innovation University theme that transformation is the ultimate fulfillment of Wichita State's long-term strategic plan. The University intends to transform the world through:

- Guaranteeing applied learning or research experiences for students
- Pioneering interdisciplinary curriculum development
- Capitalizing on trends that increase quality educational opportunities
- Accelerating knowledge transfer
- Empowering students to create a campus culture that meets their needs
- Reflecting the evolving diversity of society
- Creating a new model of assessment, incentive and reward processes

The development of the Innovation Campus Master Plan is being built around innovation and thinking differently to develop new ways to fulfill the needs of those we serve and the desire to do what we do better.

02 FRAMEWORK



Framework Plan

Framework

PERIMETER ROAD

Perimeter Road maintains its importance as a vehicular and pedestrian axis for the campus. This axis defines the western edge of the Innovation Campus and still serves as a conduit for the delivery of new research and academic initiatives on campus. The southern end terminates at the Experiential Engineering Building and the maker space.

INNOVATION BOULEVARD

Innovation Boulevard now serves as the major north-south axis for the Innovation Campus. This axis defines the heart of the Innovation Campus with major pedestrian and vehicular intersections along its path from 17th Street North at the south, East 18th Street North, East 19th Street North and Mike Oatman Drive toward the north. The boulevard serves as the primary vehicular access to Partnership buildings at the heart of the Innovation Campus.

EAST 18TH STREET NORTH

The east-west connection to Oliver Street serves as a conduit to the heart of the campus and allows vehicular traffic major entry/exit points along the eastern edge of the Innovation Campus. It also serves as visual separation between partnership sections of the campus.

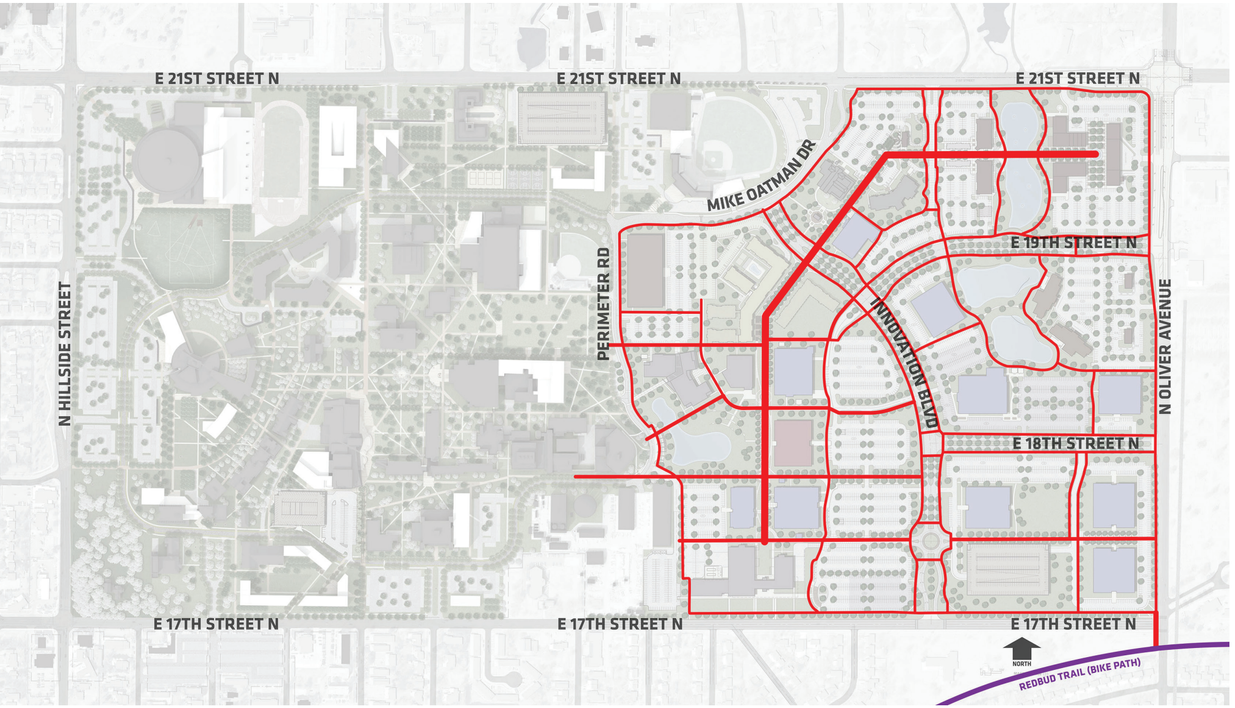
19TH STREET NORTH

The east-west connection to Oliver serves as an additional entry/exit point along the east edge of the Innovation Campus and as a visual separation between the mixed-use restaurant and retail and partnership sections of the campus.

PEDESTRIAN MALL

The Master Plan envisions the Pedestrian Mall as the major pedestrian-only spine of the Innovation Campus. It will serve to link all of the facilities with student housing and mixed-use opportunities and will reach from the northeast section of the campus and terminate almost at 17th Street North on the south. In several locations it collides with east-west pedestrian intersections as extensions from the original campus all the way to Innovation Boulevard.

03 CONNECTIVITY



Connectivity Plan

Connectivity

PEDESTRIAN CONNECTIONS

The Innovation Campus pedestrian links build on the existing connections to unite the campus at the pedestrian level. They extend to Innovation Boulevard in the east-west direction as the primary connections to the existing campus. The new Pedestrian Mall serves as the unifying north-south axis throughout the Innovation Campus expansion.

PERIMETER ROAD EXTENSION

The Master Plan envisions the existing location of Perimeter Road as the western boundary of Innovation Campus.

INNOVATION BOULEVARD

The Master Plan introduces a new boulevard as the primary entry/exit that will bisect the Innovation Campus at 17th Street N. Additional east-west connections along Oliver Street intersect with the boulevard and allow peak hour traffic to enter/exit the campus in a timely manner in all directions. This provides the Innovation Campus with a boundary that is defined by the existing major streets in both directions.

