

Building Name: Science Building
Original Construction Date: 1956
Existing Programming: General Classrooms
 Chemistry
 English Offices
 Student Activities
 Student Club Offices
 Student Health Services
 EMT Program
 Photography Lab

General Building Systems

Roof: Ballasted built up roofing at original wing in major disrepair.
Structure: Reinforced concrete, concrete deck, slab on grade with perimeter crawlspace
Façade: Masonry and curtain wall system with metal panel and single pane glazing. Concrete entry canopies are deteriorating.

Hazardous Materials

Requires Investigation

Renovations

East Wing addition, 1985
 Boiler Replacement, 2006
 Minor interior partition walls

Accessibility

This building, as well as the addition, was erected prior to the Americans with Disabilities Act of 1990, therefore, many areas of non-compliance were observed. Refer to section 1.3 of this report for examples of non-compliance.

Persistent Problems

Stairwell exterior door deterioration due to winter salt usage allowing water infiltration
 Roof leaks in laboratory and has damaged casework
 Little to no cooling, window units used intermittently
 The following are in reference to the 1985 addition:
 Difficult to heat uniformly
 Basement not accessible
 Concrete spalling at entrance overhangs

General Finishes

Floors: The floors are mostly VAT throughout the building, with carpet occurring at the second floor corridor and at the office areas. Most of the flooring is dated, but in good condition. Stair treads are bare and in poor condition. Areas of exposed concrete are in generally poor condition.
Walls: The walls are painted concrete and are in generally good condition. Lockers in the second floor corridor are metal and appear to be in good repair.
Ceilings: The ceilings are a combination of suspended acoustical ceiling tile and exposed concrete. The suspended ceiling is showing some age in areas, but overall is in good condition. Exposed concrete is in good condition, but lends to poor acoustics.

Mechanical

Heating: The Science Building has two independent heating systems. A hot water system serves the original 1956 building and a closed loop water source heat pump systems serves the addition.

The boiler plant serving the original building has just been replaced and all new boilers circulating pumps, hot water piping and controls have been provided. Hot water is generated by two new high efficiency, condensing boilers. The Science Building boilers also serve the Student Services building's hot water heating system.

The Science Building's addition is served by a closed loop water source heat pump system with space mounted terminal heat pump units serving most all other spaces. Heat is supplied via to a single gas-fired, copper tube, hot water boilers (Raypack) located in the addition's basement mechanical room. The boilers and associated water circulation pumps appear to be in good condition. Some of the original heat pumps have been replaced due to failures. This is expected as the heat pump units are reaching the end of their normal life expectancy.

A small sectional cast iron, gas fired, steam boiler provides process steam for the Unit Operations Lab. The boiler is located within a non-rated service room in the lab that is not provided with adequate combustion air make-up. A relatively new gas-fired rooftop unit provides tempered make-up air to the west wing lab spaces.

Cooling: The terminal, water source, heat pump units provide for summer cooling in addition to winter heating. Excess heat from the water loop is rejected via a rooftop evaporative fluid cooler. The cooler appears to be in good condition.

Ventilation: The Science building's laboratory classrooms are equipped with fume hoods. Each fume hood is equipped with its own dedicated exhaust fans. Most of the over two dozen fume hood exhaust fans are located on the roof and appear to be original equipment and in poor condition. Fume hood make-up air is supplied by a variety of fans and fan coil units. Many of the Toilet rooms are exhausted via roof-mounted central exhaust fans.

HVAC Controls: The 1956 building's boilers are new and are equipped with direct digital (DDC) controls. The direct digital control system provide for local control access only as a central campus control network does not exist. The 1956 building's central hot water loop and terminal units are provided with pneumatic controls that reportedly provide very poor control of space temperatures. The building addition controls are electric with pneumatic actuation.

Plumbing

Domestic Water: two independent gas fired water heaters generate domestic hot water. A high efficiency, gas fired, condensing unit serves the original building and is located in the original buildings basement mechanical room. The unit was recently installed as part of the boiler room renovation project. A 90-gallon standard efficiency, gas fired, unit (Ruud) serves the addition and is located in the addition's basement mechanical room.

