

Volume 2b

Facilities & Campus Analysis





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ANALYSIS OVERVIEW

The University of Illinois Springfield (UIS) has grown and thrived since its humble beginning in 1970. Today the University is the *#1 Regional Public University in the State of Illinois* as ranked by *U.S. News & World Report*. UIS marks its 50th year in 2020 with the mission to provide a uniquely student-centered education both on campus and on-line.

Due to years of growth, the University faces challenges with aging infrastructure and limited financial resources. To understand UIS's complexities, the planning team completed a thorough campus and facility condition assessment to better understand the issues and opportunities facing the campus facilities, infrastructure, and utilities.

The following narratives, maps, charts, and graphics summarize the key findings discovered by the planning team along with existing documentation shared by UIS.

CAMPUS ORGANIZATION BUILDING AND LAND USE

The University of Illinois Springfield is situated on 740 acres surrounded by farmland and prairie restoration. The campus is located six miles southeast of Downtown Springfield. The campus includes 1.2 million gross square feet (GSF) in 86 buildings. Off campus locations include: the UIS Field Station on Lake Springfield, Therkildsen Field Station at Emiquon National Wildlife Refuge, Barber Observatory near Pleasant Plains, IL, and UIS Peoria in Peoria, IL.

The campus is bounded by 11th Street to the west, Toronto Road to the south, Lake Springfield to the east and residential neighborhoods to the north. Campus facilities are organized around four "neighborhoods." The west is made up of student housing. The Main Quad is framed by four academic buildings (Brookens Building, University Hall Building, Public Affairs Center, and Health & Sciences Building) and the Student Union. The East Quad is a series of single story buildings that house academic programs, student services and University support units. Athletics and Campus Recreation are at the south edge of the campus and to the west.



View of Public Affairs Center (PAC) & Brookens Building (BRK) across the Main Quad at dusk. Photo courtesy of UIS.



*A student athlete takes a selfie with Orion, the UIS Prairie Stars' mascot.
Photo courtesy of www.uis.edu.*



Campus Organization





CAMPUS ORGANIZATION

The University occupies 740 acres, including 1.2 million gross square feet (GSF) among the 86 buildings it owns.

Surrounded by farmland and prairie restoration, the academic buildings are positioned around both the Main Quad and the East Quad. Student housing is largely located to the west and southeast edge of campus, with Athletics and campus recreation to the south.

CAMPUS BUILDINGS

- (BRK) Brookens Building
- (BSB) Business Services Building
- (CCC) Cox Children's Center
- (DBS) Dixie Barn & Shed
- (FSL) UIS Field Station on Lake Springfield
- (HBC) Homer L. Butler Commons
- (HRB) Human Resources Buildings
- (HSB) Health & Sciences Building
- (KIW) Kiwanis Building/Stadium
- (KPB) Kiwanis Press box & Bleachers
- (MB) Maintenance Building
- (PAC) Public Affairs Center
- (PDB) Police Department Building
- (REC) Recreation Park
- (RSL) Residential Simulation Lab
- (SAB) Student Affairs Building
- (SB) Storage Buildings
- (SLB) Student Life Building
- (SPH) Spencer House, Barn, & Garage
- (SSH) Strawbridge-Shepherd House, Barn, & Garage
- (TC) Tennis Complex
- (TRAC) The Recreation & Athletic Center
- (UHB) University Hall Building
- (UNION) Student Union
- (VPA) Visual & Performing Arts Building
- (WUIS) WUIS Building

Student Housing

- (BBL) Bluebell Court
- (CLV) Clover Court
- (FRH) Founders Residence Hall
- (FXG) Foxglove Court
- (LKR) Larkspur Court
- (LRH) Lincoln Residence Hall
- (MGR) Marigold Court
- (PRL) Pennyroyal Court
- (SFL) Sunflower Court
- (TRL) Trillium Court



Facility Condition Assessment: Architectural



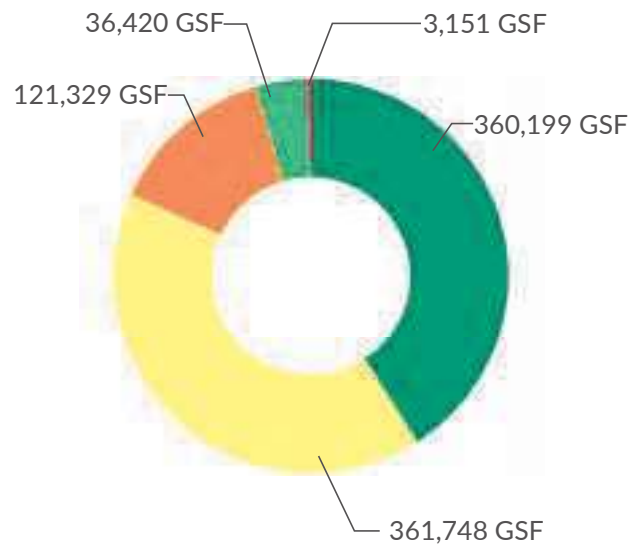


ARCHITECTURAL ASSESSMENT OVERVIEW

A comprehensive facility condition assessment was conducted by the planning team and included the 86 buildings the campus owns. Using ratings established by APPA (Association of Physical Plant Administrators) facilities were categorized in one of five levels ranging from poor to excellent based on the overall condition of roofs, building envelope, interior condition, code compliance via visual inspections only, and age of facility.

The map to the left illustrates the facility condition rating based on the architectural assessment.

The following pages summarizes the architectural values of each of the campus neighborhoods and the key findings.



BUILDING RATING KEY

- 1. Poor, Replacement or Complete Renovation (if historic)
Code, finishes, exterior, structural needs improvements
- 2. Below Average (major renovation required)
Code, finishes need improvement; no structural issues
- 3. Fair (normal renovation required)
Finishes, interior
- 4. Good (maintain within life cycle)
Older building with recent updates
- 5. Excellent (like new)
New (or updated within five years)
- Building/structure not surveyed



Facility Condition Assessment: Architectural

CAMPUS ARCHITECTURAL CONTEXT

ARCHITECTURAL VALUES

The buildings on the UIS campus are characterized by a variety of architectural languages. These languages respond to the use, time period of construction, and intended lifespan of the buildings.

The buildings can be divided into various groupings around the UIS campus, and the following descriptions pertain to these groupings.

The campus building were evaluated on a visual basis, using the building rating key below. Each component of the building was rated according the rating key; i.e. Roofing, Exterior Windows, Interior Flooring. The individual ratings were then averaged to produce the Architectural Building Rating.

BUILDING RATING KEY

- 1. Poor, Replacement or Complete Renovation (if historic)
Code, finishes, exterior, structural needs improvements
- 2. Below Average (major renovation required)
Code, finishes need improvement; no structural issues
- 3. Fair (normal renovation required)
Finishes, interior
- 4. Good (maintain within life cycle)
Older building with recent updates
- 5. Excellent (like new)
New (or updated within five years)
- Building/structure not surveyed

EAST QUAD

East Quad buildings are characterized by their utilitarian exterior aesthetic. Most are single story buildings with flat roofs. Interiors use more contemporary materials. Interior floor plans are often winding and confusing to navigate.

Exterior

- Metal wall panels
- Exterior Insulation & Finish System (EIFS)
- Aluminum doors and windows
- Limited use of masonry on one or two buildings
- Flat Roof System

Interior

- Carpet tile
- Vinyl Composition Tile (VCT)
- Drywall partitions
- Lay-in and drywall ceilings
- Direct adhered ceiling tiles
- Stained wood doors with aluminum frames
- Wood or plastic laminate casework

Condition

Exterior metal panels are nearing the end of their life with visible denting, discoloration, and rust. EIFS is in need of minor repairs with cracks visible in some places. Sealant joints need to be replaced in most cases. Windows, doors and associated perimeter sealant seem to just need routine maintenance. Interior materials are mostly in good shape with routine maintenance needed. In some cases, lay-in ceilings are worn out and should be replaced. Drywall is mostly in good condition, with minor repair and painting needed.

Photos courtesy of Lawrence Group



Student Affairs Building

MAIN QUAD AND WEST QUAD RESIDENCE HALLS

The buildings on the Main Quad, and the two residence halls west of the Main Quad (Lincoln Residence Hall (LRH) and Founders Residence Hall (FRH)) are characterized by more traditional and durable materials. These are multi-story buildings with flat roofs. Interiors are characterized by contemporary materials, and layouts are more straightforward. One exception to this is Brookens Building, where multiple renovations on levels 3 and 4 have resulted in a layout that is confusing and disorienting on these floors.

Exterior

- Masonry and concrete
- Aluminum storefront doors
- Aluminum windows
- Flat roof systems

Interior

- Carpet tile
- Vinyl Composition Tile (VCT)
- Luxury Vinyl Tile (LVT)
- Ceramic tile in public area
- Drywall Partitions
- Some use of Concrete Masonry Units (CMU) partitions in Residence Halls
- Lay-in and drywall ceilings
- Stained wood doors with aluminum frames

Condition

Exterior masonry is mostly in good condition, with minor maintenance on tuckpointing and sealant needed in isolated areas. Windows and doors are still in good shape, with some minor maintenance required. Most interior materials are still in good shape, though the carpet on levels 2 and 3 of Brookens Building needs to be replaced, and some lay-in ceilings are worn out in isolated areas. Drywall is in mostly good condition, with



Brookens Library

STUDENT UNION & THE RECREATION & ATHLETIC CENTER

The Recreation & Athletic Center (TRAC) and Student Union are characterized by a much more modern aesthetic, with the use of more durable masonry mixed with modern aluminum curtain wall and metal panels. Both are two-story buildings with flat roofs. Interiors are characterized by large open spaces that are easy to navigate, two-story open height spaces with upper level spaces overlooking the ground floor.

Exterior

- Masonry
- Metal Panels
- Exposed structure
- Aluminum curtain wall and storefront
- Aluminum doors
- Flat roof systems

Interior

- Carpet tile
- Ceramic tile
- Wood and rubber athletic flooring (TRAC)
- Drywall partitions
- CMU partitions (TRAC)
- Lay-in, drywall, and open ceilings
- Stained wood doors with aluminum frames
- Wood or plastic laminate casework
- Metal and Glass railings

Condition

Both of these buildings are in very good condition. All interior and exterior materials are still fairly new and only need routine maintenance. The Kiwanis Press Box is an exception to this. The Press box is in poor condition, and is in need of replacement.



The Recreation and Athletic Center

EAST CAMPUS HOUSING COMPLEX (APARTMENTS)

The East Campus housing buildings consisting of Bluebell Court, Larkspur Court, Clover Court, and Sunflower Court are arranged into smaller buildings with multiple units accessed from the exterior, similar to an apartment complex. The buildings are more residential in nature. They are two-stories high with sloping roofs, and more residential materials. Interiors use more residential materials and are arranged into separate units with living area, kitchen, bedrooms and bathrooms.

Exterior

- Painted wood or cement board siding
- Wood or vinyl windows
- Insulated metal doors
- Sloping asphalt shingle roofs

Interior

- Carpet
- Sheet Vinyl
- Drywall Partitions
- Drywall ceilings
- Wood Doors
- Wood casework

Condition

Most of the East Campus housing buildings have been renovated recently. These buildings are in good condition and need only routine maintenance at this time. The only exceptions to this are the buildings in Sunflower Court, and two buildings in Clover Court, which need major repair to exterior siding, exterior windows and doors, and roofing.



Clover Court Apartments
Photos courtesy of Lawrence Group

WEST CAMPUS HOUSING COMPLEX (TOWNHOUSES)

The West Campus housing buildings are also arranged into smaller buildings with multiple units accessed from the exterior. The buildings are two-story buildings with sloping roofs, but use more durable materials. Interiors use residential materials, and are arranged into separate units with living area, kitchen, bedrooms and bathrooms. Additionally, there are one one-story laundry buildings associated with each housing complex.

Exterior

- Brick masonry
- Aluminum windows
- Insulated metal doors
- Sloping asphalt shingle roofs

Interior

- Carpet
- Sheet Vinyl
- Drywall partitions
- Drywall ceilings
- Wood Doors
- Wood casework

Condition

These buildings are in good condition on the exterior. Masonry is in good shape with no tuckpointing repair needed. Some minor sealant repair is necessary. Windows and doors are in good condition. Roofs have no visible damage and seem to be in good shape. Interior materials are starting to show signs of wear, but still appear to have life left with minor repairs. Drywall is in good condition with minor repair and painting needed. Several window sills with a reverse slope catch and hold water.



Trillium Court Apartments

REMAINING BUILDINGS

The remaining buildings are a mix not characterized by one aesthetic. Many of these are separated from the main campus.

These are either residential in nature (Strawbridge-Shepherd House, Spencer House), or more utilitarian with durable masonry materials (Athletic buildings), or metal storage (Pole Barn 1 & 2).

Condition

Residential buildings are in need of repair or replacement of materials, both interior and exterior. Masonry buildings are in good shape with minor maintenance needed. Metal storage buildings show signs of minor damage or discoloration.

The Spencer House complex in particular needs repair or replacement. Siding shows extensive mold growth, window and door trim is in poor condition and sealant needs to be replaced, the masonry chimney needs to be tuckpointed, and interior materials are in poor condition.



Dixie Barn



Spencer House



Facility Condition Assessment: Mechanical, Plumbing, Fire Protection, Technology



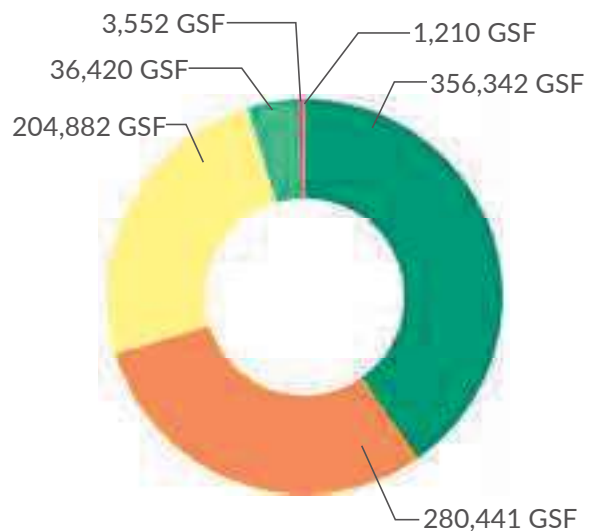


MECHANICAL, ELECTRICAL, PLUMBING, FIRE PROTECTION, TECHNOLOGY ASSESSMENT OVERVIEW

A comprehensive facility condition assessment was conducted by the planning team to evaluate the campus facility's Mechanical, Electrical, Plumbing, Fire Protection, and Technology systems. Using ratings established by APPA (Associate of Physical Plant Administrators), building infrastructure was categorized into one of five ratings from poor to excellent. All 86 of the buildings owned were included in the assessment.

The map to the left illustrated the facility condition rating based on the Mechanical, Electrical, Plumbing, Fire Protection, and Technology assessment.

The following pages summarizes the key findings.



BUILDING RATING KEY

- 1. Poor, Replacement or Complete Renovation (if historic) Mechanical, Electrical, Plumbing Systems (MEP), code, exterior, structural needs improvements
- 2. Below Average (major renovation required) Mechanical, Electrical, Plumbing Systems (MEP), code; no structural issues
- 3. Fair (normal renovation required) Minor Mechanical, Electrical, Plumbing Systems (MEP) need improvement
- 4. Good (maintain within life cycle) Older building with recent updates
- 5. Excellent (like new) New (or updated within five years)
- N/A (system don't exist)
- Building/structure not surveyed



Facility Condition Assessment: Mechanical, Plumbing, Fire Protection, Technology



Technology Equipment at HSB



Technology Equipment at UHB
Images Courtesy of IMEG.

CAMPUS MECHANICAL, ELECTRICAL, PLUMBING, FIRE PROTECTION, TECHNOLOGY KEY FINDINGS

TECHNOLOGY

Fiber Optic campus backbone

- Fiber is installed in a Ring and Star topology.
- Most fiber is routed to the primary data center located in Health & Sciences Building (HSB).
- Some fiber is routed to the redundant data center located in the University Hall Building (UHB).
- Fiber consists of single mode, 62.5 multi-mode and 50-micron multi-mode.
- There is a 100-strand fiber between the Data Centers.
- Fire alarm system utilizes the 62.5 multi-mode fiber.

Copper campus backbone

- There is existing copper cabling to most buildings on campus. However, most of the copper has been abandoned except for analog fax machines and fire alarm, elevators lines.

Campus pathways

- 3-Buildings utilize an underground tunnel.
- Rest of the buildings on campus utilize a ductbank or direct bury approach for cabling.

Data Centers

- Primary is in HSB.
 - There are science labs above the data center. This is a concern for water and other liquids leaking into the data center.
 - There have been some recent upgrades to the Uninterruptible Power Supply and cooling systems.
 - Mechanical and electrical systems are fully redundant.
- University Hall is the redundant data center.

Telephone and Network

- Telephone system is VoIP manufactured by Cisco.
- Cisco network switches and wireless access points are also installed.
- Wireless Access Points
 - There are no wireless access points installed outdoors.
 - Wireless coverage in most Residential Units is poor.
 - Most interior spaces in PAC and Brookens Building have limited wireless coverage.

Cellular and Radio

- 2-cellular repeaters are located at Brookens Building and HSB.
- Office of Electrical Media also has a small repeater.
- All lower levels of buildings have issues with cellular and radios.

Access Control

- S2 is the manufacturer.
- Credentials have magnetic swipes.
- All residential units have key locks. There are card readers at exterior doors.
- Not all buildings on campus have S2 card access installed.
- All exterior doors are monitored by UIS police.
- All interior doors, which have card readers, are monitored and serviced by each building tenant.
- Duress buttons are connected to the fire alarm system. Some of them are also wireless, which connect to the network. The wireless buttons identify general areas.
- The access control is not integrated to the video surveillance system.

Video Surveillance

- ONSSI is the manufacturer.
- Currently have 30 days of storage, which is the industry standard.
- Most of their cameras are 720p resolution.
- Monitoring is done at the UIS Police Department Building (PDB).



Technology Equipment at Brookens Library

Cable Television

- The campus cable television system is provided by APOGEE.
- UIS staff is looking at moving towards an IP solution.
- UIS staff is looking at streaming options for residential units.

Emergency Notification

- Informa-cast is utilized via VoIP
RAVE is the texting app used by UIS for notification.



Electrical Equipment at Legacy Campus



Electrical Equipment at Legacy Campus

ELECTRICAL

- All the main campus buildings are fed from their primary system including the buildings around the East Quad. The apartments, townhouses, and Cox Children's Center are fed from Springfield City Water, Light, and Power (CWLP).
- Most of the electrical equipment and outlets are original to when the buildings were built with very little replacement. Some of the townhomes/apartments (Bluebell Court, Larkspur Court, Clover Court) were completely renovated on the interior in 2012.
- Most of the lighting is in good shape and mostly T-8 type fluorescent lighting with some LED, Compact fluorescent, HID, and Incandescent lighting.
- The fire alarm systems appear to be in good shape with some of the main Simplex panels needing replacement due to obsolescence.

Images Courtesy of IMEG.

MECHANICAL

- Majority of campus is local gas-fired boiler heating plants within each building. Three buildings are served from cross-connected steam boiler plant (PAC, BRK, HSB).
- Central campus is served from the chilled water plant located in Brookens. The capacity of this system is maxed out although the cooling tower condenser water system is updated compared to the rest of the plant. The remainder of the East campus and the housing apartments/ townhomes are all served from direct expansion refrigerant equipment.
- The air handling systems and distribution are functional currently but most are at or beyond their life expectancy.
- The buildings having varying levels of communication with the campus DDC system (Alpha Controls) but most have some minimal tie-in. There are many separate systems in different buildings with little to no integration. Several of the buildings are still being controlled by older pneumatic systems.

PLUMBING

- The majority of the buildings on campus do not meet code requirements for mixing valves and hot water recirculation.
- Plumbing fixtures are functional throughout campus.
- Storm and sanitary piping systems in many buildings throughout campus are having issues due to their age and material.

FIRE SUPPRESSION

- Fire suppression systems are not present in a majority of the buildings on campus.
- Fire detection systems are present in a majority of buildings on campus. Simplex fire alarm systems are utilized throughout except for East Quad which currently uses Pyrotronics.



