

State University of New York at Fredonia



FACILITIES MASTER PLAN
CAPITAL PLAN YEARS 2013-2023
Phase Two : Assessment of Conditions

FINAL PROOF SET
MAY 9, 2011

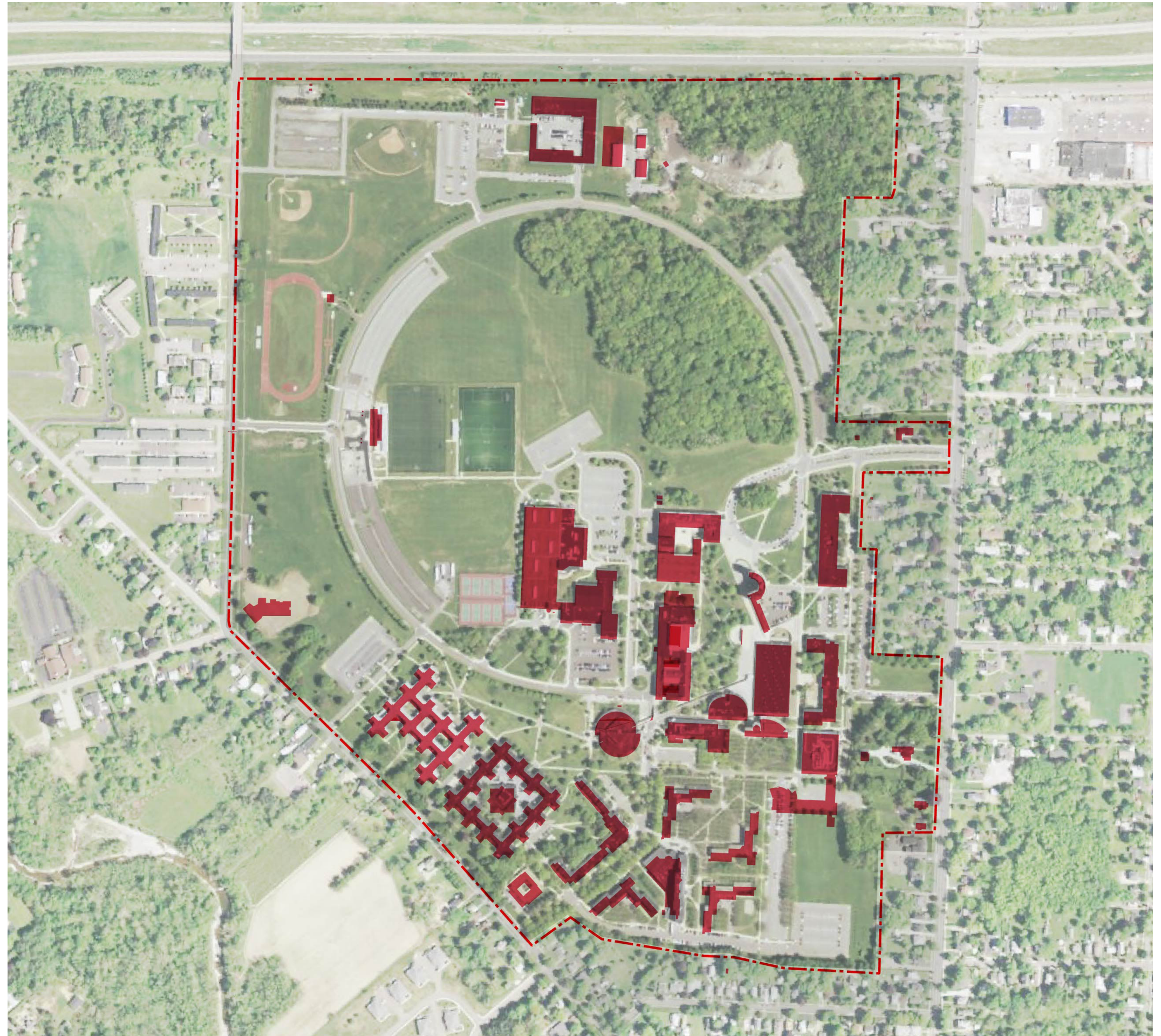
Prepared for:
STATE UNIVERSITY CONSTRUCTION FUND
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SUNY FREDONIA

Project No: 05823

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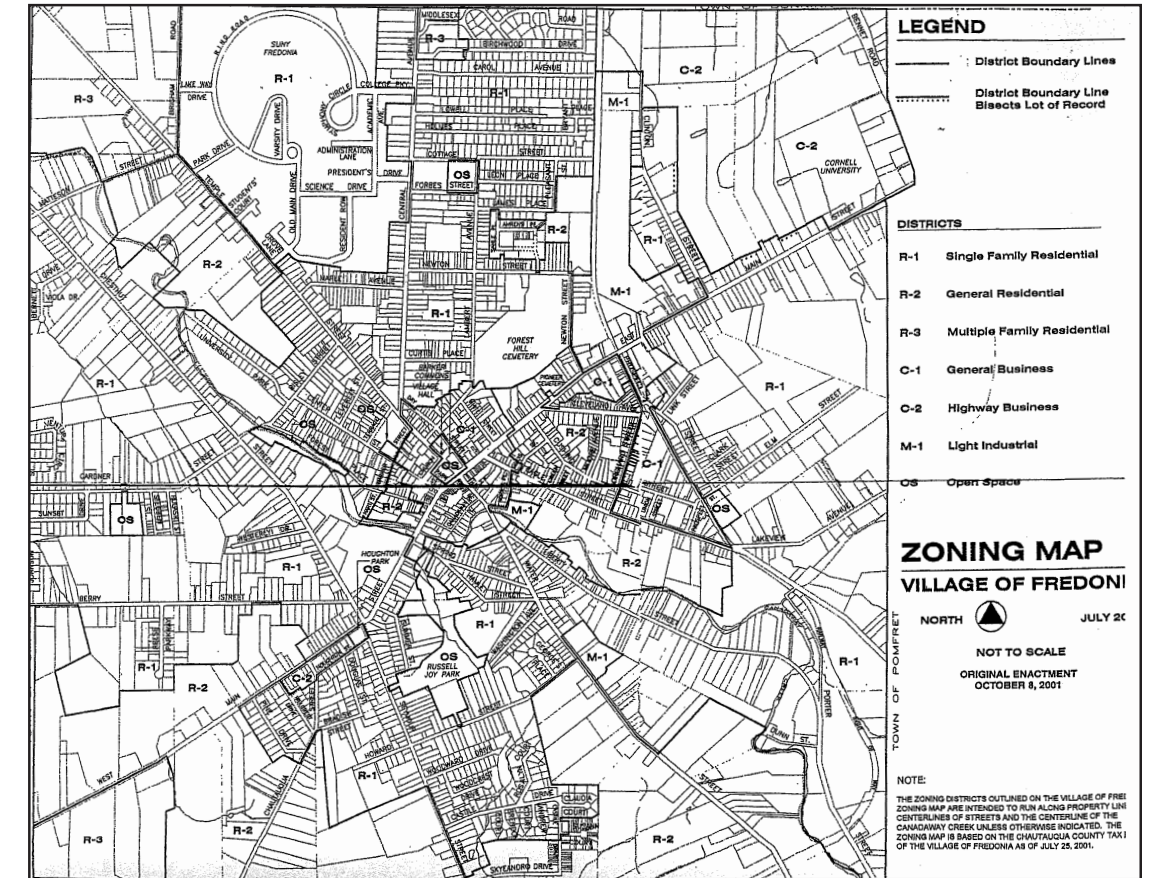
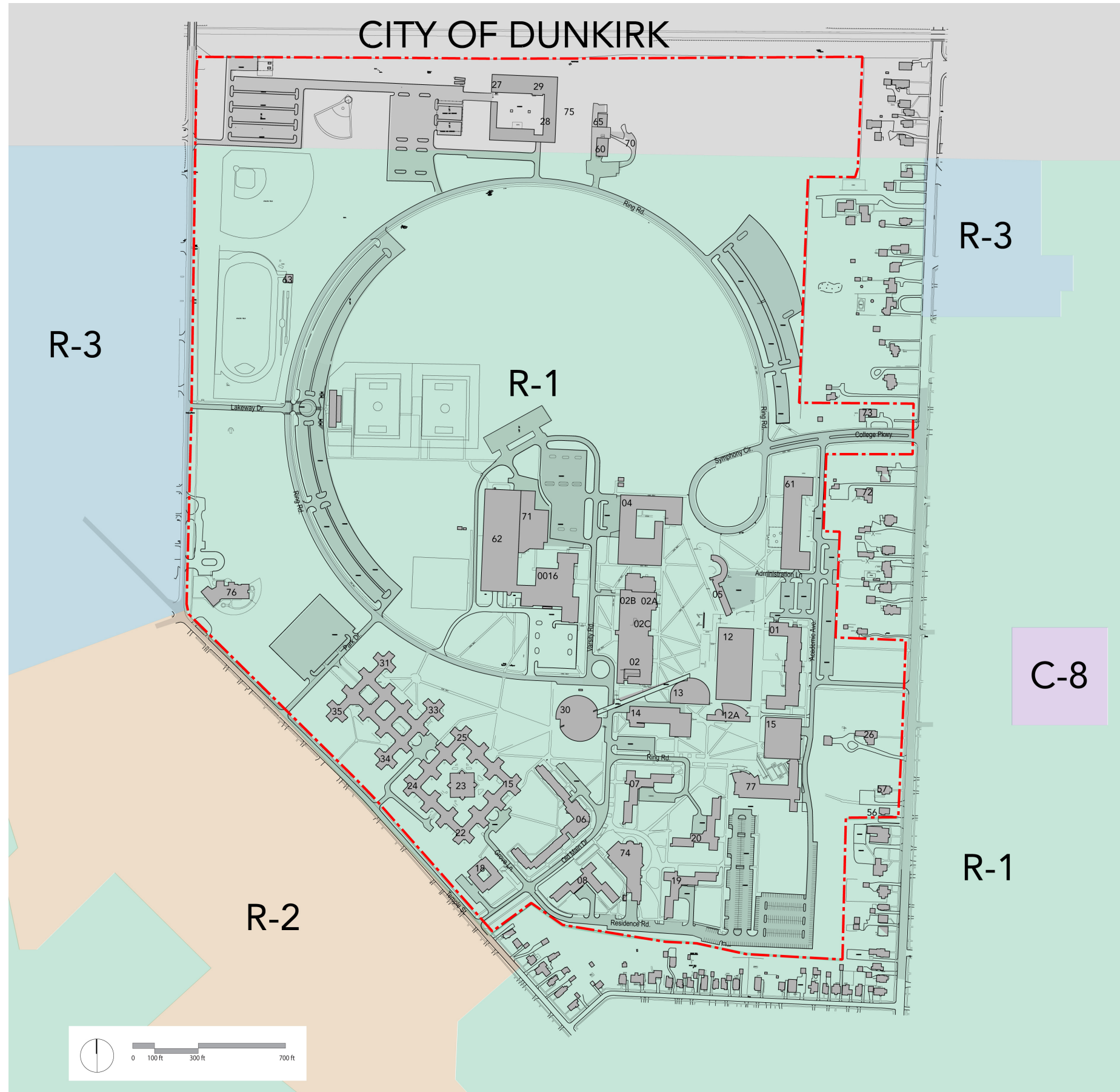


BLDG	NAME	CONST DT.	GSF
56	Admissions Annex	1910	1,963
07	Alumni Hall	1958	43,994
73	Alumni House	1932	4,031
04	Rockefeller Arts Center	1968	119,687
60	Butler	1967	4,080
76	Campus Children's Center	2010	14,271
12A	Carnahan Jackson	1991	43,866
27	Central Heating Plant	1967	11,828
19	Chautauqua Hall	1963	45,055
24	Disney Hall	1967	51,750
12	Daniel A. Reed Library	1968	80,861
16	Dods Hall	1963	82,591
25	Eisenhower Hall	1967	51,750
23	Erie Dining Hall	1967	23,881
57	Fenner House	1860	4,175
01	Fenton Hall	1953	72,759
29	Food Service	1967	13,474
72	Foundation House	1920	6,745
06	Gregory Hall	1951	72,940
21	Grissom Hall	1967	51,750
34	Hemingway Hall	1970	55,125
35	Hendrix Hall	1970	56,685
15	Houghton Hall	1968	73,981
63	HPE Storage	1983	896
31	Igoe Hall	1970	55,125
14	Jewett	1963	65,530
22	Kasling Hall	1967	51,750
18	Lograsso	1967	24,445
28	Maintenance	1967	26,419
02	Mason Hall	1961	12,760
02A	Mason Hall Annex	1961	12,760
02B	Mason Hall Addition	1972	50,500
02C	Mason Recital Hall	2004	23,191
05	Maytum Hall	1968	53,242
13	McEwen Hall	1968	50,894
08	McGinnies Hall	1960	45,063
20	Nixon Hall	1963	45,991
26	President Residence	1910	9,931
70	Salt Storage	2000	1,200
33	Schulz Hall	1970	55,125
77	Science and Technology Center	2012	91,962
62	Steele Hall (Field House)	1982	91,734
71	Steele Hall Natatorium	2002	91,734
65	Stockade Storage	1989	2,400
75	Storage Bldg (Campus Storage)	2007	5,000
61	Thompson Hall	1973	136,400
74	University Commons	2006	91,368
30	Williams Center	1970	90,380

Land Use

The organization of land use at SUNY Fredonia was largely shaped by the I.M. Pei and Partners Master Plan, implemented from 1966 to 1971. The campus is made up of several overlapping program zones, with athletic, residential, academic and administrative uses clustered together in close proximity to each other. These zones are concentrated in the southern portion of the campus, linked by a variety of styles of open spaces such as quads, groves, plazas and linear corridors. To the north is the iconic Ring Road of the I.M. Pei and Partners Master Plan, encircling a combination of open space and recreational/athletic fields and a dense natural grove of trees. Aside from the figural Ring Road, circulation and parking at SUNY Fredonia is secondary to buildings and open spaces. Campus circulation has frequent turns and interruptions, to allow campus structures and the relationships between them to remain unencumbered by roads and parking lots.

The campus is surrounded on three sides by residential neighborhoods, and is bordered at the north by the New York State Thruway. Though the Thruway is a major highway, main areas of campus activity are buffered from its view and noise by service areas and parking at the site's northern edge.



The official zoning map of the Village of Fredonia. Source: http://village.fredonia.ny.us/taxonomy_menu/8/16

- R-1 Single-Family Residential
- R-2 General Residential
- R-3 Multifamily Residential
- C-8 Open Space

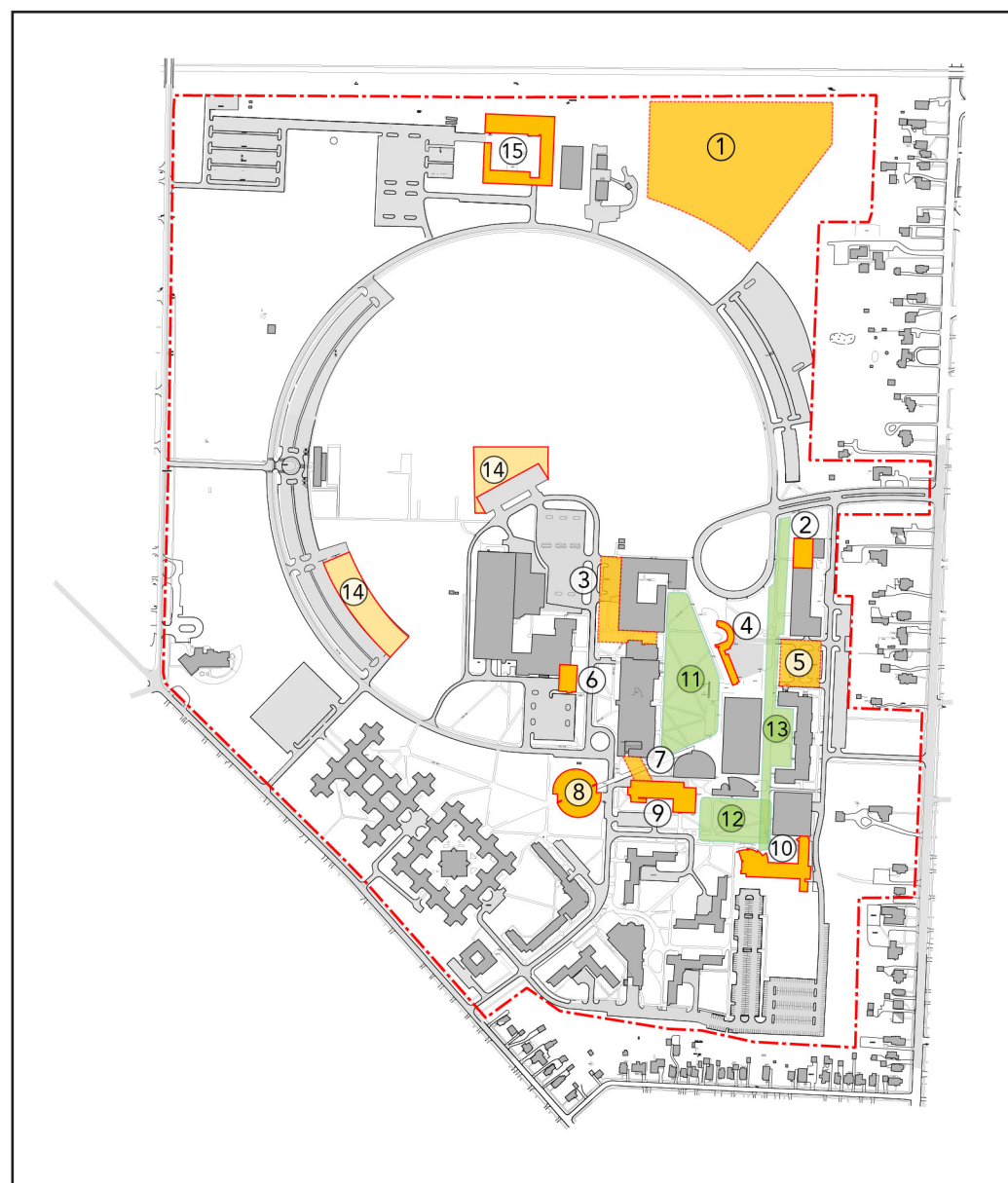
Land Use Summary

Challenges & Opportunities

The compact, pedestrian-friendly organization of SUNY Fredonia is one of its greatest assets. Though building sites within the campus core are sometimes difficult to establish, careful siting of new construction is capable of strengthening campus edges, open spaces, and the relationship between structures. This capability is evident in the placement of the new Science and Technology Building, to begin construction in 2011. The siting of this building – the first new academic building to be built on campus since Thompson Hall in 1975 – both strengthens the campus’ eastern edge and helps define a future “Science Quad” with nearby Houghton and Jewett Halls. Though few large sites exist within the campus core, their importance goes beyond programmatic benefit, given their ability to enhance campus organization at a larger context.

Other challenges to SUNY Fredonia’s growth include adequate stormwater retention, parking constraints, and the flexibility of existing buildings. SUNY Fredonia’s buildings have undergone frequent renovations as teaching and research practices have continued to evolve over time. These renovations have been necessary not only to allow the College to maintain its reputation, but also because new construction within the compact campus is challenging, as mentioned previously. In addition to the difficulty of determining appropriate sites for new buildings, the elimination of surface parking and the increase in stormwater presented by new construction is challenging to overall campus planning. Though great care has been taken to retrofit existing buildings to current instructional needs, SUNY Fredonia faces increased challenges as it continues to retrofit, making the addition of new buildings more desirable.

At right is a map of ongoing and potential projects and sites at SUNY Fredonia that have been either observed or reported in interviews. Site selection is further explored in Phases 4 and 5, with input on appropriate programs and sizes developed in Phase 3. Some opportunity sites have been identified by the College and the Master Plan Team as potential locations for building expansion, though their viability and necessity has not been thoroughly studied. Along with expansion, existing facilities must be continually upgraded to accommodate changes in pedagogy, equipment requirements, and curriculum. In addition to facilities improvements, landscapes can be strengthened to enhance the relationship between campus buildings and spaces.