04 LAND USE

Land Use

The Innovation Campus Master Plan builds on the existing core and density of the main campus with the development of additional facilities and landscape projects. The Innovation Campus is a major expansion in an effort to support job creation based on innovation. For its partners, it represents a unique opportunity to become more productive, more profitable and more prosperous for generations to come. From helping startups get off the ground to assisting in long-term growth of major corporations, the Innovation Campus supplies the resources necessary to achieve corporate goals and bolster bottom lines.

The Master Plan is being custom designed to help carry out the vision and goals of the Innovation University concept–a place that blurs the line between education and application and creates an atmosphere that fosters groundbreaking collisions between the University and partners from every industry.

Working closely with City of Wichita planners, a lengthy process was undertaken to zone the Innovation Campus a "University Overlay District." This designation will allow the University to develop all anticipated uses of the land.

05 PROGRAM

Program

RESIDENTIAL – THE FLATS AT WSU

Wichita State has partnered with a developer to construct 283 beds as a part of the new Master Plan with planned phases for an additional 120 beds as growth requires. The residential facilities are located at the hub of the Pedestrian Mall and allow easy access to student services, the academic facilities, the new Starbucks and the mixed use retail/restaurant activities in the northeast quadrant of the Master Plan.

ACADEMIC

The WSU Barton School of Business/Innovation Center is an academic building slated for a location on the Innovation Campus. The new four-story building will be a state-of-the-art facility designed to foster collaboration, experiential learning and entrepreneurial activity among students, faculty and the business community while ensuring that teaching and learning models are innovative, student-centric and widely recognized. It is located on the western edge of the Innovation Campus near other academic facilities to the west of Perimeter Road.

RESEARCH

The campus is planned to become an interconnected community of partnership buildings where organizations establish operations and reap the rewards of the University's vast resources, technology and research laboratories that give students access to real-world applications and the training needed to effortlessly assimilate into the workforce, a community maker-space that gives both students and non-students alike access to the technology, services and business incubators that help facilitate product development as well as mixed-use environments that provides everyone with a place to eat, sleep, play, shop and share.

STUDENT LIFE

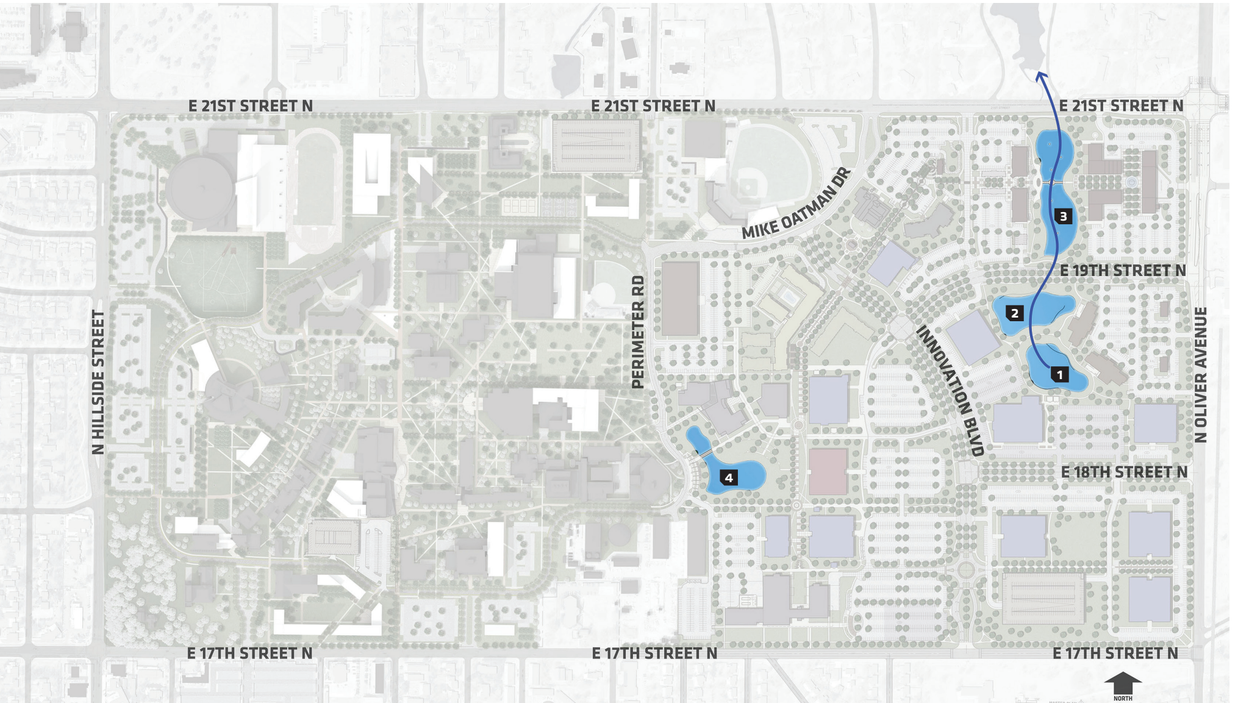
The Master Plan will build on the investment in campus facilities and amenities put into place over the last two to three years. The intent is to promote students to stay on campus to study, dine and socialize through the extension of interactive social zones in student housing areas, landscaped pedestrian-only "social spots" that link in multiple connections through the Innovation Campus with retail, restaurants, and recreation with all-hour access to academic facilities.