Campus Mechanical, Electrical, Plumbing, Fire Protection, Technology: Analysis

CAMPUS PRIMARY ELECTRICAL SYSTEM

ELECTRICAL

- **SERVICE & DISTRIBUTION:** The main 15KV load center located in the basement of Brookens. It consists of two 12.47KV feeds from City Power and Light to a lineup of 15 KV switchgear with incoming fused Load break switches configured in a main tie main line up with a 1200A 15 KV horizontal bus which provide service to fused Load break switches and metering cabinets. All the gear is manufactured by S&C and appear to be in good shape. There is no more room for additions to this lineup of switchgear. Most buildings on campus are feed radially feed from this lineup except for the legacy campus which is on a loop feed from this lineup and Student center which is tie to another feed. Space can be freed up by providing loop feeds throughout the campus with pad mounted switching and fused load break switches to provide a radial feed from the loop to the building or install a new lineup 15KV switchgear down in the student recreation center and bring in a new feed from City Power and Light.

BLUEBELL COURT (BBL)

TECHNOLOGY

- **Apartment Complex:** The telecommunications closet is a 2-post equipment rack located in a shared utility closet. This closet is the main IT closet for the housing units.
- The room is not grounded. There is some cooling and spare room for rack-mount equipment but no room for additional rack. Equipment is rack and wall mounted, and there is no cable management. There is risk of equipment and cabling being damaged in these shared utility spaces.
- Cabling is a mix of CAT5, 5E, and 6
- There are several fiber feeds into this building:
 - MM to Data Center
 - MM to VPA
 - MM to individual housing unit telecom closets
 - MM to Bluebell units

- SM to UHB (CATV Fiber)
- The switch in this room houses Bluebell and Clover, and Housing Commons switches.
- ACCESS CONTROL: N/A
- VIDEO SURVEILLANCE: N/A

ELECTRICAL

- **SERVICE & DISTRIBUTION:** Obtains an 800A 120/240V single phase service from the power company. Metered at the transformer. This distribution panel provides service to each apartment panelboard.
- **EMERGENCY LIGHTING:** None
- **LIGHTING & BRANCH WIRING:** Compact fluorescent lighting. Wiring is type NM. Otherwise, run in wiremold or conduit.

FIRE ALARM

- Addressable horn/strobe system. Fire alarm panel is a Simplex 4100U. This panel is obsolete and will need to be replaced in the future.

HVAC

- All-electric residential heat pump equipment serves the apartment complex.

PLUMBING

- Residential-style electric tank water heater.

FIRE PROTECTION

None

BROOKENS BUILDING (BRK)

TECHNOLOGY

- **TELECOMMUNICATIONS:** This building is segregated into two towers. Each tower has stacked telecom closets on Floors 1 through 4 and a telephone server room located on the 1st floor. Room #110A is the campus telephone server room located on the 1st level.
- Room #110A is the campus telephone server room located on the 1st level.
 - AT&T and CWLP are the two service providers coming into this room.

- AT&T has several equipment racks of telephone equipment located in Room #110A.
- AT&T fiber provides IP phone service. The campus SIP server is in this room.
- CWLP is the City fiber to downtown Springfield. The fiber is for future services and is currently dark.
- This room is also the OSP fiber cross connect for Brookens Library and PAC building. This room is grounded. There is no dedicated cooling in this room. There is a large analog telephone cable wall field that is no longer in service and could be demolished.
- OSP cross connect is located in this room. Incoming campus fiber enters this room and cross connects.
- The room does not meet TIA/EIA telecommunication cabling standards. (There is grounding, however, the room is not properly grounded, no cooling, no cable management, etc.) The switch in this room houses Bluebell and Clover, and Housing Commons switches.
- Tower #1:
 - Telecom closets are stacked vertical on Floors 1 through 4.
 - Fiber for Tower 2 is fed from 1st floor Telephone Room 110A and terminated in the 3rd floor telecom closet. Fiber pairs are extended from the 3rd floor closet to the 2nd floor closet.
 - There is no switch in the 1st floor telecom closet and serves as a cross connect room. The cabling passing through this room is a variety of CAT5, 5E, 6, and 6E.
 - It is UIS IT's desire to have a network switch in each closet to serve a single floor. UIS IT is in the process of re-cabling and adding switches in closets as needed during renovation projects or department relocations, etc.
 - The horizontal cabling pathway is supported by divided wireway duct located above the accessible ceiling. The other half of the pathway is used for electrical wiring.
 - GENERAL NOTES:
 - Rooms do not meet TIA/EIA telecommunication cabling standards.
 - The rooms are not grounded, not cooled, and are undersized. Equipment is wall mounted, and there is no cable management. It is UIS's desire to have a network switch in each closet to serve a single floor per closet in the respective tower.
- Tower #2:
 - Telecom closets are stacked vertical on Floors 1 through 4.
 - There is no switch in the 1st floor telecom closet and serves as a cross connect room. The cabling passing through this room is a variety of CAT5, 5E, 6, and 6E.
 - 1st and 4th floor closets are identical (cross connect rooms with no network switch).
 - The 3rd floor telecom closet has five network switches and server horizontal cable for all floors.
 - It is UIS IT's desire to have a network switch in each closet to serve a single floor. UIS IT is in the process of re-cabling and adding switches in closets as needed during renovation projects or department relocations, etc.
 - The horizontal cabling pathway is supported by divided wireway duct located above the accessible ceiling. The other half of the pathway is used for electrical wiring.
 - Fiber for Tower 2 is fed from 1st floor Telephone Room 110A and terminated in the 3rd floor telecom closet. Fiber cross connects and extends from the 3rd floor closet to the Tower #1 3rd floor closet.
 - GENERAL NOTES:
 - Rooms do not meet TIA/EIA telecommunication cabling standards.
 - The rooms are not grounded, not cooled, and are undersized. Equipment is wall mounted, and there is no cable management. It is UIS's desire to have a network switch in each closet to serve a single floor per closet in the respective tower.
- ACCESS CONTROL: There is S2 access control system in this building. The access control system is not centralized. S2 node controllers are located above the accessible ceiling throughout the building.
- VIDEO SURVEILLANCE: There is minimal to no

video surveillance coverage in Brookens Library.

ELECTRICAL

- SERVICE & DISTRIBUTION: Radial feeds from UIS main primary fused S&C load break switches. One radial feed provides service to a 12.47KV to 277/480V, 2000/2666KVA 3-phase transformer that provides service to chillers and other mechanical equipment and a 12.47KV to 120/208V, 1500/2000A 3-phase transformer that provides service to panelboards, receptacles, and lighting. Both unit substations are Westinghouse and should be replaced due to obsolescence. The second radial feed provides service to a 12.47KV to 480V, 2000 KVA 3-phase transformer that provides service to two chillers.
- EMERGENCY LIGHTING: There is a 450KW generator located inside the building that provides service for egress lighting and other equipment deemed necessary to be on emergency power. In the future, the emergency power needs to be segregated in emergency (life safety) and optional standby branches.
- LIGHTING & BRANCH WIRING: Lighting is a mixture of T-8 fluorescent and incandescent lighting. Branch wiring is in EMT and steel type conduits.

FIRE ALARM

- The fire alarm is an addressable /voice system. The main fire alarm panel is a Simplex ES4100. It appears to be in good shape.

HVAC

- SYSTEMS:
 - This building houses the main campus chilled water plant. It is set up in a primary/secondary pumping arrangement. The piping is arranged so that each primary pump is dedicated to a specific chiller. The secondary chilled water pumps are manifolded. The condenser piping is arranged with a common return from the tower, but each pump has a dedicated supply to a specific chiller. This does not allow for redundancy or ease of servicing.
 - The chiller plant was originally installed with a Trane Tracer Summit control system. This

has been removed, and the campus DDC system by Alpha Controls currently runs the chiller plant.

- This building has steam boiler equipment for the heating plant that is interconnected with the Public Affairs Center boiler equipment.
- Constant volume air handlers with duct reheat coils and perimeter radiation.
- EQUIPMENT:
 - One 350 HP gas-fired steam boiler with Riello burner making 8 psi steam. The condensate piping is interconnected so that makeup can return to Brookens or the Public Affairs Center, depending on which valves are opened and closed.
 - Two redundant steam-to-water heat exchangers. One heat exchanger was in the process of being replaced while we were on site.
 - Two redundant constant volume heating water pumps (600 gpm, 100 ft hd, 25 hp). These pumps appeared to be original equipment.
 - Perimeter finned tube radiation fed by heating water, except on 4th floor. The 4th floor is served by electric perimeter heat.
 - Three large built-up constant volume air handling units serve the building. The air handlers have cooling coils and humidifiers but no heating coils.
 - The building steam system has to be flushed of the chemical cyclohexamine when the injection humidifiers are operational.
 - Three Trane centrifugal chillers (850, 850, 750 tons).
 - Three constant volume primary chilled water pumps (1370 gpm, 25 hp).
 - Three constant volume secondary chilled water pumps (75 hp).
 - Three constant volume condenser water pumps (2400 gpm, 85 ft hd, 75 hp).
 - Two Evapco cooling towers.
 - One newer Marley SPX cooling tower.
 - The cooling towers have electric basin heaters and electric heat trace on makeup and drain lines. The fans have VFDs for control modulation. All of the fill has exterior attached screens to block cottonwood.

PLUMBING

- Separate domestic cold water service enters the building.
- Building regulator for gas service to the boiler.
- Domestic hot water (125 degrees) is provided via a steam-water instantaneous Patterson Kelley water heater.
- A duplex air compressor provides control air for the pneumatic controls.

FIRE PROTECTION

- Separate fire protection service enters the building.
- The building is partially sprinkled.
- The standpipes are kept dry, otherwise they leak. The standpipes are charged by City water. There is no fire pump.

BUSINESS SERVICES BUILDING (BSB)

TECHNOLOGY

- Single Story Building: The telecommunication closet is a 2-post equipment rack located in a shared electrical room.
- The rooms are not grounded, not cooled, and are undersized. Equipment is rack and wall mounted, and there is no cable management. There is risk of equipment and cabling being damaged in these shared utility spaces.
- Cabling is a mix of CAT5, 5E, and 6.
- There are several fiber feeds into this building:
 - 24-strand MM from HR
 - MM to HSB
- ACCESS CONTROL: N/A
- VIDEO SURVEILLANCE: N/A

ELECTRICAL

- SERVICE & DISTRIBUTION: A loop feed from the campus 12.47KV primary system and a radial feed from the pad-mounted loop switch provides service to one pad-mounted transformer located outside the building. The transformer provides 3phase service

to a 120/208V, 800A, 3-phase, 4-wire fused disconnect type switchboard that provides power for panelboards, receptacles, mechanical loads, and other loads requiring 120V or 208V single phase power or 208V 3-phase power. Square D is the manufacturer of the switchboard and panelboards.

- EMERGENCY LIGHTING: Battery back lights provide emergency lighting in the building.
- LIGHTING & BRANCH WIRING: T-8 and compact fluorescent lighting is used. Branch wiring is run in EMT or steel conduit.

FIRE ALARM

- The fire alarm is an addressable horn/strobe system. The fire alarm panel is a Pyrotronics Fire Finder XLS located in the Visual and Performing Arts Building.

HVAC

- This building is served by seven gas-fired direct expansion constant volume rooftop units of various sizes. They are not original to the building.
- There are two mushroom style roof-mounted exhaust fans and five gooseneck discharges for inline exhaust fans.
- There is no roof access for maintenance.
- One grade-mounted gas-fired direct expansion packaged unit with ERV serves the Print Shop. This area continues to experience humidity control issues per UIS.
- There is one grade-mounted mini-split unit serving the waiting room.
- There is one grade-mounted cooling-only furnace type unit serving the Computer Lab.
- There are two gas-fired unit heaters serving the warehouse.
- This building has some communication with the campus Alpha Controls system.

PLUMBING

- There are no roof drains. There is no parapet, and the entire storm load drains to the edge and routes underground via external downspouts.
- Natural gas piping serves rooftop HVAC equipment.
- A portion of the building is served by a 30-gallon electric tank type water heater with recirculation

pump. The remainder of the building is served by a 30-gallon electric tank type water heater with no recirculation.

FIRE PROTECTION

None

CLOVER COURT (CLV)

TECHNOLOGY

- Apartment Complex: The telecommunications closet is wall-mount equipment located in a shared utility closet.
- The room is not grounded; there is some cooling. Equipment is wall mounted, and there is no cable management. There is risk of equipment and cabling being damaged in these shared utility spaces.
- Fiber is fed from Bluebell Court.
- There is no core switch in the location.
- ACCESS CONTROL: N/A
- VIDEO SURVEILLANCE: N/A

ELECTRICAL

- SERVICE & DISTRIBUTION: Obtains an 800A 120/240V single phase service from the power company. Metered at the transformer. This distribution panel provides service to each apartment panelboard.
- EMERGENCY LIGHTING: None
- LIGHTING & BRANCH WIRING: Compact fluorescent lighting. Wiring is type NM. Otherwise, run in wiremold or conduit.

FIRE ALARM

- Addressable horn/strobe system. Fire alarm panel is a Simplex 4100U. This panel is obsolete and will need to be replaced in the future.

HVAC

- All-electric residential heat pump equipment serves the apartment complex.

PLUMBING

- Residential-style electric tank water heater.

FIRE PROTECTION

None

COX CHILDREN'S CENTER (CCC)

TECHNOLOGY

- Single Story Building: The telecommunications closet is a 2-post equipment rack located in a shared electrical room.
- The rooms are not grounded, not cooled, and are undersized. Equipment is rack and wall mounted, and there is no cable management. There is risk of equipment and cabling being damaged in these shared utility spaces.
- Cabling is a mix of CAT5, 5E, and 6.
- There are several fiber feeds into this building:
 - 24-strand MM from WUIS
 - MM to HSB
- ACCESS CONTROL: N/A
- VIDEO SURVEILLANCE: N/A

ELECTRICAL

- SERVICE & DISTRIBUTION: Overhead Service is from City Power and Light.
- EMERGENCY LIGHTING: None
- LIGHTING & BRANCH WIRING: Mixture of T-8 fluorescent and incandescent lighting.

FIRE ALARM

- Smoke detectors and horns for notification. System is connected back to the main Siemens Panel in legacy campus.

HVAC

- This building is served by three residential style split system cooling only units with grade-mounted condensers. Two of the evaporator units are located in the crawlspace and one is located above the ceiling.
- The only source of heat for the building is residential perimeter electric baseboard heat. The children have complete access to this wall-mounted heating equipment.
- There are two through-wall PTAC units serving the employee break room.
- There is a sidewall exhaust fan serving the bathroom.

- There is no ventilation air being supplied by mechanical means.

PLUMBING

- The kitchen area has a 4-basin sink. A grease interceptor was not observed.
- Domestic hot water is provided by an 80-gallon electric tank type water heater with no recirculation pump or piping.
- There is an electric residential style washer and dryer.

FIRE PROTECTION

No fire protection system observed.

DIXIE BARN (DBS)

TECHNOLOGY

THIS BUILDING IS NOT ON THE UIS CAMPUS NETWORK.

ELECTRICAL

- SERVICE & DISTRIBUTION: Obtained from City Power and Light. 100A, 120/240V single phase, 3-wire.
- EMERGENCY LIGHTING: None
- LIGHTING & BRANCH WIRING: Incandescent lights. Branch wiring in conduit.

FIRE ALARM

None

HVAC

None

PLUMBING

None

FIRE PROTECTION

None

DIXIE SHED (DBS)

TECHNOLOGY

THIS BUILDING IS NOT ON THE UIS CAMPUS NETWORK.

ELECTRICAL

- SERVICE & DISTRIBUTION: None
- EMERGENCY LIGHTING: None
- LIGHTING & BRANCH WIRING: None

FIRE ALARM

None

HVAC

None

PLUMBING

None

FIRE PROTECTION

None

FIELD STATION AT EMIQUON

TECHNOLOGY

- Telecommunication service is via T-1 line. The equipment is installed into a wall mount equipment rack located in a janitor closet. CAT 5E work station cabling with approximately 24 network drops serving the classroom and office space.
- There is a classroom space has a video projector and audio video rack for sound re-enforcement.
- No fiber currently servicing this site. UIS Technology would prefer to have an incoming fiber service to this facility.
- Equipment rack is not grounded.
- ACCESS CONTROL: Card reader with S2 control panel connected to the campus access control system.
- VIDEO SURVEILLANCE: No video surveillance cameras.

ELECTRICAL

- SERVICE & DISTRIBUTION: Obtain from the local Utility Company. 2-225A 120/240V single phase, 3-wire services. Panels are Square D type NQO.
- EMERGENCY LIGHTING: Battery lights.
- LIGHTING & BRANCH WIRING: T-8 fluorescent lighting. Branch wiring in conduit.

FIRE ALARM

- Firelite addressable system with pull stations, heat and smoke detectors for initiation devices. Visual lights and combination horn/strobes for notification.

HVAC

- The building is served by a geothermal ground loop. The condenser water is circulated through the ground loop piping by two inline circulator pumps. The entire building is served by a large Water Furnace heat pump.
- There is a dry lab in the building with a fume hood that is served from a roof mounted exhaust fan. This fume hood does not have a dedicated make-up air source.
- There is a wet lab with filtered recirculating hood equipment.
- There is no connection/communication with the campus DDC system.

PLUMBING

- The building domestic hot water is provided by an electric tank type water heater with no recirculation. The A.O. Smith water heater has been recently replaced.
- Domestic cold water is fed from a county main routed across the property. It is not served from a local well. The incoming service routes through a meter and water softener but there is no backflow preventer.
- There is a master mixing valve located in the mechanical room. A tempered water piping system routes to the lab spaces and supplies emergency showers/eyewashes in the dry lab and wet lab spaces.
- There are manual operation plumbing fixtures and showers in the restrooms and kitchen and lab fixtures in the lab spaces. The fixtures are in very good condition.
- There are no interceptors or neutralization basins in the lab spaces. All building sanitary piping routes to a septic system outside.

FIRE PROTECTION

None

UIS FIELD STATION ON LAKE SPRINGFIELD (FSL)

TECHNOLOGY

- Telecommunication service is via AT & T wireless broadband 4G Internet modem patched to a network switch. The equipment is installed into a wall mount equipment rack located in a janitor closet. CAT 6 work station cabling with approximately 24 network drops serving the Science Biology Space and the Common Meeting space.
- There is a common meeting space has a video projector and audio video rack for sound reinforcement.
- No fiber currently servicing this site and DSL service is not offered for this area.
- Equipment rack is not grounded.
- ACCESS CONTROL: No access control.
- VIDEO SURVEILLANCE: No video surveillance cameras.

ELECTRICAL

- SERVICE & DISTRIBUTION: Obtained from City Power and Light. They have 2-200A 120/240V single phase, 3-wire services to the building. Both panels are manufactured by Square D Type NQO.
- EMERGENCY LIGHTING: Battery lights.
- LIGHTING & BRANCH WIRING: T-8 Fluorescent lighting with HID for the outdoor lights on the building. Branch wiring in conduit.

FIRE ALARM

- It a Simplex 4010 ES addressable fire alarm system with heat and smoke detectors for initiation and visual lights and combination horn/strobe units for notification.

HVAC

- The building is served by three gas-fired, direct expansion, ducted furnace units located in the attic with associated condensing units located outside on grade.
- There is no connection/communication with the campus DDC system.

PLUMBING

- The building domestic hot water is provided by a gas-fired, tank type, 50 gallon, A.O. Smith water heater with no recirculation.
- The plumbing fixtures are manual operation and are in very good condition.
- There is a stainless steel cleaning station located outside against the wall that drains to grade down the hill.

FIRE PROTECTION

None

FOUNDERS RESIDENCE HALL (FRH)

TECHNOLOGY

- This building is approximately 10 years old and has concrete block construction for the interior wall. This requires lots of WAP coverage.
- TELECOMMUNICATIONS:
 - This building is three stories with IT closets stacked vertically on each level.
 - Ceilings on the 2nd and 3rd levels are exposed. All cabling serving the 2nd and 3rd levels pass through the 1st level closet. Because of cable distance limitations, portions of 2nd and 3rd level information outlets are served out of the 1st level telecom closet.
 - Incoming backbone fiber is fed for UHB into the 1st level closet and cross connected to the 2nd and 3rd level closets.
 - Each telecom closet has a dedicated cooling system; however, they are not working properly.
 - All rooms meet TIA/EIA telecommunication cabling standards, including grounding, cooling, cable tray, sized appropriately with room for future equipment. Rooms have vertical pathway with space cable capacity.
 - All horizontal cabling is CAT 6.
- ACCESS CONTROL:
 - The building has access control card reader locations. The S2 access control panel is in the main telecom closet.
 - There is a CBORD system for student laundry that gets a network connection.