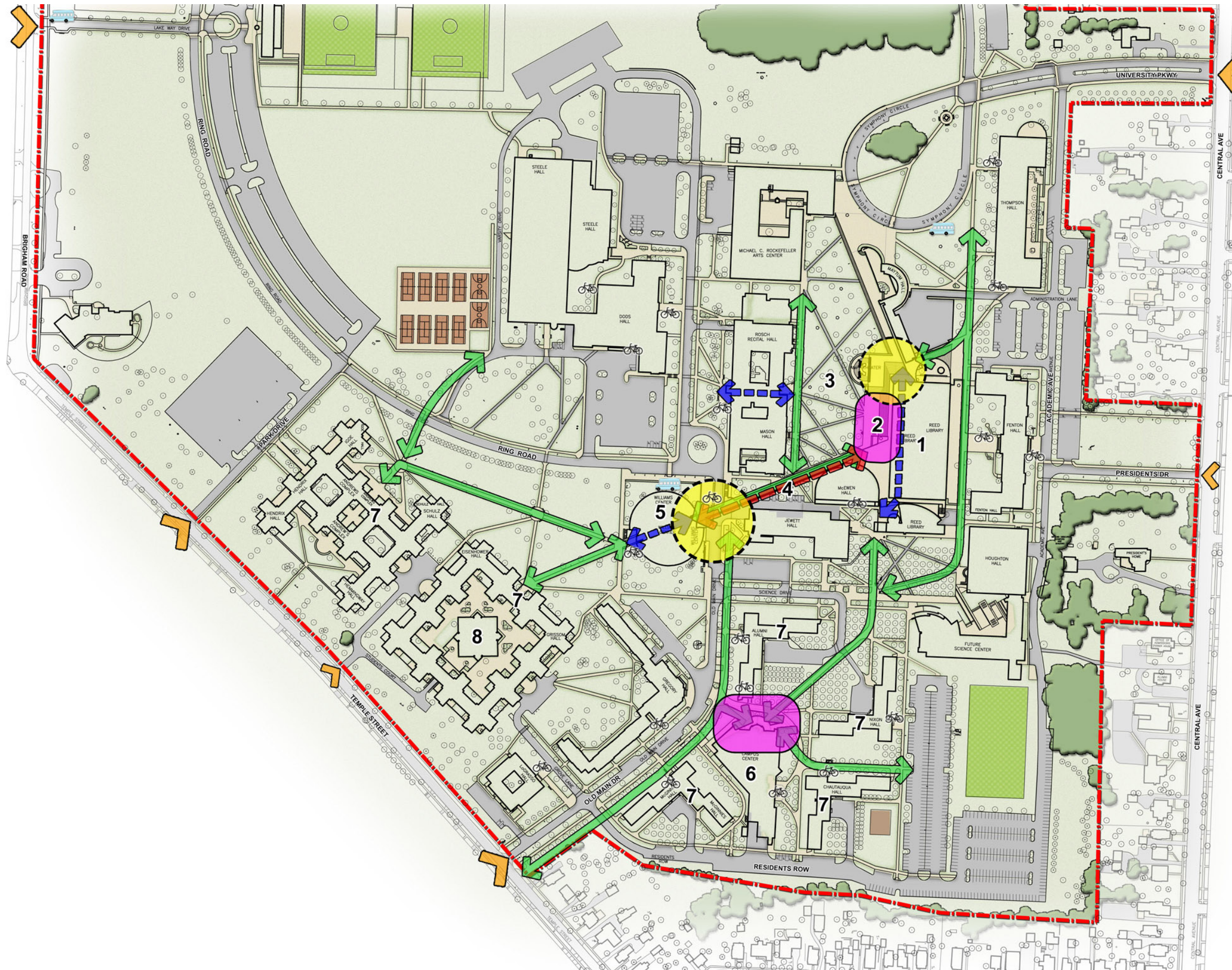


- 1 Potential Site: 200 beds new residential (townhomes)
- 2 Thompson Hall - Day Care to be Vacated
- 3 Rockefeller Arts Center Addition (site TBD)
- 4 Maytum Hall Renovations
- 5 Potential Site: New Academic Building
- 6 Dods Hall: New Fitness Center
- 7 Potential Connection: Mason/Jewett/Spine
- 8 Williams Center Redesign & Renovation
- 9 Jewett Hall: Potential Repurposing
- 10 New Science & Technology Center
- 11 The Quad
- 12 New Science Quad
- 13 Potential North-South Connection
- 14 Expanded Parking
- 15 Renovated / Backfilled Central Plant and Services Complex

- Campus organization is largely shaped by the I.M. Pei and Partners Master Plan of 1965, which resulted in many SUNY Fredonia facilities but also defined campus open space and circulation
- The campus is surrounded by residential neighborhoods and the NYS Thruway to the north
- Site selection for new construction is challenging because of the compact organization of the campus core
- Parking, stormwater retention, and the flexibility of existing structures are challenges to campus growth

B CIRCULATION

Pedestrian & Bicycle Circulation



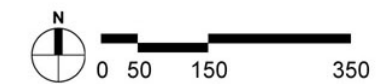
The Pedestrian and Bicycle Circulation Map illustrates the perceived major pedestrian routes, the key campus destination points, and pedestrian nodes and areas of conflict with vehicular circulation.

- 1 REED LIBRARY
- 2 LIBRARY STAIRS
- 3 ACADEMIC QUAD
- 4 ELEVATED WALKWAY "SPINE"
- 5 WILLIAMS STUDENT UNION
- 6 UNIVERSITY COMMONS CAMPUS CENTER
- 7 RESIDENCE HALLS
- 8 ERIE DINING HALL

PEDESTRIAN AND BICYCLE CIRCULATION MAP

- CAMPUS ENTRIES
- MAJOR PEDESTRIAN LINKS
- ELEVATED WALKWAY
- CIRCULATION THROUGH BUILDINGS
- CONFLICT AREAS
- PEDESTRIAN NODES
- BICYCLE RACK
- CAMPUS COMMUNITY BUS SERVICE STOP

*Data Source:
SUNY Fredonia CAD Base



Circulation

Pedestrian Circulation

The major pedestrian routes extend between the student residences and the campus core, with the Reed Library, the Academic Quad, and the Williams Center Student Union as the key destinations in the core. The University Commons Campus Center and Erie Dining Hall are the key destinations within the residential areas. The library steps and the University Commons plaza are popular pedestrian nodes located along major pedestrian routes.

The main circulation routes are clear and well defined. For example, a colonnade of pedestrian light fixtures defines the promenade from Thompson Hall to Houghton Hall; stately oak trees overshadow the Old Main Drive sidewalk; and a dense grid of honey locusts shape the pathways in the Residential Quad. The strong physical definition of major circulation paths is exemplified in particular by the two-level Spine that extends from Williams Center to Reed Library. The diagonal route traced by the Spine extends through the William Center towards the west residential area; and across the Library steps, towards Thompson Hall and Symphony Circle. The Spine, essentially an elevated walkway with a path underneath, was a strong spatial element of the I.M. Pei and Partners Campus Master Plan, connecting the second floors of Williams Center with the former main library entrance that was located at the top of the stepped plaza. However for accessibility and safety reasons, the main entrance to the library has been relocated to the ground level; so the original intent of the elevated walkway has been diminished. In addition, the elevated walkway is closed to foot traffic in winter due to maintenance concerns. The lower passageway of the spine is used heavily, despite its narrow dimension and the visual obstructions posed by the massive supports of the elevated walkway. A parallel walkway has been created along the quad-side of the Spine, as a practical way to alleviate some of the congestion under the Spine.

While being one of the strongest pedestrian connections, the Spine also presents a major circulation conflict where it crosses Old Main Drive. Several conflicting uses – major pedestrian circulation, the main entrance to Williams Center, a busy vehicular connection to the campus core and the Ring Road, and service for the Williams Center - are all located at this critical intersection. To make things worse, the massive concrete supports of the elevated walkway obstruct the sight lines. A spherical mirror mounted on the structure attempts to alleviate the lack of visibility; however this remains a critical conflict point that needs a permanent and safe resolution.

Another area challenging for pedestrian circulation is the stepped plaza around Reed Library and Maytum Hall. This area is especially difficult to navigate for people with disabilities and in the winter months. An alternate circulation path exists, a well-used tunnel under the library plaza, which offers convenience and comfort during Fredonia's harsh winters.

With the upcoming construction of the Science Center and the Mason Hall addition it is likely that some of the desired sight lines in the core would change. This could be an opportunity to eliminate some of the paths intersecting the Library Quad and especially the Honey Locust Grove..

The Ring Road beyond the campus core serves as the primary pedestrian route to the parking and the athletic open space facilities. It is also well used for recreational walking and jogging.

Many elements of visual interest such as sitting nodes, gardens, sculpture, as well as site amenities, such as well marked pedestrian crossings, site lighting, and the generally good condition of paving, contribute to the overall good experience of the pedestrian environment. Some of the elements that could be improved include reducing the number of pathways in the Honey Locust grove and simplifying the circulation, improving site accessibility, and improving the paving at the Library Quad and Rockefeller Arts Center plaza. Finally the most critical area is the intersection of the Spine and Old Main Drive, where the solution may require more drastic measures such as structural revisions to the Spine, or reorganization of the vehicular circulation.

Bicycle Circulation

Bicycling is a popular means of getting around campus. There are currently no dedicated bicycling lanes, and the campus driveways as well as walkways are all used. The long flights of stairs in the campus core present an obstacle to bicycle circulation.

The campus is well provided with bicycle racks, which are located near virtually all main building entrances. Some of the bike racks, especially in the west residential area, are conveniently sheltered in building passages or under canopies.



Bicycle racks are provided near most building entrances.



The stepped plazas in the Academic Quad are an obstacle to most bicyclists.



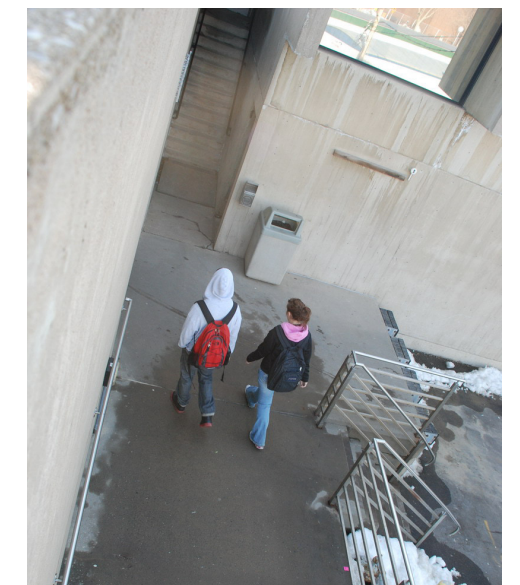
The walk from the Reed Library to the University Commons bisects the honey locust grove.



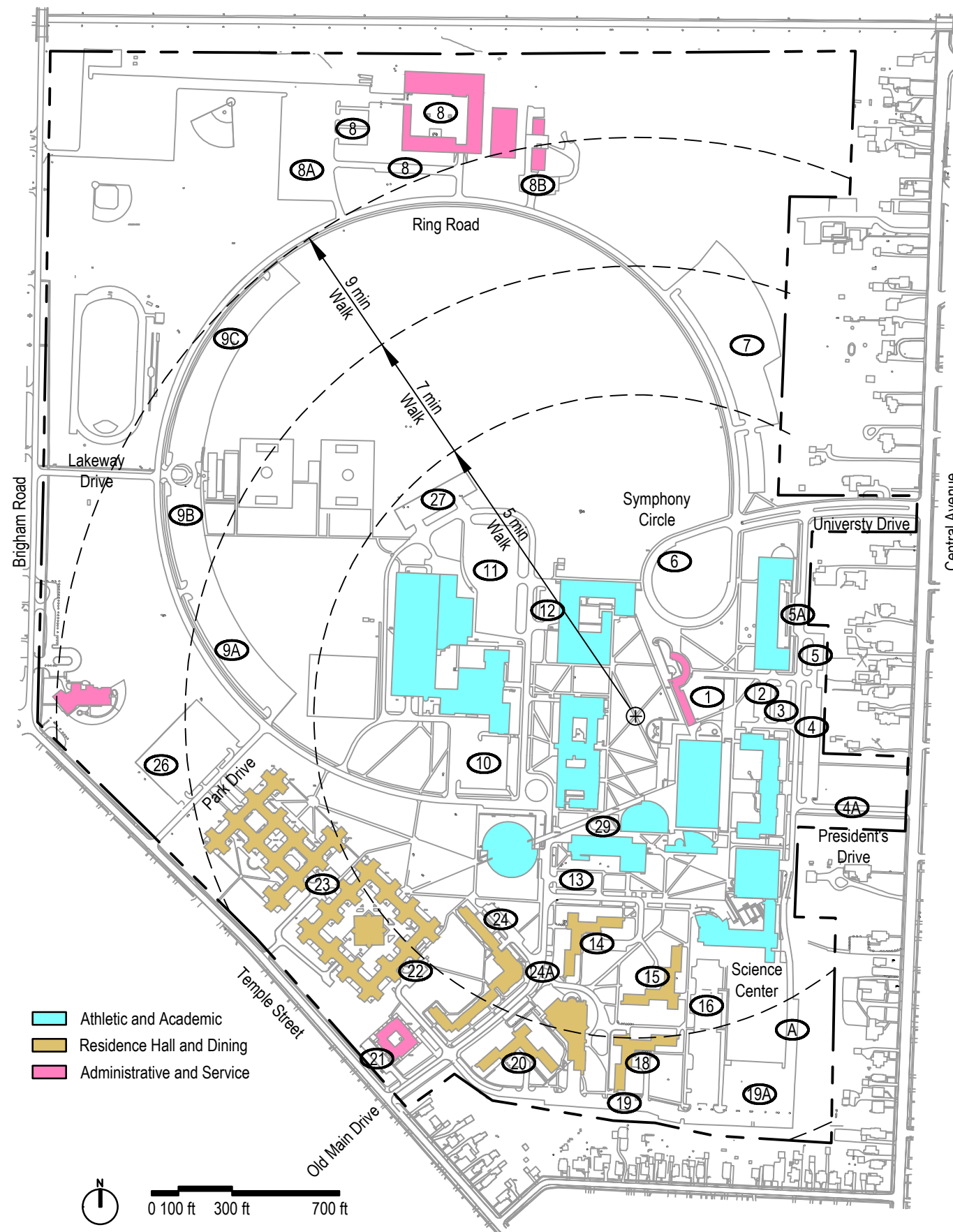
The Spine lower passageway is one of the major pedestrian routes.



The intersection of the Spine and Old Main Drive is a blind spot and a major circulation conflict point.



Students enter the inconspicuous corridor under the Library Stairs, which provides a cut-through from Thompson Hall to the Academic Quad.



Lot Number	Parking Lot Capacities					Vacancies 11:30 AM, 04-27-10					Vacancies 1:30 PM, 04-27-10				
	General	Handicapped	Reserved	Visitor	Total	General	Handicapped	Reserved	Visitor	Total	General	Handicapped	Reserved	Visitor	Total
1*															
2	17	5	4	0	26	2	0	0	0	2	1	0	0	0	1
3	20	6	0	0	26	0	5	0	0	5	0	3	0	0	3
4	84	4	0	6	94	0	3	1	1	5	0	0	0	0	0
4 A	30	0	0	0	30	0	0	0	0	0	0	0	0	0	0
5	30	0	0	0	30	0	0	0	0	0	0	0	0	0	0
5 A	9	5	1	3	9	0	0	0	0	0	0	0	0	0	0
6	58	1	9	0	68	1	1	4	0	6	0	1	0	0	1
7	375	1	0	0	376	172	1	2	2	177	165	1	1	0	167
8**	61	1	67	1	130										
8 A	155	0	0	0	155	93	1	0	0	94	118	0	0	0	118
8 B**	16	0	0	0	16										
9 A	207	4	0	3	214	0	4	0	0	4	2	4	0	0	6
9 B	196	2	0	0	198	49	2	0	0	51	39	3	0	0	42
9 C	277	0	0	0	277	45	2	0	0	47	49	0	0	0	49
10	107	4	1	6	118	0	0	0	0	0	4	1	0	0	5
11	179	6	0	0	185	0	5	0	0	5	0	6	0	0	6
12	18	4	0	0	22										
13	26	3	0	4	33	0	0	0	0	0	0	1	0	0	1
14**	15	0	4	2	21										
15**	8	1	1	0	10										
16	199	0	0	0	199	1	0	0	0	1	0	0	0	0	0
18**	4	1	1	0	6										
19	93	3	4	0	100	0	0	0	0	0	1	0	0	0	1
19 A	202	0	0	0	202	1	0	0	0	1	1	0	0	0	1
20	7	0	2	0	9	0	0	0	0	0	2	0	0	0	2
21**	10	2	3	0	15										
22**	7	1	2	4	14										
23**	0	1	5	7	13										
24**	3	1	15	0	19										
24 A	0	1	0	16	17	0	0	0	0	0	0	0	0	0	0
26	193	2	0	0	195	1	0	0	0	1	7	0	0	0	7
27	134	0	0	0	134	57	0	0	0	57	51	0	0	0	51
29**	0	6	0	0	6										
A	26	0	0	0	26										
TOTAL	2740	65	119	52	2993	422	24	7	3	456	440	20	1	0	461

* Lot 1 is under construction and revised capacity is unknown.

** Lots 8, 8B, 12, 14, 15, 18, 21-24 and 29 are dock and / or service areas and were not counted

Lot 25 was eliminated due to the proposed construction of the new Science Center building

Lot 16 capacity was revised due to the proposed construction of the new Science Center building

Lot A contains new spaces proposed to be added during construction of the new Science Center building

Vehicular Circulation & Parking

Observations of current campus vehicular and pedestrian traffic circulation were made during a site visit on April 27, 2010. However, a new Science Center, adjacent to Houghton Hall in the southeast portion of the campus, is under design and is expected to be completed in 2013. This project will eliminate parking Lot 25 (105 spaces) and the northern end of Lot 16 (72 spaces). These reductions in available parking spaces will be partially offset by the addition of 26 new spaces along a proposed roadway connecting Lot 19A with Academic Avenue. Although these changes - which would result in a net loss of 151 parking spaces - are shown on the accompanying mapping and will be considered as existing conditions in this report, the final traffic and parking configuration is still conceptual. The following sections describe the current 2010 circulation of pedestrian and vehicular traffic throughout the campus, modified as necessary to reflect the completion of the new Science Center building.

Enrollment and Parking Permit Statistics

- The total student enrollment was 5,536 for the spring 2009 semester
- 2,600 students lived on campus
- 2,936 students commuted
- Permits are issued to students and faculty and are usable in all lots with a few exceptions as noted below under Parking Conditions.
- All students are allowed to have automobiles on campus
- 2,979 student and 1,136 faculty/ staff parking permits were issued in 2010 for a total of 4,111 permits useable in the designated parking lots.

Parking Conditions

The capacity of all campus parking lots and the number of vacant spaces are summarized in a table on the Parking Distribution map. As noted above and on the drawing, this report includes the 2013 completion of the new Science Center Building as an existing condition. The effect of this addition will be evaluated during construction of the building and any necessary adjustments to parking lots or roadway alignments will then be implemented. The table of existing lot capacities on the Parking Distribution map has been adjusted to reflect the proposed completion of the Science Center building.

Parking permits are restricted as follows:

- General spaces may be used by students and faculty/ staff.
- Freshmen overnight parking is confined to Lot 9C.
- Parking is not allowed between 1:00 AM and 7:00 AM except in Ring Road Lots 9A, 9B, 9C and Nixon-Chautauqua Lot 19A with the following two special conditions:
- Hendrix-Igoe students may park overnight in Lot 26.
- University Commons students have 65 reserved spaces in Lot 19A.

Parking permits are issued to faculty/ staff and students, with student permits being subdivided into the following categories:

- Permits for upperclassmen
- Permits for freshmen
- Permits for students in the Hendrix-Igoe dormitories to allow overnight parking in Lot 26. (Designated by a "Hendrix-Igoe" logo on a standard student permit)
- Permits for students in the University Commons dormitories to insure overnight parking spaces in Lot 19A. (Designated by a "University Commons" logo on a standard student permit)

From August 2009 to April 2010, 4,540 parking tickets were issued by campus security. This average of 17 per day includes tickets issued to students, faculty, staff and visitors.

Bus Transportation

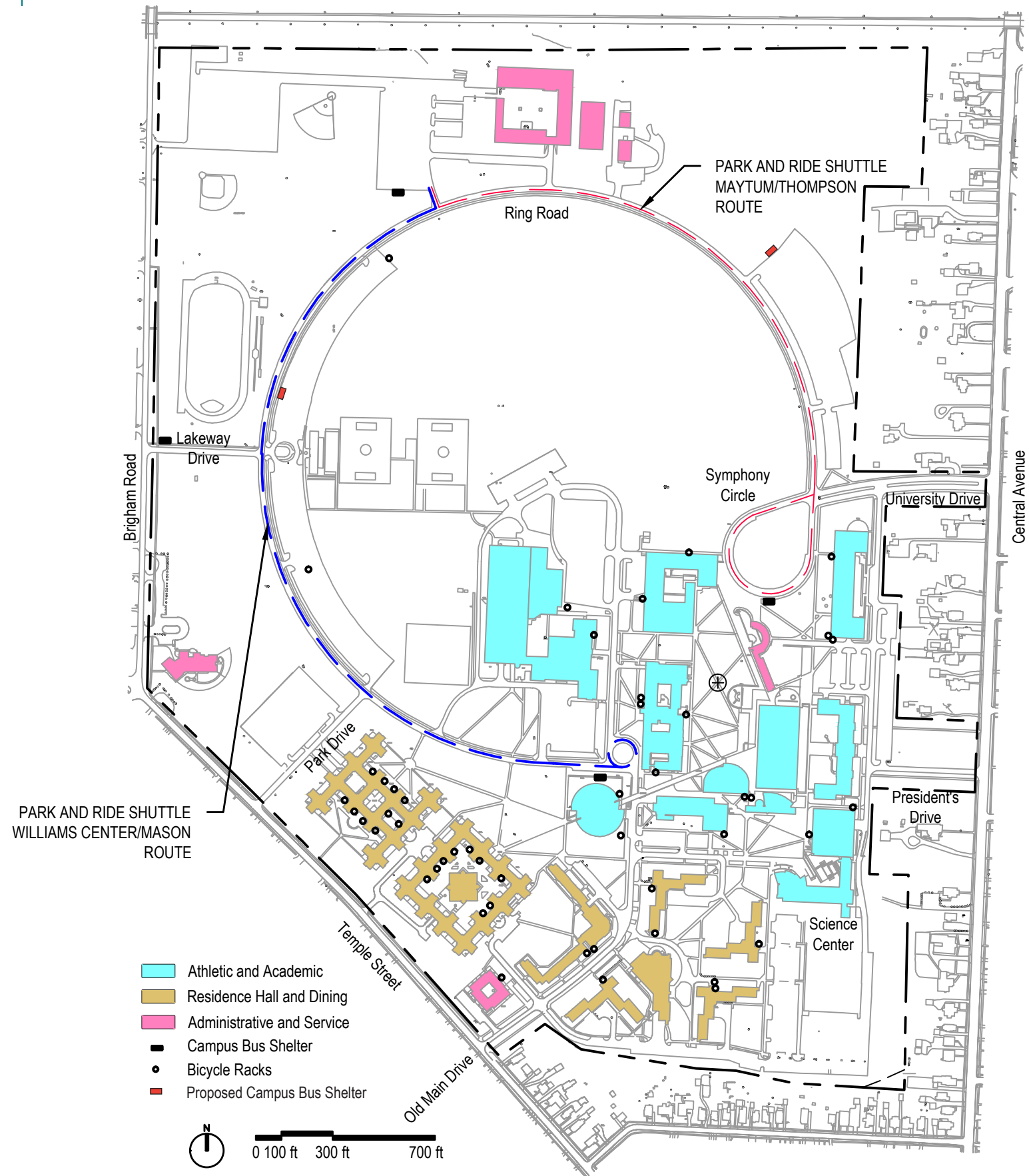
Fredonia offers two types of complimentary bus service to students and faculty. Two intra-campus shuttle bus routes use the Ring Road as shown on the Pedestrian Circulation map. These shuttles originate on the north side of the Ring Road in parking Lot 8 A which is the only campus lot designated as a "Park and Ride" lot. The busses do not operate continuously, but are accessed through call boxes located in Lot 8 A, in Symphony Circle and adjacent to the Williams Center. Campus personnel estimate that these two busses make approximately 100 to 120 trips per day.