BUSINESS PARTNERSHIPS

The largest part of the Master Plan is devoted to business partnerships and is an area where ideas can be shared, learned from and improved upon for the greater good. As a whole, the Master Plan symbolizes what the Brookings Institute has termed an "Innovation District," a densely populated geographic area that facilitates collaborations, accelerates the commercialization of new ideas and promotes knowledge spillover. As of this date, the following buildings are currently located on campus or in planning:

- An Experiential Engineering Building tied to the University's strategic vision of being "internationally recognized for applied learning and research." The building contains engineering laboratories and a maker space open to paying members. This facility serves as the south terminus of the pedestrian mall.
- A new 2-story home for Airbus Engineering that provides 400 engineers with top quality space to work with WSU Students and faculty.
- The Flats at WSU - a new apartment-style residence facility with the first phase containing 283 beds located at the hub of the pedestrian mall and adjacent to the Law Enforcement Training Center. The future residential phases would build the residence facility to approximately 400 beds.
- The 60,000-square-foot, 3-story Law Enforcement Training Center that serves the City of Wichita and Sedgwick County law enforcement on the first 2 floors with shared training, tactics areas, classrooms and crime scene investigation rooms. The upper floor will be for the criminal justice department at WSU.
- The largest free-standing Starbucks in the United States, with 2,000 square feet, was the most requested amenity of the student body and is located along the Pedestrian Mall.
- A new home for the W. Frank Barton School of Business, with an adjacent Innovation Center and state-of-the-art technology open to students around the clock, located in close proximity to The Flats at WSU.
- A mixed-use retail/restaurant complex with multiple buildings surrounding the existing water features in the northeast quadrant of the Master Plan. This area also serves as the north terminus of the Pedestrian Mall.
- An Element Hotel by Marriott with approximately 93 rooms in 70,000 square feet that will offer fully equipped kitchens; spa-inspired bathrooms; and sustainable, eco-friendly amenities. The hotel will accommodate on-campus or off-campus guests with direct access to a major street and located in close proximity to the restaurant retail in the northeast quadrant of the Master Plan.
- A second hotel of similar room count for short-stay on-campus and off-campus guests will also be located in the general vicinity of the first hotel with direct access to a major street to reduce on-campus traffic congestion.
- A 60,000-square-foot recreation facility used by students, faculty and the public, which will include a Health & Wellness space for students and faculty, to be located in close proximity to The Flats at WSU.
- PB2, a public/private partnership shell building containing approximately 55,000 square feet on 2 floors that will accommodate up to 8 tenants, located adjacent to Airbus Engineering and the Experiential Engineering Building.

06 LANDSCAPE AND ENVIRONMENT



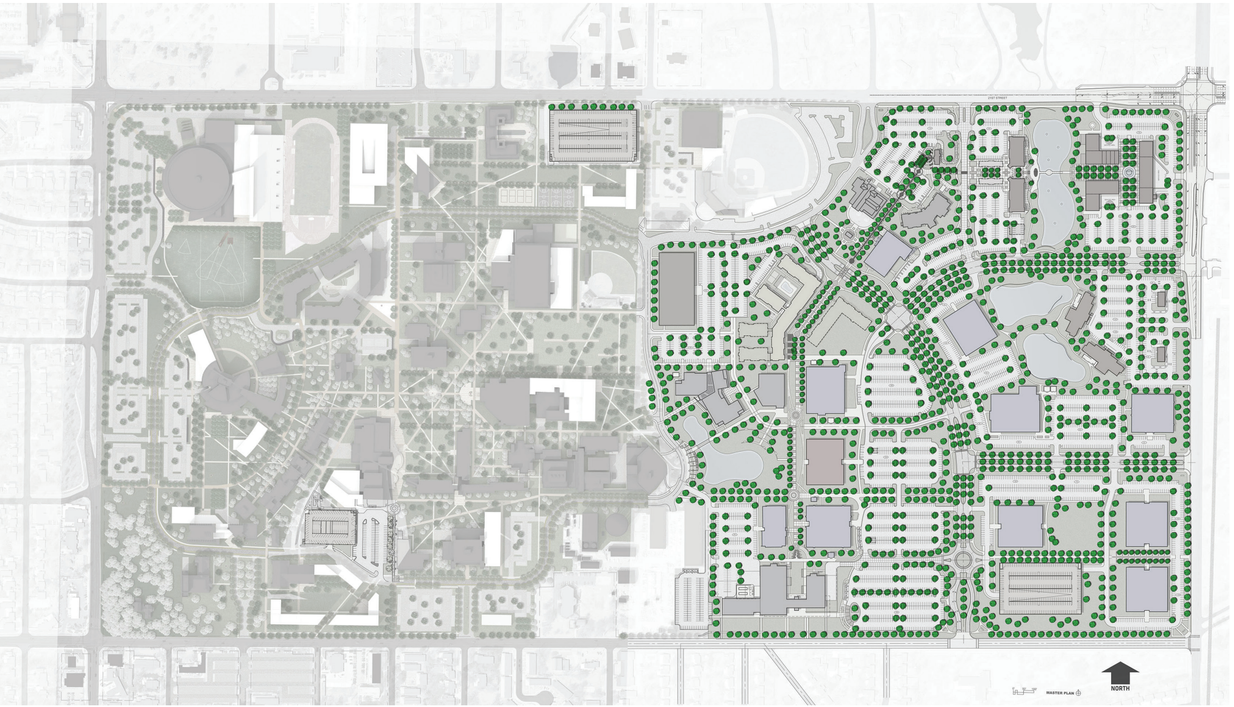
Hydrology Plan

Landscape and Environment

HYDROLOGY

The majority of water conveyance on the Master Plan will be developed through engineered solutions. The site is divided into 4 main drainage basins that drain in different directions. These are referred to as the 4 ponds on the Master Plan. Each basin will provide stormwater detention to reduce the developed peak flow rates below existing condition peak flow rates. Each basin will also provide water quality volumes either through stormwater detention ponds or proprietary devises. Channel protection will be provided in the basins in the proposed stormwater detention facilities. The development of the Master Plan has the most impact on the basin that drains to the north. Additional detention will be provided to reduce the occurrence of stormwater from flowing into 21st Street North. Pond number 3 flows over top into 21st Street in a 2-year storm event or larger. With proposed developed conditions, the new constructed pond will overtop in approximately a 100-year storm event or larger. This development also benefits the property north of 21st Street by reducing the peak flow rates to the ponds and drainage way.