ELECTRICAL

- SERVICE & DISTRIBUTION: A radial feed from the campus 12.47KV primary system provides service to one pad-mounted transformer located outside this building. The transformer provides 3-phase service to a 120/208V, 1600A, 3-phase, 4-wire switchboard that provides power for panelboards, receptacles, mechanical loads, and other loads requiring 120V or 208V single phase power or 208V 3-phase power. The switchboard and panelboards are manufactured by GE. GE has been purchased by ABB. It is unknown how this acquisition will affect spare parts availability.
- EMERGENCY LIGHTING: Battery back lights provide emergency lighting in the building. There is an ATS outside the building that can be connected to an emergency generator to provide power to the building.
- LIGHTING & BRANCH WIRING: T-8 and compact fluorescent lighting is used. Branch wiring is run in EMT or steel conduit.

FIRE ALARM

- The fire alarm is an addressable horn/strobe system. The fire alarm panel is a Simplex 4100 ES.

HVAC

- SYSTEMS:
 - Two-pipe changeover fan coil units in the student rooms. The changeover valves are operated manually due to leak-by issues.
 - Direct buried chilled water from Brookens with no secondary pumps.
 - Air handlers serve public spaces.
- EQUIPMENT:
 - Four indoor modular Carrier air handling units. One of the air handlers originally served a kitchen/grille that is no longer active.
 - Fan coil units in every student room. The condensate for these units is piped through the wall to the exterior. The rooms have operable windows for ventilation air.
 - One constant volume heating water pump on a dedicated piping loop serves the fan coil units.
 - Four variable volume heating water pumps

(150 gpm, 70 ft hd, 7.5 hp). Only two run at a time, so there is full redundancy.

- Three two-million Btu gas-fired Lochinvar Power-Fin boilers.
- Two redundant plate and frame heat exchangers that use heating water to make domestic hot water.
- Two dedicated heating water pumps (80 gpm, 50 ft hd, 3 hp) serve these domestic water heat exchangers.

PLUMBING

- All sanitary and storm piping is PVC.
- The plate and frame heat exchangers send 140-degree water to a 750-gallon storage tank for domestic hot water.
- Combined water service for domestic and fire protection. 3" cold water and 6" fire protection.

FIRE PROTECTION

- Combined water service for domestic and fire protection. 3" cold water and 6" fire protection.
- Standpipes and sprinkler coverage.

FOXGLOVE COURT (FXG)

TECHNOLOGY

- Incoming campus fiber backbone is an MM fiber fed from HSB. There is also a CATV SM fiber backbone from UHB. Both fibers terminate in the PRL laundry room utility closet.
- Incoming copper backbone cable is a 50-pair cable fed from BRK and terminated in the PRL laundry room utility closet.
- The copper and fiber backbone cable is cross connected in PRL and distributed to FXG, MGR, and the TRL laundry room utility closets.
- Each laundry room utility closet cross connects to the individual apartment building utility closet. A network switch in each closet serves individual apartments.
- The telecommunication equipment is wall mounted in the utility closets. Cabling appears to be CAT 5 and CAT 5e.
- The rooms are not grounded, not cooled, and are undersized. Equipment is wall mounted, and there is no cable management. There is risk of

equipment and cabling being damaged in these shared utility spaces.

- ACCESS CONTROL: There is no access control and no video surveillance system for this building.

ELECTRICAL

- SERVICE & DISTRIBUTION: Obtains 120/240V single phase service from the power company. Each individual townhouse is metered.
- EMERGENCY LIGHTING: None
- LIGHTING & BRANCH WIRING: Compact fluorescent lighting. Wiring is type NM. Otherwise, run in wiremold or conduit.

FIRE ALARM

- Addressable smoke and heat detectors to a Simplex 4004 NAC panel that reports to the main fire alarm panel in the Maintenance Building. Notification by horn and combination horn/strobe units.

HVAC

- All-electric residential heat pump equipment serves the apartment complex.

PLUMBING

- Residential-style electric tank water heater.

FIRE PROTECTION

None

GREENHOUSE

TECHNOLOGY

None

ELECTRICAL

- SERVICE & DISTRIBUTION: Feed from the HRB building.
- EMERGENCY LIGHTING: None
- LIGHTING & BRANCH WIRING: HID lighting and branch wiring in conduit.

FIRE ALARM

None

HVAC

- Two gas-fired unit heaters hanging inside.
- Sidewall fans/louvers for natural cooling.
- Wadsworth localized control system.
- Manual shade control.

PLUMBING

- Domestic cold water.
- Natural gas serving unit heaters.

FIRE PROTECTION

None

HEALTH & SCIENCES BUILDING (HSB)

TECHNOLOGY

- This building was constructed in 1992. There is a connecting tunnel between HSB and Brookens Library. The campus data center is located in the lower level of the building.
- DATA CENTER:
 - The entire building, including the data center, is on backup generator.
 - UPS:
 - One 60 KV 208v
 - One 60KVA 408v
 - Each equipment rack has two PDU power trips. One PDU is connected to the 208 UPS and one PDU is connected to the 408V UPS.
 - There is an emergency power “off button” located on the wall near the door.
 - There are three dedicated cooling systems for the data center.
 - All campus video surveillance storage goes to SAN.
 - All campus fiber feeds originate from the data center on MM fiber cable.
 - There is redundant fiber to the backup data center in UHB.
 - There is one telecommunication rack in the data center that is for the horizontal cross connect and serves the lower level HSB Building over CAT6 cable.
 - There is a ground bond bus bar in the data center. However, the room is not properly / completely grounded.
 - There are science labs located direct above

the data center, which causes concern for risk of chemical or water damage in the data center.

- There are three stacked telecommunication closets and each closet serves that floor.
 - The rooms are not grounded, not cooled, and are undersized. Equipment is wall mounted, and there is no cable management. There is risk of equipment and cabling being damaged in these shared utility spaces.
- ACCESS CONTROL: The access control panel is in 1st floor Telecom Room 136.

ELECTRICAL

- SERVICE & DISTRIBUTION: A radial feed from the campus 12.47KV primary system provides service to two pad-mounted transformers located outside the building. One transformer provides 3-phase service to a 277/480V, 2000A, 3-phase, 4-wire switchboard via a 2000A 4-pole ATS. The other transformer provides 3-phase service to a 120/208V, 3000A, 3-phase, 4-wire switchboard via a 3000A 4-pole ATS. The 277/480V switchboard provides power to mechanical equipment and other equipment requiring 277V or 480V single phase or 480V 3-phase power. The 120/208V switchboard provides power for panelboards, receptacles, and other loads requiring 120V or 208V single phase power or 208V 3-phase power.
- EMERGENCY LIGHTING: The entire building is backed up by an appropriately sized generator to provide power to the building on loss of power.
- LIGHTING & BRANCH WIRING: Lighting is made up T-8 fluorescent and compact fluorescent lighting, with the Art Gallery having incandescent lighting to highlight the art work on display. Branch wiring is in EMT or steel conduit.

FIRE ALARM

- The first alarm is an addressable/voice system. The fire alarm panel manufacturer is Simplex 4100ES.

HVAC

- SYSTEMS:
 - Computer room cooling units serve the

main campus server room via a raised floor air plenum. The load outgrew the original unit, and two additional units were added to the space.

- The Vivarium has a dedicated air handling unit.
- The Autoclave area has a dedicated air handling unit.
- Variable air volume air handling units are located on the roof. Two serve lab spaces and two serve offices and public spaces.
- Perimeter radiant ceiling panels.
- General lab exhaust and fume hood exhaust are combined into a single galvanized duct system. This ducting routes up to two centrifugal exhaust fans on the roof. Each fan serves approximately half the building, and there is no redundancy.
- The heating plant serving HSB is located within the Brookens Library boiler room.
- The building is electronic DDC control by Alpha, except for the Phoenix lab air valves.
- Localized terminal heating/cooling units with humidifiers within the greenhouse were installed approximately five years ago. The original exhaust fans and intake dampers are now manually controlled.
- **EQUIPMENT:**
 - One floor mounted computer room cooling unit with glycol piping to roof-mounted dry cooler. This unit is original to the building (1990).
 - Two new Data-Aire 12-ton dry cooler units added on the roof in 2008. The original dry cooler unit also remains in operation. New units are located in the ceiling plenum, and service/access is very difficult.
 - Two roof-mounted Carrier brand air-cooled chillers (232 tons each) with 30% ethylene glycol.
 - Two redundant steam-to-water shell and tube heat exchangers (350 gpm, 6770 lbs/hr, 220 to 180 degree) provide heating water (160 to 210 degree current operating temps) to the building. All Victaulic fittings in the piping system distributing this heating water have been replaced with high temperature gaskets. The heating water also has 30% ethylene glycol.
 - Duplex condensate pump/receiver station (37.5 gpm, 20 psi, 1 hp).
 - Two redundant constant volume primary heating water pumps (440 gpm, 10 hp) circulate heating water during the winter.
 - One smaller constant volume primary heating water pump (60 gpm, 1.5 hp) circulates heating water during the spring/summer.
 - One constant volume AHU serving Vivarium.
 - One constant volume AHU serving Autoclave area.
 - Four variable air volume rooftop air handling units. The two serving the lab spaces are 100% outdoor air.
 - Pressure independent Phoenix venturi air valves serving lab spaces. The Phoenix valves are pneumatically controlled and are not tied into the building controls graphics. Their control air compressor is located in the 3rd floor mechanical room.
 - Two roof-mounted single wheel single inlet centrifugal exhaust fans with ten-foot high stainless steel exhaust stacks.
 - Various mushroom style roof-mounted general exhaust fans located outside the mechanical screened area.
 - Two redundant constant volume chilled water pumps (1200 gpm, 62 ft hd, 25 hp).
 - Constant volume secondary heating water pumps:
 - One serving air handlers (300 gpm, 45 ft hd, 7.5 hp)
 - One serving booster coils (70 gpm, 45 ft hd, 1.5 hp)
 - Two serving separate radiant panel piping loops (70 gpm, 50 ft hd, 2 hp)
 - Three constant volume air handlers with heating and chilled water and humidifiers serve three separate zones in the greenhouse.
 - Three exhaust fans and associated intake dampers for the greenhouse zones are manually controlled.

PLUMBING

- A combined water service enters the building and splits to serve domestic water and fire protection.
- Duplex sump pump located in basement.
- Duplex sewage ejector located in basement.
- The original water softener system is inactive.
- Two gas-fired domestic hot water heaters (200 MBH, 230-gallon recovery).

- DI water system by Evoqua – appears to be piped in Schedule 80 PVC.
- Duplex laboratory air compressor (Squire Cogswell). One of the compressors has been replaced.
- Duplex laboratory vacuum pump.
- Various laboratory utilities – gas, air, vac, DI water.
- Localized fiberglass neutralization basin for acid waste located in Chemical Storage 170 and large entire building capacity fiberglass neutralization basin located at north end near Room 151.

FIRE PROTECTION

- A combined water service enters the building and splits to serve domestic water and fire protection.
- An FM-200 suppression system serves the main server room.
- Portions of the sprinkler system have anti-freeze for routing in unheated areas such as the Receiving Room.

HOMER L. BUTLER COMMONS BUILDING (HBC)

TECHNOLOGY

- MM fiber network service into this building routed and served from Larkspur Housing building. There is no SM fiber serving this building; Also has underground coaxial CATV fed from Larkspur. Equipment is mounted directly to the wall (no rack or cabinet) and located in electrical panel room. Work station cabling is Cat5e cabling.
- This facility is at the end of a network hop so if an upstream network hub fails this building loses network service.
- Equipment is not grounded.
- ACCESS CONTROL: Card readers connect to S2 access control panel networked to campus access control system.
- VIDEO SURVEILLANCE: A few video surveillance cameras connected to the campus camera system.

ELECTRICAL

- SERVICE & DISTRIBUTION: Obtains power from City Power and Light. 600A 120/240V single phase, 3-wire service. Panel is manufactured by Square D.
- EMERGENCY LIGHTING: Battery Packs and battery backed exit signs.
- LIGHTING & BRANCH WIRING: T-8 type fluorescent lighting. Branch wiring in conduit.

FIRE ALARM

- Simplex addressable fire alarm system with heat and smoke detectors. Notification is carryout by visual strobes and combination horn/strobe units. Both notification and initiation circuits are extended from the main fire alarm panel in Larkspur building.

HVAC

- The building is served by a Daikin variable refrigerant volume (VRV) system. There are several indoor fan coil type units with direct expansion cooling and electric heat fed from a condensing unit with inverter compressors located outside on grade. Ventilation air is provided by a Renewaire DOAS unit located in the mechanical room. This unit has an energy recovery ventilator and direct expansion cooling. All of this equipment appears to be fairly new.

PLUMBING

- There are newer automatic sensor plumbing fixtures serving the building that appear to be in good condition.
- Domestic hot water is provided by an electric tank type water heater.
- There is a kitchenette/break room area with two residential electric stove/ovens.

FIRE PROTECTION

None

HUMAN RESOURCES BUILDING (HRB)

TECHNOLOGY

- Single Story Building: The telecommunication closets is a 2-post equipment rack located in a telephone closet.

- The room is not grounded, not cooled, and is undersized. Equipment is rack and wall mounted, and there is no cable management.
- Cabling is a mix of CAT5, 5E, and 6.
- There are several fiber feeds into this building:
 - 24strand SM to SAB
 - MM to HSB
- One network switch and MM fiber to serve the Sunflower Court Building.
- ACCESS CONTROL: N/A
- VIDEO SURVEILLANCE: N/A

ELECTRICAL

- SERVICE & DISTRIBUTION: A loop feed from the campus 12.47KV primary system and a radial feed from the pad-mounted loop switch provides service to one pad-mounted transformer located outside the building. The transformer provides 3phase service to a 120/208V, 1200A, 3-phase, 4-wire fused disconnect type switchboard that provides power for panelboards, receptacles, mechanical loads, and other loads requiring 120V or 208V single phase power or 208V 3-phase power. Federal Pacific is the manufacturer of the switchboard and some panelboards. These are obsolete and should be replaced. Other panelboards are Square D Type NQO.
- EMERGENCY LIGHTING: Battery back lights provide emergency lighting in the building.
- LIGHTING & BRANCH WIRING: T-8 and compact fluorescent lighting is used. Branch wiring is run in EMT or steel conduit.

FIRE ALARM

- The fire alarm is an addressable horn/strobe system. The fire alarm panel is a Pyrotronics Fire Finder XLS located in the Visual and Performing Arts Building.

HVAC

- This building is served by nine gas-fired direct expansion constant volume rooftop units of various sizes. Several of them are showing their age.
- There is one mushroom style roof-mounted exhaust fan.
- There is no roof access for maintenance.
- The ducted air distribution for this entire

building is constructed of duct board that is original to the building.

- There are two through-wall window air conditioners serving the Plumbers Shop.
- This building has some communication with the campus Alpha Controls system.

PLUMBING

- Natural gas piping serves rooftop HVAC equipment.
- There are two roof hydrants for maintenance purposes.
- The building is served by one 40-gallon gas-fired tank type water heater with no recirculation pump or piping.
- The majority of the plumbing fixtures are manual flush valve style, with a few battery sensor flush valves and faucets.
- There are three interior roof drains serving this building with no secondary storm drainage system. There is no parapet, and the remainder of the storm load drains to the edge and routes underground via external downspouts.

FIRE PROTECTION

None

KIWANIS STADIUM & PRESSBOX (KPB)

TECHNOLOGY

- One network switch which is rack mounted in a shared Audio rack. Wireless access point located in the press box area. IP video camera used to live stream games.
- Incoming fiber backbone is 12 strand SM fiber fed from UHB.
- Equipment rack is not grounded.
- ACCESS CONTROL: No access control.
- VIDEO SURVEILLANCE: No video surveillance cameras.

ELECTRICAL

- SERVICE & DISTRIBUTION: Electrical service is obtained from the utility company pad-mounted transformer located outside the building. The transformer provides single phase service to a 120/208V, 800A, single phase, 3-wire distribution panel that provides power for

panelboards, receptacles, mechanical loads, and other loads requiring 120V or 208V single phase power. The switchboard and panelboards are manufactured by GE. GE has been purchased by ABB. It is unknown how this acquisition will affect spare parts availability.

- EMERGENCY LIGHTING: Battery back lights provide emergency lighting in the building.
- LIGHTING & BRANCH WIRING: T-8 fluorescent lighting is used. Branch wiring is run in EMT or steel conduit.

FIRE ALARM

- Did not see any fire alarm in this building.

HVAC

- Three Panasonic mini-splits with grade-mounted condensers provide cooling for the locker rooms.
- There are sidewall louvered exhaust fans for the locker rooms.
- The press box is served by a through-wall PTAC unit.

PLUMBING

- Could not access. Staff did not have keys. Plumbing appeared to be winterized, as building did not appear to have heat.

FIRE PROTECTION

- Could not access. Staff did not have keys. Assume no fire protection for locker rooms or press box.

LARKSPUR COURT (LKR)

TECHNOLOGY

- Apartment Complex: The telecommunications closet is a 2-post equipment rack located in a shared utility closet.
- The room is not grounded. There is some cooling and spare room for rack-mount equipment, but no room for additional rack. Equipment is rack and wall mounted, and there is no cable management. There is risk of equipment and cabling being damaged in these shared utility spaces.

- This switch feeds the individual housing unit switches. One core switch feeds four others. This is typical topology for the housing units.
- ACCESS CONTROL: N/A
- VIDEO SURVEILLANCE: N/A

ELECTRICAL

- SERVICE & DISTRIBUTION: Obtains an 800A 120/240V single phase service from the power company. Metered at the transformer. This distribution panel provides service to each apartment panelboard.
- EMERGENCY LIGHTING: None
- LIGHTING & BRANCH WIRING: Compact fluorescent lighting. Wiring is type NM. Otherwise, run in wiremold or conduit.

FIRE ALARM

- Addressable horn/strobe system. The fire alarm panel is a Simplex 4100U. This panel is obsolete and will need to be replaced in the future.

HVAC

- All-electric residential heat pump equipment serves the apartment complex.

PLUMBING

- Residential-style electric tank water heater.

FIRE PROTECTION

None

LINCOLN RESIDENCE HALL (LRH)

TECHNOLOGY

- Three-story residence hall with interior drywall construction. Six telecommunication closets and one main cross connect closet.
- TELECOMMUNICATIONS:
 - The building is cabled with CAT 5E cable.
 - Incoming MM fiber is fed from the HSB campus data center.
 - Incoming SM CATV fiber feed is fed from UHB. Spare strands are available on the SM fiber. CATV fiber is converted and distributed as a coaxial trunk and tap

- system.
- Six telecommunication closets.
- The main cross connect is a 2-post equipment rack located in the electrical room on 1st floor.
 - The room has grounding but not cooling.
 - There is an analog telephone wall field that is out of service and can be demoed.
- Three telecommunications closets are stacked and serve the south wing.
 - Each closet has two network switches.
 - The rooms have two post equipment racks with spare rack space available.
 - Rooms are grounded but not cooled.
 - Rooms have vertical pathway with spare cable capacity.
- Three telecommunications closets are stacked and serve the west wing.
 - Each closet has two network switches.
 - The rooms have two post equipment racks with spare rack space available.
 - Rooms are grounded but not cooled.
 - Rooms have vertical pathway with spare cable capacity.
- Wireless access points are located throughout the building, giving full wireless coverage. There may be dead spots.
- There is a CBORD system for student laundry that gets a network connection.
- ACCESS CONTROL: The building has access control card reader locations. The S2 access control panel is in the main telecom closet.

ELECTRICAL

- SERVICE & DISTRIBUTION: A radial feed from the campus 12.47KV primary system provides service to one pad-mounted transformer located outside the building. The transformer provides 3-phase service to a 120/208V, 1600A, 3-phase, 4-wire switchboard that provides power for panelboards, receptacles, mechanical loads, and other loads requiring 120V or 208V single phase power or 208V 3-phase power. The switchboard and panelboards are manufactured by GE. GE has been purchased by ABB. It is unknown how this acquisition will affect spare parts availability.
- EMERGENCY LIGHTING: Battery back lights provide emergency lighting in the building. There is an ATS outside the building that can

be connected to an emergency generator to provide power to the building.

- LIGHTING & BRANCH WIRING: T-8 fluorescent and LED lighting is used. Branch wiring is run in EMT or steel conduit.