The second type of bus service is the Campus Community Bus Service, which provides daily service to a wide variety of shopping and service sites in the Village of Fredonia and environs. Busses leave Williams Center at 40 minute intervals from 7:10 AM to 9:55 PM Monday to Friday with additional service from 10:30 PM to 11:30 PM on Friday and

Saturday. Larger capacity busses are used on Fridays and Saturdays.

SUNY Fredonia charters busses for transportation to various locations throughout New York State at semester and holiday break periods, including service to the Buffalo airport and Amtrak stations.

Coach USA offers 5 daily round trips between Buffalo, New York and Jamestown, New York, with stops on the Fredonia Campus. Fullington Trailways busses make occasional stops in the Village of Fredonia but do not enter the campus. Amtrak offers once a day connecting bus service between its passenger stations in Buffalo and Fredonia.



BICYCLE RACK LOCATIONS

LOCATION	NUMBER OF RACKS	REMARKS
North End, Parking Lot 9C	1	At end of center aisle
North End, Parking Lot 9A	1	At end of center aisle
Andrews Complex	10	Complex core area
Kirkland Complex	9	Complex core area
LoGrasso Hall	1	Northeast side
Gregory Hall	2	Southeast entrance
McGuinnies	1	Northwest corner
Alumni Hall	1	South entrance
" "	1	Northwest entrance
Chautauqua Hall	2	Northwest entrance
Nixon Hall	1	East Entrance
Williams Center	2	East Side
Jewett Center	1	Southeast corner
McEwen Hall	2	Southeast corner
Houghton Hall	1	West Entrance
" "	1	Northeast entrance
Fenton Hall	1	East Entrance
" "	1	North Entrance
Thompson Hall	1	Northwest entrance
" "	2	Southwest corner
Mason Hall	2	West Side
" "	1	East Side
" "	1	East Side
Dods Hall	1	Northeast corner
Rockefeller Atrs Center	1	West Entrance
" " "	1	North Side
Natatorium	1	South Side
Total Number of Racks	50	

Average rack occupancy on April 27, 2010 was 6-10 bicycles

Circulation Summary

Bicycle Transportation

The general terrain throughout the campus is flat and level, providing ideal biking conditions.

The campus contains a total of 50 bicycle racks, each capable of accommodating 10 bicycles, scattered throughout the campus. On April 27, 2010, the racks contained from 6 to 10 bicycles each, with a total occupancy of approximately 400. The location of the bicycle racks are indicated on the Pedestrian Circulation map.

Pedestrian Circulation

The Fredonia campus, being relatively compact and flat, is pedestrian friendly. There are a minimum of open windy spaces, with dormitories and academic buildings at well spaced intervals. Heavy pedestrian traffic was observed in all areas of the academic core during class breaks. Walking times, which are shown graphically on the Pedestrian Circulation map, are 5 minutes or less between the academic core and the dormitories and 10 minutes or less between the academic core and the furthest parking lots.

Emergency Access

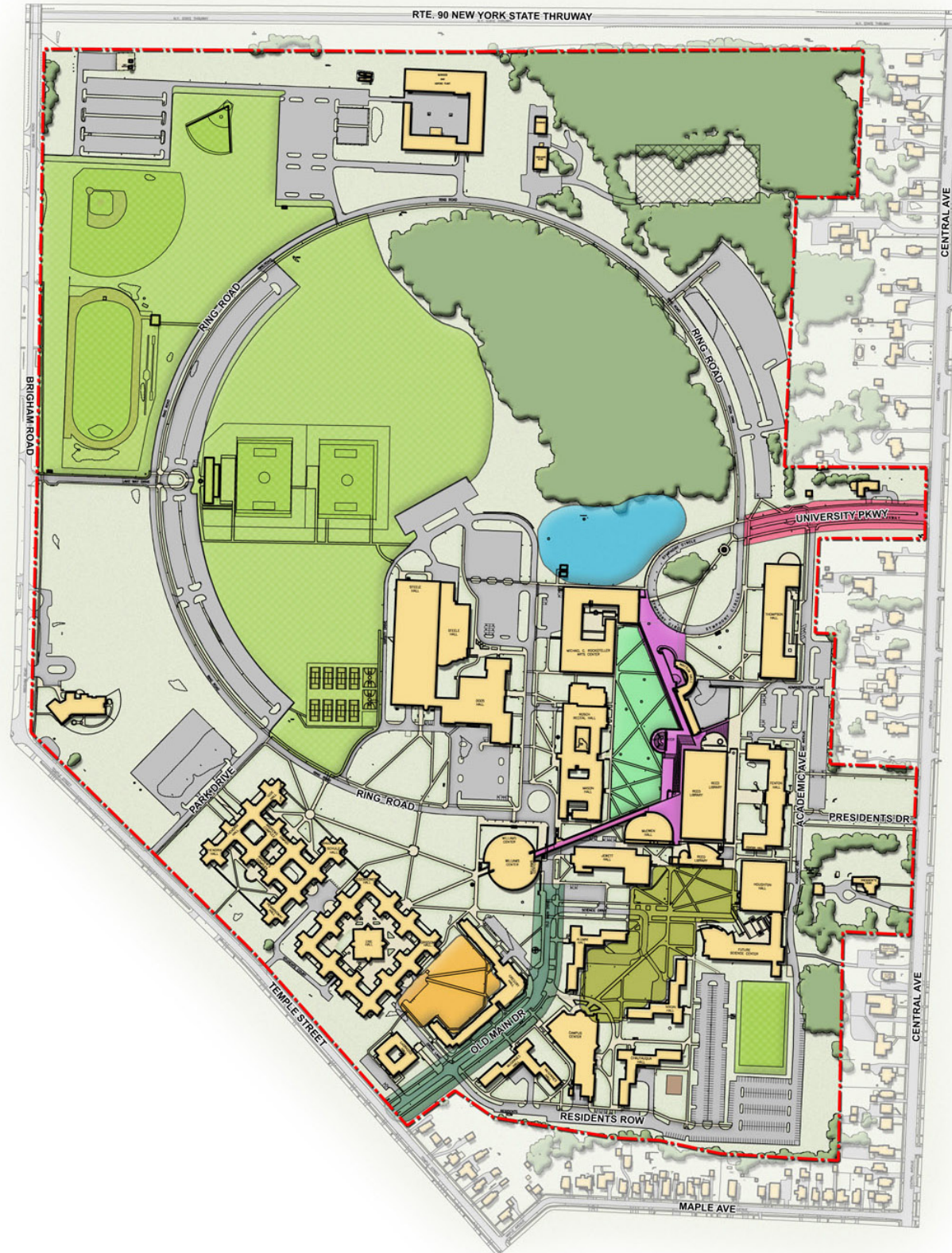
Fire or medical emergency calls are routed through the campus security office in Gregory Hall to 911. Medical treatment for minor conditions is available at the Health Center in LoGrasso Hall.

In addition to standard telephones located in all dormitory rooms and throughout all campus buildings, there are 35 "blue light" phones which connect directly to the campus security office. These phones are both indoors and outdoors at prominent locations.

General Traffic Considerations




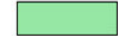
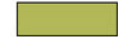






- The campus shuttle bus service does not operate continuously, only responding when a call is received.
- The only lot with a "Park and Ride" designation is Lot 8A.
- Several of the bicycle racks were observed as being at capacity.
- There are four secondary entrances to the campus from perimeter roadways. These are from Brigham Road (Lakeway Drive), from Temple Street (Park Drive and Old Main Drive) and from Central Avenue (President's Drive). University Parkway, the main campus entrance on Central Avenue, is a four-lane divided roadway leading to Symphony Circle and the Ring Road. The entrance has distinctive signing and is well landscaped.
- Although parking Lot 27 and the northern end of Lot 7 are no further from the academic core than other lots, they are significantly under-utilized, with a total of over 215 spaces available at times when other lots at similar distances (Lots 16, 19 and 19A) are at capacity. (See table of Lot Vacancies on the Parking Distribution drawing)
- A significant number of vehicles were observed "cruising" Lots 3, 4, 5, 16 and 19A, waiting for spaces to be vacated.

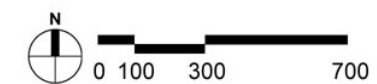
- Automobiles are permitted for all students on campus
- Students are able to park in any lots on campus, with a few exceptions for overnight parking
- The campus is well-served by bus transportation, with campus shuttles on campus and community bus service and regional links available
- The campus is generally flat and pedestrian-friendly, with short distances between buildings and parking lots
- Bicycles are used frequently, but existing bike racks are often at capacity
- Perimeter lots with longer distances from the campus core are underutilized
- Parking in the campus core is at a premium; students often idle their vehicles while waiting for space to become available



Landscape Features Map shows the general landscape types within the overall campus. More specific information about hardscape, site amenities, and outdoor gathering is shown on the **Campus Core Site Features Map**. Information on tree canopy / vegetation types is shown on **Campus Core Tree Canopy Map**.

LANDSCAPE FEATURES MAP

-  Wooded Areas
-  General Landscape
-  Athletic Fields
-  Academic Quad
-  Honey Locust Quad
-  Gregory Hall Quad
-  Sloped Lawn with Sculpture
-  Academic Quad Plazas
-  University Parkway Arrival
-  Old Main Drive Arrival
-  "Back of House" Materials Storage Area



*Data Source:
SUNY Fredonia CAD Base

Landscape

Landscape Features

Refer to the Landscape Features Map for the locations of landscape elements described in this section.

Wooded Areas on the campus include a 17-acre dense wood lot that occupies the northeast quadrant of the space within Ring Road, 16+ acres in the north-east corner of the campus, a small grove within the Symphony Circle, and a small grove between Academic Avenue and the President’s House. Both the wooded areas within Symphony Circle and Ring Road were elements of the 1964 I.M. Pei and Partners Campus Master Plan, although they were more integrated with each other than they are today. At present, a 3.75-acre sloped mowed lawn separates the two groves and they are quite different in character. The large grove has a more “wild” character with its dense undergrowth and informal trails, while the Symphony Circle grove has been populated with benches and picnic tables.

The wooded area at the northeast corner of the campus effectively screens the abutting residential properties to the east and the Rt. 90 New York State thruway to the north. A 2-acre clearing within it, used as a “back of house” storage area for mulch, earth, topsoil, campus furnishings, and other materials, is also fully screened by the dense woods.

Along the east and south property lines there are also some wooded areas that are generally less dense and provide some visual screening of abutting residential back yards. One of these wooded areas appears to be a wooded swamp which restricts its potential use as a development parcel.

The **Sloped Lawn with Sculpture** is the gently rolling swath of land between Rockefeller Arts Center and the large wooded area within the Ring Road. Although the 1964 I.M. Pei and Partners campus master plan did not include this lawn as a specific landscape feature, its present appearance is attractive and serves to reinforce the arrival experience from Symphony Circle. The large-scale brushed stainless steel sculpture, William King’s ‘Words’ (also known as “The Tin Men”) placed near the top of the lawn, makes a recognizable campus focal point, although unfortunately it has come to be rivaled by the tall lights of the recently built athletic fields beyond. The lawn offers several attractive views and vistas, both from Symphony Circle and from within the Rockefeller Center colonnade.

The **University Parkway Arrival** offers a formal arrival experience to the campus core and the Rockefeller Arts Center. The formality of the median-divided road is reinforced by the sculptural landscape of large columnar English Oaks planted in rows along the campus property lines, and the wide-canopied Kwanzan cherries planted in front of the oaks and in the road median. A concrete SUNY Fredonia entry sign, site lighting with banners, and a pull-over area with a large campus map, complete the well articulated arrival to Symphony Circle.



The sloped lawn presents a serene view.



The wooded grove at Symphony Circle is populated with benches.



University Parkway Arrival.



Academic Quad looking towards the Library Steps.



Library steps and Plaza as seen from the Spine. The vast plaza paving is in need of repair or redesign.



Old Main Drive Arrival.

Old Main Drive Arrival is the more active arrival to the campus core. Its landscape character is defined by the tall canopy of mature oak trees and the brick residence halls that line the road from both sides, imparting a more traditional campus look. A concrete college entry sign identical to the one at University Parkway Arrival marks the campus entrance. This is an attractive and vibrant area of college landscape, with well-used sidewalks, multiple building entrances, crosswalks, and a popular gathering node at the University Commons plaza. The area that could use an improvement is immediately at the main entrance, where the campus abuts a residential side yard; a solid fence or dense planting would provide more adequate visual screening and better visual appearance than the existing chain link fence.

Academic (Library) Quad and Plazas are the landscape heart of campus. The Quad is surrounded by the historic Mason Hall, its contemporary addition Rosch Recital Hall, the visually unified I.M. Pei and Partners building complex consisting of the Spine, McEwen Hall, Reed Library, Maytum Administration Building and the Rockefeller Arts Center. The sculptural forms of the I.M. Pei buildings are the most visually defining elements of the campus environment, and the Academic Quad benefits from the striking vistas of these buildings.

The Quad itself is a fairly traditional campus green consisting of a tree-shaded lawn intersected by bituminous concrete paths constructed at angles to follow desire lines. Several contemporary sculptures intersperse the lawns. There are no benches or other sitting areas along the paths other than at the Mason Hall annex entrance plaza. Most of the trees are mature, and several show signs of decline. The I.M. Pei and Partners 1964 campus master plan envisioned the campus green as a more architecturally articulated area, where the lawn was overlain with a dense rectangular grid of paths. Today, when environmental sustainability is an important campus goal, a new design approach is needed that would highlight the best features of the space and create a good environment for socializing, study, gathering, outdoor performances, and informal recreation.

The Academic Quad plazas are integral to the I.M. Pei buildings and consist of the elevated Spine, the Library stepped plaza, the Amphitheater, the Maytum Hall stepped plinth, and the Rockefeller Arts Center plaza. These were built of the same buff-colored cast-in-place concrete as the buildings, creating a visually unified environment. Seating niches have been sculpted out of concrete all along the elevated Spine and the upper Library Plaza deck. The Library stairs, originally designed as a monumental entrance to the Library, presently are a popular gathering space overlooking the Library Quad.

The design integrity of this outdoor space is strong and it should remain as one of the campus iconic features. Improvements are needed primarily in the area of ADA accessibility, and in repairs or replacement of deteriorated materials. At Rockefeller Arts Center plaza, new pavement and site amenities would further help animate this important campus open space. The recently installed 'Popeye' sculpture, a 12-foot shape of bright red spirals, has already helped bring more visual interest. Finally, the Academic Quad is an opportunity space to showcase new landscape design ideas that would complement the contemporary character of its surrounding. The College has already retained Saratoga Associates Landscape Architects to study and propose design solutions for the Quad.

Honey Locust Quad (or 'Residential Quad') is the open space area defined by the mature honey locust groves set in lawns, designed by renowned landscape architect Dan Kiley. The quad extends from Reed Library to the University Commons Campus Center and is bisected by Science Drive. Honey locusts, planted at a 20-foot grid, define the canopy and create linear vistas between the rows of trees. Diagonal paths of various angles crisscross the grid on the ground plain. Smaller groves of crabapples and Japanese zelkovas are also integrated within the quad. The honey Locust Grove is probably SUNY Fredonia's most renowned landscape and is a critical character-defining element. The trees that create this compelling environment however have a finite life span, and will inevitably start declining in the future. In the short term it is very important to create the best conditions for maintaining their health and longevity.

Athletic Fields occupy about 35 acres, or about one half of the area within Ring Road, and almost eighteen additional acres in the northwest corner of the site. The fields include a stadium complex composed of a natural turf game field and a multi-use synthetic turf field, which were recently built as per the recommendations of the 2002 SUNY Fredonia Outdoor Athletic Facilities Master Plan. Other fields include multi-use fields, running track, varsity baseball and softball fields, eight tennis courts, and two outdoor basketball courts. There is also a multi-purpose practice field located west of Nixon Hall, and well as a sand volleyball court next to Chautauqua Hall.

Most of the athletic fields are accessed from the Ring Road as well as from Varsity Drive. A new formal arrival has been created from Lake Way Drive, with its new sidewalks, rows of cherry trees, and a landscaped drop-off circle at the stadium.



Honey Locusts grove in the Residential Quad..













View of the Athletic fields from Ring Road.



The Campus Core Site Features Map identifies the site paving materials, locations of outdoor sculpture, memorial and other distinctive plantings, and outdoor performance / assembly / instruction areas.

- 1 Native Plant Garden
- 2 Clock Tower Garden
- 3 Children's Playground
- 4 Children's Garden
- 5 Japanese Garden
- 6 Gravel Bed
- 7 Greenhouse Garden
- 8 Flag Pole Garden
- 9 Library Stairs & Plaza
- 10 Amphitheatre
- 11 The Spine
- 12 Campus Center Plaza & Outdoor Cafe

CAMPUS CORE & SITE FEATURES MAP

-  Sculpture
-  SUNY Fredonia Entrance Sign
-  Campus Map
-  Clock
-  Memorial Planting
-  Flag Poles
-  Special Gardens
-  Concrete Walk
-  Bituminous Concrete
-  Concrete Pavers
-  Outdoor Assembly / Performance / Instruction Areas



Hardscape Materials, Public Art, & Site Amenities

Paving Materials

The prevalent site material is poured-in-place concrete, in a soft buff color. It is used on walls, steps and walkways. The use of a specific pigment "Fredonia Buff" is required by the campus standard construction specifications for concrete pavement. There have been more recent efforts to introduce other pavements, such as concrete pavers near the University Commons, and stamped concrete or asphalt at pedestrian crossings. Within the Library Quad and the Honey Locust Grove, the main walkways are concrete and all the secondary paths are bituminous concrete.

Curbing is generally slip-formed concrete, which often gets damaged by snow plowing equipment. On recent projects the College has used granite curbing.

The condition of pavements is generally good, with some areas showing winter damage. The concrete steps had multiple locations of considerable damage and evidence of ongoing repairs. The areas of most critical need for paving improvement are the Rockefeller Arts Center plaza, and the plaza at the foot of the Reed Library steps.

Furnishing

Many main building entrances feature a combination of at least one bench, one bicycle rack, decorative plantings, standard campus benches, trash receptacles, recycling center receptacles, and bicycle racks.



Range of site materials: buff-colored concrete sidewalks and walls, concrete pavers, stamped concrete crosswalks.



Standard campus bench and trash receptacle.



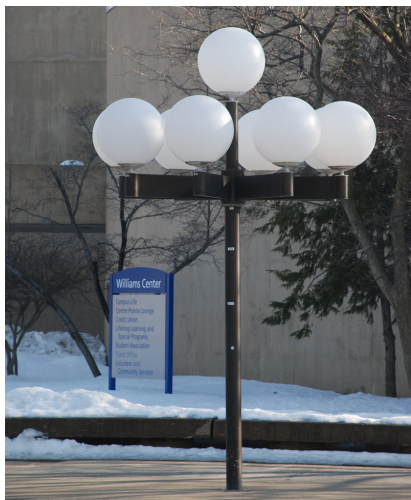
Sculpted concrete sitting niche at the Library Plaza.



The clock tower is a prominent landmark, although in a style not very compatible with the campus architecture.



Fredonia entry sign at Old Main Drive.



Globe candelabra at the plaza next to Williams Center, are a variation on the simple globe post-top light fixture used all over campus.



Campus Directory maps are located at arrival routes.

Site Signage and Wayfinding

There is a coordinated palette of building and site signage throughout the campus. There are two main entry signs located at the University Drive and at Old Main Drive entrances. Both feature the distinctive SUNY Fredonia lettering on plank-formed concrete walls. Large site directory signs, complete with a campus maps, are located at arrival routes, and have dedicated pull-over lanes for convenience when viewing from a vehicle.

A new building signage system has been implemented that includes building names and major programs within them. The orientation of these signs is sometimes ineffective as a wayfinding device, with text facing building entrances, and poorly visible from major pedestrian and vehicular routes.



New campus building signage is sometimes oriented facing building entrances or away from major pedestrian and vehicular routes, rendering it ineffective for wayfinding.

Site Lighting

The globe post-top pedestrian light fixtures are consistently used throughout the pedestrian environment. A different type of light fixture is found along Science Drive. The parking areas have shoe-box type lighting. The globe post-tops are compatible with the style of the I.M. Pei era buildings; however, from the point of view of environmental sustainability, there are other, more efficient and environmentally friendly, fixtures that could be used to illuminate the campus.

Billboards / Kiosks

The passageway under the elevated walkway features several pin-boards for flyers; limiting the billboards to this area controls the visual clutter elsewhere on campus.