Please refer to the Development Drainage Study for the Wichita State University Innovation Campus prepared by MKEC, dated December 2014, for supplemental information.



Proposed Vegetation Plan

VEGETATION

The Master Plan will build off the precedent established on the original campus. The planting of rows of trees along the main interior vehicular boulevards, the Pedestrian Mall and other pedestrian walkways shape the open space, provide spatial definition and provide shade.

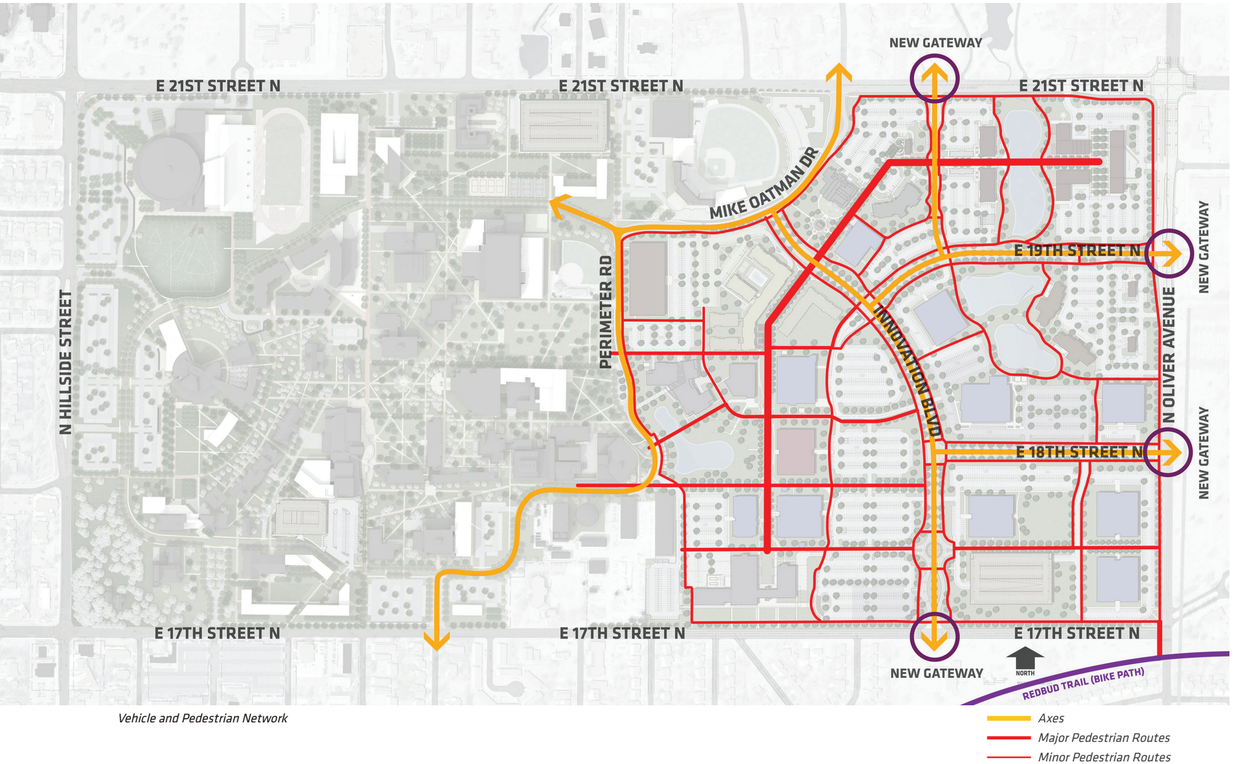
RECREATION AND OPEN SPACE

The addition of The Flats at WSU on the campus presents the need for added outdoor recreational spaces. The Master Plan facilities this additional need with outdoor amenities at the apartments, the open spaces around the proposed detention ponds and the "social spots" creating along the Pedestrian Mall.

SCULPTURE

The intent is to continue with the theme established by the University. It is recommended that pubic/private partnership buildings consider the inclusion of a sculpture component with the addition of various stakeholders and private partners to help guide the process.