Sanitary: Plumbing fixtures are vitreous china with manually operated trim. Fixtures and trim appear to be in fair condition.

Storm: The building is served by system of roof drains and internal drainage pipes. All roof drains appeared to be functional, however, there are several areas where water ponds on the roof.

Fire Suppression: The original 1956 portion of the building is not provided with a sprinkler or standpipe system. The addition is equipped with a Class I wet-pipe, standpipe, system.

Electrical

Power Distribution: This building is fed from the 12.47KV site network distribution. The 12.47KV feeds an S&C switch, which serves a 225KVA transformer. This transformer steps the voltage down to 208Y/120V, 3Ø, 4W and enters the building. The building electric distribution consists of a Main Distribution Panel rated at 208Y/120V, 3Ø, 4W, with a 1200A Main bolted pressure switch. This panel feeds various panels that serve building lighting receptacle equipment and mechanical loads.

The overall condition of the building power distribution system appears serviceable and no problems have been reported. However some of the panels are older.

Lighting: The lighting consists of T-8 fluorescent luminaires. The foot-candle levels appear adequate for the tasks being performed.

Emergency Lighting: The emergency lighting consists of self-contained emergency battery lighting units.

Exit Lights: The existing exit lights have been retrofitted with energy saving L.E.D.'s and appear to be serviceable.

Fire Alarm: The fire alarm system consists of a point addressable Simplex 4100 Fire Alarm Control panel. The initiation devices consist of Manual Pull Stations, Smoke Detectors, and Heat Detectors. The notification devices consist of Horn/Strobe units and Strobe only units.

Clock System: The clock system consists of a Simplex Master Clock with an impulse generator. This system is in working condition and appears serviceable.

Telephone/Data: The telephone system enters the building with copper. The Data is provided over fiber-optic cabling from the Campus Data Center. The Fiber is routed to a Cisco Catalyst 3550 data switch and routed to clients via Cat 5 cabling.

Data cables located on the second floor are routed below the ceiling along the exterior of the corridor wall.

Recommendations

The location of this building within the campus core and the overall condition of the structure makes this building a candidate for total renovation versus removal. Architectural recommendations are as follows:

- Have the building audited for ADA compliance to determine areas of renovation priority
- Replace roof
- Repair spalled concrete at canopies

- Replace all storefront and glazing with thermally broken double pane units for better insulation
- Add dropped acoustical ceilings in teaching spaces with exposed structure to mediate acoustics
- Remove unused lockers
- Replace all outdated or damaged finishes
- Finish all stair treads in a flooring material

Mechanical recommendations are as follows:

- Provide campus central DDC system and tie building controls into campus network.

Electrical recommendations are as follows:

Power Distribution - It is recommended that older panels be replaced.

Lighting - It is recommended that occupancy sensors be provided.



Exterior at south façade



Southwest entry canopy



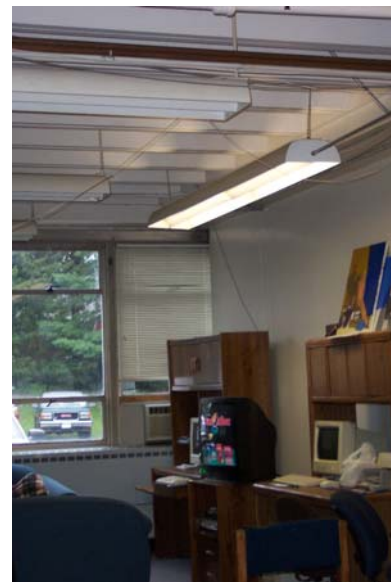
Ground floor corridor looking east



Door to east stair



Unit Operations Lab S109



Student Government S107

Building Name: Student Center
Original Construction Date: 1956
Existing Programming: Athletics Office
 Food Court / Cafeteria
 Faculty Student Association
 Gift Shop
 Fitness Center
 Gymnasiums
 Little Theatre
 Physical Education Office

General Building Systems

Roof: Ballasted built up roofing at original wing in major disrepair
Structure: Steel frame, reinforced concrete slabs, slab on grade with partial basement
Façade: Brick Veneer and curtain wall system with metal panel and single pane glazing

Hazardous Materials

99% Abatement in 1991 addressing visible and affected areas only. Hazardous material encapsulated in various construction.