Sculpture, Memorials & Distinctive Plantings

There are several contemporary sculptures dispersed throughout the landscape, adding beauty and interest. A number of them use natural materials such as stone, wood, metal, and glass. Only a few of them have plaques identifying the artist name and the sculpture title. One of the most prominent sculptures is 'Popeye' by John Clement, a 12-foot tall bright red sculpture of intertwining steel spirals, which adds visual interest at the plain Rockefeller Arts Center plaza. The other large-scale sculpture is William King's 'Words', also known as "The Tin Men", which serves as a landmark on the sloped lawn between Rockefeller Arts Center and the campus woodlot. These sculptures have been part of the SUNY Fredonia "In Sight/On Site" project, which is directed by distinguished professors of Visual Arts and New Media, and supported by the student group ARTFORUM and Friends of Rockefeller Arts Center. The program has been designed to give the campus and the community an opportunity to enjoy contemporary sculpture in the landscape, at the same time greatly enhancing the campus environment. The program features select outdoor sculpture for an ongoing, revolving installation on campus.

In addition to the outdoor sculpture, there are several memorial plantings and memorial wall-mounted artwork. There are also several distinct garden or landscape areas, including a child-sized garden at the Campus & Community Children's Center entrance in Thompson Hall; and the walled-in Japanese Garden, a landscape of rocks, a small water cascade, and miniature shrubs accessed through Reed Library. An unsuccessful example is the gravel-filled bed next to Reed Library, a bleak setting for the elegant building architecture; lawn or decorative planting with site sculpture would be a much more attractive landscape treatment.



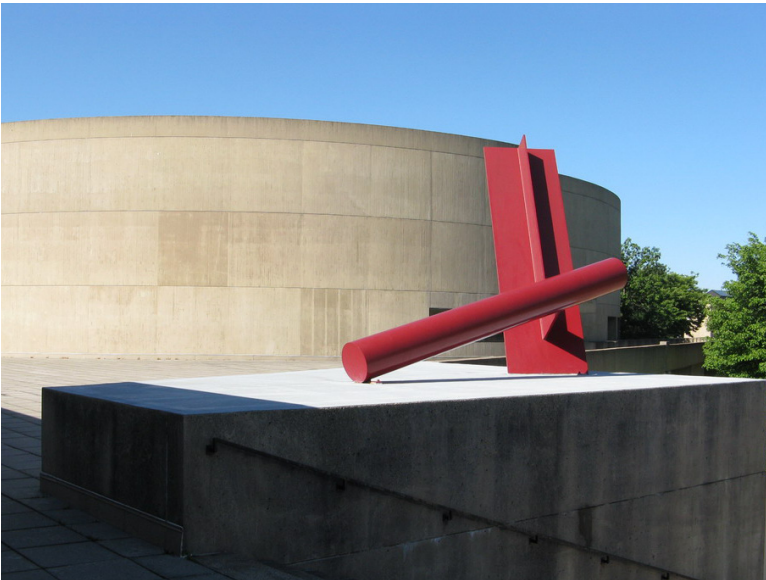
'Words' by William King is a landmark on the sloped lawn next to Symphony Drive.



The Japanese Garden at Reed Library has a water cascade and miniature plantings. The planting palette does not provide sufficient shade in this "hot spot".



Contemporary sculpture enriches the Academic Quad environment.



A red sculpture is a visual marker for the Library main entrance below.



The Library would benefit from a green foreground instead of the present gravel bed.



'Popeye' by John Clement animates the Rockefeller Arts Center plaza.

Landscape Summary

Tree Canopy and Plant Materials

The most unique element of the campus landscape are the mature groves of honey locust trees planted on a 20-foot grid; they have grown to create a tall canopy that casts dappled shade on the lawn at the ground plain. A grid of Japanese zelkovas abuts the honey locust grid at Jewett Hall. Even denser planting of crabapples add ornamental interest in several areas of the honey locust grove. The grid pattern allows strong delineation of the main circulation paths and creates interesting views defined by the tree trunks as one moves through the landscape.

The formal planting elements also appear along University Parkway, which is lined with large columnar English Oaks and wide-branching Kwanzan Cherries. Along the Ring Road, a row of densely spaced upright Armstrong maples along its outer perimeter recalls the intent of the 1964 Master Plan, with its columnar poplars. However, like the poplars before them, the maples have suffered from the strong winds coming from Lake Erie. Over the years, many have been replaced with small-caliper saplings so the highly architectural effect of a uniform row of "green columns" has been somewhat lost.

The rest of the campus features more typical campus planting with informal groupings of deciduous and evergreen trees in lawns. The plant palette includes various species, including Kwanzan cherry, American beech, crabapple, green ash, blue spruce, sugar maple, white fir, zelkova and others.

The campus landscape is well-maintained. Most of the trees appear healthy. The SUNY Fredonia Tree Inventory, of October 2009, documents all trees in the north half of the campus core, with species, size, and condition and highlights tasks for immediate, high priority, and standard priority action related to the tree maintenance. A similar inventory will be completed this summer for the other half of the campus core. From the point of view of long-term maintenance and preservation of the character of uniformly sized trees in the Honey Locust Quad, the time will come that the trees, which were planted all at the same time about 40 years ago, will start declining and will need to be replaced. The campus should develop a strategy for replacement, whether it would be individual tree replacement with large-caliper specimens, or mass replacement of sections of the grove starting with all new honey locust plantings. Having a strategy in place would help avoid the uneven look that piecemeal replacement has given to the Ring Road planting; and will avoid introducing haphazard new planting into this area that has such a strong importance for the campus experience.

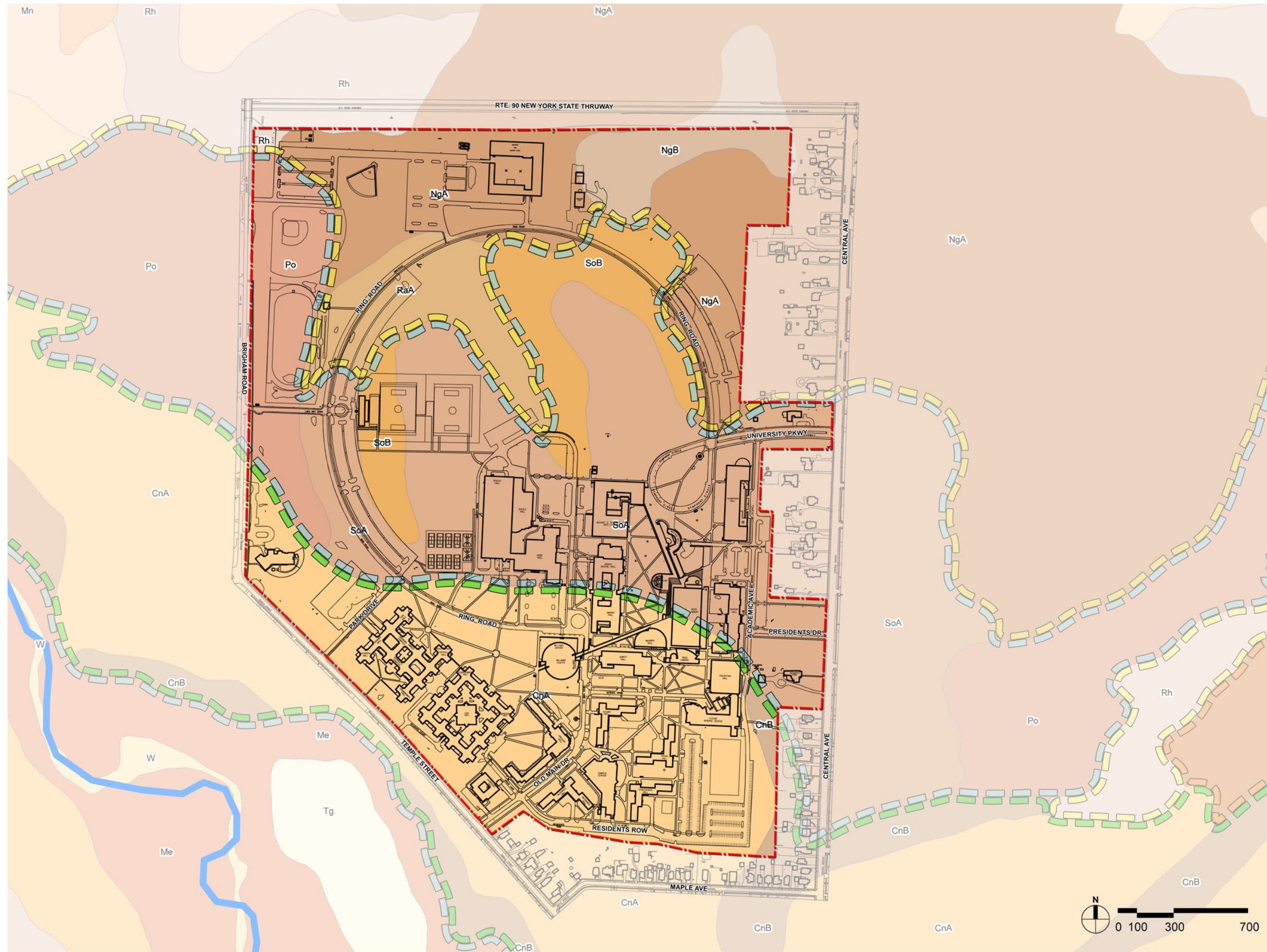


Formal planting of columnar English Oaks and vase-shaped Kwanzan cherries.



The honey locusts foliage casts dappled shade, allowing enough light for lawn growth.

- Well-defined landscape features such as densely-wooded areas, open lawn, and various arrival sequences comprise the campus, with the Academic Quad and Plazas at its heart.
- Though site lighting is coordinated throughout the campus and compatible with Pei-era buildings, alternative fixtures and/or lamping could improve environmental sustainability
- The predominant paving material is poured-in-place concrete with a proprietary "Fredonia Buff" pigment, and is generally in good condition
- Honey locust groves in the vicinity of Houghton Hall and University Commons are the most unique landscape elements at SUNY Fredonia; as these groves age, a strategy for replacement avoiding piecemeal planting should be studied



The Soils Map indicates the various types of soils underlying SUNY Fredonia Campus and its surrounding.

SOILS MAP

Hydrologic Groups:

- █ A - High Infiltration Rate
- █ B - Moderate Infiltration Rate
- █ C - Slow Infiltration Rate
- █ D - Slow Infiltration Rate with Moderate Infiltration at Drained Areas

Soil Types:

- Cb Canandaigua silt loam, loamy substratum
- CnA Chenango gravelly loam, 0-3 % slopes
- CnB Chenango gravelly loam, 3-8 % slopes
- DeB Darien silt loam, 3-8% slopes
- EIA Elnora fine sandy loam, 0-3% slopes
- Ge Getzville silt loam
- Ha Halsey mucky silt loam
- La Lamson silt loam
- Me Middlebury silt loam
- Mn Minoa fine sandy loam
- NgA Niagara silt loam, 0-3% slopes, loamy substratum
- NgB Niagara silt loam, 3-8% slopes, loamy substratum
- Po Pompton silt loam
- RaA Raynham silt loam, 0-3% slopes
- Rh Red Hook silt loam
- SoA Scio silt loam, 0-3% slopes
- SoB Scio silt loam, 3-8% slopes
- Tg Tioga silt loam
- W Water

*Data Source:
"Natural Resources Conservation Service" 2009

Geography

Soils

The campus sits on fairly flat land that was previously used as farmland. Three distinct soil zones are present, based on the soil hydrologic groups. Hydrological soil groups are based on estimates of runoff potential, with group A soils (such as Chenango gravelly loam) having the highest infiltration rate and lowest runoff potential, and group D having very slow infiltration rate and highest runoff potential. The southern third of campus, coinciding with the upper campus core, sits on well-drained Chenango gravelly loam (symbol CnA). The middle third, coinciding with the Athletic fields, fieldhouse, wooded area, and lower part of campus core, sits on moderately drained Scio silt loams (symbols SoA and SoB). The northern third of campus, coinciding with the areas beyond the Ring Road, sits on slow-draining Niagara silt loams (symbols NgA and NgB). A finger of slow-draining Raynham silt loam (symbol RaA) extends from the Ring Road across the athletic field area, along the edge of wooded area to the Steele Hall parking lot.

Some of the soil properties that are relevant to campus development are the presence of restrictive layers and the potential for frost action. A restrictive soil layer significantly impedes the movement of water and air through the soil and impedes root development; none of the underlying soils feature such a restrictive layer. Potential for frost action is the likelihood of upward or lateral soil expansion caused by the formation of segregated ice lenses (frost heave) and the subsequent collapse of the soil and loss of strength at thawing, resulting in damage to pavements and other rigid structures. All the underlying soil types have high potential for frost action, except for the well drained Chenango gravelly loam which has moderate potential.

From the point of view of development of facilities and athletic fields, the most suitable are the well drained (type A) soils; indeed the larger area of developed campus is located on such soils. Locating athletic fields on poorly drained (type C) soils may require use of costly under-drainage. Considering the climate and the moderate to high frost action potential of the soils, new and replacement pavements should incorporate adequate depth of aggregate bases to minimize frost heave and pavement damage. Geotechnical investigation should be done for any potential building sites to determine the specific soil properties and recommendations for the structural design of buildings. Soil testing of samples taken from specific sites would be the best and most useful indicator of the soil composition, pH, organic matter, and the amendments needed to optimize growth of the specific plant material proposed for the site.

For more information on general soil properties, refer to Soil Features-Chautauqua County Area, NY, USDA National Cooperative Soil Survey and Web Soil Survey (websoilsurvey.nrcs.usda.gov).

Landscape Buffers

This Landscape Buffers discussion pertains to the **Tree Canopy Map** (page 18) and the **Landscape Features Map** (page 10).

Significant wooded buffers exist along the campus northeast property lines, helping to visually screen the abutting residential properties to the east, and the Interstate 90 New York State Thruway to the north. Along the rest of the east property line, a narrower vegetation buffer mostly does an adequate job of screening the adjacent residential back yards. The recently planted evergreen trees and mixed deciduous trees and shrubs east of the new parking lot on Residents Row will provide better screening as the young vegetation grows.

The landscape buffer of mature deciduous trees along the south property line is not dense enough to provide full screening. Supplementing with evergreen trees and /or screen fencing would create a better edge to the campus and more privacy to abutters. The property line to the east of Old Main Drive is the weakest buffer, as the chain link fence allows unobstructed views into the abutting residential yard. Creating an attractive planted strip along the edge, or a solid fence, would greatly enhance the arrival experience.

The southwest frontage along Temple Street presents the campus face to the community. The frontage features an attractive informal planting of mature trees in lawn, setting the campus apart from the residential surrounding.

Along Brigham Road are located the campus athletic fields. There are a few trees along this edge, allowing wide views into the campus green land. With the construction of the campus stadium gateway building, the Lakeway Drive has become the main arrival for athletic events, so the wide views of athletic fields compliment the arrival experience.

Along the north property edge are located service and maintenance land uses. A planted slope screens the Thruway. This area is quite remote from the campus core so the visual impact of the Thruway is minimal.

Wetlands / Hydrography / Drainage

Hydrography Map highlights the water and wetland features within the SUNY Fredonia campus and its vicinity, as compiled from available USGS and GIS information, and on-site observation. The information about general location of outfalls from the campus drainage system references the 2008 SUNY Fredonia Stormwater Master Plan.

In general the runoff from the entire campus eventually finds its way to the Canadaway Creek, whether it is through storm sewer pipes that outfall at two locations west of the campus, or via overland flow from south to north, eventually collecting along the campus northern perimeter and being culverted under the Interstate 90 New York State Thruway to a drainage swale tributary to Canadaway Creek.

No jurisdictional wetlands have been recorded on the campus property. There are, however, several low-lying or poorly draining areas that, based on site observation, appear to be wetlands. The existence of wetlands poses certain restrictions to development, such as complying with wetland buffer requirements.

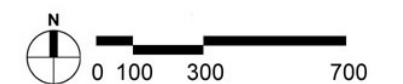
There is only one bioretention area on campus - a wet pond located south of Lake Way Drive. The bioretention area featured lush and varied wildflowers and aquatic vegetation.



HYDROGRAPHY MAP

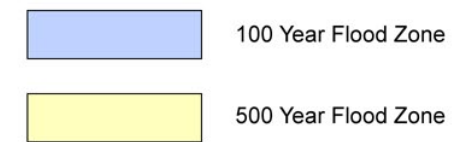
- National Wetland Inventory
- Wetland Per SUNY Fredonia CAD Base
- Observed Wet Areas
- Stream
- Bioretention Area
- Direction of Overland Flow

*Data Source:
"New York State GIS Clearinghouse" 2009
and SUNY Fredonia CAD Base

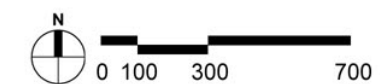




FLOOD PLAIN MAP



*Data Source:
"New York State GIS Clearinghouse" 2009



Floodplains

Flood Zone Map shows the extent of 100-year and 500-year flood zone. A hundred-year flood is a flood event that has a 1% chance of being equaled or exceeded in any single year; and a 500-year flood has 0.2% chance. The SUNY Fredonia campus is fully situated outside of both 100-year and 500-year flood zones.

Topography & Site Slopes

The **Topography and Site Slopes Map** show the topographical features on the site as well as elevations at key locations.

The campus land is relatively flat. From the highest elevation of 703 feet at the southeast property corner, the land slopes in northwest direction at a fairly consistent overall slope of about 1%, to a low point of 650 feet at the north property line. The Site Slopes Map indicates that the majority of land does not exceed 2% slope. The area with slopes over 2% are associated with specific grading transitions between various campus developments. The Service and Heating Plant building features man-made grassed berms against its façade as an architectural statement.

The only area that shows steeper topography is the grassed berm between Rockefeller Arts Center and the campus wood lot, which is a man-made landform that resulted from former land development operations. The sloped lawn with its brushed steel sculpture, set against the wooded background, has become an attractive feature in the otherwise flat landscape.

The campus land topography does not pose any constraints to site development.



TOPOGRAPHY AND ELEVATIONS MAP

• HP 693' High Point / Spot Elevation

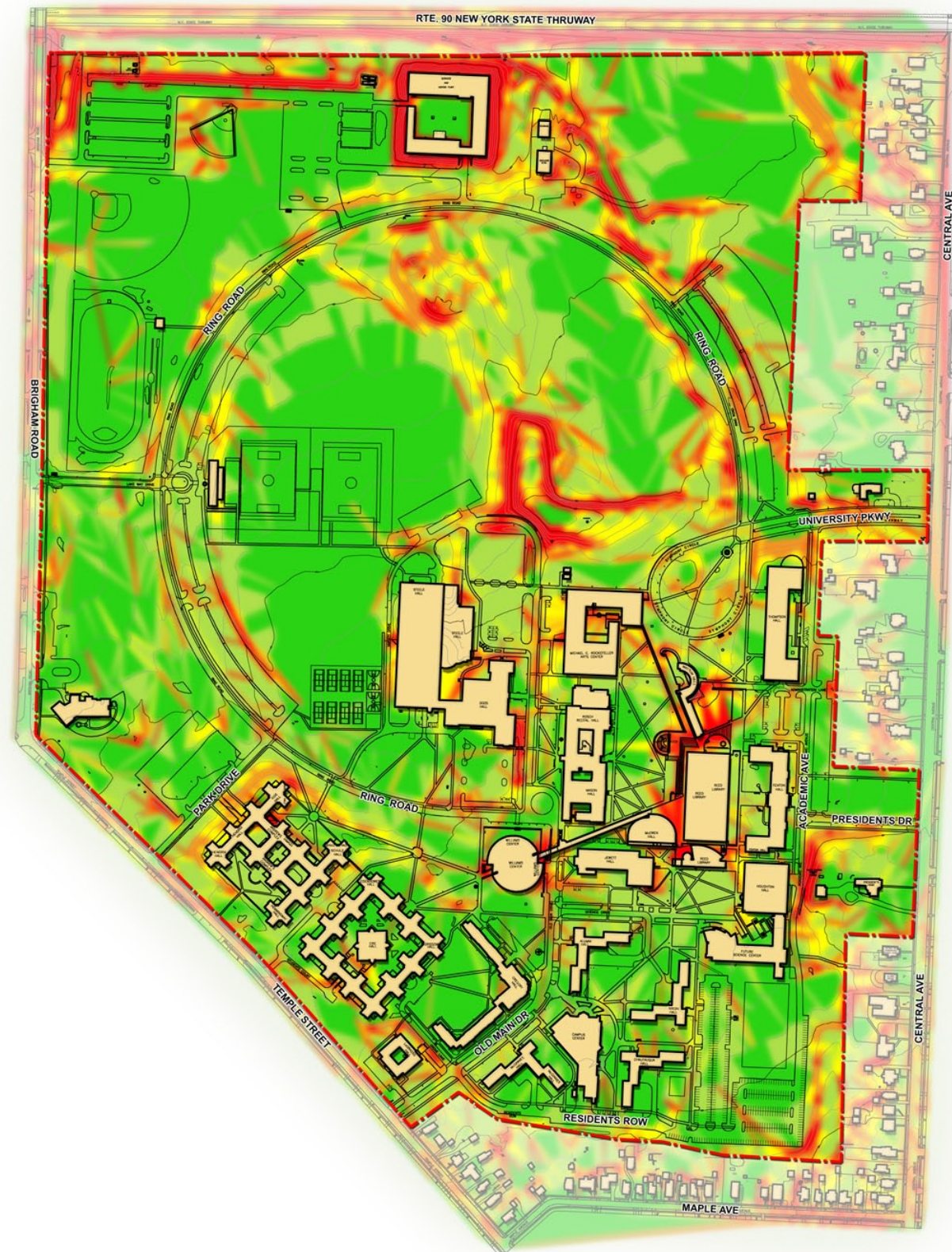
Elev. 648' Elev. 716'