FIRE ALARM

- The fire alarm is an addressable horn/strobe system. The fire alarm panel is a Simplex 4100 ES.

HVAC

- SYSTEMS:
 - Two-pipe changeover vertical stacked fan coil units in the student rooms.
 - Makeup air unit for corridors.
 - Variable air volume rooftop unit for public spaces.
 - This building has limited connectivity to the campus DDC system.
- EQUIPMENT:
 - Direct buried chilled water piping from Brookens.
 - Two redundant constant volume chilled water pumps (88 gpm, 86 ft hd, 5 hp) serve the fan coil units.
 - Two redundant variable flow chilled water pumps and associated plate/frame heat exchanger serve RTU and MAU. This chilled water system has 30% glycol.
 - Two redundant three million Btu gas-fired Cleaver Brooks flexible water tube boilers. These boilers are extremely oversized. They were meant to serve the adjacent Founders Residence Hall in the future but were never connected.
 - Two redundant constant volume heating water pumps that serve the heating side of a plate and frame heat exchanger and a domestic hot water heater.
 - Two redundant constant volume heating water pumps (76 gpm, 29 ft hd) that serve the glycol side of the heating plate and frame heat exchanger. These pumps serve the RTU and MAU.
 - One rooftop unit variable air volume air handler with glycol heating and cooling coils.
 - One indoor makeup air unit with glycol heating and cooling coils and a pumped

- heating coil.
- Several rooftop mounted mushroom style exhaust fans serving stacked restrooms.
- Fan coil units in every student room.

PLUMBING

- Combined water service for domestic and fire protection. 3" cold water and 6" fire protection.
- Two Cemline semi-instantaneous domestic water heaters and a 500-gallon storage tank. The water heaters use boiler heating water.

FIRE PROTECTION

- Combined water service for domestic and fire protection. 3" cold water and 6" fire protection.
- Standpipes and sprinkler coverage.

MAINTENANCE BUILDING (MB)

TECHNOLOGY

- Campus fiber provides network service to this building. The equipment is mounted to the wall field and not installed in an equipment rack and installed in a utility closet. CAT 5E work station cabling with approximately 6 network drops serving the area.
- MM fiber from HSB
- Equipment rack is not grounded.
- ACCESS CONTROL: No access control
- VIDEO SURVEILLANCE: No video surveillance cameras

ELECTRICAL

- SERVICE & DISTRIBUTION: A loop feed from the campus 12.47KV primary system and a radial feed from the pad-mounted loop switch provides service to one pad-mounted transformer located outside the building. The transformer provides 3phase service to a 120/208V, 600A, 3-phase, 4-wire distribution panel that provides power for panelboards, receptacles, mechanical loads, and other loads requiring 120V or 208V single phase power or 208V 3-phase power. Square D is the manufacturer of the switchboard and panelboards.
- EMERGENCY LIGHTING: Battery back lights provide emergency lighting in the building.

- LIGHTING & BRANCH WIRING: T-8 fluorescent and HID lighting is used. Branch wiring is run in EMT or steel conduit.

FIRE ALARM

- The fire alarm is an addressable horn/strobe system. The fire alarm panel is a Pyrotronics Fire Finder XLS located in the Visual and Performing Arts Building.

HVAC

- A cooling-only Lennox furnace with exterior condenser serves the kitchen/break area.
- A mini-split unit provides cooling to the Electrical Shop.
- A gas-fired direct expansion Tempstar furnace serves the Lawn Shop break area and restrooms.
- Various gas-fired unit heaters serve the remainder of the building.

PLUMBING

- Domestic hot water is provided by a gas-fired tank type 81-gallon water heater with recirculation pump.
- There is a combined domestic cold water and fire protection service at the Lawn Shop area.

FIRE PROTECTION

- The fire protection service is backflow protected.
- A dry fire protection system serves the building, with an associated DIPS panel and air compressor.

MARIGOLD COURT (MGR)

TECHNOLOGY

- Incoming campus fiber backbone is an MM fiber fed from HSB. There is also a CATV SM fiber backbone from UHB. Both fibers terminate in the PRL laundry room utility closet.
- Incoming copper backbone cable is a 50-pair cable fed from BRK and terminated in the PRL laundry room utility closet.
- The copper and fiber backbone cable is cross connected in PRL and distributed to FXG, MGR, and TRL laundry room utility closets.
- Each laundry room utility closet cross connects

to the individual apartment building utility closet. A network switch in each closet serves individual apartments.

- The telecommunication equipment is wall mounted in the utility closets. Cabling appears to be CAT 5 and CAT 5e.
- The rooms are not grounded, not cooled, and are undersized. Equipment is wall mounted, and there is no cable management. There is risk of equipment and cabling being damaged in these shared utility spaces.
- ACCESS CONTROL: There is no access control and no video surveillance system for this building.

ELECTRICAL

- SERVICE & DISTRIBUTION: Obtains 120/240V single phase service from the power company. Each individual townhouse is metered.
- EMERGENCY LIGHTING: None
- LIGHTING & BRANCH WIRING: Compact fluorescent lighting. Wiring is type NM. Otherwise, run in wiremold or conduit.

FIRE ALARM

- Addressable smoke and heat detectors to a Simplex 4004 NAC panel that reports to the main fire alarm panel in the Maintenance Building. Notification by horn and combination horn/strobe units.

HVAC

- All-electric residential heat pump equipment serves the apartment complex.

PLUMBING

- Residential-style electric tank water heater.

FIRE PROTECTION

None

OLD PHYSICAL PLANT BUILDING

TECHNOLOGY

THIS BUILDING IS NOT ON THE UIS CAMPUS NETWORK.

ELECTRICAL

- SERVICE & DISTRIBUTION: A 225A single phase 3-wire service is obtained from the pad mounted transformer located by the building.
- EMERGENCY LIGHTING: None
- LIGHTING & BRANCH WIRING: Fluorescent lighting. Branch wiring in conduit.

FIRE ALARM

None

HVAC

- The building is served by a gas-fired, 80% efficient furnace with limited distribution ducting. There is also an old gas-fired Modine unit heater with combustion flue routing up through the roof.
- There is a non-operational old dust collection system with abandoned equipment inside and outside the building.

PLUMBING

- The water service and restrooms have been removed from this building.

FIRE PROTECTION

None

PENNYROYAL COURT (PRL)

TECHNOLOGY

- Incoming campus fiber backbone is an MM fiber fed from HSB. There is also a CATV SM fiber backbone from UHB. Both fibers terminate in the PRL laundry room utility closet.
- Incoming copper backbone cable is a 50-pair cable fed from BRK and terminated in the PRL laundry room utility closet.
- The copper and fiber backbone cable is cross connected in PRL and distributed to FXG, MGR, and TRL laundry room utility closets.
- Each laundry room utility closet cross connects to the individual apartment building utility closet. A network switch in each closet serves the individual apartments.
- The telecommunications equipment is wall

mounted in the utility closets. Cabling appears to be CAT 5 and CAT 5e.

- The rooms are not grounded, not cooled, and are undersized. Equipment is wall mounted, and there is no cable management. There is risk of equipment and cabling being damaged in these shared utility spaces.
- ACCESS CONTROL: There is no access control and no video surveillance system for this building.

ELECTRICAL

- SERVICE & DISTRIBUTION: Obtains 120/240V single phase service from the power company. Each individual townhouse is metered.
- EMERGENCY LIGHTING: None
- LIGHTING & BRANCH WIRING: Compact fluorescent lighting. Wiring is type NM. Otherwise, run in wiremold or conduit.

FIRE ALARM

- Addressable smoke and heat detectors to a Simplex 4004 NAC panel that reports to the main fire alarm panel in the Maintenance Building. Notification by horn and combination horn/strobe units.

HVAC

- All-electric residential heat pump equipment serves the apartment complex.

PLUMBING

- Residential-style electric tank water heater.

FIRE PROTECTION

None

POLE BARN 1 (SB)

TECHNOLOGY

THIS BUILDING IS NOT ON THE UIS CAMPUS NETWORK.

ELECTRICAL

- SERVICE & DISTRIBUTION: Obtains from City Power and Light. 200A 120/240V single phase 3-wire serviced. Panel is a Square D type Panel.
- EMERGENCY LIGHTING: None
- LIGHTING & BRANCH WIRING: Fluorescent lighting is used. Wiring is in conduit.

FIRE ALARM

None

HVAC

- The barn is served by two gas-fired unit heaters that are in very good condition and appear to be fairly new.

PLUMBING

- There is an incoming domestic cold water service with backflow preventer. This water service feeds an emergency shower/eyewash station and the chemical mixing station tanks/pumps/hoses.
- There is a large Smith air compressor with copper piping to indoor quick connect fitting outlets. Piping also routes underground from this compressor to the adjacent barn.

FIRE PROTECTION

None

POLE BARN 2 (SB)

TECHNOLOGY

THIS BUILDING IS NOT ON THE UIS CAMPUS NETWORK.

ELECTRICAL

- SERVICE & DISTRIBUTION: Obtains power from Pole Barn #1 at 120V.
- EMERGENCY LIGHTING: None
- LIGHTING & BRANCH WIRING: Fluorescent lighting is used. Wiring is in conduit.

FIRE ALARM

None

HVAC

None

PLUMBING

- Compressed air quick connect fitting outlets are served by an air compressor located in the adjacent Pole Barn 1. Piping routes from that barn underground over to Pole Barn 2.

FIRE PROTECTION

None

POLICE DEPARTMENT BUILDING (PDB)

TECHNOLOGY

- Telecommunications closet is wall-mount equipment located in a shared utility closet underneath the stair case.
- The room is not grounded, and there is no cooling. Equipment is wall mounted, and there is no cable management. There is risk of equipment and cabling being damaged in these shared utility spaces.
- 24 strand SM to BRK
- 12 strand SM to DCFS
- 12 strand SM to UHB (CATV)
- ACCESS CONTROL: S2 node controller located in basement wall field.
- VIDEO SURVEILLANCE: N/A

ELECTRICAL

- SERVICE & DISTRIBUTION: Service comes in underground to a 4-pole transfer switch which is backup by a diesel generator. This transfer switch provides power to two 120/208V, 3-phase, 4-wire panelboards located in the basement. These panels provide service to equipment and devices requiring 120V or 208V single phase or 208V 3-phase service.
- EMERGENCY LIGHTING: The entire building is backed up by an appropriately sized generator to provide power to the building on loss of power.
- LIGHTING & BRANCH WIRING: T-8 fluorescent and incandescent lighting. Branch wiring in EMT conduit.

FIRE ALARM

- A simplex addressable fire alarm system with horns and strobes for notification.

HVAC

- Converted house serving as Police Station.
- One electric heat pump with electric heat serves the basement.
- One electric heat pump with electric heat serves the main floor.
- No info on the Police Garage.

PLUMBING

- Generator (propane?)
- 1" domestic cold water service enters in the basement.
- Domestic hot water provided by 30-gallon tank type electric water heater.

FIRE PROTECTION

None

PUBLIC AFFAIRS CENTER (PAC)

TECHNOLOGY

- Five floors and three telecom rack / closet locations.
- Room #130 telecom rack (no closet) is located in the "fan room" (basement) Room 130. This room serves 1st level and most of 2nd level.
 - Copper / fiber backbone to this rack location is fed from Brookens Library Telecom Room 110. Fiber backbone from fan room serves Telecom Closets #406 and #484 located on 4th floor.
- Horizontal cable is a variety of Cat 5, 5e, and 6 cabling.
- No grounding, no cooling, no cable management.
- Room #406 Telecom Closet is located on 4th floor. It generally serves the north side of the building's 3rd, 4th, and 5th floors. Some cabling does cross over to the south side and also serves a portion of the 2nd floor. Fiber backbone is fed from basement Room #103.
 - No grounding, no cooling, no cable management.

- Horizontal cable is a variety of Cat 5, 5e, and 6 cabling.
- Room #484 Telecom Closet is located on the 4th floor. It generally serves the south side of the building's 3rd, 4th, and 5th floors. Some cabling does cross over to the north side and also serves a portion of the 2nd floor. Fiber backbone is fed from basement Room #103.
 - The room does not meet TIA/EIA telecommunication cabling standards (no grounding, no cooling, no cable management, etc.).
 - Horizontal cable is a variety of Cat 5, 5e, and 6 cabling.
- General Notes:
 - Cable is not supported in corridors and is not run in straight cable pathways, supported on electrical conduit, building support beams, mechanical duct, etc.
 - No access control and minimal video surveillance coverage in the building.
 - There is a connecting tunnel between the PAC Building and Brookens Library Building.

ELECTRICAL

- SERVICE & DISTRIBUTION: There are three unit substations in this building. They are fed from the University's 12.47KV primary system. One is a 120/208V, 1000/1333KVA 3-phase sub that provides service to the auditorium located inside the building. One is a 120/208V, 750/1000KVA 3-phase sub that provides service to panels, receptacles, and lighting. The last is a 277/480V, 1500/2000 KVA 3-phase sub that provides service to mechanical equipment and other equipment needed either 277V or 480V single phase or 480V 3-phase power. The 750 KVA transformer has recently been replaced. All switchboards are manufactured by Westinghouse and should be replaced due to obsolescence.
- EMERGENCY LIGHTING: Emergency lighting is powered by the generator in Brookens Library.
- LIGHTING & BRANCH WIRING: Lighting is a mixture of T-8 compact fluorescent and incandescent lighting with some HID lights. Branch wiring is in EMT and steel conduits.

FIRE ALARM

- The fire alarm is an addressable/voice system. The main fire alarm panel is a Simplex 4100ES.

HVAC

- SYSTEMS:
 - Chilled water is fed from piping routed from the adjacent Brookens Library. There are no secondary chilled water pumps in this building.
 - This building has steam boiler equipment for the heating plant that is interconnected with the Brookens Library boiler equipment.
 - Constant volume air handlers with duct-mounted return fans. A mixture of hot deck/cold deck and multizone with plenum return. There is some perimeter finned tube radiation throughout the building.
 - Pneumatic controls.
- EQUIPMENT:
 - Two 500 HP gas-fired steam boilers with Riello burners making 8 psi steam. The condensate piping is interconnected so that makeup can return to Brookens or Public Affairs Center, depending on which valves are opened or closed.
 - Two redundant steam-to-water heat exchangers.
 - Two redundant constant volume heating water pumps (600 gpm, 20 hp).
 - Fourteen constant volume air handling units serve the building. Some of the original casings have been internally coated to prolong their life.
 - Roof-mounted mushroom style general exhaust fans.

PLUMBING

- Combined 8" galvanized piping domestic water service and fire protection service. They were originally separate services, but the fire protection service developed a leak, so they cut the pipe in place and tapped off the domestic water service.
- Water softener for boiler makeup system.
- Duplex sewage ejector for basement level sanitary.
- Duplex submerged style storm pumps for drain tile discharge.

- Domestic hot water (125 degrees) from steam-to-water heat exchanger in the boiler room with a recirculation system. A 500-gallon storage tank used to serve the kitchen.
- Tower 1 has an electric hot water heater.
- Building regulator for gas service to the boilers and the old kitchen.
- Hard-wired flush valves for recent toilet remodel. All other fixtures are manual.
- The cast iron sewer piping has had several failures and some has been replaced with PVC.

FIRE PROTECTION

- Combined 8" galvanized piping domestic water service and fire protection service. They were originally separate services, but the fire protection service developed a leak, so they cut the pipe in place and tapped off the domestic water service.

RESIDENTIAL SIMULATION LAB (RSL)

TECHNOLOGY

- This facility has a 12 strand SM fiber cable fed from the Police Station and connected to a network switch. The network switch provided horizontal cable drops to eight IP cameras used for simulation viewing and recording. The cameras are not used for video surveillance security and are not connected to the campus camera system.
- There are no other network data connection in the building.
- Network switch is wall mounted in a closet and is not grounded.
- ACCESS CONTROL: N/A
- VIDEO SURVEILLANCE: N/A

ELECTRICAL

- SERVICE & DISTRIBUTION: Obtained from City Power and Light. 200A, 120/240V single phase.
- EMERGENCY LIGHTING: None
- LIGHTING & BRANCH WIRING: Incandescent and fluorescent lighting. Type NM wiring and some wiring in conduit.

FIRE ALARM

- Standalone smoke detectors.

HVAC

- The house is served by electric baseboard heat around the perimeter and a single thru-wall PTAC unit for cooling.

PLUMBING

- Domestic hot water is provided by a small electric tank water heater with no recirculation.
- Residential style plumbing fixtures. We were not able to confirm if it was connected to a working sewer or septic system.

FIRE PROTECTION

None

STRAWBRIDGE-SHEPHERD HOUSE (SSH)

TECHNOLOGY

THIS BUILDING IS NOT ON THE UIS CAMPUS NETWORK.

ELECTRICAL

- SERVICE & DISTRIBUTION: Service is from City Power and Light and is at 120/240V single phase, 3-wire.
- EMERGENCY LIGHTING: None.
- LIGHTING & BRANCH WIRING: Incandescent lighting with Type NM wiring.

FIRE ALARM

- Fire alarm is battery operated powered smoke detector.

HVAC

- The house is served by a newer gas-fired furnace located in a cellar underneath the front porch. The cellar door could not be opened (even with a crowbar) on the day of our site visit.

PLUMBING

- Domestic hot water is provided by a gas-fired tank type water heater in a cellar underneath the front porch. The cellar door could not be opened (even with a crowbar) on the day of our site visit.
- There are newer residential style fixtures in the restroom on first floor.

FIRE PROTECTION

None

STRAWBRIDGE-SHEPHERD HOUSE GARAGE (SSH)

TECHNOLOGY

THIS BUILDING IS NOT ON THE UIS CAMPUS NETWORK.

ELECTRICAL

- SERVICE & DISTRIBUTION: Feed from a circuit breaker in the house.
- EMERGENCY LIGHTING: None.
- LIGHTING & BRANCH WIRING: Incandescent and Fluorescent lighting. Type NM wiring and some wiring in conduit.

FIRE ALARM

None

HVAC

None

PLUMBING

None

FIRE PROTECTION

None

STRAWBRIDGE-SHEPHERD SMOKE HOUSE (SSH)

TECHNOLOGY

THIS BUILDING IS NOT ON THE UIS CAMPUS

NETWORK.

ELECTRICAL

- SERVICE & DISTRIBUTION: None
- EMERGENCY LIGHTING: None.
- LIGHTING & BRANCH WIRING: None.

FIRE ALARM

None

HVAC

None

PLUMBING

None

FIRE PROTECTION

None

SPENCER HOUSE (SPH)

TECHNOLOGY

THIS BUILDING IS NOT ON THE UIS CAMPUS NETWORK.

ELECTRICAL

- SERVICE & DISTRIBUTION: Service is from City Power and Light at 225A, 120/240V single phase, 3-wire. Square D panel with a 225A main circuit breaker.
- EMERGENCY LIGHTING: None.
- LIGHTING & BRANCH WIRING: Incandescent Lighting. Type NM wiring with some wiring in surface raceway.

FIRE ALARM

- Battery operated standalone smoke detectors.

HVAC

- The house is served by three newer gas-fired furnaces located in the basement with associated condensing units located outside on grade.

PLUMBING

- There is an old residential gas meter outside.
- The residential kitchen and bathroom plumbing fixtures are very old and dated.
- Domestic hot water is provided by a 40 MBH, gas-fired, tank type water heater located in the basement.

FIRE PROTECTION

None

SPENCER HOUSE BARN (SPH)

TECHNOLOGY

THIS BUILDING IS NOT ON THE UIS CAMPUS NETWORK.

ELECTRICAL

- **SERVICE & DISTRIBUTION:** Service is obtained from the house at 120V.
- **EMERGENCY LIGHTING:** None.
- **LIGHTING & BRANCH WIRING:** Incandescent and fluorescent lighting.

FIRE ALARM

None

HVAC

None

PLUMBING

None

FIRE PROTECTION

None

SPENCER HOUSE GARAGE (SPH)

TECHNOLOGY

THIS BUILDING IS NOT ON THE UIS CAMPUS NETWORK.

ELECTRICAL

- **SERVICE & DISTRIBUTION:** Obtains 120V from the house panel.
- **EMERGENCY LIGHTING:** None.

- **LIGHTING & BRANCH WIRING:** Fluorescent and incandescent lighting. Type NM wiring and some wiring in conduit.