Renovations

Gymnasium, lockers and fitness office addition, 1986
 Mechanical systems replacement, 1991
 Dining area addition, 1970

Accessibility

This building was erected/renovated prior to the Americans with Disabilities Act of 1990, therefore, many areas of non-compliance were observed. Refer to section 1.3 of this report for examples of non-compliance. This statement does not refer to the Ice Center.

Persistent Problems

Forward floor in the theatre is damp
 Staining at exterior south wall
 Moisture infiltration at perimeter of the roof especially at north entrance
 East gym bleachers are binding and are difficult to operate

General Finishes

Floors: The flooring in the Student Center ranged from excellent condition to poor condition, based on the type of space and date of installation. The terrazzo in the corridors appeared to be in good repair, showing wear as typical for the product's age. The VAT/VCT in the dining area appeared to be worn and in disrepair, especially along the heaving seams of the slab. The gymnasium floors have been well maintained and show no signs of damage, and many of the fitness spaces appear to have new flooring.
Walls: The walls are primarily painted concrete and are in generally good condition. Lockers in the locker rooms are metal and appear to be in good repair. The tiling in the locker rooms is also in good condition and the neutral colors prevent the space from feeling dated. The shower and bathroom partitions are showing some wear consistent with the type of use. The walls at the theater vestibule appear to have makeshift acoustical treatments that are deteriorating. The bleachers in the east gymnasium appear well

maintained, however the mechanical components of the frame are showing wear consistent to the system's age.

Ceilings: The ceilings are a combination of suspended acoustical ceiling tile, adhered acoustical ceiling tile, gypsum board and exposed structure. The ceilings show some age in areas, but are in overall good condition.

Mechanical

Heating: The Student Center complex is heated via a combination of hot water radiation and gas fired handling systems. The complex is served by two independent hot water boiler plants that serve building terminal radiation and unit heaters. One plant serves the original 1965 building and the 1970 dining hall addition. The second boiler plant serves the 1986 gymnasium addition. The 1986 addition is also served by a closed loop water source heat pump system.

All of the building's rooftop air-handling units are equipped with indirect gas fired heaters.

Cooling: All occupied areas of the building except for locker rooms and east gym are provided with summer cooling via packaged rooftop refrigerant based (DX) air handling units. The rooftop units serving the original 1956 building were replaced in 1991, but are now fifteen years old and have begun to show their age but reportedly are all functioning well. The 1986 building addition systems are original and in fair condition except for two rooftop units that were recently replaced and in excellent condition. The 1986 addition is also partially served by as closed loop water source heat pump system. The heat pump system's fluid cooler (Evapco) is located, at grade, outside the addition's mechanical room and appears to be in good condition.

Ventilation: Ventilation of occupied spaces is provided by the packaged rooftop air-handling units. Numerous rooftop exhaust fans serve toilet and locker rooms. The original 1956 building's locker rooms are supplied heated make-up air via two rooftop (Reznor), natural gas fired, and make-up air units.

HVAC Controls: HVAC system temperature controls within the complex are a mixture of direct digital DDC, electronic, pneumatic and packaged unit controls. The original 1956 building is served by a Johnson Metasys DDC system. The rooftop units are primarily standalone, packaged, systems with Johnson controls. The 1986 addition's heat pump system is an electric control system.

Plumbing

Domestic Water: Domestic hot water is generated in each of the building's two mechanical rooms. Domestic hot water for the 1980 addition is generated by the building's heating boilers via a plate-&-frame heat exchanger and a large storage tank.

Sanitary: Plumbing fixtures are vitreous china with manually operated trim. Fixtures and trim appear to be in good condition.