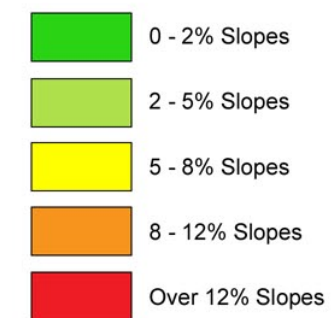
*Data Source:
SUNY Fredonia CAD Base



Geography Summary



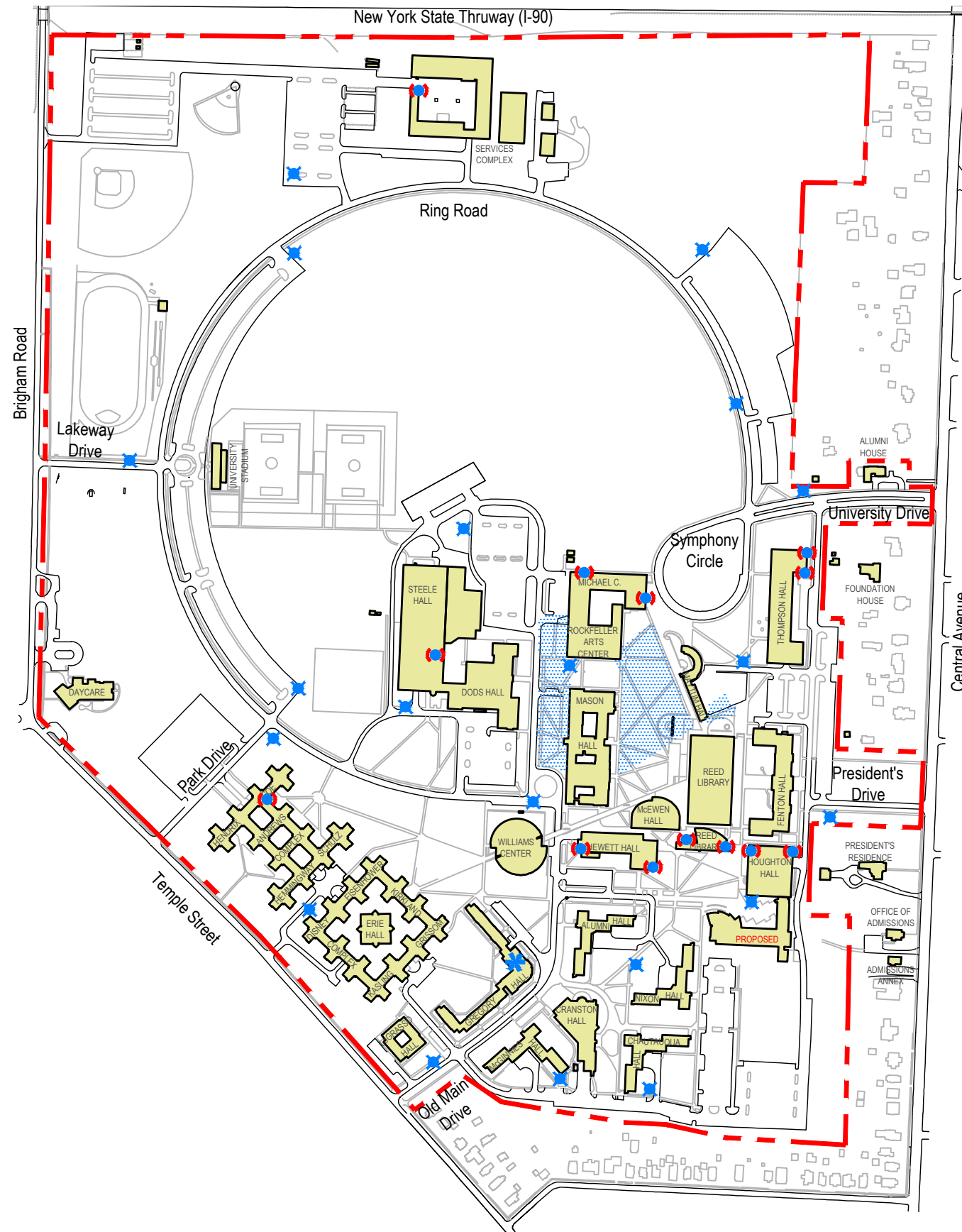
SLOPE ANALYSIS MAP








*Data Source:
SUNY Fredonia CAD Base



- Successful landscape buffers to the east and north of the campus shield it from I-90 and adjacent residential properties; a lack of buffer to abutting properties detracts from the Old Main Drive arrival sequence
- Runoff from the campus drains to the Canadaway Creek
- Though no jurisdictional wetlands exist on the campus, some areas appear to be wetlands which will affect their ability to be used for development
- The site is generally flat (<2% slope), with one significant grade change at the sloped lawn adjacent to the Rockefeller Arts Center



KEY:

-  Property Line
-  Police Station
-  Exterior Call Station
-  Interior Call Station
-  Area of Insufficient Light Level



Security

Background

Travel to the SUNY Fredonia campus is readily accessible from main roadways including a nearby exit to the New York State thruway. The roadways which access the actual campus are limited to four exterior roads which enter from Central Avenue, Brigham Road, and two entrances from Temple Street. There are many parking lots throughout the campus near academic and dormitory buildings, and also near athletic buildings and fields. The campus is within walking distance of the Village of Fredonia, and there are residential and commercial buildings in close proximity to the campus.

Remote Emergency Call Station

The campus has 20 exterior remote emergency call station or blue light stations and 15 interior stations located throughout the campus. The remote emergency call station allows a two way conversation between the remote area and the police station for a person in distress. The police station monitors the blue light stations 24 hours a day. Blue light stations in general are located in all of the larger parking lots, along walkways and in close proximity to campus buildings and at main entrance to 15 dormitory buildings. Refer to the Security Map for locations of the blue lights. The emergency call stations are tested on a monthly basis and currently have no maintenance issues.

Closed Circuit Television Systems

The campus closed circuit television system, or CCTV system, monitors approximately 100 cameras throughout the campus at the campus police station. System cameras are located in the following areas:

- Lobbies/entrance of all of the dormitories/residence halls
- Main parking lots and walkways through out the campus
- Interior portions of Reed Hall and McEwen Hall

The monitoring and recording station for the campus CCTV system is located in the police station, which is located in on the second floor of Gregory Hall. Portions of the CCTV systems have been installed at different time periods, so the maintenance condition of the CCTV system varies. Exterior cameras are all the pan-tilt zoom variety. The pan-tilt zoom allows an operator to manually zoom in on an object to rotate the view of a camera.

Site Lighting

The exterior lighting levels throughout the campus are generally above the recommended levels for a campus. See Security Map for average illuminance levels. The Illuminating Engineering Society of North America (IESNA) recommended levels for open areas 0.5 to 2 foot candles (fc). There are a few areas that the recorded illumination levels are below these values; these areas are indicated on the Security Map. It should be noted that various construction projects are in progress and may be the reason that some lighting fixtures were not operating at the time of the survey. Non-operational fixtures may be the reason for some below-recommended lighting levels. In general, the campus lighting ranges from an area average of 3.5 fc on the high side to 0.1 fc on the low side. The range in lighting levels throughout the campus will affect the perception of a secure light level. Walking from an area with the illuminance level well above the recommended illuminance level to an area in the lower region of illuminance can create a false impression that areas of sufficient light levels are not sufficiently illuminated.

It appears that there is no campus standard for site lighting, as the method and types of site lighting at the campus varies greatly. Exterior lighting includes a multitude of pole-mounted fixture types and pole heights, including shoe box type fixtures, globe fixtures for the outer walkways, area lighting fixtures with different configurations and amount of uplight. Building-mounted fixtures include wall packs spot lights and down lighting in canopies. Ground-mounted and bollard fixtures are also included in exterior lighting at the campus. Campus personnel have indicated that they would like to have all pulse start metal halide fixtures in the future. Lighting standards should be considered in the future, to minimize the type of fixtures and set consistent lighting levels for entryways, walkways and roadways. This would also help with maintaining exterior lighting fixtures by minimizing replacement lamps and ballast types.

The exterior lighting standards feed from local building panels. Maintenance personnel indicated that the egress lighting for all of the buildings is served by the building generator of the building. It was not determined what portion of the roadway and parking lot fixtures are served by emergency power, and may be without light in a power outage.

Campus Police

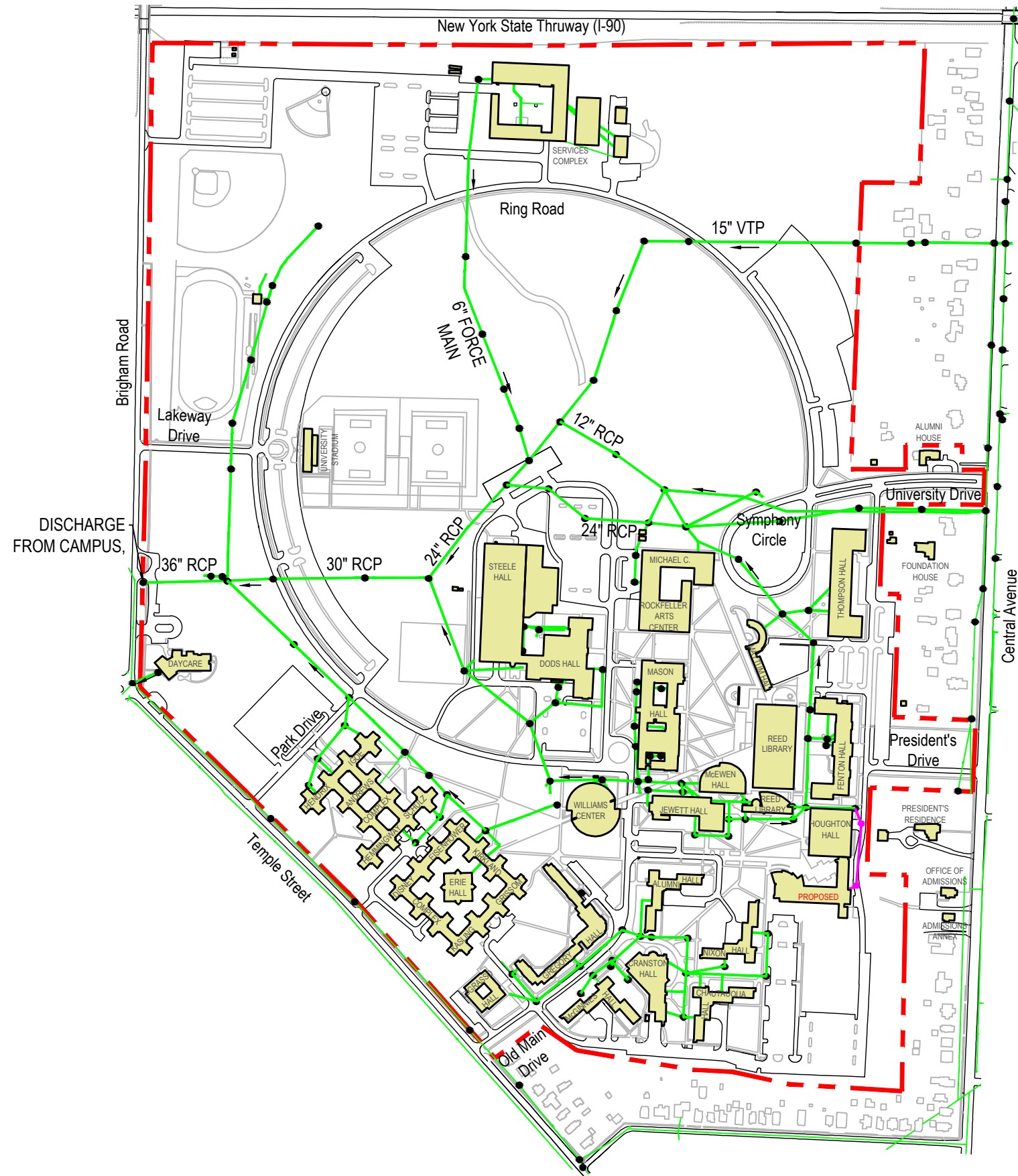
Campus police have a station located on the second floor of Gregory Hall, and officers patrol/monitor the campus twenty four hours a day. Campus police have a memorandum of understanding with the Village of Fredonia and City of Dunkirk police departments. The second floor station decreases the visibility of the police, and increases the response time of the campus police to an incident, which is a potential life safety issue. Covered parking for police vehicles could decrease response time in months of inclement weather and eliminate the need for snow and ice removal.

Emergency Plans

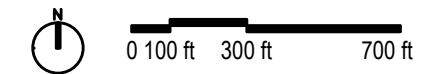
One of the methods utilized by the campus emergency mass notification is the NY Alert system. This is a voluntary procedure that students and campus employees can receive a text, or e-mail when an emergency occurs. The campus personnel are in the process of instituting mass notification through the fire alarm system, which includes exterior horns and speakers in some buildings notifying occupants of a emergency.

Security Summary

- The campus is equipped with 20 blue light remote emergency call stations and +/- 100 closed circuit television cameras, monitored by Campus Police
- A lack of lighting standards affects not only the campus appearance but also the perception of security due to variable light levels
- The location of Campus Police on the second level of Gregory Hall decreases its visibility and increases response time
- A voluntary mass notification system linked to student, faculty, and staff cell phones is used for announcements during emergencies



- KEY:**
- Property Line
 - Sanitary Sewer
 - Sanitary Sewer - Future Relocation for Science/Tech Bldg.
 - Sanitary Manhole



Physical Conditions: Infrastructure

Sanitary

The sanitary system is a gravity sewer system with one section of force main as shown on Figure SU-01. The sewer piping consists of +50% vitrified clay tile (VCT) and +35% reinforced concrete pipe (RCP), with the majority of the installation occurring between 1940 and 1960. Newer sanitary sewer lines account for roughly 15% of the system and are Polyvinyl Chloride pipe (PVC). Pipe diameter is reported to range between six-inch (6") and thirty-six inch (36").

Village of Fredonia has two sanitary lines which enter the campus along Central Avenue and connect near the center of the Ring Road. The campus sewer system branches empty into these two lines and combined sanitary trunk. Currently the Village of Fredonia has an agreement with SUNY Fredonia to service sections of these sanitary lines. At the point of discharge from the campus the sanitary pipe is thirty-six inch (36") diameter. Majority of the sanitary manholes are original brick made structures.

Nixon Hall is the only facility building to have a sanitary backflow preventer, this apparatus was installed after a backup event. In an effort to reduce grease build-up a grease trap has been installed at the University Commons.

Maintenance on the campus sewer system is performed as required. Tree root penetration at the older sections of pipe has been a common backup problem. Grease build-up from the University dining facilities found in Erie Hall, Williams Center and University Commons have created blockage issues. Some manholes and pipes in these prone areas are flushed as time permits.

Sanitary Course of Action:

- Perform a closed circuit video (CCTV) inspection of the sanitary sewer lines campus wide to determine conditions and potential problem areas. CCTV will also aid in the identification of correct structure networking.
- Perform regular maintenance on sanitary lines and manholes.
- Phase replacement construction of original brick manhole structures.

Storm



KEY:

- Property Line
- Storm Sewer
- Storm Sewer - Future Relocation for Science/Tech Bldg.
- Existing Ditch Line
- Storm Manhole
- Storm Catch Basin
- Storm Management Practice (SMP)
- ★ Culvert

- Note:
1. OUTFALL # 1 -53"x83" HERCP at CANADAWAY CREEK
 2. OUTFALL # 2 - 42" RCP



Storm Distribution

The drainage system for SUNY Fredonia is a gravity type, separated storm sewer system, shown on Figure SU-02. This system consists of manholes, catch basins and storm drain piping which has been expanded as necessary based on infrastructure construction. Campus records have indicated there is roughly 40,000 linear feet (lf) of piping, ranging in size from 6" to 66" diameter. Pipe materials consist of Polyvinyl Chloride (PVC), Corrugated Metal Pipe (CMP) and Reinforced Concrete Pipe (RCP). The manholes and catch basins are believed to include precast reinforced concrete, and brick and mortar structures. This could not be verified due to limited record drawing availability. Structures in the traffic path are prone to collapse and a campus inspection schedule should be established.

There are two storm sewer trunks from the campus on the west side which discharge into Canadaway Creek. Both trunks transfer stormwater collected by the Village of Fredonia's storm water system through the campus. Based on analysis of the storm system done under the Stormwater Master Plan (2008), the 42" diameter (Outfall #2) southwest discharge rate for a 10-year rainfall event is equivalent to the outlet pipe capacity under existing conditions. Localized backups and flooding may occur with collection of additional stormwater into this system as the campus expands.

The campus currently performs maintenance on sections of the storm sewer system when possible. Pipes are flushed, and structure sumps cleared of debris accumulation as time permits during the summer months. Structures are replaced by the facility staff on an as-needed basis when outside the scope of ongoing construction projects.

Surface drainage is generally able to handle the storm runoff; however facility staff has identified the following areas of concern:

- Old Main Drive - East of Gregory Hall, standing water in roadway.
- Between Reed Library and Houghton Hall, standing water in lawn.
- Ring Road – At various locations surface runoff does not permeate through the gravel shoulder, and areas with pavement distress have created pools of standing water at various locations on the campus.
- Both Nixon and Chautauqua Halls have experienced storm water backups at times since the construction of Lot 19 over the existing tennis courts.

Storm Course of Action:

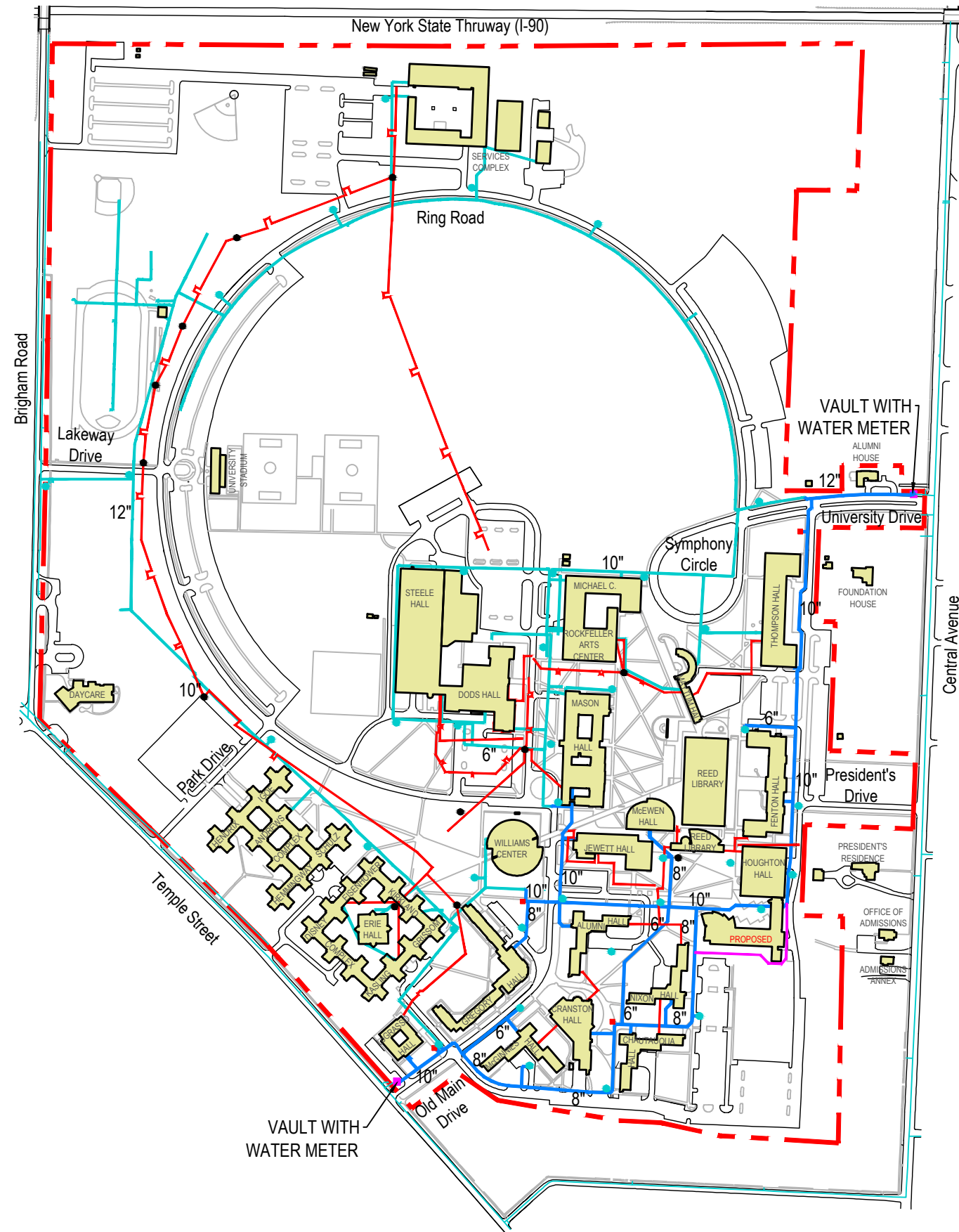
- Perform a closed circuit video (CCTV) inspection of the storm sewer lines campus wide to determine conditions and potential problem areas. CCTV will also aid in the identification of drains and structures for developing system mapping.
- Continue regular maintenance on storm lines, manholes and catch basins.
- Establish a campus inspection schedule of storm system.

Stormwater Management Practice:

Any project with disturbance of more than one acre of land will require obtaining permit coverage under New York State Department of Environment Conservation (NYSDEC) State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharge from Construction Activity. The campus has the following Stormwater Management Practices: Bioretention System (located near Lakeway Drive) and Underground Infiltration System (the new Campus and Community Children's Center). For the proposed Science and Technology Building an underground detention plus cartridge filtration system is proposed.

Implementation of the required stormwater management practices on an individual project basis can consume land area and can be difficult to efficiently manage. An alternative would be to combine projects and treat the total required stormwater, as was done for the Cranston / Athletic Complex projects (using bioretention).