FIRE ALARM

None

HVAC

None

PLUMBING

None

FIRE PROTECTION

None

STUDENT AFFAIRS BUILDING (SAB)

TECHNOLOGY

- **Single Story Building:** The telecommunications closet is a 2-post equipment rack located in a shared electrical room.
- The rooms are not grounded, not cooled, and are undersized. Equipment is rack and wall mounted, and there is no cable management. There is risk of equipment and cabling being damaged in these shared utility spaces.
- Cabling is a mix of CAT5, 5E, and 6.
- There are several fiber feeds into this building:
 - 24 strand SM from HRS
 - 24 strand SM to HSB
 - 12 strand SM to VPA
 - MM to HSB
- **ACCESS CONTROL:** N/A
- **VIDEO SURVEILLANCE:** N/A

ELECTRICAL

- **SERVICE & DISTRIBUTION:** A loop feed from the campus 12.47KV primary system and a radial feed from the pad-mounted loop switch provides service to one pad-mounted transformer located outside the building. The transformer provides 3phase service to a 120/208V, 800A, 3-phase, 4-wire fused disconnect type switchboard that provides power for panelboards, receptacles, mechanical loads, and other loads requiring 120V or 208V single phase power or 208V 3-phase power. Square D is the manufacturer of the switchboard

- and panelboards.
- EMERGENCY LIGHTING: Battery back lights provide emergency lighting in the building.
- LIGHTING & BRANCH WIRING: T-8 and compact fluorescent lighting is used. Branch wiring is run in EMT or steel conduit.

FIRE ALARM

- The fire alarm is an addressable horn/strobe system. The fire alarm panel is a Pyrotronics Fire Finder XLS located in the Visual and Performing Arts Building.

HVAC

- This building is served by nine gas-fired direct expansion constant volume rooftop units of various sizes. They are not original to the building.
- There are two mushroom style roof-mounted exhaust fans and two gooseneck discharges for inline exhaust fans.
- There is no roof access for maintenance.
- This building has some communication with the campus Alpha Controls system.

PLUMBING

- There are no roof drains. There is no parapet, and the entire storm load drains to the edge and routes underground via external downspouts.
- The building is served by one electric tank type water heater with a recirculation pump and associated piping.
- There are two roof hydrants for maintenance purposes.
- Natural gas serves rooftop HVAC equipment.

FIRE PROTECTION

None

STUDENT LIFE BUILDING (SLB)

TECHNOLOGY

- Single Story Building. Half of the building has been re-cabled.
- The telecommunications closet is a 2-post equipment rack in a dedicated telecom closet.

- The rooms are not grounded and not cooled. The room has cable tray and space for additional equipment and racks if needed.
- Cabling is a mix of CAT5, 5E, and 6.
- There are several fiber feeds into this building:
 - 12 SM CATV fiber
 - 12 SM to BSB
 - MM fiber from HSB
- ACCESS CONTROL: An S2 access control unit wall mounted in the telecom closet.
- VIDEO SURVEILLANCE: Coverage for entrances and exits. Video is stored to SAN.

ELECTRICAL

- SERVICE & DISTRIBUTION: A loop feed from the campus 12.47KV primary system and a radial feed from the pad-mounted loop switch provides service to one pad-mounted transformer located outside the building. The transformer provides 3phase service to a 120/208V, 800A, 3-phase, 4-wire switchboard that provides power for panelboards, receptacles, mechanical loads, and other loads requiring 120V or 208V single phase power or 208V 3-phase power. The switchboard is a GE Series 2, and panelboards are manufactured by GE. There are a lot of Square D fused disconnect switches in the main electrical room. GE has been purchased by ABB. It is unknown how this acquisition will affect spare parts availability.
- EMERGENCY LIGHTING: Battery back lights provide emergency lighting in the building.
- LIGHTING & BRANCH WIRING: T-8 and compact fluorescent lighting is used. Branch wiring is run in EMT or steel conduit.

FIRE ALARM

- The fire alarm is an addressable horn/strobe system. The fire alarm panel is a Pyrotronics Fire Finder XLS located in the Visual and Performing Arts Building.

HVAC

- The single-story portion of the building is served by eight gas-fired direct expansion constant volume rooftop units of various sizes. They are not original to the building.
- There are two mushroom style roof-mounted exhaust fans.

- The low roof portion of the building has two gas-fired direct expansion constant volume rooftop units and two mushroom style roof-mounted exhaust fans.
- The gym is served by two exterior grade-mounted cooling-only direct expansion packaged units (15 tons?), with insulated ductwork routed up the exterior wall before penetrating at the ceiling. There are two new gas-fired unit heaters hanging in the gym.
- There are sidewall exhaust fans with sidewall intake louver/dampers in the gym.
- There is no roof access for maintenance to any of the roof levels.
- This building has some communication with the campus Alpha Controls system.

PLUMBING

- There are no roof drains. There is no parapet, and the entire storm load drains to the edge and routes underground via external downspouts.
- Natural gas piping serves rooftop HVAC equipment.
- There are two roof hydrants for maintenance purposes.
- The building is served by a single 98-gallon gas-fired tank type domestic water heater with a recirculation pump.

FIRE PROTECTION

None

STUDENT UNION (UNION)

TECHNOLOGY

- This is a new two-story building that opened in January 2018.
- TELECOMMUNICATIONS:
 - There is a main telecommunications room located on the 2nd level that serves a portion of the 1st and 2nd levels.
 - Incoming backbone fiber is fed from the REC building and terminated in the main telecommunication closet on the 2nd level.
 - AV equipment racks for the Multi-Purpose Room are in the main telecommunications closet on 2nd level.
 - There is a telecommunications room on the 1st level that serves a portion of the 1st and

2nd levels.

- All rooms meet TIA/EIA telecommunication cabling standards, including grounding, cooling, and sized appropriately, with room for future equipment. All horizontal cabling is CAT 6.
- There are wireless access points throughout the building.
- ACCESS CONTROL: An S2 access control panel is in the telecom room located on 1st level.
- VIDEO SURVEILLANCE: There are IP cameras in various locations and tied to the network. Cameras are recorded to a cloud-based server.
- The switch in this room serves Bluebell and Clover, and Housing Commons switches.

ELECTRICAL

- SERVICE & DISTRIBUTION: A radial feed from the campus 12.47KV primary system provides service to one pad-mounted transformer located outside the building. One transformer provides 3-phase service to a 277/480V, 1200A, 3-phase, 4-wire switchboard. The 277/480V switchboard provides power to mechanical equipment and other equipment requiring 277V or 480V single phase or 480V 3-phase power. It also provides service to two 480V to 120/208V 3-phase step down transformers. These transformers provide service to 120/308V 3-phase, 4-wire distribution panels. The 120/208V distribution panels provide power for panelboards, receptacles, and other loads requiring 120V or 208V single phase power or 208V 3-phase power. The manufacturer of the switchboards and panels is Siemens. There is a code violation of sanitary lines run over the top of electrical panels. This is not allowed.
- EMERGENCY LIGHTING: The building has an outside emergency generator with one transfer switch. This generator provides power to egress emergency lighting and other pieces of equipment deemed necessary to be on emergency power. This building should have at least two emergency transfer switches for emergency and optional standby branches of power. These need to be segregated from one another to meet code.
- LIGHTING & BRANCH WIRING: Lighting is made up LED and compact fluorescent lighting. Branch wiring is in EMT or steel conduit.

FIRE ALARM

- The fire alarm is an addressable/voice system. The fire alarm panel manufacturer is Simplex 4100ES.

HVAC

- SYSTEMS:
 - Variable air volume air handlers with terminal air boxes, perimeter finned tube radiation, radiant ceiling panels, and in-floor radiant heat.
 - Fan coil units serve various public spaces as well as electrical and telecom rooms.
 - Ventilation air is provided to the air handlers and fan coil units from a dedicated outside air unit.
 - Direct buried chilled water piping routes from Brookens Library and is used as condenser water for a Multistack heat recovery chiller. During the winter when the Brookens chilled water plant is off, the condenser water is dumped into the building heating water loop.
 - Mechanical room refrigerant purge exhaust system.
- EQUIPMENT:
 - Four variable air volume indoor modular air handling units with steam humidifiers.
 - One dedicated outside air handler with energy recovery that serves the other four air handlers and various fan coil units.
 - Sixteen four-pipe fan coil units.
 - Five grease exhaust fans serving kitchen equipment located on the roof.
 - One dishwasher exhaust fan located on the roof.
 - One exhaust fan and associated refrigerant monitor serving the mechanical room.
 - Roof-mounted fireplace flue exhaust fans. The flues route through the Ballroom, and the fan noise is very apparent.
 - Multistack modular heat recovery chiller. It has four modules and is sized to serve the entire building load.
 - One gas-fired Fulton steam boiler serves the air handler humidifiers.
 - Three gas-fired high-efficiency 1,000 MBH PK Mach condensing boilers.
 - Three variable flow inline heating water pumps (45 gpm, 65 ft hd, 3 hp).
 - Two redundant chilled water pumps (335

gpm, 60 ft hd, 10 hp).

- The building is connected to the campus DDC controls system.

PLUMBING

- Combined 6" domestic water and fire protection service in the first floor mechanical room.
- Gas regulator located outside near the loading dock serves boilers, domestic water heaters, fireplaces, kitchen equipment, and an outdoor fire pit.
- Manual faucets and hard-wired automatic flush valves.
- Exterior below grade grease interceptor.
- Domestic water softener.
- Domestic hot water storage tank (PVI 500 gallon) held at 130 degrees with heat exchanger fed by boiler heating water. This is piped in series with five A.O. Smith gas-fired instantaneous water heaters.

FIRE PROTECTION

- Combined 6" domestic water and fire protection service in the first floor mechanical room.
- Sprinkler protection.
- No standpipes.

SUNFLOWER COURT (SFL)

TECHNOLOGY

- Apartment Complex: The telecommunication closets is a 2-post equipment rack located in a shared utility closet.
- The room is not grounded. There is some cooling and spare room for rack-mount equipment but no room for additional rack. Equipment is rack and wall mounted, and there is no cable management. There is risk of equipment and cabling being damaged in these shared utility spaces.
- This switch feeds the individual housing unit switches. One core switch feeds four others. This is typical topology for the housing units.
- MM fiber from BSB
- SM fiber from UHB (CATV)
- ACCESS CONTROL: N/A
- VIDEO SURVEILLANCE: N/A

ELECTRICAL

- SERVICE & DISTRIBUTION: Obtains an 800A 120/240V single phase service from the power company. Metered at the transformer. This distribution panel provides service to each apartment panelboard.
- EMERGENCY LIGHTING: None
- LIGHTING & BRANCH WIRING: Compact fluorescent lighting. Wiring is type NM. Otherwise, run in wiremold or conduit.

FIRE ALARM

- Addressable horn/strobe system. The fire alarm panel is a Simplex 4100U. This panel is obsolete and will need to be replaced in the future.

HVAC

- All-electric residential heat pump equipment serves the apartment complex.

PLUMBING

- Residential-style electric tank water heater.

FIRE PROTECTION

None

THE RECREATION AND ATHLETIC CENTER (TRAC)

TECHNOLOGY

- Two-story building is 10 to 12 years old.
- TELECOMMUNICATIONS:
 - One main telecommunications closet located on 2nd level that serves 1st and 2nd levels.
 - Incoming fiber backbone is SM and MM fiber fed from UHB.
 - Fiber backbone is also cross connected to and feeds the Union Building. Copper backbone cable is also cross connected and serves the Union Building.
 - The telecom room meets TIA/EIA telecommunication cabling standards, including grounding, cooling, cable tray wire management, and sized appropriately, with

room for future equipment. All horizontal cabling is CAT 6.

- ACCESS CONTROL: An S2 access control panel is in the telecom room located on 2nd level.
- VIDEO SURVEILLANCE: IP cameras are in various locations and tied to the network. Cameras are recorded to a cloud-based server.

ELECTRICAL

- SERVICE & DISTRIBUTION: There is one unit substation in this building. It is fed from the University's 12.47KV primary system. The unit substation is a 277/480V, 750/1000 KVA 3-phase sub that provides service to mechanical equipment and other equipment needing either 277 or 480V single phase or 480V 3-phase power. There is a 480V to 120/208V stepdown transformer that provides service to a 120/208V 3phase, 4-wire distribution panel. This distribution panel provides 120V or 208V single phase or 208V 3-phase power to receptacles, panels, and other equipment requiring this type of power. The switchboard and panelboards are manufactured by GE. GE has been purchased by ABB. It is unknown how this acquisition will affect spare parts availability.
- EMERGENCY LIGHTING: The building has an outside emergency generator with one transfer switch. This generator provides power to egress emergency lighting and other pieces of equipment deemed necessary to be on emergency power. In the future, another emergency transfer switch should be added, and the emergency and optional standby branches of power segregated from one another to meet current code.
- LIGHTING & BRANCH WIRING: Lighting is T-8 and T-5 fluorescent lighting and some HID lighting. Branch wiring is in EMT or steel conduit.

FIRE ALARM

- The fire alarm is an addressable/voice system. The main fire alarm panel is a Simplex 4100U. The 4100U panel is obsolete and should be replaced in the near future.

HVAC

- SYSTEMS:
 - Variable air volume air handlers with

terminal air boxes with reheat coils and perimeter radiation.

- 6" direct buried chilled water mains routed from Brookens Library. There are no secondary pumps in the building.
- Variable flow heating water system with 30% ethylene glycol.
- Systems and equipment appear to be original (approximately 2007).
- EQUIPMENT:
 - Seven indoor modular air handling units. Air handlers are variable volume airflow with heating/chilled water coils and return air bypass.
 - One energy recovery unit serving the restrooms.
 - Several Runtal radiators around the perimeter.
 - Three fan coil units serving the entries.
 - Four two million Btu gas-fired Aerco Benchmark heating water boilers.
 - Two redundant variable flow 15 hp heating water pumps.
 - One glycol feed system.

PLUMBING

- Dedicated 3" domestic cold water service.
- One gas-fired domestic water heater (Lochinvar Copper Fin II, 1,000 MBH, 1,020 gallon recovery rate).
- One gas-fired domestic water heater (Lochinvar Copper Fin II, 400 MBH, 412 gallon recovery rate).
- Systems and equipment appear to be original (approximately 2007).

FIRE PROTECTION

- Dedicated 6" water service for fire protection.
- Sprinkler protection and associated wall-mounted FDC.
- No standpipes.

TICKET BOOTH

TECHNOLOGY

THIS BUILDING IS NOT ON THE UIS CAMPUS NETWORK.

ELECTRICAL

- SERVICE & DISTRIBUTION: None
- EMERGENCY LIGHTING: None
- LIGHTING & BRANCH WIRING: None

FIRE ALARM

None

HVAC

None

PLUMBING

None

FIRE PROTECTION

None

TRILLIUM COURT (TRL)

TECHNOLOGY

- Incoming campus fiber backbone is an MM fiber fed from HSB. There is also a CATV SM fiber backbone from UHB. Both fibers terminate in the PRL laundry room utility closet.
- Incoming copper backbone cable is a 50-pair cable fed from BRK and terminated in the PRL laundry room utility closet.
- The copper and fiber backbone cable is cross connected in PRL and distributed to FXG, MGR, and TRL laundry room utility closets.
- Each laundry room utility closet cross connects to the individual apartment building utility closet. A network switch in each closet serves the individual apartments.
- The telecommunications equipment is wall mounted in the utility closets. Cabling appears to be CAT 5 and CAT 5e.
- The rooms are not grounded, not cooled, and are undersized. Equipment is wall mounted, and there is no cable management. There is risk of equipment and cabling being damaged in these shared utility spaces.
- ACCESS CONTROL: There is no access control and no video surveillance system for these building.

ELECTRICAL

- SERVICE & DISTRIBUTION: Obtains 120/240V

single phase service from the power company. Each individual townhouse is metered.

- EMERGENCY LIGHTING: None
- LIGHTING & BRANCH WIRING: Compact fluorescent lighting. Wiring is type NM. Otherwise, run in wiremold or conduit.

FIRE ALARM

- Addressable smoke and heat detectors to a Simplex 4004 NAC panel that reports to the main fire alarm panel in the Maintenance Building. Notification by horn and combination horn/strobe units.

HVAC

- All-electric residential heat pump equipment serves the apartment complex.

PLUMBING

- Residential-style electric tank water heater.

FIRE PROTECTION

None

UNIVERSITY HALL BUILDING (UHB)

TECHNOLOGY

- This building is segmented into north and south from a structured cabling infrastructure.
- The campus backup data center is located in the lower level, south side of the building and serves horizontal cabling for that level.
 - Emergency backup generator power and dedicated cooling.
 - UPS to cover the time delay between power outage and generator backup power.
 - The campus television system is an APA.
 - GE network satellite system. The head end equipment rack is located in the backup data center. The service provider, APAGE, owns and services all equipment. The television signal is distributed throughout the campus on a dedicated SM fiber network and is then converted to a trunk and tap coaxial cable system after it enters the various buildings.
 - The campus backbone fiber ring is cross

connected in the backup data center. The campus fiber ring is managed by UIUC.

- All video surveillance is recorded and stored to a cloud server.
- There is a telecom closet on each level 1 through 3. They are vertical offset from each other. Each room serves the horizontal cabling on its respective level.
- There are four telecom closets stacked vertically that serve the north portion of the building.
- This building was built in 2003. All rooms meet TIA/EIA telecommunication cabling standards, including grounding, cooling, and sized appropriately, with room for future equipment. All horizontal cabling is CAT 6.
- UIS IT likes how this cabling infrastructure is designed and installed for this building.
- ACCESS CONTROL: This building has card reader access control points. S2 access control node controllers are located in the lower level telecommunications closets.

ELECTRICAL

- SERVICE & DISTRIBUTION: There are two unit substations in this building. They are fed from the University's 12.47KV primary system. One is a 120/208V, 500/667KVA 3-phase sub that provides service to panels, receptacles, and lighting. The other one is a 277/480V, 750/1000 KVA 3-phase sub that provides service to mechanical equipment and other equipment needing either 277 or 480V single phase or 480V 3-phase power. Both switchboards and panelboards are manufactured by GE. GE has been purchased by ABB. It is unknown how this acquisition will affect spare parts availability.
- EMERGENCY LIGHTING: The building has an outside emergency generator (diesel?) with one transfer switch. This generator provides power to egress emergency lighting and other pieces of equipment deemed necessary to be on emergency power. In the future, another emergency transfer switch should be added, and the emergency and optional standby branches of power segregated from one another to meet current code.
- LIGHTING & BRANCH WIRING: Lighting is T-8 and T-5 fluorescent lighting. Branch wiring is in EMT or steel conduit.

FIRE ALARM

- The fire alarm is an addressable/voice system. The main fire alarm panel is a Simplex 4100U. The 4100U panel is obsolete and should be replaced in the near future.

HVAC

- SYSTEMS:
 - VAV air handling units with terminal air boxes and perimeter finned tube radiation.
 - Mitsubishi mini-split system with roof-mounted condenser serves the elevator room.
 - The campus server room was originally served by a Carrier split system that their load outgrew. A Data-Aire computer room unit and associated dry-cooler condenser has been installed, as well as another mini-split system for an adjacent office room that isn't currently operational. The Data-Aire computer room unit can be fed from the campus chilled water or from glycol piping that is connected to the dry-cooler. The computer room unit also has an electrode humidifier served by domestic cold water piping.
- EQUIPMENT:
 - Direct buried chilled water piping mains route from Brookens Library and enter the basement mechanical room. There are no secondary chilled water pumps in the building.
 - Three 1,290 MBH gas-fired Lochinvar Power-Fin heating water boilers with inline circulating pumps.
 - Two redundant 15 HP heating water pumps with variable frequency drives. The pumps appear original but have had new impellers, bearings, seals, etc. replaced in 2018.
 - Six variable air volume Trane modular air handlers are located in the roof-level penthouses. These air handlers have heating coil circulating pumps and duct-mounted return fans located in the penthouses.
 - One mushroom style, roof-mounted general exhaust fan.

PLUMBING

- A 4" domestic cold water service branches off

- the incoming combined 8" main.
- A 2" service also branches off the incoming 8" main to serve irrigation.
- There is a separate backflow preventer and water meter for the domestic cold water and irrigation branches.
- The domestic water pressure is raised to 65 psi by a duplex booster pump skid (Iron Heart Syncro Flo) located in the basement mechanical room.
- A duplex submersible style storm sump pump/pit is located in the basement mechanical room.
- A duplex submersible style sewage ejector pump/pit is located in the basement mechanical room.
- Two 70,000 Btu A.O. Smith gas-fired tank type domestic water heaters with 72-gallon recovery. The water heaters were making 120 degree water and a master mixing valve distributes at 110 degrees.
- The flat roof is served by a primary storm drainage piping system. Secondary storm drainage is accomplished via openings in the parapet, except at the southwest corner of the building.