07 MOBILITY



Vehicle and Pedestrian Network

Mobility

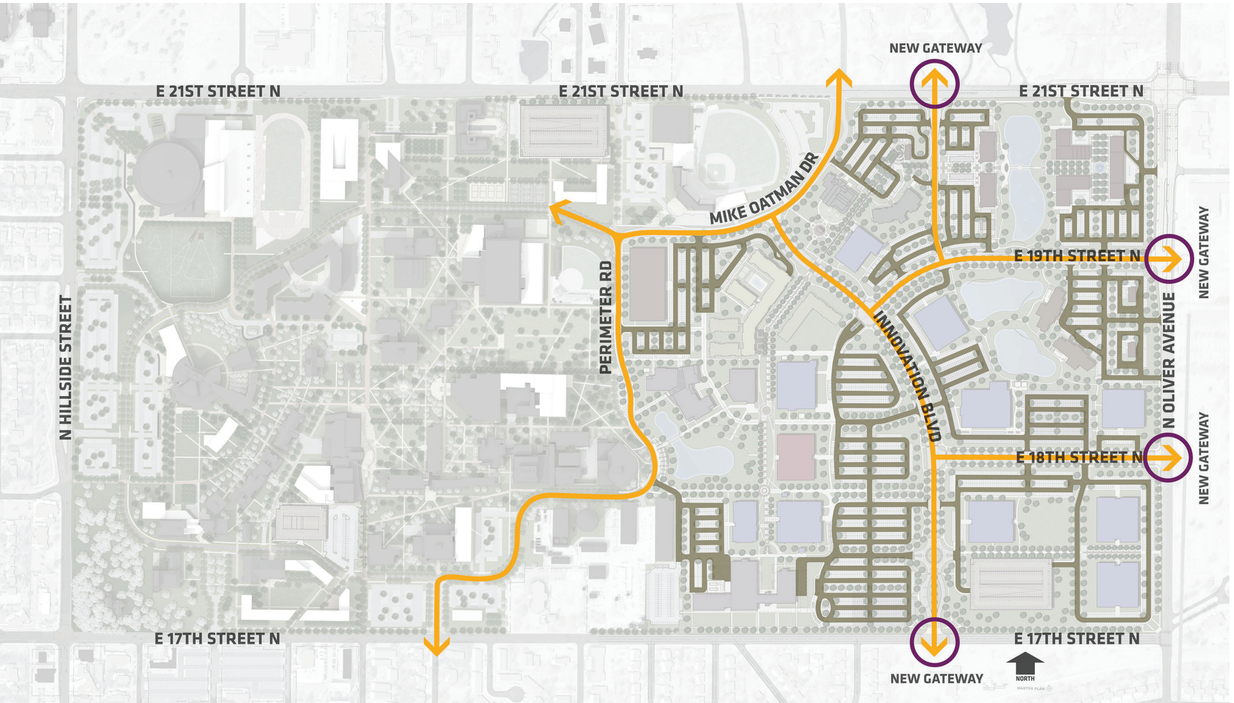
The existing campus has relied on a culture of mobility and the new Innovation Campus will introduce considerably more traffic in the coming years. Based on the long-term growth, a Vehicular Traffic Impact and Pedestrian and Bicyclist Study was conducted that addresses traffic impacts within the project site as well as the four adjacent arterial street corridors, their intersections, Innovation Campus access points, the four major existing WSU campus access points (Yale Avenue, Mike Oatman Drive, Harvard Avenue and Fairmont Avenue) and at the intersection of Innovation Boulevard through the Innovation Campus and Mike Oatman Drive. The study includes the following:

- Traffic trip generation
- Intersection analysis
- Pedestrian and bicycle system study
- Geometric changes and traffic control

Some of the recommendations have already been implemented in the planning and development, mainly for on-campus recommendations. As further development occurs the arterial street improvements will need to be implemented. Please refer to the study prepared by MKEC, dated December 2014, for supplemental information.

BICYCLES AND PEDESTRIANS

Recently the City of Wichita conducted a bicycle facilities planning study that will help integrate the Innovation Campus into the city-wide bike facilities system. Especially key is the Redbud Shared Use Path south of the campus with an intersection shared at 17th Street N and Oliver Street. Ultimately, this path will extend into East Wichita and Andover. The introduction of traffic signals, pedestrian-actuated signals, and pavement markings to delineate bicycle lanes on both sides of 17th Street North will provide traffic calming and accommodate crossing into the campus. Innovation Boulevard, 18th and 19th Streets North will have wider sidewalks for service and emergency as well as other improvements recommended in the study.



Vehicular Circulation

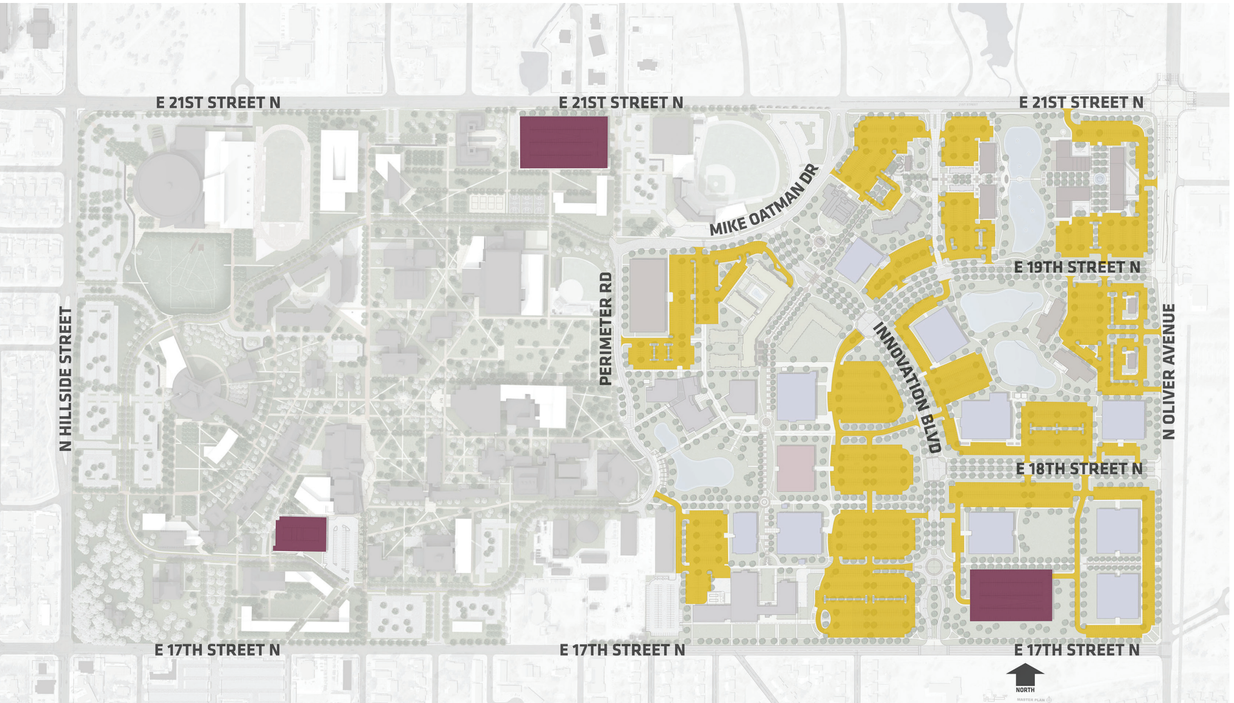
AUTO

Auto mobility starts at the entry points into the Innovation Campus with the following recommendations:

- The interior roads for the Master Plan are to have raised landscaped medians, turn lanes at the various intersections and one through lane in each direction. Lane width should be 20 feet from curb to curb to accommodate emergency vehicles or any stalled vehicles.
- Internal campus drives will be controlled by signage or mini-roundabouts.
- 17th Street – center islands and turn bays; through traffic accommodated with single lanes east and west bound.
- 17th Street North and Innovation Boulevard – a signal will be needed with near build-out on the Master Plan.
- Oliver at 17th Street North - turn lanes for both north/south directions with signalization in the long term.
- Oliver at 18th Street North – turn lanes for both north/south directions and consideration for a Continuous Green T-intersection in the long term.
- Oliver at 19th Street North – turn lanes for both north/south directions with signalization in the long term.
- 21st Street North at Oliver – double turn lanes for both east/west and north/south directions with 2 through lanes in all directions.
- Various right-of-way needs for the roadway improvements noted above will be required.

With the implementation of the recommendations above there could still be slow movements during the rush hour a.m. and p.m., which is typically expected during those times. During hours outside of peak times the intersections will operate at higher levels of service.

08 PARKING



Proposed Parking

Parking

Parking requirements for the Innovation Campus will need to take into account a combination of academic facilities, community use facilities including retail/restaurant and public/private partnership facilities.

Academic buildings, recreation, student housing and community facilities are located on the west side of the Master Plan with parking to accommodate their requirements and added capacity for the main campus.

The retail/restaurant and hotel facilities have parking with direct links to arterial streets to minimize access and congestion and are located in the northeast quadrant of the Master Plan.

The public/private partnership buildings are located in the middle and east side of the Master Plan and served by parking that will be regulated by the size and occupancy of the building. Parking has direct links to the interior roadways for ease of access in and out of the campus and direct pedestrian connections with the balance of the campus.

GARAGE

The Master Plan proposes two garages: the South Garage and a relocated North Garage that are both placed to accommodate the additional vehicular traffic on campus.

The South Garage is a 1,256-car, 4-level structure located near 17th Street North and Oliver. The garage supplements the surface parking for the 3 public/private partnership buildings in the southeast quadrant of the Master Plan. Access is from 17th Street North to Innovation Boulevard with a right hand turn at the mini-roundabout.

The North Garage is a 914-stall, 3-level structure located in the existing surface parking lot west of Eck baseball stadium directly south of 21st Street North. The garage is located in the Active Corridor of the campus and will serve the new student housing and recreation as well as major and minor events at nearby campus venues. Entry is from Perimeter Road to the south or a new entry point directly east of the structured parking on 21st Street North. The North Garage is to take the place of the structured garage that was originally located east of Cessna Stadium.

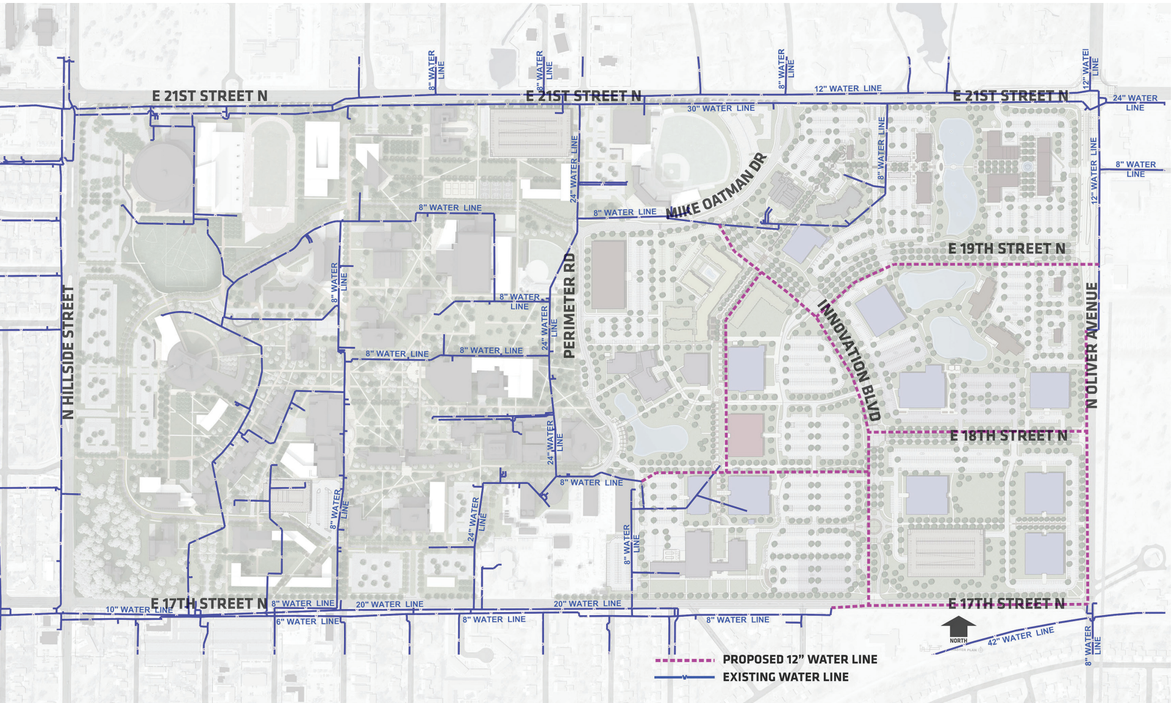
In addition, there is a 427-car, 3-level garage currently nearing completion directly south of the Rhatigan Student Center that occupies a portion of the existing surface lot.