INFRASTRUCTURE



- KEY:**
- - - Property Line
 - Water Main
 - Water Main - Replaced 2000
 - Water Main - Future Relocation for Science/Tech Bldg.
 - HTHW - Abandoned - 2009
 - Water Vault with Meter
 - Water Main - Cap For Future Expansion
 - Fire Hydrant Location
 - HTHW Manhole - Abandoned 2009



Water

The configuration and size of campus water mains has been obtained from available mapping and as-built drawings from the 1999-2000 underground water distribution replacement. Based on this information the network consists of nearly all ductile iron pipes, ranging in size from 6" to 12" diameter. Water mains not replaced in the replacement project may date back to the 1950's. Found on the Water Distribution Map is the on-campus water distribution system, which differentiates between original, replaced and proposed water mains. Currently the campus is connected at (2) locations into the surrounding water system at the intersections of University/Central and Old Main/Temple. A vault is present at each location housing a water meter to monitor usage; only the Campus and Community Children's Center and Technology Incubator buildings have meters. Water distribution for the campus is a combined domestic and fire protection system; at some buildings separate fire protection service line have been installed off the primary water main.

Fire hydrants are flushed and routinely flow tested verifying campus water pressure. Hydrant inspection report from 2009 flow testing has established an approximate pressure of 115 pounds per square inch (psi), throughout the campus.

As seen on the Water Distribution Map, the 2000 water replacement work was limited to the southeast quadrant of the campus. This project replaced the water mains between both water meter vaults along Academic Avenue and Science Drive. Laterals to existing buildings and fire hydrants found along the replacement alignment were replaced as encountered. Valves and pipe stubs have been installed at various locations to provide for future water line replacement project connections. Phase II of the replacement is in design and is slated to begin construction Spring of 2011. The scope of work for this project includes 8,000 linear feet of underground water line and 15 fire hydrants.

Relocation of an existing 10" diameter water main will be required for the construction of the proposed Science and Technology Building, south of Houghton Hall. The water line will be relocated around the east and south side of the building.

The campus has identified that water line problems or breaks have been relatively infrequent. Based on the BCAS assessment report this system has been rated 25% Poor, 25% Fair and 50% Good. Any waterlines older than 50 years should be considered near the end of their useful design life and considered for replacement.

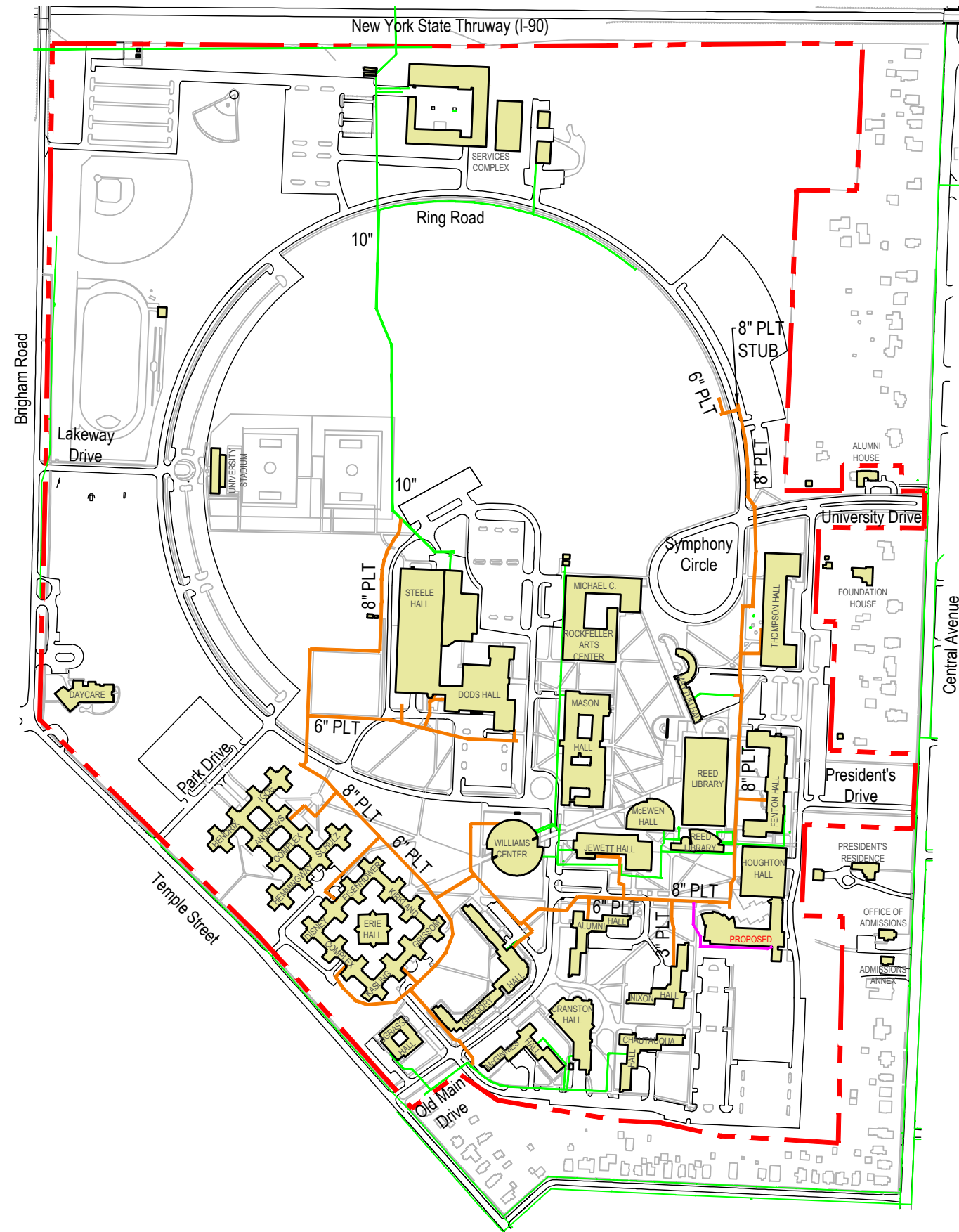
Water Course of Action:

- Installation of water meters at each building, allowing for detailed usage review.
- Replacement of original underground water mains not included in Phase II project (+3,000lf).
- Continue with regular maintenance on hydrants and valves, including flushing hydrants and opening and closing valves.

High Temperature Hot Water

SUNY Fredonia has changed from a Central Boiler, High Temperature Hot Water (HTHW) system to Satellite heating systems. In May of 2009 the campus phased out the remaining HTHW system and abandoned the piping infrastructure in-place. Facilities has stated that HTHW manholes have been abandoned by removing the top riser section and access cover followed by filling manholes with backfill and/or concrete. This abandoned system should be suspected to have asbestos containing materials, thus requiring testing prior to demolition or removal. Incidental disturbance of asbestos containing materials shall follow corrective actions as detailed under New York State Department of Labor Code Rule 56.

Gas Distribution



- KEY:**
- Property Line
 - Gas Main
 - Gas Main - Replaced 2007
 - Gas Line - Future Relocation for Science/Tech Bldg.



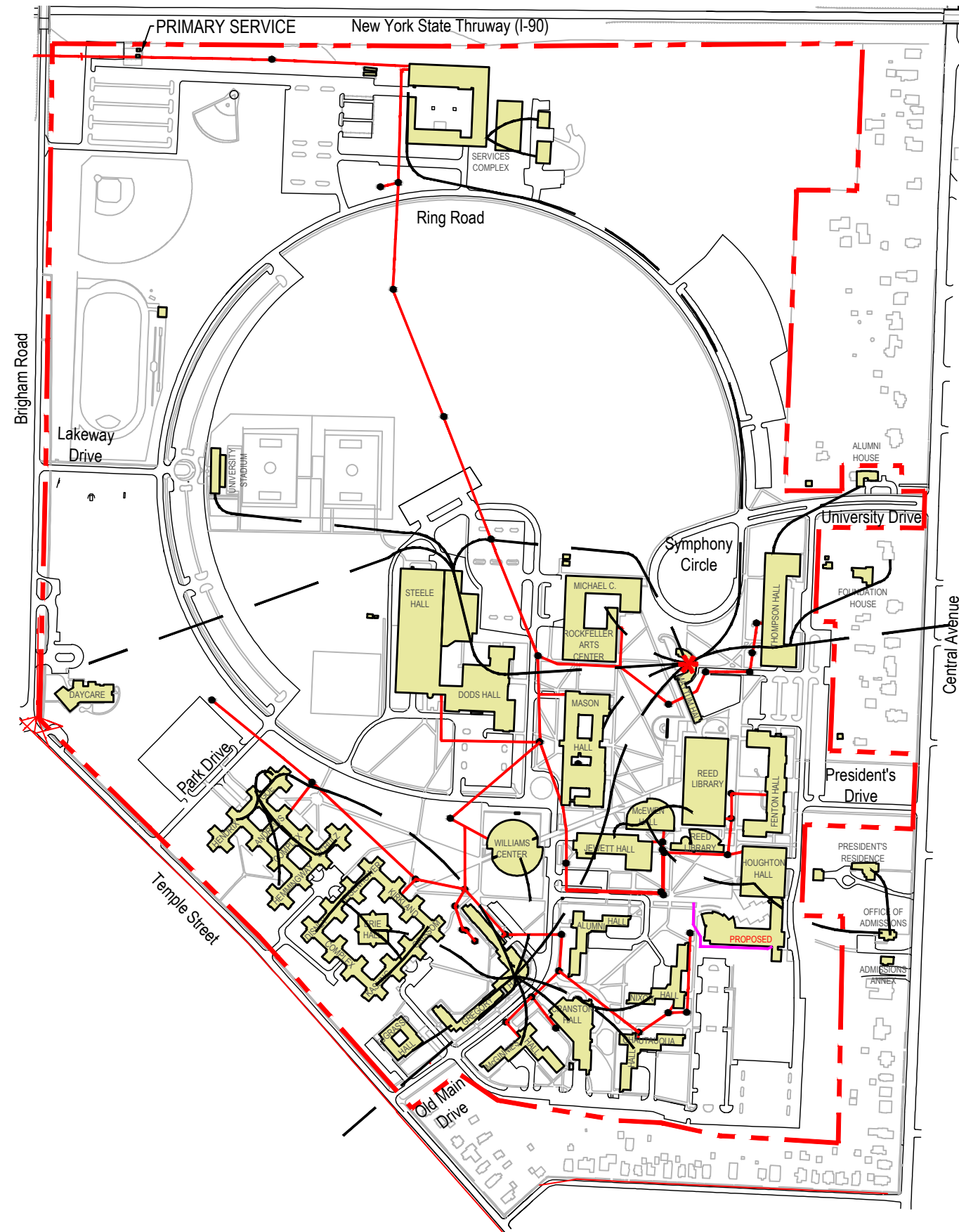
Gas Distribution

In 2007 a campus wide gas upgrade project replaced the majority of existing gas piping with plastic pipe. Natural gas is piped over the campus as shown on the Gas Distribution Map, with differentiation between 2007 work and existing piping. The gas lines on the campus are owned and maintained by SUNY Fredonia. National Fuel provides gas to the campus from a gas main along the New York State Thruway, which ties in at the Services Complex. From the Services Complex a ten inch (10") line runs south through the Ring Road to Steele Hall. At this location the service is reduced to eight inch (8") pipe which branches as shown on the Gas Distribution Map to the facility buildings. Generally the gas lines within the campus consist of six (6") and eight inches (8") lines.

Gas Course of Action:

- Replacement of original gas lines not included in 2007 project.
- Update mapping of campus utilities, identifying active and abandoned lines/valves.

INFRASTRUCTURE



KEY:

- - - Property Line
- Communications Pathway
- Power Distribution
- Power Manhole
- * Data Center



Electrical Distribution

The electric service to the SUNY Fredonia is fed from the utility, National Grid, to a single 10,000KVA transformer with a 13.2KV secondary. From this service there are two primary feeds which serve all of the main buildings on the campus. Each building has a primary selective switch to a single transformer. Thompson hall is the only building with two services to the building. The two primary feeds to each building allow for redundancy. If there is a problem with one of the feeders resulting in power outage, the switch can be operated to receive power from the second set of feeders.

The individual building service transformers range in size and have either a 480V or 208V secondary to serve the building loads. Currently the service to the campus and each building is of sufficient size to serve their required loads.

Currently there are no issues with the primary distribution. There is a study underway that is reviewing the current conditions of the primary conductors and manholes through out the campus.

F PHYSICAL CONDITIONS

BUILDING ASSESSMENTS



Physical Conditions: Building Assessments

This section evaluates and analyzes existing campus buildings over 5,000 square feet in area, and provides an update to the Building Conditions Assessment Survey (BCAS) that was completed in 2007. Assessments are focused on key factors of building conditions: Building Exterior, Building Interior, MEP Systems, and Building Environmental, with written descriptions of existing facilities and observations taken from building walk-throughs. A summary of key issues, deficiencies, and adjustments since the 2007 BCAS Report was created is provided. A more evaluative discussion of building flexibility, efficiency, and adequacy in addressing current needs of campus operations can be found in the Suitability chapter of this document.

Detailed structural assessment of existing buildings was also performed, and recommendations for structural improvements and repairs have been provided. The structural report can be found in the Appendix.

Recent Construction and Current Projects

SUNY Fredonia has undergone growth in recent years which is not evaluated by the Building Conditions Assessment Survey but constitutes significant additions to the campus' physical plant. The new buildings are not academic in nature, but are supportive of the SUNY Fredonia mission through the services that they provide. In addition, several important projects are in development that will alter the campus physically, and enhance the campus experience. By providing these new spaces, other facilities on campus may be vacated, creating opportunities for additional growth within the campus' existing footprint.

SUNY Fredonia Technology Incubator

As described in the Campus Profile, the Technology Incubator was built in downtown Dunkirk to provide services to local startup businesses in order to ensure their success and continue and strengthen the University's contributions to the local and regional economy. This 21,000 square foot facility opened in 2010, and contains individual offices and shared spaces such as seminar and conference rooms, a kitchen and lunch room, copy and workroom, and tenant storage. The building is equipped with the latest technology for its businesses, and is a state of the art new facility in excellent condition. There are no plans for the Technology Incubator to be used for academic purposes.

Campus & Community Children's Center

With construction completed, the Campus and Community Children's Center will provide an existing non-academic program with a much-needed expansion, and allow increased visibility and desirable autonomy to a longstanding institution that has previously been operated within SUNY Fredonia's facilities. Formerly located in Thompson Hall, the Campus and Community Center has provided quality child care and early education to local preschool and school-age children since 1974. The new facility will not only reallocate space for academic use by SUNY Fredonia, but will also allow the Campus and Community Center to offer care for more children, including a new infant care program. The new Campus and Community Center is to be built solely for use as a day care and preschool facility and as an educational resource for programs such as Early Childhood Education and Communications Disorders and Sciences. It is not intended to be used in the future for any other purpose.

Science and Technology Center

The College of Natural and Social Sciences, and in particular the Departments of Biology and Chemistry, will soon benefit from a sizeable increase in square footage with the addition of the Science and Technology Center, expected to be occupied in 2013. Currently in design, the building is expected to be 92,244 gross square feet and to consist of classrooms, state-of-the-art labs, and common learning and social spaces that existing facilities do not offer.

The addition of the Science and Technology Center to SUNY Fredonia creates numerous opportunities beyond those created within its walls; it is a catalyst for long-range campus improvements to academics and student life. Construction of this new facility will vacate space in both Houghton and Jewett Halls, both of which are slated for extensive renovation. Houghton Hall is expected to be renovated first, which will dramatically improve efficiency, technological capability, and the overall adequacy of the lab science facilities at SUNY Fredonia. When Houghton Hall is fully renovated and re-occupied by these programs, Jewett Hall will be made available. Jewett's strategic location at the heart of the campus core and as an anchor of a future "Science Quad" created by Houghton Hall and the Science and Technology Center make it an appropriate candidate for expanded use as an academic or student services building. In particular, the location of Jewett Hall in close proximity to the Williams Center highlights its ability to provide much-needed expansion of student services that are currently scattered throughout the campus.

Foundation House

Though the Foundation House and its property are not owned by SUNY Fredonia, the facilities and services offered there play an important role in campus life and university advancement. The Foundation House provides conference facilities and event space for small groups, private offices, and is home to the Fredonia Foundation and the Office of University Advancement, both playing integral roles in obtaining grants and donations to the campus. Purchased by the Fredonia Foundation in 2003, the building is an important welcome point for alumni and donors, and is able to be used for a variety of functions with catering and staff provided by the Faculty Student Association (FSA). The building is in excellent condition and is appropriately used as a small conference/events facility.

President's Residence

The President's Residence, located at the intersection of Central Avenue and President's Drive, was built in 1910 and purchased by SUNY Fredonia in 1964. It serves as the primary residence for the acting University president and his family, and is also a popular location for special events and dinners. The home is equipped with a catering kitchen and gathering space on the first level for medium-sized groups. The President's private quarters are located on the upper level. The residence is built in Greek Revival style with its formal entrance on Central Avenue. It is well maintained by the University and is in good condition. A detached garage is also part of the property; it is reportedly in need of some structural repair. In general, the President's Residence serves the University community well, and is in good condition.



The Foundation House
Source: www.fredonia.edu



Architect's rendering of the new Science and Technology Center. Image courtesy of Mitchell Giurgola Architects



Ribbon cutting ceremony for the Technology Incubator in Dunkirk, February 2010.
Source: www.fredonia.edu



The President's Residence



Alumni Hall, a typical residence hall in the older cluster located at the southwest corner of the campus.



A historical photo of the newer residence blocks constructed according to the I.M. Pei and Partners Master Plan. Source: In "Colleague," October 1971. www.library.buffalo.edu/archives/sudents/dorms.html



Gregory Hall, the oldest residence hall on campus.



University Commons. At right is the entrance to the Marché dining facility, Starbucks coffee shop, and University Bookstore, with the popular entrance plaza in the foreground.

Residence Halls

Campus residence halls make up the majority of the built space at SUNY Fredonia at 442,243 square feet, and are an integral component of the campus experience. Residence halls accommodate approximately 50% of students currently, and are located in two clusters in close proximity to the campus core. The first cluster, including Alumni, Chautauqua, Gregory, McGinnies, and Nixon Halls, predates the I.M. Pei and Partners Master Plan. Gregory Hall is the oldest residence hall on campus, built in 1950; others within this residential cluster were built between 1958-1963. These three-story structures are traditionally-arranged, corridor-style brick buildings, housing both single-sex first year students and co-ed upperclassmen. As with other residence halls at SUNY Fredonia, continued maintenance and renovation of these facilities allows them to continue to provide adequate living spaces for students.

The second cluster of residence halls is located to the northwest of the campus core, and is comprised of two major structures, divided into four residence halls each. These three-story modern brick structures were part of the I.M. Pei and Partners Master Plan, and were built between 1967 and 1970. Though dated, these buildings have been retrofitted and renovated over time to meet the demands of current students. Today, they house both underclassmen and upperclassmen in suite-style arrangements of three and four bedrooms. Window replacement in these structures, along with other renovations, is ongoing, allowing these facilities to remain current.

Many residence halls on campus also house other student service and academic programs. Virtually all of the first floors of residence halls in the Pei-era structures are used for a variety of offices and academic functions such as the Office of Facilities Planning and the Visual Arts and New Media Photography Lab. Gregory Hall also houses many nonresidential programs; this building is home to the offices of Residence Life, University Police, Faculty Student Association, Career Development, and the campus print shop. Though residence halls are convenient locations for smaller offices and academic programs, location in these buildings is at the expense of student common areas, which have been repurposed for these other uses without replacement.

Increased demand for alternatives to traditional dorm-style accommodations has brought attention to the need for new on-campus housing. SUNY Fredonia is currently in the planning and site-selection stages of 200 beds of townhouse-style apartments to meet this demand and to become more competitive with the local off-campus rental market.

University Commons

Also in the vicinity of the older residence halls described above, and with a highly visible entrance on Old Main Drive, is the newly-constructed University Commons (formerly Cranston Hall). This new facility combines a number of campus functions such as a bookstore, coffee shop, and dining facilities with new "independent-living"-style single and double rooms with adjoining bathrooms. Since its construction in 2006, University Commons has served as a hub of campus activity, with its welcoming common spaces and lounge areas inviting students and community members to linger both inside the building and outside at its entrance plaza. Its large expanses of glass showcase activity during the day and night, enlivening this part of the campus and providing a focal point for student activity.

Building No. 60

BUILDING ASSESSMENTS

Building Exterior

The exterior of the Butler Building is corrugated aluminum with a small wall of split-face concrete block at the front entrance. The roof is also corrugated aluminum, with fiberglass acrylic panels for skylights. The corrugated walls are in fair to poor condition, with paint finish deteriorating and numerous minor dents around the building perimeter. Man doors and rolling doors at each end of the building are in fair condition.

Building Interior

The Butler Building is an open shed inside with an exposed pre-manufactured steel frame and concrete floor. The walls and roof of the interior are insulated. The insulation is generally in good condition, though the plastic facing is deteriorated in several locations. The floor is in good condition with a central trench drain down the middle.

MEP Systems

The building MEP systems are in good condition.

Building Environmental

No records were available for this building. The year of construction (1967) and the area where it is located suggest that the same conditions described in the Maintenance and Food Service Buildings exist in Butler.



Butler Building (Building No. 60)

Building No: 60
 GSF: 4,080
 Const. Type: Quonsets and Temporary Steel Buildings Wood and Metal
 Const. Year: 1967
 Floors Above: 1
 Below: 0
 Building Type: Campus Service

The Butler Building sits with several other service structures next to the Maintenance Building at the edge of the Ring Road. It serves as a storage location for equipment and small vehicles used for maintenance of the campus grounds.

Summary of Issues

- Mechanical: Added the building heating system.
- Electrical: Downgraded the electrical systems due to age and review with facilities.

BUILDING EXTERIORS

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
		100				100		Building Framing
		100			50	50		Roof
		100				100		Walls
		100				100		Foundations
		100				100		Windows/Louvers
		100			50	50		Doors/Frames/Hardware

- Door Comment: Exterior doors and door finish at original building deteriorating due to weathering.