FIRE PROTECTION

- This building has a fire pump and a jockey pump fed from generator power (this needs to be confirmed). The fire pump is fed from an 8" combined service main in the basement mechanical room.
- There are standpipes as well as sprinkler coverage in the building. The sprinkler coverage includes the roof-level air handler penthouses. The sprinkler main piping routes right in front of large open exhaust air dampers in the air handler penthouses.

UIS EAST SOCCER COMPLEX BUILDING

TECHNOLOGY

THIS BUILDING IS NOT ON THE UIS CAMPUS NETWORK.

ELECTRICAL

- SERVICE & DISTRIBUTION: Obtained from City Power and Light. 100A, 120/240V single phase, 3-wire service.
- EMERGENCY LIGHTING: None
- LIGHTING & BRANCH WIRING: Fluorescent lighting. Branch wiring in conduit.

FIRE ALARM

None

HVAC

- The building is served by an electric heater located in the attic space.

PLUMBING

- The flush valves have been removed from the plumbing fixtures and the drains/traps have been filled with glycol. They appear to be in a winterized condition.
- Domestic hot water is provided by a small electric tank type water heater with recirculation pump and piping.
- The sanitary piping appears to route to a settling basin pit within the building. Could not confirm if building is served by a septic tank/field.

FIRE PROTECTION

None

VISUAL AND PERFORMING ARTS BUILDING (VPA)

TECHNOLOGY

- This is one of the original buildings on campus. The telecommunications closet is a 2post equipment rack in a shared electrical closet.
- The room is not grounded, not cooled, and is undersized. Equipment is rack and wall mounted, and there is no cable management. There is risk of equipment and cabling being damaged in these shared utility spaces.
- Cabling is a mix of CAT5, 5E, and 6.
- There are several fiber feeds into this building:
 - MM fiber to Bluebell Court building
 - 24 MM and 24 SM fiber to WUIS
 - MM fiber from HSB
 - MM to SAB

- SM to SAB
- 24 SM to HSB
- A second switch in rack for the building serves Building 3, 5, 6.
- AT&T phone service comes into this building.
- ACCESS CONTROL: An S2 access control unit is wall mounted in the telecom closet.
- VIDEO SURVEILLANCE: N/A

ELECTRICAL

- SERVICE & DISTRIBUTION: A loop feed from the campus 12.47KV primary system and a radial feed from the pad-mounted loop switch provides service to one pad-mounted transformer located outside the building. The transformer provides 3phase service to a 120/208V, 1200A, 3-phase, 4-wire switchboard that provides power for panelboards, receptacles, mechanical loads, and other loads requiring 120V or 208V single phase power or 208V 3-phase power. The switchboard and some panelboards are manufactured by GE. GE has been purchased by ABB. It is unknown how this acquisition will affect spare parts availability. The panelboards are GE Type NLAB, which is obsolete and should be replaced. Other panelboards are Eaton Type PRL1A.
- EMERGENCY LIGHTING: Battery back lights provide emergency lighting in the building.
- LIGHTING & BRANCH WIRING: T-8 and incandescent lighting is used. Branch wiring is run in EMT or steel conduit.

FIRE ALARM

- The fire alarm is an addressable horn/strobe system. The fire alarm panel is a Pyrotronics Fire Finder XLS located in this building. It is tied to a Simplex fire alarm panel so it can report back to campus.

HVAC

- This building is a single story but is spread out over a large area. There is no roof access for maintenance. It is served by the following equipment:
 - One grade-mounted gas-fired direct expansion constant volume Trane Voyager packaged unit. It is not original to the building.

- Eleven gas-fired direct expansion constant volume rooftop units of various sizes. They are not original to the building.
- Four gas-fired direct expansion constant volume rooftop makeup air units that are interlocked with manually controlled exhaust fans for the shop areas.
- Several mushroom style rooftop exhaust fans and a couple upblast style rooftop exhaust fans.
- Three gooseneck discharges for inline exhaust fans.
- One snorkel collection system located on grade (Airflow Systems Inc.) serving the Clay Mixing area. This Clay Mixing area also has an electric unit heater.
- One grade-mounted dust collection system serving the Wood Shop.
- Six ceramic kiln exhaust stacks with no associated fans.
- Roof intake ventilators for ceramic kiln gas burner combustion air makeup.
- The piano room has a local electric humidifier.
- This building has some communication with the campus Alpha Controls system.

PLUMBING

- There are no roof drains. There is no parapet, and the entire storm load drains to the edge and routes underground via external downspouts.
- Natural gas serves gas burners for brick drying ovens.
- Natural gas piping serves rooftop HVAC equipment.
- Shops are served by a compressed air piping system with a new 5HP Quincy air compressor.
- 66-gallon electric tank type water heater with no recirculation serving ceramic and printing rooms.
- The remainder of the building domestic hot water is served by two 30-gallon electric tank type water heaters with no recirculation.
- Solids interceptors are located in the floor, receiving discharge from stainless steel wash sinks in the ceramics and printing rooms.
- Solids interceptor located above floor receiving discharge from the service sink in the Wood Shop.

FIRE PROTECTION

None

VOLATILE STORAGE

TECHNOLOGY

THIS BUILDING IS NOT ON THE UIS CAMPUS NETWORK.

ELECTRICAL

- SERVICE & DISTRIBUTION: Obtained from one of the HRB building panels.
- EMERGENCY LIGHTING: None
- LIGHTING & BRANCH WIRING: Explosion Proof T-8 fluorescent lighting.

FIRE ALARM

None

HVAC

- A Panasonic brand split system heat pump provides heating and cooling for the building. The evaporator unit is wall-mounted indoors. The condenser unit is located outside on grade.

PLUMBING

None

FIRE PROTECTION

None

WUIS/WIPA RADIO STATION (WUIS)

TECHNOLOGY

- A single-story building built in the 1970s. The telecommunication closet is a 2-post equipment rack located in a shared electrical room.
- The rooms are not grounded, not cooled, and are undersized. Equipment is rack and wall mounted, and there is no cable management. There is risk of equipment and cabling being damaged in these shared utility spaces.
- Cabling is a mix of CAT5, 5E, and 6.
- There are several fiber feeds into this building:

- 24 strand SM from BKB
- 24 strand MM and SM to VPA
- MM fiber to HSB
- MM fiber to CCR (Cox Children's Center)
- ACCESS CONTROL: N/A
- VIDEO SURVEILLANCE: N/A
- WUIS Radio Station is located in the building. The radio station has an independent network and is not connected to the UIS campus network infrastructure.

ELECTRICAL

- SERVICE & DISTRIBUTION: A loop feed from the campus 12.47KV primary system and a radial feed from the pad-mounted loop switch provides service to one pad-mounted transformer located outside the building. The transformer provides 3phase service to a 120/208V, 800A, 3-phase, 4-wire switchboard that provides power for panelboards, receptacles, mechanical loads, and other loads requiring 120V or 208V single phase power or 208V 3-phase power. The switchboard and panelboards are manufactured by Square D.
- EMERGENCY LIGHTING: Battery back lights provide emergency lighting in the building. There is a natural gas generator located outside the building, with an ATS (automatic transfer switch) located inside the building. This generator provides power for the TV and radio station if they lose power.
- LIGHTING & BRANCH WIRING: T-8 and compact fluorescent lighting is used. Branch wiring is run in EMT or steel conduit.

FIRE ALARM

- The fire alarm is an addressable horn/strobe system. The fire alarm panel is a Pyrotronics Fire Finder XLS located in Visual and Performing Arts Building.

HVAC

- This building is served by nine gas-fired direct expansion constant volume rooftop units of various sizes.
- There is one mushroom style roof-mounted

exhaust fan serving the building.

- This building has some communication with the campus Alpha Controls system.

PLUMBING

- There are no roof drains. There is no parapet, and the entire storm load drains to the edge and routes underground via external downspouts.
- Natural gas serves rooftop HVAC equipment.
- One small Cummins gas-fired generator with no local regulator.
- The building is served by one 40-gallon tank type electric water heater with recirculating pump.

FIRE PROTECTION

None

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Campus Utility & Infrastructure



Typical Parking Lot



Gas Service to Campus



The Pond

The University of Illinois Springfield Campus Site and Utilities serving the campus were reviewed based upon information provided by the University and on-campus interviews with the facilities and administration staff and local utility agencies.

The campus is bounded mainly by University Drive which circles much of the outside perimeter of the campus on the north and east, Toronto Road is the campus arrival point from the south, running east-west while 11th Street along the west side of campus runs north-south. The main entrance to the campus is from 11th Street. Although, a secondary entrance is located on Toronto Road with a signalized intersection.

Overall the campus can be broken into two different areas, the original area known as the East Quad which is mainly comprised of the north and northeast areas while the remaining parts of campus consisting of newer buildings and parking areas which includes new Student housing, Student Union and The Recreation and Athletic Center (TRAC).

All areas of campus are served by number of parking lots for students and staff. The campus serves not only students living on campus, but also a great number of commuter students.

ELECTRICAL DISTRIBUTION

The campus is served by two electric feeders which enter campus from the northwest. The Porter Substation, owned by Springfield CWLP, is a 138kV substation that feeds the campus from the northwest located on Vachel Lindsay Drive west of campus. One of the critical underground feeds coming from the Porter Substation loops around 11th Street to University Drive and heads north on Shepherd Road/Richard Wright Drive where it crosses the campus on the east side of the Library, Learning & Student Success Center (LLSSC), Heath & Sciences Building (HSB) and Brookens Building (BRK) where it enters the building from the north. Another feed from the Porter Substation runs on the south side of Vachel Lindsay Drive and heads east where it loops around the Foxglove Court, Penny Royal Court, Marigold Court and Trillium Court residences. A third feed from the substation heads east on Vachel Lindsay Drive and turns south on 11th Street where it connects to an east-west overhead electrical line south of the Baseball/Softball Complex on University Drive.

Photos courtesy of David Mason + Associates

GAS DISTRIBUTION

The campus gas service is provided by Ameren Illinois and is a high-pressure main providing 100 psi. This is more than enough for the current and future needs of campus. Ameren Illinois has made infrastructure improvements to the mains serving the campus by switching from ductile iron to plastic pipe.

Presently, the gas main connection for the campus is located north of Vachel Lindsay Drive along the east side of Eliza Farnham Drive. The campus gas meter reduces the gas service from high pressure to low-pressure which is around 10 psi. The low-pressure line hinders the ability to install natural gas backup generators at the Student Union and future buildings, as well as, additional kilns in the Visual and Performing Arts building. A new high-pressure gas main should be installed from the Ameren gas main in Vachel Lindsay Dr. and Eliza Farnham Dr. where a new meter will be placed and the high-pressure gas main can be run along the east side of Eliza Farnham Dr. to University Dr. This allows for service connections to future student housing and the future Athletics Field House on University Dr. Service lines for future Natural Gas Generators at existing buildings on campus can also utilize this high-pressure gas line.

WATER DISTRIBUTION

The campus is served by City Water, Light and Power (CWLP). Presently, the CWLP is reviewing pipe age for the University of Illinois Springfield campus. The University is served by two water mains which enter the campus from the northwest. Overall, the infrastructure of water supply is able to serve the needs of the campus now and in the future.

SANITARY SEWER SYSTEM

The sanitary sewer collection system is connected to the existing off-campus sewer system operated by the Sangamon County Water Reclamation District (SCWRD). The sanitary sewer main which serves the campus along Vachel Lindsay Dr. runs east-west through the campus. A new 12-inch sanitary sewer line is to be constructed as part of the construction of the Public Safety Building (PSB) which will be located at the northwest corner of the intersection of Eliza Farnham Dr. and University Dr. This provides the sanitary service to the future residence halls adjacent to the PSB and the future Athletics Field House (AFH) at the southeast corner of University Dr. and 11th St.

ROADWAY/PARKING LOT/SIDEWALK PAVEMENTS

Overall the roads and parking lots are constructed with an asphalt surface which wears after a period of time. As a result, most roads and parking lots have developed alligator cracking, as well as, potholes.

Concrete walks in the East Quad of campus exhibit settling which results in uneven walking surfaces and tripping hazards. The concrete walks in the newer parts of campus are in good condition and do not require any maintenance at this time.

EXISTING UTILITY CORRIDORS

The campus presently has existing utility corridors established in Vachel Lindsay Drive, Eliza Farnham Drive, Richard Wright Drive and Shepherd Road. The utilities are mainly distributed on each side of these roads. Richard Wright Drive is at capacity for the number of existing utilities in that particular corridor which limits any additions in this section. Expansion in Vachel Lindsay Drive, Eliza Farnham Drive and Shepherd Road have room to allow for expansion of future utilities. A new corridor was established for a 12-inch sanitary main which runs north-south through the quad area between Foxglove, Pennyroyal Court, Trillium Court and Marigold Court. This is an ideal secondary utility corridor to allow expansion of other utilities to the south for University Drive future buildings.

SUMMARY

In summary, the review of the existing facilities and utilities on the University of Illinois Springfield campus exhibits issues with the gas pressure on campus and an inadequate number of shut off valves for each campus building. A great need for high pressure gas lines on the campus to serve natural gas-powered backup generators and expansion in the number of pottery kilns on campus.

The electric distribution functions well and does not require any immediate upgrades at this time. Brookens Building (BRK) seems to serve as the main utility distribution center on campus.

Campus roads and parking lots have alligator cracking and potholes. The East Quad of campus sidewalks have uneven walking surfaces due to settlement. The newer parts of campus have pavement in good condition.



Existing Utility Systems - Electric







Existing Utility Systems - Water





KEY

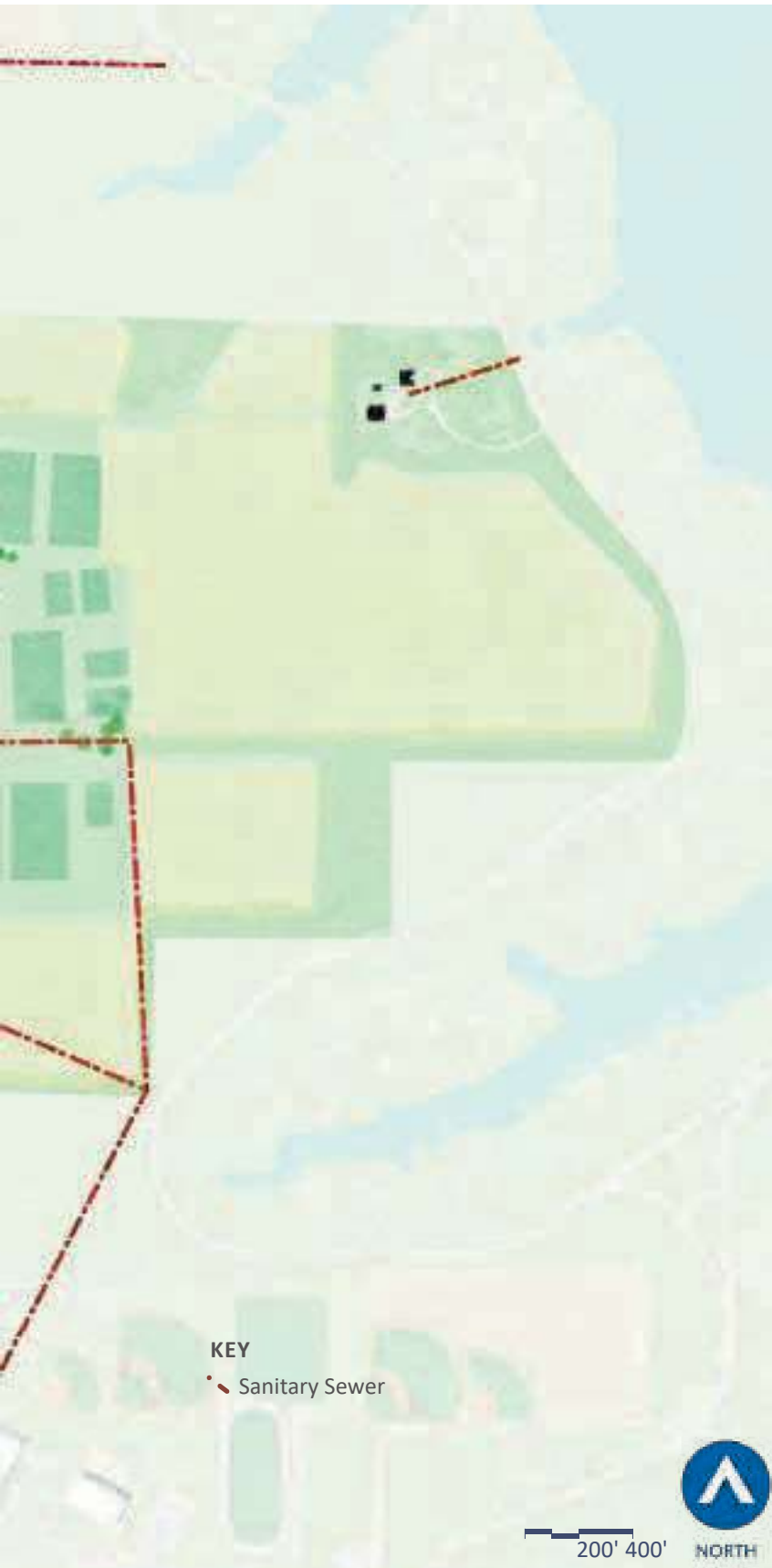
- Yard Hydrant
- Fire Hydrant
- - - Abandoned Water Line
- - - UIS Water Line
- - - CWLP Water Line

200' 400' NORTH



Existing Utility Systems - Sewer







Existing Utility Systems - Gas







Existing Utility Systems - Telephone & Wiring







Accessibility, Mobility, Connectivity: Existing



Photo of advanced crossing signage provided for key park/trail crossings on Edgar Lee Masters Drive/Ring Road

CAMPUS MULTI-MODAL TRANSPORTATION NETWORK ASSESSMENT

TRANSPORTATION EXISTING CONDITIONS ASSESSMENT

The following discussion of multi-modal transportation infrastructure and operational characteristics establishes the framework for future opportunities to enhance mobility and accessibility throughout the campus and leverage transportation to improve the academic, physical, economic, and cultural development of the University.

EXISTING TRANSPORTATION INFRASTRUCTURE

Pedestrian

Continuous sidewalk is provided within the central campus area; however, gaps in the sidewalk network are present throughout the campus. Sidewalk is generally not provided on the primary streets, including Ernest Hemingway Drive, Vachel Lindsay Drive, Edgar Lee Masters Drive, Richard Wright Drive, and portions of Eliza Farnham Drive. During field observations, students were observed using paved shoulders to navigate these streets.

Striped crosswalks are provided at key crossings on the campus; however, the striping is faded in some locations, thereby reducing visibility for both pedestrians and motorists. Signage for the crosswalks is limited; advanced signage is generally not provided. Advanced crossing signage is provided in some locations on University Drive; however, the current signage is inconsistent.

The *Springfield Area Transportation Study-Bicycle and Pedestrian Plan* (August 2012) identified opportunities to provide sidewalk on 11th Street between Ernest Hemingway Drive and Toronto Road. In addition, sidewalk was recommended along Ernest Hemingway Drive and Edgar Lee Masters Drive in order to provide connectivity to the UIS-LLCC Trail. In addition to these recommendations, opportunities to enhance on-campus connectivity and provide more intuitive pedestrian routes were identified through the master planning process.



Photo of cyclist on Vachel Lindsay Drive approaching the UIS campus, Bike lanes are not currently provided on Vachel Lindsay Drive



Photo of bicycle parking outside Founders Residence Hall

Photos courtesy of Kimley-Horn

Bicycle

In the vicinity of the UIS campus, bike lanes are provided along 11th Street, University Drive, Taylor Street, and Toronto Road. A multi-use trail, known as the UIS-LLCC Trail is also provided through the UIS campus; however, the trail terminates at University Drive with limited connectivity to the adjacent community.

The Springfield Bicycle Club, in partnership with the League of Illinois Bicyclists have identified the comfortability of on-street bicycle routes serving the campus as follows:

- 11th Street: High Comfort
- Taylor Street: Moderate Comfort
- Toronto Road: Moderate Comfort

A bicycle lane is provided on Ernest Hemingway Drive; however, the striping and signage is limited. This bicycle lane does not appear to be maintained. Bicycle lanes are not provided on Edgar Lee Masters Drive or Eliza Farnham Drive. During field observations, cyclists were observed using active traffic lanes or paved shoulders.