SURFACE

The mixed-use and hotels are served by surface parking with links to arterial streets to minimize access and congestion to the heart of the campus. The remainder of the surface lots to support the public/private partnership buildings have direct access to the interior roadways for ease of access in and out of the campus and direct pedestrian connections with the balance of the campus.

Parking lots are to be comprised of simple materials with striping demarcating each stall and landscaping with trees to break up the sea of paving, offer much-needed shading at strategic locations and provide catchment for stormwater.

09 UTILITIES AND INFRASTRUCTURE



Current and Future Waterline Infrastructure.

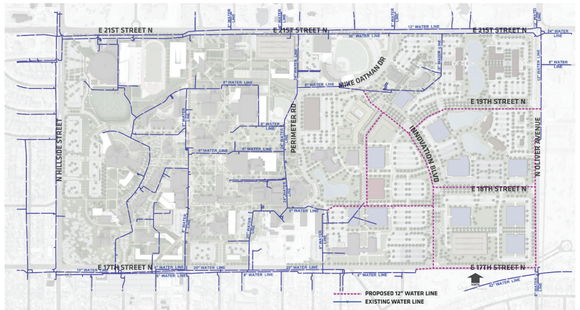
Utilities and Infrastructure

ENVIRONMENTAL SITE ASSESSMENT

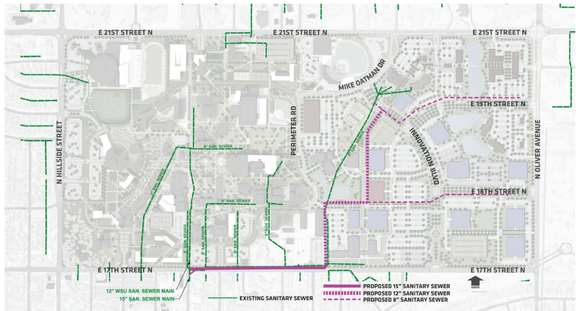
A Phase 1 Environmental Site Assessment (ESA) was prepared by Terracon Consultants, Inc. The ESA was conducted as an assessment of the WSU main campus and included the Innovation Campus. The ESA identified Recognized Environmental Conditions (RECs) associated with the site's golf course maintenance operations. The identified RECs included fuel storage and surface staining associated with general golf course maintenance chemicals, such as solvents and pesticides.

It should be noted that during a geotechnical investigation for the Master Plan, soil samples were collected on portions of the maintenance yard for the old golf course. Evidence of staining or odor that are normally associated with petroleum impacted soils were not observed during the field work or laboratory analysis of the samples.

Please refer to the complete EDA Environmental Narrative Report for the WSU Innovation Campus prepared for MKEC Engineering by Terracon Consultants, Inc., dated June 16, 2015, for supplemental information.



Water Line Plan



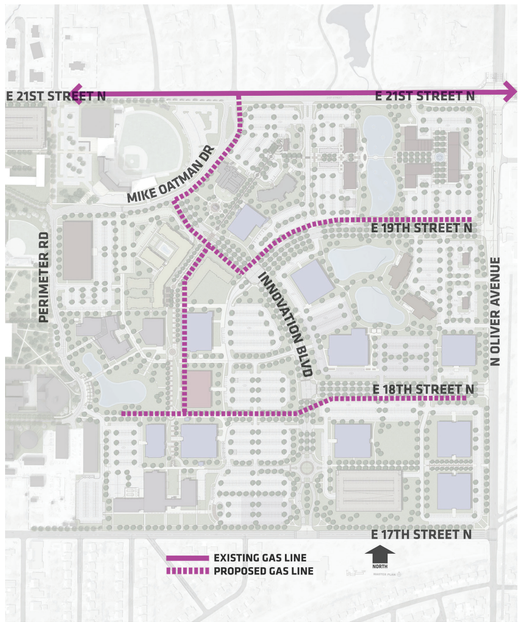
Wastewater Plan

WATER AND DISTRIBUTION SYSTEMS

Water for the site will be provided by the City of Wichita for domestic, irrigation and firefighting purposes. The water service needs are proposed to be met primarily by extending an existing 12-inch line in Oliver Street on south to 17th Street North; taking this 12-inch line west along 17th Street North to a connection with an 8-inch line at 17th Street North and Fountain, and completing a series of loops within the Master Plan. The proposed lines are sized to deliver approximately 8,000 gallons per minute (gpm) to areas throughout the Master Plan without dropping the system pressure below 20 pounds per square inch (psi). Additionally, a two-million-gallon City of Wichita water tank exists on the main campus, approximately 500 feet north of 17th Street and ½-mile west of Oliver, near the southwest corner of the Innovation Campus.

WASTEWATER COLLECTION

The City of Wichita will provide sanitary sewer service for the Master Plan. An eight-inch sanitary sewer crosses the western part of the site, and services facilities located north of the site including the Alumni Center, Marcus Welcome Center and Eck Stadium. The nearest sanitary sewer main with capacity to serve the site is a 15-inch line that runs from 17th Street North along Yale Avenue and serves the existing University campus, flows south across 17th Street North and connects to this 15-inch line. New 8-inch lines will be added along 18th and 19th Streets North for new facilities on the Innovation Campus.