Storm: The building is served by system of roof drains and internal drainage pipes. All roof drains appeared to be functional. There is a fair amount of ponding on the 1956 building's flat roof.

Fire Suppression: The original 1956 building and 1970 and 1980 era additions are not provided with sprinkler or standpipe systems. The fire suppression system in the Food Service and Kitchen areas was installed/replaced in 2005.

Electrical

Power Distribution: This building is fed from the 12.47KV site network distribution. The 12.47KV feeds an S&C switch, which serves a 1500KVA transformer. This transformer steps the voltage down to 208Y/120V, 3Ø, 4W and enters the building. The building electric distribution consists of Main Distribution Switchgear rated at 208Y/120V, 3Ø, 4W, with a 2000A Main Switch Fuse Unit. This distribution feeds various panels that serve building lighting building receptacles, equipment, and mechanical loads.

The overall condition of the building power distribution system appears serviceable and no problems have been reported. It was noted that there were abandoned electrical switchboard and panels located in Electrical Room B04.

Lighting: The lighting consists of T-8 fluorescent luminaires and HID lights. The foot-candle levels appear adequate for the tasks being performed.

The overall condition of the luminaires appears adequate.

Emergency Lighting: The emergency lighting consists of newer self-contained emergency battery lighting units.

Exit Lights: The exit lights are energy saving L.E.D. type and appear to be serviceable.

Fire Alarm: The fire alarm system consists of a point addressable Simplex 4100 Fire Alarm Control panel. The initiation devices consist of Manual Pull Stations, Smoke Detectors, and Heat Detectors. The notification devices consist of Horn/Strobe units and Strobe only units.

Clock System: The clock system consists of a Simplex Master Clock with an impulse generator. This system is in working condition and appears serviceable.

Telephone/Data: The telephone system enters the building with copper. The Data is provided over fiber-optic cabling from the Campus Computer Center. The Fiber is routed to a data switch and routed to clients via Cat 5 cabling.

Recommendations

Architectural recommendations are as follows:

- Have the building audited for ADA compliance to determine areas of renovation priority
- Repair / reinforce flashing at the roof parapet to mitigate water migration through the wall
- Replace roof on original building
- Replace all storefront and glazing with thermally broken double pane units for better insulation
- Control moisture at theater slab
- Replace east gym bleachers
- Replace all outdated or damaged finishes

Mechanical recommendations are as follows:

- Provide campus central DDC system and tie building controls into campus network.

Electrical recommendations are as follows:

Power Distribution - It is recommended that the abandoned panels in Electrical Room B04 be demolished and removed from the facility, and any old panels still in service be replaced.

Lighting - It is recommended that occupancy sensors and/or central lighting control scheme be provided.



Dining SC108



Dining SC108



Lobby looking east



West Gym SC102



Theatre SC101



Vestibule at Theatre SC101

Building Name: Student Services Building

Original Construction Date: 1956

Existing Programming: General Classrooms
 ACCESS Center (Advising, Counseling and Career Exploration Services)
 Finance Office
 Financial Aid
 Registrar
 Safety and Security
 Student Accounts
 Public Service

General Building Systems

Roof: Modified Bitumen

Structure: Reinforced concrete frame, precast concrete deck, slab on grade with perimeter crawlspace

Façade: Brick veneer and curtain wall system with metal panel and single pane glazing

Hazardous Materials

Requires Investigation

Renovations

Roof replacement, 2002

Minor interior partition walls

Elevator added, 1980s

Accessibility

This building was erected prior to the Americans with Disabilities Act of 1990, therefore, many areas of non-compliance were observed. Refer to section 1.3 of this report for examples of non-compliance.

Persistent Problems

Difficult to heat uniformly

Little to no cooling

Exposed electrical panels in areas

Restrooms are unbalanced

General Finishes

Floors: The floors are mostly VAT throughout the building, with carpet occurring at the second floor corridor and at the office areas. Most of the flooring is dated, but in good condition. Stair treads are bare concrete and in poor condition.