Bike parking is currently provided in key locations on campus, including student residence halls.

The University currently offers 20 bikes available for student use, free of charge. In partnership with the City of Springfield, Downtown Springfield, Inc., Springfield Bicycle Club, and the Springfield Park District, a coalition has been formed to expand the bike share program to a formal network of bike sharing stations throughout the community.

TRANSIT

UIS campus is served by public transportation options, including a variety of options provided by the University and three routes operated by Sangamon Mass Transit District (SMTD).

University Transportation

The University offers the following transportation options via a shuttle or through an agreement with Gracious Cab Co.

- **SHOPPING ACCESS:** Shuttle service to key shopping destinations in Springfield. The shuttle provides hourly round trip service from Founders Residence Hall and the Residence

Life Office to key destinations from 12:00PM to 5:00PM on Sundays, and from 6:00PM to 10:00PM on Wednesdays.

- **AMTRAK ACCESS:** Free transportation between campus and the Springfield Amtrak Station is provided on select dates during peak travel periods (e.g., holidays, academic breaks, and end of semester).
- **AIRPORT ACCESS:** Transportation between campus and the Abraham Lincoln Capital Airport is available during move-in and move-out weeks. Transportation is scheduled through the Office of International Student Services.
- **MEDICAL ACCESS:** Transportation to and from Urgent Care providers for non-emergency incidences is also available.

Sangamon Mass Transit District (SMTD)

Sangamon Mass Transit District (SMTD) operates three routes with regular service to the UIS campus. These routes are depicted in Exhibit 4. A summary of the existing routes is provided below.

- **ROUTE 11: SOUTH GRAND / UIS / LLCC** provides weekday and Saturday service between downtown Springfield and the UIS campus. Service is also provided to Lincoln Land Community College (LLCC). In the vicinity of UIS, Route 11 travels along Taylor Avenue/University Drive with multiple stops on campus, including the Student Union and various stops along Wright Drive and Eliza Farnham Drive. Weekday service is provided every 30 minutes between 6:00AM and 5:00PM. Saturday service is provided hourly between 6:00AM and 5:00PM.
- **ROUTE 15: UIS / PRAIRIE CROSSING** provides direct access between the UIS campus to the west side of Springfield without traveling through downtown. Route 15 provides a connection to the Junction Circle Transfer Point. In the vicinity of the UIS campus, inbound Route 15 travels northbound on Shepherd Road to Richard Wright Drive and Eliza Farnham Drive; outbound service travels on Ernest Hemingway Drive and northbound on 11th Street. Service is provided hourly, Monday through Saturday.
- **ROUTE 905: NIGHT SERVICES UIS / LLCC** operates from 5:45PM to 10:45PM on weekdays. Route 905 provides service between the downtown Transfer Center (11th Street/Adams Street) and LLC, with multiple stops on the UIS campus.

Transit shelters are provided for some SMTD stops on the UIS campus; however, most of the stops are designated by a flag sign only. In some cases, continuous sidewalk is provided to the transit stop; however, some stops are accessible from the street only.

A summary of total ridership data for each route serving the UIS campus is presented in Table 5; the data reflects total ridership for the full route. The most recent monthly ridership data, available for November 2018, is provided along with ridership data for November 2017 for comparison. SMTD does not currently have boarding and alighting data available for transit stops. SMTD recently instituted automated passenger counters which will provide future boarding and alighting data; however, this information is not currently available.

As shown, ridership levels on Route 15 and Route 905 were lower in November 2018 as compared to the same period in the previous year; Route 15 experienced an approximately 10 percent decline in ridership and Route 905 experienced an approximately 34 percent decline in ridership. This trend in overall ridership is also evident in a review of annual ridership data as summarized in Table 6.

According to SMTD, the overall decline in ridership may be attributable to the decrease in international student enrollment. To address changes to transit ridership, SMTD has modified the routes serving the UIS campus. Route 11 continues to provide service to downtown Springfield. Historically Route 15 also provided service to downtown Springfield; however, with recent service changes, Route 15 now provides transit access to students living on the west side of Springfield. Route 11 now serves as the only route providing access between the UIS campus and downtown Springfield. In addition, Route 11 has extended service to LLCC. A review of evening service on Route 905 is currently underway; route changes are not anticipated.

SMTD recently installed a new data collection system on buses serving the UIS campus. Based on data available for April and May 2019, a summary of average month boarding and alighting data for existing campus transit stops is presented in Exhibit 5. As shown in this exhibit, transit stops near the Public Affairs Center and Student Union experience the highest demand. In contrast, a number of stops on campus are currently underutilized.

In addition to the SMTD fixed route service, Access Springfield provides transportation for persons with disabilities who are unable to use the fixed routes. Advanced registration is required to use Access Springfield.



*Photo of transit shelter outside Founders Residence Hall. Route 11 and Route 15 both stop at this shelter
Photos courtesy of Kimley-Horn*



Photo of two-lane cross-section with paved shoulder on the east side of campus, along Edgar Lee Masters Drive/Ring Road

Table 5: SMTD Ridership Data - Monthly

ROUTE	TOTAL RIDERSHIP PER MONTH		
	NOVEMBER 2018	NOVEMBER 2017	PERCENT CHANGE
Route 11	8,456	9,447	+10.5%
Route 15	10,124	11,252	-10.0%
Route 905	820	1,240	-33.9%

Source: Sangamon Mass Transit District (SMTD)

Table 6: SMTD Ridership Data - Annual

ROUTE	TOTAL RIDERSHIP PER YEAR		
	FY2017	FY2016	PERCENT CHANGE
Route 11	93,576	103,368	-9.5%
Route 15	118,611	146,842	-19.2%
Route 905	11,153	21,655	-48.5%

Source: Sangamon Mass Transit District (SMTD)



Existing Multi-Modal Transportation Network










Exhibit 4: Existing Multi-Modal Transportation Network



Graphic courtesy of Kimley-Horn.



MULTI-MODAL TRANSPORTATION KEY

-  Pedestrian/Vehicle Conflicts
-  Bicycle Lane
-  Multi-Use Path
-  Transit Route 11 (SMTD Bus)
-  Transit Route 15 (SMTD Bus)
-  Transit Route 905 (SMTD Bus)
-  Transit Shelter
-  University Gateway
-  Prairie Restoration



Existing Multi-Modal Transportation Network

Exhibit 5: Average Monthly Transit Ridership



Graphic courtesy of Kimley-Horn.



AVERAGE MONTHLY RIDERSHIP KEY

- Transit Route 11 (SMTD Bus)
- Transit Route 15 (SMTD Bus)
- Transit Route 905 (SMTD Bus)
- Transit Shelter (no stop)
- Total Boardings/Alightings less than or equal to 5
- Alightings (Monthly)*
- Boardings (Monthly)*
- Prairie Restoration

**Reflects average of April and May 2019 data provided by SMTD.*



Physical Systems: Pedestrian Circulation

Pedestrian Circulation



Graphics courtesy of Massie Massie + Associates.



PEDESTRIAN CIRCULATION KEY

- Multi-Use Path
- Primary Pedestrian Path
- Secondary Pedestrian Path
- Tertiary Pedestrian Path
- Outdoor Gathering Area
- Prairie Restoration

VEHICULAR ACCESS AND CIRCULATION

The external roadway network provides mobility between the UIS campus and the adjacent community. The recently completed extension of 11th Street enhances connectivity between the University and downtown Springfield. The street network surrounding the campus generally consists of two or four lanes with turn lanes provided at key intersections. The key intersections providing access to the University are under minor-leg stop-control with the exception of 11th Street/Ernest Hemingway Drive and University Drive/Shepherd Road which operate as all-way stop-controlled intersections.

Access to the UIS campus is provided via multiple intersections. A monument sign is provided at the 11th Street/Ernest Hemingway Drive access; however, alternate intersections may also serve as primary access points.

Within the campus, the scale of the street system is typically consistent with the context of the adjacent land uses. On the east side of campus, the street network is not intuitive with limited continuity and closed streets. Wayfinding signage is provided; however, navigating the campus street network may be confusing for visitors and new students.

PARKING

In order to evaluate existing campus parking conditions, occupancy counts were conducted on a typical weekday when classes were in session. The counts were conducted on Wednesday, November 14, 2018; the count date was selected as representative of typical conditions based on a review of the course schedule. Counts were conducted hourly, starting at 8:00AM with the last count beginning at 7:00PM.

A summary of the existing parking supply is highlighted in Exhibit 6. A total of approximately 3,910 spaces is currently provided on campus. The total parking supply includes reserved parking and accessible parking spaces. All students (full- and part-time), faculty, and staff are required to display a hangtag permit to park on campus. Employees and non-residential students with a valid permit may park in any lettered lot. Visitors and residential students are required to park in designated lots. Visitor parking is available in Lots A, B, C-North, D, I, and J; a permit is not required. Residential students must park in the lot designated for their housing location.

As documented on the University's website, all parking lots are within a typical one-quarter mile walk distance to key campus destinations, including University Hall Building (UHB), the Public Affairs Center (PAC), Brookens Building (BRK), and the Health & Sciences Building (HSB).

Parking Utilization

A summary of the parking utilization for the total campus is provided as Figure 3. This data indicates the peak hour of parking demand occurred during the 1:00PM to 2:00PM period. Overall, the parking utilization during the peak hour was approximately 34 percent of the total parking supply of 3,912 spaces (1,333 occupied spaces). Overall parking utilization was generally consistent between 10:00AM and 5:00PM, coinciding with the class schedule. After 5:00PM, parking utilization declined.

As shown in Exhibit 7, while the overall parking utilization was relatively low, some parking lots experienced high demand. Lot E and Lot G were more than 90 percent occupied between 9:00AM and 4:00PM. Based on the occupancy levels of Lot E and Lot G, visitors, students, faculty and staff likely experienced some frustration with the limited parking availability adjacent to key destination(s) such as the Public Affairs Center (PAC) (Lot E) and Student Union (Lot G). As a result, motorists may have been forced to park at an alternate lot.

The results of the parking occupancy counts demonstrate that the overall peak parking utilization was 34 percent. This observed occupancy is lower than the functional capacity (typically 85 to 95 percent) of the overall parking supply. A maximum parking occupancy of 85 to 95 percent is generally desirable in order to optimize the parking supply while also providing an appropriate cushion for circulation, turnover, and access. This occupancy also provides some cushion to accommodate routine events that may reduce the effective parking supply, such as snow cover, minor construction staging or maintenance work, and inefficiently parked vehicles, as well as providing some level of comfort and convenience for the driver that a parking space can be found with limited difficulty during periods of peak demand.

Figure 3: Summary of Parking Occupancy - Wednesday, November 14, 2018

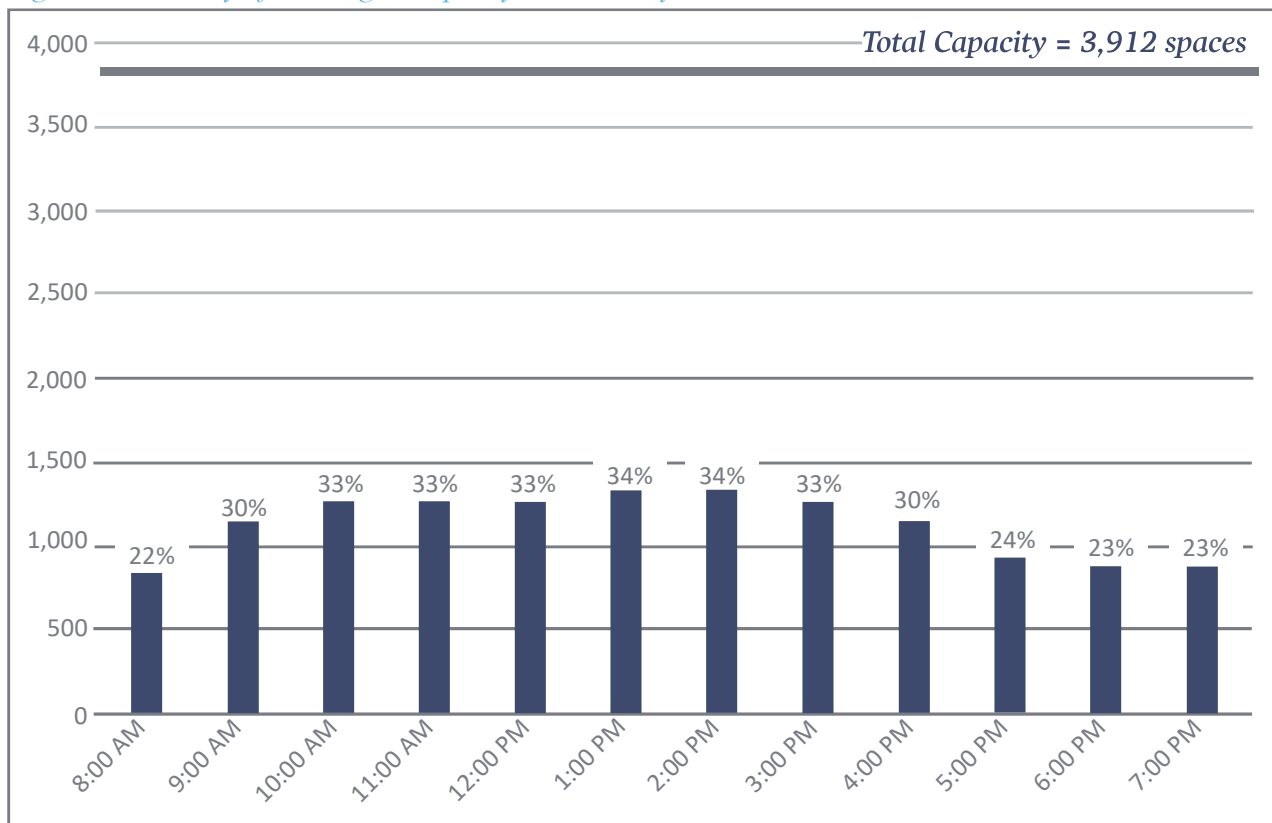


Table courtesy of Kimley-Horn.

While the overall peak parking utilization was 34 percent, there are individual lots which experience high utilization throughout a significant portion of the day. These lots are generally concentrated near the Public Affairs Center (PAC) and Student Union. While the high parking utilization may influence student, faculty, and staff satisfaction and create additional traffic on the street network as drivers circulate to find a parking space, the parking utilization also affects adjacent properties. The high utilization observed in some areas likely created spillover into adjacent lots, which may have resulted in reduced parking capacity for other students, faculty, and staff. Despite the high utilization in some lots, the overall peak occupancy level suggests the campus provides ample opportunity to remove existing parking to accommodate other capital improvements. With modifications to the parking supply, strategies to address parking demand during special event conditions should be identified.

EXISTING TRANSPORTATION CHALLENGES AND OPPORTUNITIES

Based on an initial assessment of existing vehicle, transit, bicycle, and pedestrian infrastructure and operational characteristics throughout the community, the following strengths, challenges and opportunities were identified. A summary of the key challenges and opportunities is presented in Table 7.



Physical Systems: Existing Parking Supply

Exhibit 6: Existing Parking Supply



Graphic courtesy of Kimley-Horn.



NUMBER OF TOTAL SPACES

Existing Parking Spaces

Standard	3,744
Reserved	35
ADA	133
Total Parking Supply	3,912

Ⓝ TOTAL NUMBER OF SPACES



PERCENT OCCUPIED






-  0 - 20%
-  21 - 40%
-  41 - 60%
-  61 - 80%
-  81 - 100%

Table 7: Summary of Multi-Modal Transportation Challenges and Opportunities

TRAVEL MODE	STRENGTHS	CHALLENGES
VEHICLE	<ul style="list-style-type: none"> Proximity to downtown Springfield Recent extension of 11th Street enhances connectivity to downtown Four-lane cross-section on 11th Street north of Ernest Hemingway Drive supports existing traffic volumes Transition to two-lane cross-section on 11th Street south of Ernest Hemingway Drive creates gateway to University 	<ul style="list-style-type: none"> Multiple access points to UIS Campus without clear, defined primary access Pavement conditions, including asphalt roadway and parking lot pavements with alligator cracking and potholes
TRANSIT	<ul style="list-style-type: none"> Three SMTD routes provide access to the UIS Campus Transit shelters provided at key stops on campus 	<ul style="list-style-type: none"> Lack of sidewalk at some stops limits accessibility Lack of amenities (e.g., shelters, lighting) at some stops may limit attractiveness of service
PEDESTRIAN AND BICYCLE	<ul style="list-style-type: none"> Existing bike lane on 11th Street supports cycling as a viable transportation option UIS-LLCC multi-use trail provides bicycle access through the campus Defined pedestrian network within central campus area Bicycle parking provided at key locations on campus, including student housing 	<ul style="list-style-type: none"> Pedestrian network is not intuitive Faded crosswalk striping at many intersections Bike lanes not provided along primary access routes, including Vachel Lindsay Drive, Edgar Lee Masters Drive, Richard Wright Drive, and Eliza Farnham Drive Sidewalk gaps along primary access routes, including Ernest Hemingway Drive, Vachel Lindsay Drive, Edgar Lee Masters Drive, Richard Wright Drive, and portions of Eliza Farnham Drive Limited pedestrian access to Toronto Road Existing conflicts between pedestrians/ vehicles, particularly during morning peak period, discourages pedestrian connectivity.

Table courtesy of Kimley-Horn.

OPPORTUNITIES

- Evaluate traffic volumes at key intersections in order to define primary and secondary campus access and associated improvements (e.g., geometric improvements, pedestrian and cyclist accommodations, wayfinding)
- Explore traffic calming solutions for pedestrian areas, including but not limited to student housing
- Identify crossing enhancements (e.g., striping, signage) in order to increase motorist visibility of pedestrians

- Review ADA accessibility of transit stops on campus
- Coordinate stops/eliminate underutilized stops to optimize existing transit service
- Coordinate targeted marketing of transit service to commuters
- Consider transit subsidies for eligible commuters to encourage use of alternate transportation
- Encourage use of transit for special events on campus through public outreach campaign
- Partner with SMTD to continue to monitor ridership and evaluate service enhancements

- Promote a walkable environment through installation of a continuous and intuitive pedestrian network
- Prioritize new sidewalk installation
- Enhance signage and striping for existing on-street bike lanes and multi-use trails
- Explore a bike share program with the City of Springfield to encourage increased commuting trips by biking
- Identify and prioritize crossing enhancements (e.g., striping, signage) in order to increase motorist visibility of pedestrians



Campus Landscape



Colonnade Plaza

SOILS

The native soils throughout the campus are primarily deep prairie loam, rich in nutrients and organic matter. Where site grading or construction has occurred, however, soils tend to be mixed with less organic subsoil materials, and the ground may be densely compacted.

Plant material adapted to the central Illinois climate will generally do well in these soils, although soil compaction and poor drainage, both surface and subsurface, will be limiting factors.

TOPOGRAPHY AND DRAINAGE

The terrain of the UIS campus is very flat with elevation change on the entire site not much more than 20 feet. The highest area is along a ridge that begins on the quadrangle near the colonnade and continues west to 11th Street.

The southern half of campus drains to the south and east into a drainageway that flows through Lincoln Land Community College to the southeast and into Lake Springfield. The north half of campus drains to the north and east through a drainageway and into Lake Springfield beyond West Lake Drive. There is one stormwater retention pond on campus north of Brookens Library.



North Campus Drainageway

DRAINAGE CONSIDERATIONS

Within the core area of the campus, nearly 50% of the surface area is covered with impermeable materials including rooftops, streets, parking lots, sidewalks, and other paved areas.

As the campus develops in the future with new and expanded facilities the area covered by hard surfaces will no-doubt increase, adding to the challenge of managing stormwater drainage. It should be noted that green roofs on two existing buildings and the permeable paver surface on the Student Union plaza have helped reduce the amount of runoff.

Currently, stormwater runoff is handled in several ways. In some areas, stormwater runs off hard surfaces into turf areas where it gradually percolates into the ground. Where there is an underlying tile system, the water can percolate more rapidly through the soil, into the tile where it will flow away from the area.



South Campus Drainage Ditch

Photos courtesy of Massie Massie + Associates.

In many locations, stormwater flows into swales or ditches designed to collect and divert it either to a detention area or directly into an established waterway. Drainage from building downspouts and inlets along driveways and parking lots flow into underground stormwater collection systems.