Gas Line Plan

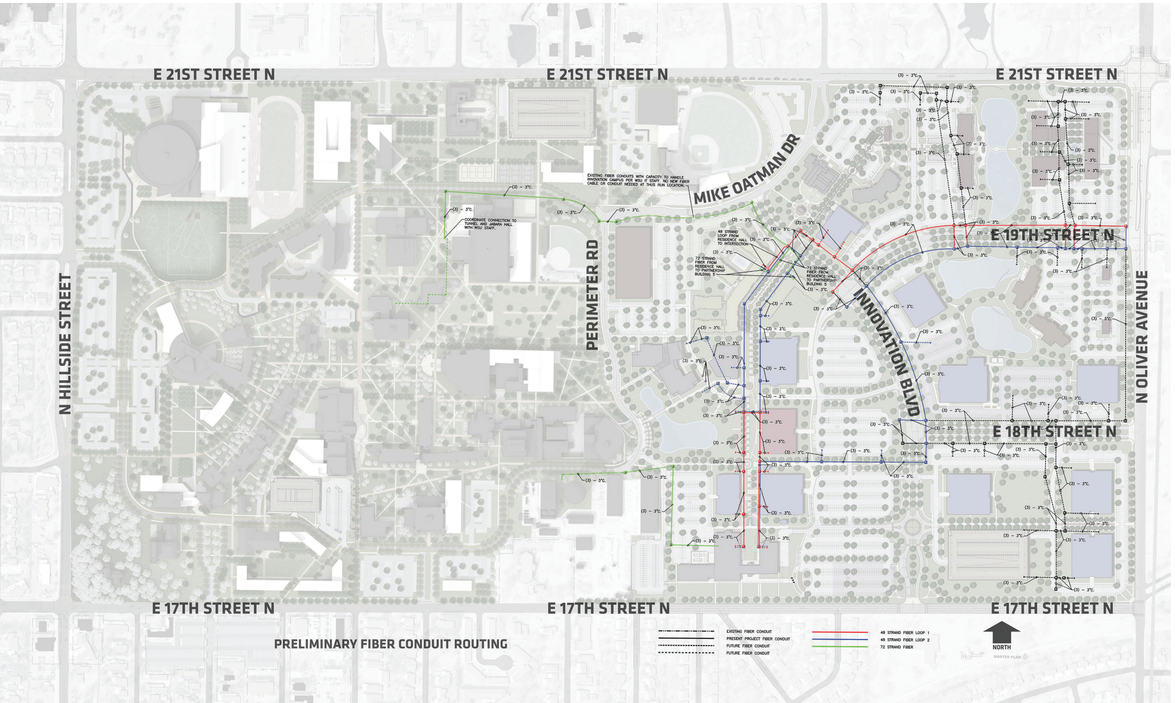
MECHANICAL INFRASTRUCTURE

Due to the existing central plant being at capacity, all the buildings located on the Innovation Campus will be independent mechanical systems sized to accommodate each particular building. Chillers will be ground-mounted, located away from building entrances with privacy screens as required.

A study for a satellite central energy plan serving the Innovation Campus estimated the construction cost to be approximately $20 million. This was deemed unfeasible. Please refer to the Satellite Central Energy Plant Program Document prepared by Professional Engineering Consultants dated November 2014.

GAS INFRASTRUCTURE

Natural gas service will be provided by Kansas Gas Service. Nearby lines are provided along 21st Street North and 17th Street North. New gas service will come south from 21st Street North with connection points along Mike Oatman Drive, Pedestrian Mall, the north half of Innovation Boulevard, 18th and 19th Streets North to serve future buildings on the Innovation Campus.



Preliminary Fiber Conduit Routing

FIBER LOOP

The fiber backbone consists of 72- and 48-strand, single-mode, fiber optic cable to allow voice and data transmission over several miles. The 72-strand fiber connects the original campus to the Innovation Campus from 2 separate sources and multiple service providers. The 48-strand fiber is routed throughout the Innovation Campus in a double loop with all new buildings receiving 2 separate connections to the loop for redundant operation. In-grade boxes are installed every 300 feet to provide convenient connection locations for fiber infrastructure tie-in as facilities are developed. A separate 19-cell tube cable is also installed alongside the traditional fiber to allow for the installation of blown fiber to increase capacity as needed in the future.

Please refer to the Development Utility Study for WSU Innovation Campus prepared by MKEC Engineering, dated December 2014, for supplemental information.

ELECTRICAL INFRASTRUCTURE

Electrical service for the north portion of the site including retail, mixed-use and hotels will be served from primary service along 21st Street North at various pick-up points. The southern portion of the site will be served by primary service along 17th Street North in multiple locations.

Wichita State University and Westar Energy, Inc. have received legislative authority to exchange property that will allow Westar to construct a new substation. This substation will increase the full load capability from 35 MVA to 50 MVA providing reliability and added capacity to accommodate the anticipated growth of the university and the surrounding area.

10 APPENDIX

Credits

All presentations to the Master Plan Committee given by the design team throughout the design process accompany the Master Plan document in digital form. These presentations provide condensed supplemental materials and data guiding the direction of the Master Plan.

Development Utility Study for WSU Innovation Campus, December 2014, created by MKEC

Vehicular Traffic Impact and Pedestrian & Bicyclist Studies, December 2014, created by MKEC

Development Drainage Study for the WSU Innovation Campus, December 2014/Revised in May 2016 by MKEC

EDA Environmental Narrative Report for the WSU Innovation Campus, June 2015, created by Terracon Consultant's, Inc.

Satellite Central Energy Plant Program Document prepared by Professional Engineering Consultants, Inc., November 2014

WICHITA STATE UNIVERSITY

MASTER PLAN COMMITTEE

John Bardo; President
Anthony (Tony) Vizzini; Provost and Senior Vice President
Mary Herrin; Vice President for Administration and Finance
David Moses; Vice President and General Counsel
Andrew (Andy) Schlapp; Executive Director of Governmental Relations and Board of Trustees, Executive Director of Operations
John Tomblin; Vice President for Research and Technology Transfer and Executive Director of the National Institute for Aviation Research

FACILITIES PLANNING

Eric King; Associate VP for Administration & Finance
Emily Patterson; Director of Facilities Planning
Woodrow Depontier; Director Physical Plant

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