BUILDING INTERIORS

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
		100				100		Floors
		100				100		Walls
		100				100		Ceilings
		100				100		Elevators
		100				100		Doors/Frames/Hardware
		100			50	50		Stairs
		NA				NA		Specialty Systems
		NA				NA		Built-In Furnishings

- Stair Comment: Rubber treads and landing tiles exhibiting wear.

BUILDING MECHANICAL

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
NA								AHU/Controls
NA						100		Boiler/Heat Exchanger/Controls
NA								Chiller/Controls
NA								Fire Sprinkler/Standpipe Sys.
		100				100		HVAC Distribution & Controls
		100				100		Plumbing Systems/Fixtures
NA								Pumps/Motors/Compressors
Na								Specialty Systems

- The heating system is a Co-Ray –Vac infrared heating system which is in good condition.

BUILDING ELECTRICAL

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
			100			100		Electrical Distribution (wiring sys)
			100		50	50		Emergency Power/Lighting Syst.
			100			100		Fire Alarm System
			100			100		Lighting Syst. (inc. branch wiring)
			100			100		Power Wiring
NA								Master Clock
NA								Public Address
NA								Security
NA						100		Specialty Systems
			100			100		Tele/Data Syst. (cabling only)

- The specialty system is a gas detection system.
- The electrical systems have been downgraded after review with facilities. This is due to age of the systems.

Carnahan Jackson Center - Addition to Reed Library (Building No. 12a)

Building No: 12a
 GSF: 43,866
 Const. Type: Steel Construction
 Masonry
 Const. Year: 1991
 Floors Above: 5
 Below: 0
 Building Type: Library



Building Exterior

The Carnahan Jackson Center is constructed of dark brown brick similar to Houghton Hall to its east. At its north side, facing McEwen Hall and Reed Library, is a concrete block cylinder with a large skylight at the roof. The exterior envelope of Carnahan Jackson is in good condition. Windows, doors and masonry have all weathered well. The roof, while reaching 20 years old, has not had any problems.

Building Interior

Carnahan Jackson's interior is generally in good condition. A small atrium space at the connection to Reed Library provides a light-filled transition to the building and employs exposed cast concrete structure in a nod to the Pei-era buildings. An open stairway in the atrium gives access to the various stack levels and Writing Center. Interior finishes are mostly brick, cast concrete and carpeting and have been highly durable.

MEP Systems

The MEP Systems for the building are generally in good condition. The Chiller is at the end of its useful life and is oversized for the load. The building needs a new fire alarm system upgrade.

Building Environmental

The building is of recent construction (1991) and has no suspect friable asbestos-containing materials.

The Carnahan Jackson Center was constructed in 1991 as an addition to the Reed Library, expanding stack capacity for Reed and created specialized program spaces. It also houses SUNY Fredonia's Writing Center. The four story building provides a gateway to Reed Library and the rest of core academic campus from Science Drive.

Summary of Issues

- Stacks have been replaced over time for other more flexible, open programs such as the Learning Center
- The building's atrium and staircase are attractive, but seldom used
- Has been used for surge space during renovations

BUILDING EXTERIORS

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
		100				100		Building Framing
		100			50	50		Roof
		100				100		Walls
		100				100		Foundations
		100				100		Windows/Louvers
		100			50	50		Doors/Frames/Hardware

- Door Comment: Exterior doors and door finish at original building deteriorating due to weathering.

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
		100				100		Floors
		100				100		Walls
		100				100		Ceilings
		100				100		Elevators
		100				100		Doors/Frames/Hardware
		100			50	50		Stairs
		NA				NA		Specialty Systems
		NA				NA		Built-In Furnishings

- Stair Comment: Rubber treads and landing tiles exhibiting wear.

BUILDING MECHANICAL

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
		100				100		AHU/Controls
	100						100	Boiler/Heat Exchanger/Controls
					100			Chiller/Controls
			100				100	Fire Sprinkler/Standpipe Sys.
		100				100		HVAC Distribution & Controls
			100		100			Plumbing Systems/Fixtures
		100				100		Pumps/Motors/Compressors
		100				N/A		Specialty Systems

- Chiller/Controls are nearing the end of their useful life. Chiller is oversized.
- Boiler/Heat Exchanger/Controls were recently renovated.
- There are minor plumbing issues with the elevator drain and the hot water tank.

BUILDING ELECTRICAL

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
		100				100		Electrical Distribution (wiring sys)
		100				100		Emergency Power/Lighting Syst.
100				100				Fire Alarm System
		100				100		Lighting Syst. (inc. branch wiring)
		100				100		Power Wiring
								Master Clock
								Public Address
								Security
		100				100		Specialty Systems
		100				100		Tele/Data Syst. (cabling only)

Building No. 27

BUILDING ASSESSMENTS

Building Exterior

The small amount of cast in place concrete that is visible above the earthen berms appears to be in good condition. Exterior walls in the courtyard are concrete block and in fair condition, showing some signs of age-related deterioration and weather-related staining. A relatively new membrane roof is in good condition. Windows and doors are original to the building and in poor condition, and louvers are in a significant state of disrepair.

Building Interior

The interior of the Central Heating Plant is in fair condition. The Central Heating Plant is primarily a large, unfinished open space with additional ceiling height due to a floor sunken below grade. Steel and concrete structure is painted and there is an unfinished concrete floor throughout. Steel doors are original to the building.

MEP Systems

The existing High Temperature boilers were recently removed and replaced with a new boiler plant and domestic hot water plant. The other mechanical and electrical systems in the building are original and when a future use is found for the building these systems will require complete replacement.

Building Environmental

The Central Heating Plant has been the subject of major asbestos abatement work over the last 10 years. The vast majority of asbestos pipe and tank insulation removed inside the facility in and abatement project this year. The original boilers were abated and demolished as part of this project. There is some asbestos cloth wrap on fiberglass insulated pipe and mudded fittings that remain in the far west portion of the building.



Central Heating Plant (Building No. 27)

Building No:	27
GSF:	11,828
Const. Type:	Steel Construction Masonry
Const. Year:	1967
Floors Above:	1
Below:	0
Building Type:	Heating Plant

The Central Heating Plant is part of the larger Service Building complex on the western perimeter of the Ring Road designed as part of the I.M. Pei & Partners Master Plan. The Service Complex is a one-story cast in place concrete structure that houses the Maintenance Building (Building 28) and Food Services (Building 29) in addition to the former Central Heating Plant. These program functions are arranged around a parking courtyard open to vehicular circulation. Earthen berms slope up to cover the exterior walls of the building on the perimeter outside of the courtyard, burying all but a continuous clerestory window and roof element. The Central Heating Plant no longer functions to generate high temperature hot water to the campus and is instead used primarily for physical plant storage.

Summary of Issues

Building Mechanical:

- Boiler/Heat Exchanger/Controls have been recently updated.
- Plumbing Systems/Fixtures are approaching the end of their useful life.
- Pumps/Motors/Compressors are replaced/upgraded as necessary.

Building Electrical:

- The Buildings Electrical Systems have been downgraded due to age.

BUILDING EXTERIORS

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
		100				100		Building Framing
		100				100		Roof
	25	75			50	50		Walls
	25	75			25	75		Foundations
25	75			100				Windows/Louvers
	100				100			Doors/Frames/Hardware

BUILDING INTERIORS

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
	100				100			Floors
	100				100			Walls
	100				100			Ceilings
								Elevators
	100				100			Doors/Frames/Hardware
	100				100			Stairs
								Specialty Systems
								Built-In Furnishings

BUILDING MECHANICAL

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
	100				100			AHU/Controls
100							100	Boiler/Heat Exchanger/Controls
			100				100	Chiller/Controls
N/A				N/A				Fire Sprinkler/Standpipe Sys.
	100				100			HVAC Distribution & Controls
		100			100			Plumbing Systems/Fixtures
50		50				100		Pumps/Motors/Compressors
N/A				N/A				Specialty Systems

- AHU/Controls are approaching the end of their useful life.
- Boiler/Heat Exchanger/Controls have been recently updated.
- Plumbing Systems/Fixtures are approaching the end of their useful life.
- Pumps/Motors/Compressors are replaced/upgraded as necessary.

BUILDING ELECTRICAL

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
		100		100				Electrical Distribution (wiring sys)
			100		75		25	Emergency Power/Lighting Syst.
			100		50	50		Fire Alarm System
		100			100			Lighting Syst. (inc. branch wiring)
		100		50	50			Power Wiring
								Master Clock
								Public Address
								Security
	100							Specialty Systems
75	25			75	25			Tele/Data Syst. (cabling only)

- The buildings electrical systems have been revised due to age and after review with facilities.

Dods Hall
(Building No. 16)

Building No: 16
 GSF: 82,591
 Const. Type: Steel Construction
 Masonry
 Const. Year: 1963
 Floors Above: 2
 Below: 0
 Building Type: HPE



Building Exterior

Dods Hall is a steel-frame building with red brick and aggregate concrete panels for exterior walls. The aggregate panels are aged and wearing and the brick is in need of general maintenance. Dods Hall's steel windows are original to the building and showing signs of wear and deterioration, particularly at the front entrance. The roof is in fair condition, but reaching the end of its expected life.

Building Interior

The interior of Dods Hall is generally in fair to poor condition. Walls floors and ceilings are all wearing and showing age-related deterioration. The locker rooms have old lockers and benches need replacement. The gymnasium is in good condition, but seating capacity is insufficient for Division 3 competition. The former pool, which was filled with concrete enclosed with structural steel and a truss system supporting a metal pan and concrete floor, is currently used for fitness classes but will soon begin the design process for an upgrade. A dance studio on the ground floor was recently renovated and has provided a good venue for dance and fitness instruction.

MEP Systems

The existing systems for the building are nearing the end of their useful life.

A project is being completed to provide and air cooled chiller and reconditioning of one of the air handling units, piping and ductwork that serve the former pool area. The chiller will provide additional cooling for offices and smart classrooms on the first floor. The existing locker room ventilation and lighting systems are in poor condition and will require replacement. The plumbing systems are original and will require major upgrades.

Building Environmental

There is asbestos-containing floor tile and mastic throughout the building. There are asbestos-containing Transite ceiling tiles and vertical panels in the former pool area. There is also exposed asbestos-containing pipe and fitting insulation and insulation that is likely concealed above ceilings and inside wall chases throughout the building.

Extensive abatement of pipe and tank insulation was recently completed in the mechanical rooms, equipment rooms and some other areas in the basement as part of the recently completed Satellite Boiler project.

Dods Hall is the oldest of SUNY Fredonia's three athletic buildings. It sits to the west of the Mason Addition and establishes the "front door" of the athletic complex as it faces the academic core of the University's campus. Constructed in 1963, Dods houses offices, classrooms and a gymnasium with basketball courts and bleachers. Fredonia is beginning the design process for renovating the area once occupied by the facility's old pool.

Summary of Issues

- Age of facility and inadequately-sized spaces contribute to underutilization, overcrowding, and failure to meet standards of Division III athletics, in particular for basketball competition
- Window replacement and selective exterior rehab planned
- Addition of air conditioning planned
- Electrical upgrades needed
- Abatement required
- Accessibility issues for lower levels; lack of accessible changing areas

Mechanical:

- HVAC Distribution/Controls have exceeded their useful life. Various spaces have no outside air ventilation.
- Plumbing Systems/Fixtures have exceeded their useful life.

Electrical:

- Much of the distribution and system equipment is close to or has exceeded its expected life, expect maintenance or replacement problems with the increasing age of equipment.

BUILDING EXTERIORS

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
		100				100		Building Framing
	100				100			Roof
25	75			25	75			Walls
	25	75			25	75		Foundations
	100			50	50			Windows/Louvers
	100				100			Doors/Frames/Hardware

Comments:

- Change windows to 50 % poor due to age deterioration at steel windows and corrugated metal insert panels

BUILDING INTERIORS

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
								Floors
	75		25		75		25	Walls
	100				100			Ceilings
								Elevators
25	50	25		25	50	25		Doors/Frames/Hardware
25	75			25	75			Stairs
	100				100			Specialty Systems
	100				100			Built-In Furnishings

Comments:

- Tile walls
- Asbestos tile floors/ terrazzo at entrance
- Old pool filled- fitness area- needs finish upgrades
- Tiered seating not useful
- Basement fitness and weight rooms are narrow and tight with no natural light.

BUILDING MECHANICAL

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
	100			100				AHU/Controls
			100				100	Boiler/Heat Exchanger/Controls
N/A				N/A				Chiller/Controls
N/A				N/A				Fire Sprinkler/Standpipe Sys.
25	75			100				HVAC Distribution & Controls
	100			100				Plumbing Systems/Fixtures
		100				100		Pumps/Motors/Compressors
N/A				N/A				Specialty Systems

- HVAC Distribution/Controls have exceeded their useful life. Various spaces have no outside air ventilation. The air handling units require replacement.
- Plumbing Systems/Fixtures have exceeded their useful life.

BUILDING ELECTRICAL

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
100				100				Electrical Distribution (wiring sys)
	100				100			Emergency Power/Lighting Syst.
100				100				Fire Alarm System
	100				100			Lighting Syst. (inc. branch wiring)
	100				100			Power Wiring
		100		NA				Master Clock
		100			100			Public Address
		100			100			Security
		100		NA				Specialty Systems
50	50				100			Tele/Data Syst. (cabling only)

- Most of the electrical distribution is original to building and has exceeded their useful life.
- Many lighting fixtures have been retrofitted with T8 lamps and ballast.
- Data cabling is Cat 5 and Cat 5e

Building No. 23

BUILDING ASSESSMENTS

Building Exterior

The exterior of Erie Dining Hall is brick in the same palette as the surrounding residence halls. Large single-pane expanses of glass define the building's windows, which are in steel frames original to the building. Doors are glass and aluminum and not original, but still aged and weathered. The roof is in fair condition and the parapet was extended beyond its original height when the last roof renovation was installed. A terrace at the back of the building is in a state of disrepair, but improvements are scheduled for 2011.

Building Interior

The interior of the Erie Dining Hall is generally in fair to good condition. Finishes are highly durable, including brick walls, tile floors and double-height concrete ceilings.

MEP Systems

The building has had some mechanical upgrades in the past with a new air handling unit and cooling tower. The plumbing sanitary sewer has also been upgraded. The existing plumbing, HVAC and electric system infrastructure is nearing the end of its useful life and requires upgrade. The dining hall kitchen infrastructure also needs upgrade based on life expectancy.

Building Environmental

This building has recently undergone extensive renovations that resulted in the abatement of most of the asbestos-containing flooring and much of the asbestos-containing thermal system insulation. Records indicate that there is still asbestos-containing pipe and fitting insulation in the basement. Asbestos-containing gaskets have also been identified.



Erie Hall Dining (Building No. 23)

Building No: 23
 GSF: 23,881
 Const. Type: Load Bearing Masonry with Steel
 Const. Year: 1967
 Floors Above: 1
 Below: 1
 Building Type: Dining

The Erie Dining Hall was one of two original dining halls in the residential complex of the I.M. Pei & Partners Master Plan. It is now the only one still operating. Despite its age and the success of the recently opened Marché at the renovated University Commons, Erie Dining Hall still attracts crowds of students. It is particularly convenient to the occupants of the surrounding residence halls

Summary of Issues

- HVAC Distribution/Controls require some upgrades base on age.
- Planned projects include kitchen renovation and conversion from electric to gas service, and separation of the elevator machine room
- Summer 2010 scheduled renovations include replacement of single-pane glass and roof replacement

BUILDING EXTERIORS

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
		100				100		Building Framing
		100			50	50		Roof
		100				100		Walls
		100				100		Foundations
		100				100		Windows/Louvers
		100			50	50		Doors/Frames/Hardware

- Door Comment: Exterior doors and door finish at original building deteriorating due to weathering.
- Back terrace in poor shape.
- Windows are original and non=thermal.

BUILDING INTERIORS

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
		100				100		Floors
		100				100		Walls
		100				100		Ceilings
		100				100		Elevators
		100				100		Doors/Frames/Hardware
		100			50	50		Stairs
		NA				NA		Specialty Systems
		NA				NA		Built-In Furnishings

- Stair Comment: Rubber treads and landing tiles exhibiting wear.

BUILDING MECHANICAL

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
50		50		50		50		AHU/Controls
			100				100	Boiler/Heat Exchanger/Controls
			100				100	Chiller/Controls
N/A				N/A				Fire Sprinkler/Standpipe Sys.
		100			100			HVAC Distribution & Controls
100				100				Plumbing Systems/Fixtures
	100				100			Pumps/Motors/Compressors
N/A				N/A				Specialty Systems

- AHU/Controls that are original need to be replaced.
- Plumbing Systems/Fixtures have exceeded its useful life.
- HVAC Distribution/Controls require some upgrades base on age.

BUILDING ELECTRICAL

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
	100				100			Electrical Distribution (wiring sys)
50	50			50	50			Emergency Power/Lighting Syst.
			100				100	Fire Alarm System
		100			100			Lighting Syst. (inc. branch wiring)
		100			100			Power Wiring
NA								Master Clock
NA								Public Address
NA								Security
NA								Specialty Systems
	100				100			Tele/Data Syst. (cabling only)

Fenner House
(Building No. 57)

Building No: 57
 GSF: 4,175
 Const. Type: Wood Frame, Masonry
 Const. Year: 1860
 Floors Above: 2
 Below: 0
 Building Type: General Administration



Building Exterior

The exterior of Fenner House is load-bearing red brick with wood detailing at the roof, cornice, doors and windows. A wood porch is located to the south of the building at the first floor. Generally, the exterior of the building is in fair condition, though the mortar in the masonry requires significant re-pointing, especially in areas around the original front door and second floor oriel window. Windows and doors are weathered and worn. The wood frame of Fenner House has several structural deficiencies. These are outlined in the appendix at the end of this document.

Building Interior

The interior of Fenner House is in fair to good condition. Public spaces for visitors have been well-maintained, but office areas are cramped and constrained.

MEP Systems

The existing MEP systems are basically residential quality and are generally in good condition.

Building Environmental

No records were available for this building. The era of construction of this house (1860) predates extensive use of asbestos-containing products. Modifications over the years have likely included the use of suspect asbestos-containing materials. Prior to renovations of this structure, testing for asbestos will need to be performed.

Designed in an early Victorian style, Fenner House was constructed in 1860 and occupied by the University in 1964. Originally constructed as a private residence, Fenner House serves as SUNY Fredonia's Admissions Office.

Summary of Issues

- Building was originally a residence, making it suitable for admissions functions, but inflexible for growth or adaptation
- The Admissions Office is cramped, and unable to accommodate groups for tours, alumni events, and other activities it frequently holds
- An expansion of the current facility, or the construction of a new "Welcome Center" facility has been discussed; the campus will prepare RFQ's for this project in Fall 2011

Mechanical:

- The building distribution ductwork is fiberglass and should be replaced.

Electrical:

- The emergency power is battery backup and needs to be upgraded.
- The building has a security system.

BUILDING EXTERIORS

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
		100		25		75		Building Framing
		100				100		Roof
50	50			50	50			Walls
		100				100		Foundations
	100				100			Windows/Louvers
		100				100		Doors/Frames/Hardware

Comments:

Building Framing: Change to 50% poor due to wood framing deficiencies at roof and first floor

BUILDING INTERIORS

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
		100				100		Floors
	100				100			Walls
		100				100		Ceilings
		NA				NA		Elevators
		100				100		Doors/Frames/Hardware
		100				100		Stairs
		NA				NA		Specialty Systems
		100				100		Built-In Furnishings

BUILDING MECHANICAL

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
	100				100			AHU/Controls
	100				100			Boiler/Heat Exchanger/Controls
		100				100		Chiller/Controls
NA								Fire Sprinkler/Standpipe Sys.
	100			100				HVAC Distribution & Controls
		100				100		Plumbing Systems/Fixtures
NA								Pumps/Motors/Compressors
NA								Specialty Systems

- HVAC distribution consists of fiberglass duct board which should be replaced.
- HVAC chiller is two heat air to air heat pumps which were modified for cooling only control. One unit handles the first floor and the other the second floor.

BUILDING ELECTRICAL

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
		100				100		Electrical Distribution (wiring sys)
		100			100			Emergency Power/Lighting Syst.
		100				100		Fire Alarm System
		100				100		Lighting Syst. (inc. branch wiring)
		100				100		Power Wiring
NA								Master Clock
NA								Public Address
NA						100		Security
NA								Specialty Systems
100				100				Tele/Data Syst. (cabling only)

- The emergency lighting system is old and in need of an upgrade.
- There is a new security system installed for the building.

Building No. 1

Building Exterior

The exterior envelope of Fenton Hall is composed of red brick bearing walls with limestone detailing at the cornice and front entrance. Painted steel windows are original to the building as are the main wood and glass entrance doors, though the door hardware is relatively up-to-date. The roof has reached the end of its useful life. In order to address the aged and deteriorated exterior elements of Fenton Hall, the University is planning to replace the doors, windows and roof in the summer of 2011.

Building Interior

The interior of Fenton Hall is generally in fair to poor condition. Wall finishes, flooring, ceilings and doors are primarily original to the building's construction, worn, and exhibit minor damage. The elevator is in poor condition, but an upgrade is planned. Generally, the condition of Fenton Hall merits a full interior renovation.

MEP Systems

The HVAC air handling systems and distribution for this building are in need of a total upgrade. There are numerous problems including lack of

ventilation, overheating and lack of mechanical cooling. The plumbing systems are original and have exceeded their useful life.

The building has no sprinkler system.

The building boilers also serve Houghton Hall. Boilers are generally in good condition, with only minor operational problems due to maintenance issues with valves, traps, and other system components at the point of use. The building utilizes steam for heating and should be replaced due to age.