Walls: The walls are painted concrete and are in generally good condition. Lockers in the second floor corridor are metal and appear to be in good repair.

Ceilings: The ceilings are a combination of suspended acoustical ceiling tile and exposed concrete. The suspended ceiling is showing some age in areas, but overall is in good condition.

Mechanical

Heating: The Student Services Building is provided with a hot water heating system that serves perimeter radiation. Hot water is provided from the nearby Science Building's boiler plant

via underground hot water piping. The Science Building's boiler plant and the associated underground piping system were installed in 2006.

Cooling: Summer cooling is provided via window air conditions.

Ventilation: The building is not provided with any form of positive ventilation except for toilet exhaust. A roof mounted gravity ventilator serves the building's corridors. The buildings operable windows are the primary source of ventilation for building occupied spaces.

HVAC Controls: The buildings temperature controls are the original pneumatic system and their functionality is most likely suspect due to the system's age. The system's air compressor is new and located in the first floor mechanical room.

Plumbing

Domestic Water: a single storage type, electric, water heater located in the first floor mechanical room generates domestic hot water. The heater appears to be in excellent shape. The system is not equipped with a recirculation pump so as to provide hot water to all fixtures in a reasonable time period.

Sanitary: Plumbing fixtures are vitreous china with manually operated trim. Fixtures and trim appear to be in fair condition.

Storm: The building is served by system of roof drains and internal drainage pipes. All roof drains appeared to be functional.

Fire Suppression: The building is not provided with a sprinkler or standpipe system.

Electrical

Power Distribution: This building is fed from the 12.47KV site network distribution. The 12.47KV feeds an S&C switch, which serves a 225KVA transformer. This transformer steps the voltage down to 208Y/120V, 3Ø, 4W and enters the building. The building electric distribution consists of a Main Distribution Panel rated at 208Y/120V, 3Ø, 4W, with a 400A Main Circuit Breaker. This panel feeds various panels that serve building lighting receptacle equipment and mechanical loads.

The overall condition of the building power distribution system appears serviceable and no problems have been reported. However some of the panels are older.

Lighting: The lighting consists of T-8 fluorescent luminaires. The foot-candle levels appear adequate for the tasks being performed.

Emergency Lighting: No emergency lighting was noted.

Exit Lights: The existing exit lights have been retrofitted with energy saving L.E.D.'s and appear to be serviceable.

Fire Alarm: The fire alarm system consists of a point addressable Simplex 4100 Fire Alarm Control panel. The initiation devices consist of Manual Pull Stations, Smoke Detectors, and Heat Detectors. The notification devices consist of Horn/Strobe units and Strobe only units.

Clock System: The clock system consists of a Simplex Master Clock with an impulse generator. This system is in working condition and appears serviceable.

Telephone/Data: The telephone system enters the building with copper. The Data is provided over fiber-optic cabling from the Campus Computer Center. The Fiber is routed to a data switch and routed to clients via Cat 6 cabling.

Recommendations

The location of this building within the campus core and the overall condition of the structure makes this building a candidate for total renovation versus removal. Architectural recommendations are as follows:

- Have the building audited for ADA compliance to determine areas of renovation priority
- Abate all hazardous materials
- Replace all storefront and glazing with thermally broken double pane units for better insulation
- Replace all outdated or damaged finishes
- Finish all stair treads in a flooring material

Mechanical recommendations are as follows:

- Replace building pneumatic controls to improve space comfort control within building.

Electrical recommendations are as follows:

Power Distribution - It is recommended that older panels be replaced.

Lighting - It is recommended that occupancy sensors be provided, to turn off lighting while it is not in use to save energy, and therefore, money.

Emergency Lighting - It is recommended that emergency lighting and associated foot-candle levels be verified. Provide visible indication of charge status for any existing emergency lights. Supplement with additional lighting where required.



Ground Floor Corridor, looking east



Registrar SS105



Column at Registrar SS105



Window at Second Floor Stair Landing



Second Floor Corridor, looking west



Classroom SS203