Drainage of stormwater on the UIS campus is a particular challenge because of the relatively flat topography. Drainage swales and ditches must be shallowly-sloped along much of their length. Some ditches on campus have so little slope that they serve as detention areas, where water flows essentially from displacement. Some of the swales/ditches are barriers and impediments to circulation on the campus and, if not well-maintained, can be unsightly.

Soil erosion is not usually a concern with such flat terrain, however, swales and ditches may be prone to sheet or gully erosion. Additionally, soils exposed during campus construction and farmland cultivation are subject erosion from both water and wind. Erosion control in these circumstances is imperative.

The Midwest is subject to frequent violent storms with heavy rainfall and strong winds. The natural landscape of the area offers little to break the winds or buffer the storms. These conditions affect the usability, comfort and enjoyment of the outdoor campus environment. Great numbers of evergreen and deciduous trees have been planted over the years to help mitigate these climatic conditions.

VEGETATION

Little natural vegetation exists on the campus. Woodland areas are located along the east edge of the campus, and along drainageways on the south and north sides. Those areas are naturally regenerated woodlands that contain exotic and, in some cases, invasive species.

The oldest trees on site are probably those near the historic Strawbridge-Shepherd House and locations of farmsteads no longer standing.

Trees within the developed area of the campus have been planted during the course of its development. Perhaps most noticeable are the rows of red maple through the campus. They line the circular ring road on the east side of campus and the newer straight roadways connecting to 11th Street on the west side of campus.

The campus also contains a large collection of other tree species scattered throughout the grounds. Generally, the trees are attractive and quite well maintained. Although their maintenance seems to be well in hand now, as the trees age and begin to decline from age or other factors, more intense maintenance will likely be needed. Future budgets should reflect an increasing cost of care and eventual replacement of trees.

A variety of shrubs, groundcover, and flowers are present throughout campus but are most prominent near buildings in the central campus area. Plants are also clustered on steep slopes, in built-in planters, and within openings in the sidewalks. Modest use of shrubs and plant beds is logical on campus in order to control the intensive maintenance required. Another consideration in limiting the use of shrubs is the potential safety and security concern they sometimes pose by their low, dense growth.

Lawns on campus can be classified into three categories, 1) campus lawns around the structures and parking areas that are mowed on a regular basis, 2) campus lawns primarily in perimeter areas and along roadways that are mowed less frequently, and 3) athletic fields with sport turf that is carefully maintained. Artificial turf is currently used only on the infield of the primary baseball field.

In addition to maintenance of the plants and turf, the grounds staff clears leaves in the fall and removes snow from the network of sidewalks, roads, and parking areas. Salt for deicing is used for sidewalks where there are steps and ramps and at building entrances where the sun does not reach.

A 4-acre prairie plot west of the Strawbridge-Shepherd House is used for study of prairie flora and fauna. Its maintenance involves prescribed burns, typically every two years. South of the prairie plot is a historic hedgerow that was likely planted in the 1930s when it was a common practice by farmers to prevent wind erosion. A small tree nursery is also located in this area near the university maintenance/storage facility. Also, in the area, a kitchen garden has been developed as a demonstration for students.

CAMPUS ENTRANCES

The campus street plan for the early University had a circular form. To provide access to campus, Shepherd Road was modified to form the semi-circular drive around the east and north side of campus. That initial roadway has evolved over the years as the campus plan changed to a rectangular form and circulation was adapted to accommodate new construction.

The current circulation system is somewhat confusing for motorists accessing the campus.

To explain the confusion, there are five vehicular access points to the campus. The principal entrance to the campus is at the intersection of 11th Street and Ernest Hemingway Drive. Here, a large landscaped berm is encircled by a low retaining wall on which the UIS name is mounted at ground-level. The other four entrances have wayfinding signs ahead of the intersections and street name signs at the intersection. Within campus, a wayfinding system and street name signs are used.

CAMPUS WAYFINDING

Several weaknesses of the way-finding signage were mentioned during input sessions. The names of the streets are long and difficult to recall. Some wayfinding signs are lengthy with multiple directions that are difficult to read/comprehend while driving. Within campus, the pedestrian orientation and wayfinding system is generally good. However, several buildings have entrances oriented in various directions, making positioning and visibility of signage difficult. Some buildings have no entrance signs. These matters create some confusion for those not already familiar with the campus.

OUTDOOR GATHERING AND ACTIVITY AREAS

The Colonnade Plaza with its jet fountains is a focal point on campus. It is centered between buildings on the north end of the quadrangle and slightly raised to be visible. Sculptures, some traditional and others contemporary, are positioned along roadways within the campus.

Several outdoor gathering areas are located within the campus. Small terraces at the entrances to many of the classroom buildings provide space for gathering, relaxing and socializing. On the north and south sides of the new Student Union, outdoor plazas offer fire bowls and movable tables and chairs for casual use or special events. The Colonnade Plaza serves as a gathering area for both Brookens Building (BRK) and the Public Affairs



University Drive near baseball field



Historic Strawbridge-Shepherd House Farmstead



*Tree windbreak along E.L. Masters Drive (circular ring road)
Photos courtesy of Massie Massie + Associates.*



Plant collection at Brookens Library



Prairie Plot - South Campus



E. Hemingway Dr. approach to Campus

Photos courtesy of Massie Massie + Associates.

Center (PAC). Nearby is a lower terrace that is accessed from the lower concourse of Brookens/PAC. Within the east campus cluster of buildings is another courtyard with a tiered design. The residence halls have small outdoor sitting areas, terraces and courtyards.

Small garden areas are found on the north side of campus. Near the Colonnade is a statue of young Lincoln, a small succulent garden, and a Koi Pond. Around the detention pond are several benches, planting beds, and a Shakespeare Garden. The elements are interconnected with sidewalks but appear to be little used as their locations are remote and scattered.

LIGHTING AND SITE FURNISHINGS

UIS campus is generally well-lit for the usability, safety and security of all. Sidewalks, roadways and parking areas are well illuminated. Some accent lighting is used at the main campus entrance and the central Colonnade Plaza. The only sports fields currently lighted are the main soccer field and a softball field in the REC park.

Over the years various styles of lights have been used. Several are still in evidence, although the University is working toward standardizing the fixtures. Recent site lighting and parking lights are LED. The older lights will likely be converted to LED in the future as fixtures are upgraded or replaced.

The new standard municipal street lights were installed along 11th Street. Street lighting along Shepherd Road to the south are older-style fixtures mounted on wood utility transmission poles. Outdoor site furniture also varies in style throughout the campus, reflecting various phases of campus development. One particular item, trash receptacles, have been standardized with a concrete product. The units are durable and relatively easy to maintain according to grounds staff.

VIEWS AND VISTAS

The UIS campus is situated near two interstate highways, the City of Springfield and Lake Springfield, yet nothing of the campus can be seen from these locations. Until the recent completion of 11th Street, the only public views of the campus were from Shepherd Road, the rural black-top lined with farm fields.



Statue of Young Lincoln

The 11th Street linkage greatly improves access to campus, but views along the way are intermittent and screened especially in the summer when crops are high. When not grown-up with crops, the flat fields in the foreground afford the sense of the campus as an “island” in an open sea according to many on campus. The three tall buildings near the center of campus rise above the lower buildings that surround it, aiding in the volcanic island appearance. The trees around the university buildings contribute to the image. Some sense that the visual isolation of the campus contributes to a sense of separation between the university and the town.

Trees along Shepherd Road to the south and the woodlands along the drainageways serve, somewhat, to visually connect the campus image with surrounding Lake Springfield areas.



Student Union Plaza

Within the campus, the shapes of buildings and their arrangement often obstruct longer vistas or opportunities to focus views. Such use of space can enhance the campus experience and aid visitors with wayfinding. The main quadrangle with its colonnade is the strongest space.

Some of the campus buildings are positioned so that the principal sidewalks and driveways approach through the service side of the structure.

This makes for an unattractive experience and for difficulty finding a public entrance. Several buildings, particularly the earliest, were designed with no major point of entry, creating confusion particularly for first time visitors.

The large surface parking lots on the north side of campus were developed early, when the campus was more commuter oriented. The great expanses of asphalt have few shade trees, planting islands, or other amenities. Stormwater runs off from these impermeable surfaces and solar heat gain from surfaces are environmental concerns.

As for utilities at the site, overhead transmission lines extend along Shepherd Road and north through campus, running just to the east of central campus buildings. Service lines within the campus are buried and not visible.

Several connection stations and transformers, however, are at ground level throughout campus and are very noticeable. Additionally, several service areas and equipment are more visible than need be.



Sidewalks and bike lanes ending at Campus
Photos courtesy of Massie Massie + Associates.

Generally, the grounds provide a nice visual environment for the students and staff without being too dense or cluttered. Too much planting can become a safety concern for creating dark areas and blocking the visibility for security.

Dense plantings can also harbor more wildlife than desired on campus.

CAMPUS SPORTS AND RECREATION

Campus sports are concentrated in and around the new TRAC building on the southwest side of campus. Inside the building are training facilities and offices. The primary soccer field, which is lighted, is directly east of TRAC.

The stadium has bleachers and a building for food concession, restrooms and locker rooms. Practice fields are located east of the stadium and south of University Drive.

Also south of University Drive is the baseball field which has an artificial turf infield. The cross-country team trains on a path along the east edge of campus through the woods and around the university's agriculture fields. Recreational facilities throughout the campus are used by students and faculty.

1. Basketball court and open field east of Kiwanis Stadium
2. Recreational area (REC Park) across Vachel Lindsay Drive from the residence halls and campus apartments. The park has a lighted ball field, putt-putt golf, basketball, sand volleyball, etc.
3. Tennis courts in the East campus residence area
4. Golf driving range in the southeast corner of campus
5. Hiking and running trail through East campus
6. Hiking and bicycling trail described above
7. Indoor recreation in TRAC

The large soccer field areas on the east and west sides of campus are leased to outside organizations. The YMCA runs the youth fields east of University Drive. The Springfield Area Soccer Association (SASA) operates additional fields on the west side of campus, west of 11th Street.

The UIS softball complex used by many community teams is also west of 11th Street. The fields are managed by the Land of Lincoln Junior Olympic Softball.



Lights and site furnishings at PAC



Lights and site furnishings at Brookens Building

Photos courtesy of Massie Massie + Associates.








Topography & Drainage



Graphics courtesy of Massie Massie + Associates.



MAP KEY

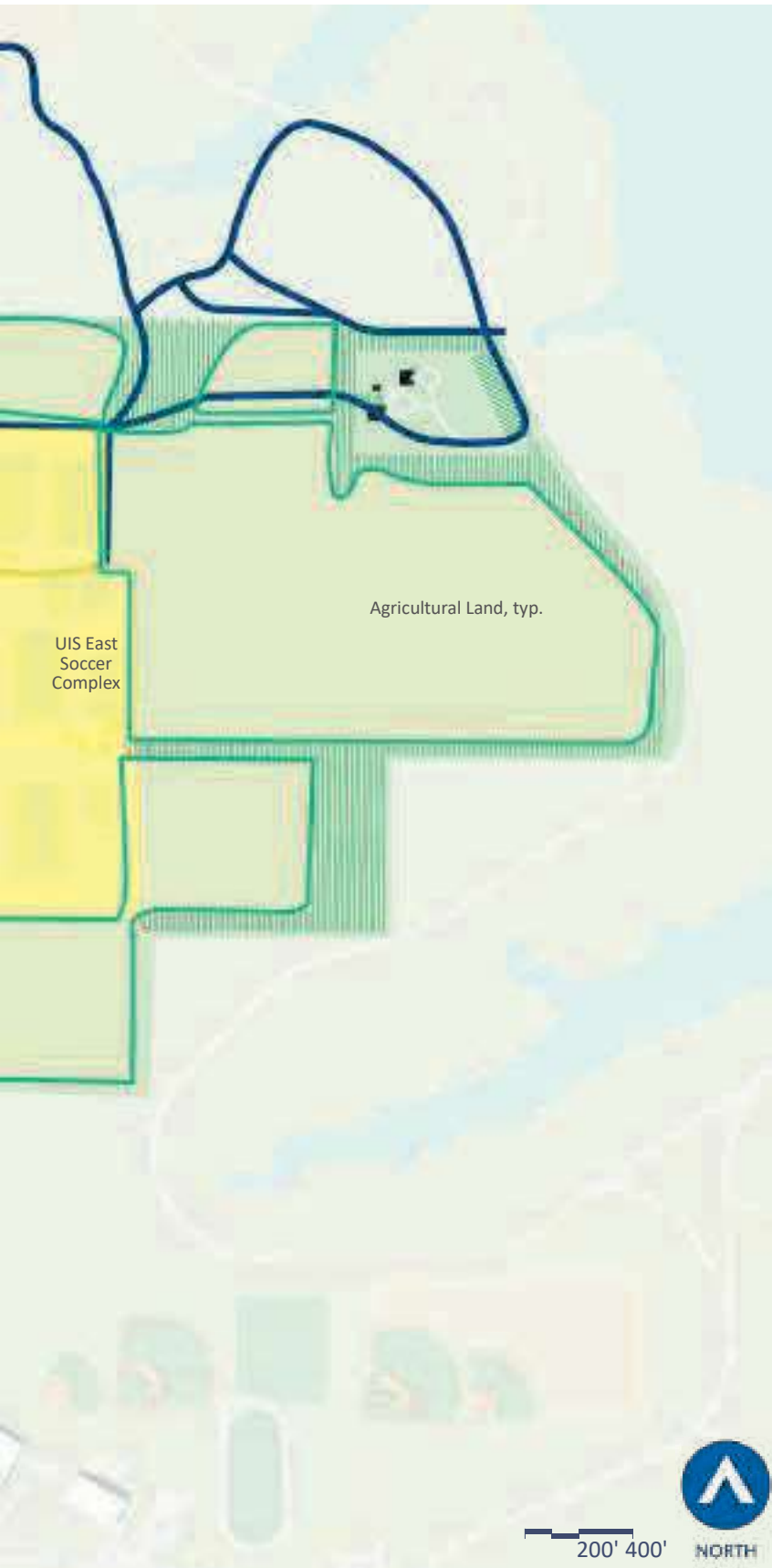
-  North Watershed Drainage Swales
-  Southwest Watershed Drainage Swales
-  Southeast Watershed Drainage Swales
-  Slope to Depression (Low Area)
-  Prairie Restoration



Campus Vegetation, Sports & Recreation



Graphics courtesy of Massie Massie + Associates.



MAP KEY

-  Sports or Recreation Field/Court
-  Disk Golf Course
-  Cross Country Trail
-  Agricultural Land
-  Mowed Turf
-  Prairie Restoration
-  Woodland
-  Tree-lined Streets



Brookens Library from north sidewalk to PAC



Central Campus from North Parking Area D



Kiwanis Stadium next to TRAC Building

Photos courtesy of Massie Massie + Associates.

ANALYSIS AND GENERAL RECOMMENDATIONS

The following points summarize the major concerns and recommendations gleaned from three sources, 1) input sessions with UIS administration and faculty organized by the Lawrence Group, 2) a one-on-one meeting with Brian Beckerman, manager of the UIS grounds, and 3) professional observation and opinions from the Massie Massie + Associates office.

ORIENTATION

Access to and wayfinding within the UIS campus is quite confusing for those unfamiliar with the campus. Entrances to the campus are from 11th Street on the west or Shepherd Road on the south (see section 8, Campus Identification, recommendations enhance campus entrances). In the perimeter parking lots on the north side of campus, it is unclear where to park for the closest access to a destination. The lots are sprawling and there is no pedestrian routing into the campus. Once on campus, locating buildings and offices is often difficult due in part to difficulty in wayfinding signage and identification of building entrances.

SENSE OF ISOLATION

A perception voiced in several input sessions was that the campus seemed very separated from the community, that it was “an island surrounded by corn fields”. This sense comes from several factors, perhaps the greatest being the lack of nearby urban development such as restaurants, grocery stores, shops, and housing.

Along the 11th Street corridor, nearly a mile of undeveloped land separates the campus from urban Springfield to the north. Along the Shepherd Road/Toronto Road access, little development exists along the two miles leading to several commercial establishments at the I-55 interchange.

The lack of direct and contiguous pedestrian and bicycle connections through campus and to areas beyond contribute to the feeling of isolation.

SITE DRAINAGE AND WATERSHED STEWARDSHIP

Stormwater drainage of the campus and its effect on nearby Lake Springfield are concerns. Runoff from hard surfaces (rooftops, sidewalks, streets and parking lots) is



Practice soccer field next to Kiwanis Stadium



Basketball Court at REC Park



Basketball Court at REC Park

Photos courtesy of Massie Massie + Associates.

primarily handled within open swales or ditches and in underground storm sewer systems. Ditches are generally built wide to collect and detain large storm events. Water then gradually flows through the system into Lake Springfield. The flow-line grades are shallow and, in several locations, water collects but cannot flow.

In some locations, pumps are used to keep the water moving. A power outage at a crucial time could result in localized flooding. Drainage through the ditches, storm sewer outlets, and directly off perimeter lands contain pollutants (oils and salt from roads and parking areas, fertilizer and herbicides from lawns and farm fields, and debris and spills from human use). No measures are in place to filter, buffer, treat or contain pollution.

CLIMATIC IMPACTS

A concern expressed by many is the severe climatic conditions on campus. Cold temperatures, wind, and driving precipitation make walking between buildings unpleasant. For many, climate factors limit the times that outdoor activities can be enjoyed. This concern has been addressed throughout campus by planting trees for windbreaks which have helped moderate the wind and provide shade.

AESTHETICS

The current campus environment has a mixture of aesthetics; it seems to have no unifying visual theme. From one area of campus to another and from one building to another, there is little continuity and sometimes great disparity. Varying throughout campus are the designs and materials used for pavements, lighting, site furnishings, trees, other plant materials. Particularly noticeable is the contrast of the acute angles of the original campus area with the later grid system. Some areas of campus are overly-developed and have a cluttered appearance while others are stark.

OUTDOOR GATHERING AND ACTIVITY AREAS

Several outdoor gathering and activity areas exist on campus, though many are little-used. The two principal outdoor areas are the Colonnade Plaza which is primarily used for formal events and ceremonies, and the terrace at the new Student Union. It is hoped that plaza will attract users year-around with its fire bowls, movable tables and chairs, and perimeter seating. Both areas, however, are quite open and exposed to sometimes-adverse weather.

The sunken courtyard at the Public Affairs Center (PAC) is protected from wind but has no campus view and no shade. The courtyard within the East Campus seems to have limited use and may need ADA access. Small gathering areas at the entrances to classroom buildings and outdoor facilities near residential areas seem to be used. The Shakespeare Garden and particularly the pond areas are being sullied by Canadian geese, making them unattractive for use and requiring extraordinary maintenance measures. Some of the elements in this area are not ADA accessible.

SPORTS AND RECREATION

Outdoor sports and recreation are a significant part of the UIS program. A variety of facilities are available on campus. The principal soccer field is considered the best-developed of the sports fields, with its full-service stadium. Farther south and across University Drive are additional sports and recreation facilities: practice soccer fields, the golf driving range, and the baseball field. Many of the facilities south of University Drive lack convenient restrooms and shelters. There is also no direct vehicular access and parking for these areas.

The new REC Park near the west student resident area provides a variety of facilities (sand volleyball, basketball, softball, and miniature golf). It is now somewhat exposed to climatic conditions.

On the north side of campus is a disk golf course located in a park-like environment. The cross-county trail winds along the east edge of the campus land along farm fields and through woodlands. The soccer fields on the east side of campus are maintained by UIS and managed by the YMCA. The soccer fields on the west side of campus are both maintained and managed by SASA.

CAMPUS IDENTIFICATION

To further identify the campus and develop its image, stronger visual identification within the campus is needed. Well-developed entrances can make a strong statement about a campus. Currently, only the Ernest Hemingway Drive entrance has a developed feature, a planted berm and sign.

The other four entrances to UIS have little distinction. This seems especially necessary with the confusion of motorists approaching campus from Shepherd Road. Within the campus there are few strong visual elements. The Colonnade and Fountain is probably the strongest, serving as a focal feature within the quadrangle area.

SECURITY AND SAFETY

Security and safety seem to have been well-considered in the more recent campus development projects. Good lighting for evening use, lines of sight, call boxes, and access for emergency vehicles have been provided. The older areas of campus seem to be most problematic for emergency access and overall security.



*Students walking through campus in the fall.
Photo courtesy of www.uis.edu.*



Photo courtesy of www.uis.edu