Building Environmental

There is asbestos-containing floor tile and mastic throughout the building. There is also asbestos-containing pipe and fitting insulation likely concealed above ceilings and inside wall chases throughout the building. There is also asbestos sprayed on fireproofing (SOF) in this building.

Extensive abatement of pipe and tank insulation as well as SOF was recently completed in the mechanical rooms and tunnel as part of the Satellite Boiler project.



**Fenton Hall
(Building No. 1)**

Building No:	1
GSF:	72,759
Const. Type:	Load Bearing Masonry, Steel Masonry
Const. Year:	1953
Floors Above:	2
Below:	0
Building Type:	Instruction

Fenton Hall, completed in 1951, sits directly to the east of Reed Library and houses classrooms and offices for departments in the liberal arts. The two-story structure is the second oldest academic building on campus. It faces one of the primary entrances to the college, presenting a neoclassical entrance to those arriving from Central Avenue. The pathway between Fenton and Reed is also one of the most travelled pedestrian routes on campus.

Summary of Issues

- Doors, window, and roof replacement scheduled for Summer 2011
- Building is not air conditioned, and ventilation is inadequate. Addition of air conditioning may occur following window replacement
- Building has never received gut rehab; if air conditioning is installed, more extensive renovations may follow
- Asbestos-containing tiles and mastic exists throughout the building

Mechanical:

- Boiler/Heat Exchanger/Controls were replaced and are now in excellent condition.
- Secondary equipment is outdated and replacement parts are difficult to find or not available. Expect maintenance or replacement problems with the increasing age of equipment.

Electrical:

- The electrical power, emergency lighting and cabling have had some upgrades.

BUILDING EXTERIORS

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
		100				100		Building Framing
75		25		75		25		Roof
	25	75			25	75		Walls
	25	75			25	75		Foundations
	100				100			Windows/Louvers
100				100				Doors/Frames/Hardware

BUILDING INTERIORS

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
		100				100		Floors
	100				100			Walls
	100				100			Ceilings
100				100				Elevators
	100				100			Doors/Frames/Hardware
								Stairs
100				100				Specialty Systems
	100				100			Built-In Furnishings

BUILDING MECHANICAL

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
100				100				AHU/Controls
100							100	Boiler/Heat Exchanger/Controls
N/A				N/A				Chiller/Controls
N/A				N/A				Fire Sprinkler/Standpipe Sys.
	100				100			HVAC Distribution & Controls
	100				100			Plumbing Systems/Fixtures
	100				100			Pumps/Motors/Compressors
N/A				N/A				Specialty Systems

- Boiler/Heat Exchanger/Controls were changed from district system to individual boilers and water heaters.
- Building has poor ventilation.
- Building has no sprinkler/standpipe system.

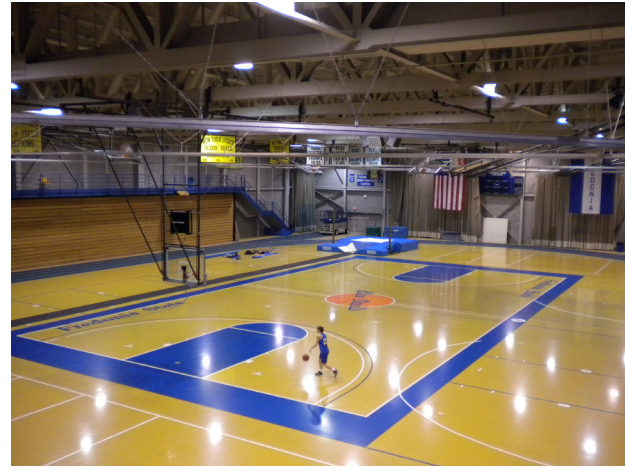
BUILDING ELECTRICAL

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
100				70		30		Electrical Distribution (wiring sys)
	100			30	70			Emergency Power/Lighting Syst.
			100				100	Fire Alarm System
		100				100		Lighting Syst. (inc. branch wiring)
	100				100			Power Wiring
NA						100		Master Clock
				NA				Public Address
				NA				Security
		100				100		Specialty Systems
100					100			Tele/Data Syst. (cabling only)

- Most of the secondary electrical distribution is original to building and has exceeded their useful life, primary switch, and switchboard replaced in 1990's
- Many lighting fixtures have been retrofitted with T8 lamps and ballast.
- Data cabling is Cat 5 and Cat 5e
- Newer master clock and classroom equipment.

**Field House
(Building No. 62)**

Building No: 62
 GSF: 91,734
 Const. Type: Steel Construction
 Masonry
 Const. Year: 1982
 Floors Above: 2
 Below: 0
 Building Type: HPE



Building Exterior

Built with a dark brown brick cavity wall and absent any fenestration, the Field House's exterior dominates the view to the campus from the outer reaches of the Ring Road. The brick is generally in good condition, with small patches of efflorescence in a few locations on the long west façade. Doors are in good condition, but hardware has aged. The building's few windows are generally in fair condition, though some have occasional leaks. New aluminum coping and a new roof were installed in approximately 2008. Roof replacement is scheduled for 2011.

Building Interior

The interior of the Field House is generally in fair condition. Finishes are durable and minimal, mostly consisting of concrete and painted concrete block. Locker areas and team rooms vary from poor to good. The ice rink is generally in good condition, but the field house has deficiencies ranging from poor scoreboard locations and aging curtains to a floor surface that is not approved for NCAA competition and is also beginning to delaminate. Bleachers in the field house also lack appropriate railings. The campus is currently in the design phase to replace the bleacher system.

MEP Systems

The MEP Systems, while most are in good to fair condition are starting to show signs of age and should be replaced and/or upgraded.

Building Environmental

The field house was constructed in 1982 and has no record of asbestos sampling. In buildings of this era, suspect materials are mainly limited to mastics, glues and pipe gaskets. Sampling should be conducted if these materials may be disturbed by planned renovations.

The Field House at Steele Hall sits adjacent to Dods Hall, fronting the athletic fields to the west and connecting to Dods Hall at its southern end. Built in 1982, the Field House is home to SUNY Fredonia's ice rink, field house, training rooms and locker rooms. It is also connected to the Steele Hall Natatorium (Building 71) to the north, forming an interior courtyard with the back of Dods Hall.

Summary of Issues

- Ice rink was replaced in 2000, but the facility is not insulated which causes problems during warmer months. Dehumidification causes problems with the building exterior
- Basketball court (in Field House) does not meet standards for NCAA competition due to its rubber flooring surface
- Installation of wood floor for basketball in Field House has been studied, but is not an ideal solution because of conflicting usage by track and field events and practices

Mechanical:

- The HVAC Distribution/Controls are in need of replacement.

Electrical:

- The Electrical Distribution, Emergency Power/Lighting, Fire Alarm, Lighting
- Systems and Specialty Systems have all been downgraded based on age, review with facilities and field investigation.

BUILDING EXTERIORS

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
		100				100		Building Framing
100				100				Roof
		100				100		Walls
		100				100		Foundations
	25	75			25	75		Windows/Louvers
25		75		25		75		Doors/Frames/Hardware

BUILDING INTERIORS

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
50	25	25		50	25	25		Floors
		100				100		Walls
	25	75			25	75		Ceilings
		100				100		Elevators
	25	75			25	75		Doors/Frames/Hardware
	100				100			Stairs
100				100				Specialty Systems
			n/a				n/a	Built-In Furnishings

BUILDING MECHANICAL

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
100				100				AHU/Controls
			100				100	Boiler/Heat Exchanger/Controls
NA						100		Chiller/Controls
		100						Fire Sprinkler/Standpipe Sys.
		100		100				HVAC Distribution & Controls
		100						Plumbing Systems/Fixtures
							100	Pumps/Motors/Compressors
							100	Specialty Systems

- The HVAC distribution is in poor condition and requires upgrades.

BUILDING ELECTRICAL

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
25		75		50		50		Electrical Distribution (wiring sys)
	100			100				Emergency Power/Lighting Syst.
25	75			50	50			Fire Alarm System
		100			100			Lighting Syst. (inc. branch wiring)
		100				100		Power Wiring
								Master Clock
								Public Address
								Security
		100			50	50		Specialty Systems
	100				100			Tele/Data Syst. (cabling only)

- The electrical systems have been downgraded based on review of systems with facilities and field observations.

Building No. 29

BUILDING ASSESSMENTS

Building Exterior

The small amount of cast in place concrete that is visible above the earthen berms appears to be in good condition. In addition to the cast concrete exterior, a portion of Food Service's perimeter above the berm is concrete block with wood fascia boards and aluminum coping at the roof. This assembly is in poor condition. The exterior walls in the courtyard are also concrete block and in fair condition, showing some signs of age-related deterioration and weather-related staining. A relatively new membrane roof is in good condition. Windows and doors are original to the building and in poor condition, and louvers are in a significant state of disrepair.

Building Interior

The interior of Food Service is in fair to poor condition. Tile flooring is cracking in several locations and different areas of past repair are revealed by changes in color. Metal ceilings in clean areas are aged and wearing and acoustic ceiling tiles in corridors are also past their useful life. Steel doors are original to the building and show some signs of damage from constant use.

MEP Systems

The existing MEP systems are in need of replacement due to age and the condition of the systems. All of the food service infrastructure is existing. There have been various minor alterations to the existing systems over the years.

Building Environmental

There is asbestos-containing floor tile and mastic throughout the building. There is exposed asbestos-containing pipe and fitting insulation that is also likely concealed above ceilings and inside wall chases throughout the building. Gaskets have been identified to be asbestos-containing.



**Food Service
(Building No. 29)**

Building No:	29
GSF:	13,474
Const. Type:	Steel Construction Masonry
Const. Year:	1967
Floors Above:	1
Below:	0
Building Type:	Campus Service

Food Service is part of the larger Service Building complex on the western perimeter of the Ring Road designed as part of the Pei Master Plan. The Service Complex is a one-story cast in place concrete structure that houses the Maintenance Building (Building 28) and the Central Heating Plant (Building 27) in addition to Food Service. These program functions are arranged around a parking courtyard open to vehicular circulation. Earthen berms slope up to cover the exterior walls of the building on the perimeter outside of the courtyard, burying all but a continuous clerestory window and roof element. Food Service is essentially the campus commissary, housing a kitchen, a bakery and storage areas for advanced preparation of food for the dining halls on campus. It also contains offices for food service management.

Summary of Issues

- Mechanical:
- HVAC Distribution/Controls have exceeded their useful life.
 - Plumbing Systems/Fixtures have exceeded their useful life.
 - Pumps/Motors/Compressors are replaced/upgraded as necessary.
- Electrical:
- The Electrical Systems have been downgraded due to age review with facilities and field investigation.

BUILDING EXTERIORS

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
		100				100		Building Framing
		100				100		Roof
	25	75				100		Walls
	25	75			25	75		Foundations
25	75					100		Windows/Louvers
25		75				100		Doors/Frames/Hardware

BUILDING INTERIORS

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
	100				100			Floors
	100				100			Walls
	100				100			Ceilings
			n/a				n/a	Elevators
	100				100			Doors/Frames/Hardware
			n/a				n/a	Stairs
	50	50			50	50		Specialty Systems
			n/a				n/a	Built-In Furnishings

BUILDING MECHANICAL

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
100				100				AHU/Controls
N/A				N/A				Boiler/Heat Exchanger/Controls
N/A				N/A				Chiller/Controls
N/A				N/A				Fire Sprinkler/Standpipe Sys.
	100			100				HVAC Distribution & Controls
		100		100				Plumbing Systems/Fixtures
	100					100		Pumps/Motors/Compressors
N/A					100			Specialty Systems

- HVAC Distribution/Controls have exceeded their useful life.
- Plumbing Systems/Fixtures have exceeded their useful life.
- Pumps/Motors/Compressors are replaced/upgraded as necessary.
- Food Service Equipment infrastructure is original.

BUILDING ELECTRICAL

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
		100		100				Electrical Distribution (wiring sys)
			100		75		25	Emergency Power/Lighting Syst.
100				100				Fire Alarm System
		100			100			Lighting Syst. (inc. branch wiring)
		100		50	50			Power Wiring
								Master Clock
								Public Address
								Security
100				100				Specialty Systems
75	25			75	25			Tele/Data Syst. (cabling only)

- The building Electrical Systems have been downgraded due to age, review with facilities and field verification.

Houghton Hall (Building No. 15)

Building No: 15
 GSF: 73,981
 Const. Type: Reinforced Concrete
 Masonry
 Const. Year: 1968
 Floors Above: 2
 Below: 1
 Building Type: Instruction



Building Exterior

Built of dark brown brick, Houghton is the one academic building of Pei's master plan not made of cast concrete. Significant cracks in the brick at the four cantilevered corners of the building require repairs, and the cantilevered steel window bays have aged beyond their expected life. Staining and efflorescence is also noticeable beneath many of the window bays. Doors are also original to the building and in need of replacement. A new roof was installed in 1999.

Building Interior

The interior of Houghton is generally in fair condition. Walls are primarily concrete block and brick. Floor tiles and ceiling tiles are original to the building and showing their age. Many of the ceilings are simply exposed structural concrete beams. Lighting is poor, mostly the result of dark brick halls with poor reflective properties.

MEP Systems

The existing MEP Systems for the building are in need of replacement or upgrade due to age. There have been renovations over the years to the infrastructure. However, most systems are reaching the end of their useful life.

Building Environmental

There is asbestos-containing floor tile and mastic throughout the building. There is also exposed asbestos-containing pipe and fitting insulation in the basement and mechanical rooms and insulation that is likely concealed above ceilings and inside wall chases throughout the building.

Extensive abatement of pipe and tank insulation was recently completed in the mechanical rooms in the basement as part of the recently completed Satellite Boiler project. There are acoustical plaster ceilings in the hallways that have been determined to be non-asbestos-containing.

Houghton Hall, along with Jewett Hall, is the home to SUNY Fredonia's science departments. Built in 1968, Houghton Hall contains labs, teaching spaces and offices. A significant addition to the south of Houghton Hall, the new Science and Technology Center is currently being designed to greatly expand the laboratory capabilities of the University.

Summary of Issues

- Houghton Hall lacks flexibility and diversity of spaces such as computer rooms, lecture rooms, and other non-laboratory teaching spaces common to contemporary science facilities
- Building is in need of gut rehab, including window replacement, HVAC replacement, and asbestos abatement
- Not ADA accessible, and exits do not meet fire codes
- New Science and Technology building will address shortcomings of SUNY Fredonia's science facilities, and free up space for renovating Houghton

Mechanical:

- Boiler/Heat Exchanger/Controls have been recently upgraded.
- HVAC Distribution/Controls have exceeded their useful life.
- Plumbing Systems/Fixtures have exceeded their useful life.

BUILDING EXTERIORS

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
		100				100		Building Framing
		100				100		Roof
		100			100			Walls
		100				100		Foundations
100				100				Windows/Louvers
	100					100		Doors/Frames/Hardware

- New roof in 1999
- Change exterior walls to 100% fair due to staining below window, efflorescence, and masonry cracks at building corners.

BUILDING INTERIORS

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
	100				100			Floors
	100				100			Walls
25	75			25	75			Ceilings
		100				100		Elevators
	100				100			Doors/Frames/Hardware
	100				100			Stairs
		100				100		Specialty Systems
	100				100			Built-In Furnishings

BUILDING MECHANICAL

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
75		25		75		25		AHU/Controls
100							100	Boiler/Heat Exchanger/Controls
N/A				N/A				Chiller/Controls
N/A				N/A				Fire Sprinkler/Standpipe Sys.
	100			100				HVAC Distribution & Controls
		100		100				Plumbing Systems/Fixtures
		100				100		Pumps/Motors/Compressors
100				100				Specialty Systems

- AHU/Controls that are original require replacement.
- Boiler/Heat Exchanger/Controls have been recently upgraded.
- HVAC Distribution/Controls have exceeded their useful life.
- Plumbing Systems/Fixtures have exceeded their useful life.

BUILDING ELECTRICAL

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
		100				100		Electrical Distribution (wiring sys)
50		50		50		50		Emergency Power/Lighting Syst.
100				100				Fire Alarm System
	75	25			75	25		Lighting Syst. (inc. branch wiring)
		100				100		Power Wiring
NA								Master Clock
NA								Public Address
NA								Security
NA								Specialty Systems
100								Tele/Data Syst. (cabling only)

- The emergency generator is original.

Building No. 14

BUILDING ASSESSMENTS

Building Exterior

The exterior of Jewett Hall is composed of a brick veneer wall with limestone spandrel panels and large aluminum windows. Given the age of the building, the exterior has weathered well, though minor damage to the stone and wear and efflorescence to the brick is apparent. Stone planters and steps at the front and side entrances of the building have severely deteriorated mortar joints. Windows are original to the building and in need of replacement.

Building Interior

The interior of Jewett Hall is generally in good to fair condition. Tile walls in the corridors have proven quite resilient, but the ceilings have deteriorated due to age, particularly at the entrance corridor. Terrazzo floors in the corridors are in fair condition, but lab floors have asbestos-containing and are in need of replacement. Doors and frames have also reached the point at which they need to be replaced due to age. There is a mid-sized tiered lecture room at the building's entrance that has recently had interior upgrades.

MEP Systems

The MEP Systems are in fair to poor condition and have exceeded their useful life. The building being relegated to science includes many special HVAC, Plumbing and Electrical systems that have been added to or abandoned. The building includes environmental chambers. The building is getting a new emergency generator.

Building Environmental

There is asbestos-containing floor tile and mastic throughout the building. There is also exposed asbestos-containing pipe and fitting insulation in the basement, mechanical rooms and fan rooms and insulation that is likely concealed above ceilings and inside wall chases throughout the building.

Extensive abatement of pipe and tank insulation was recently completed in the mechanical rooms in the basement as part of the recently completed Satellite Boiler project. The fan room on the first floor was recently partially abated of asbestos-containing pipe and duct insulation. Testing for that project also revealed that the mastic that adheres the stick pins to the duct work is asbestos-containing.



**Jewett Hall
(Building No. 14)**

Building No:	14
GSF:	65,530
Const. Type:	Load Bearing Masonry, Wood
Const. Year:	1963
Floors Above:	2
Below:	1
Building Type:	Instruction

Jewett Hall sits to the south of Old Mason and the raised concrete Spine, with its main entrance facing Science Drive. Built in 1961 as the school's first science building, Jewett pre-dates the I.M. Pei & Partners Master Plan, but is the campus' first late-modernist style building. It serves mostly the biological and natural sciences.

Summary of Issues

- No significant renovations have been done on Jewett Hall since its construction in 1963
 - Bearing wall construction and low floor-to-floor heights limit flexibility for either renovation and reuse as a science facility or repurposing for student services
 - Jewett Hall's location at the heart of the campus core, in very close proximity to both the future "Science Quad" and the Williams Center student services building make it a strategic site for future investment
 - Satellite boilers at Jewett Hall feed the Mason Addition, Carnahan Jackson Center, and McEwen Hall
- Mechanical:
- Boiler/Heat Exchanger/Controls have been recently replaced.
 - HVAC Distribution/Controls and have exceeded their useful life.
- Electrical:
- Electrical systems conditions revised to reflect alterations performed at the building, review with Facilities and field investigation.

BUILDING EXTERIORS

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
		100				100		Building Framing
		100				100		Roof
	100				100			Walls
	25	75			25	75		Foundations
100				100				Windows/Louvers
	25	75			25	75		Doors/Frames/Hardware

BUILDING INTERIORS

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
	100				100			Floors
		100				100		Walls
	100			25	75			Ceilings
		100				100		Elevators
100				100				Doors/Frames/Hardware
		100				100		Stairs
		100				100		Specialty Systems
100				100				Built-In Furnishings

Comments:

- Change ceilings to 25% poor due to deteriorated acoustic ceiling tiles at the building entry and

BUILDING MECHANICAL

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
100				100				AHU/Controls
100							100	Boiler/Heat Exchanger/Controls
		100				100		Chiller/Controls
		100				100		Fire Sprinkler/Standpipe Sys.
	100			100				HVAC Distribution & Controls
100				100				Plumbing Systems/Fixtures
	100				100			Pumps/Motors/Compressors
	50	50			50	50		Specialty Systems

- Boiler/Heat Exchanger/Controls have been recently replaced. Boiler serves McEwen, Reed Library, Mason, Roche Recital, Mason Annex, and Mason New Addition.
- HVAC Distribution/Controls have exceeded their useful life.
- AHU/Controls have exceeded their useful life.

BUILDING ELECTRICAL

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
100				80		20		Electrical Distribution (wiring sys)
		100		50		50		Emergency Power/Lighting Syst.
100				70		30		Fire Alarm System
	100				100			Lighting Syst. (inc. branch wiring)
	100				100			Power Wiring
			NA				NA	Master Clock
			NA				NA	Public Address
			NA				NA	Security
			NA				NA	Specialty Systems
75	25			75	25			Tele/Data Syst. (cabling only)

- Most of the distribution is original equipment, transformer replaced in 1999, additional panels added to serve new boilers and associated equipment.
- Generator has exceeded its useful life.

**LoGrasso Hall
(Building No. 18)**

Building No: 18
 GSF: 24,445
 Const. Type: Load Bearing Masonry and Steel
 Const. Year: 1967
 Floors Above: 1
 Below: 0
 Building Type: Student Health

LoGrasso Hall was designed as the student health services building in 1967 and still serves that function today. Located at the edge of campus close to the student residences, LoGrasso is a one-story brick building with an interior courtyard, accessible only from the building.

Summary of Issues

- Re-cladding project is in the planning stages to correct cavity wall construction with poor tiebacks
- Windows will be replaced during re-cladding
- International Education, now located in LoGrasso, is an incompatible use and would be better located in a more central campus location
- The shared waiting room for the Health Center and Counseling Services is problematic because of privacy concerns
- The fire alarm system was recently replaced and upgraded.



Building Exterior

LoGrasso Hall's brick exterior wall is in poor condition, though its state is not readily apparent. Several years ago, remediation work to brick fin walls at the window openings revealed a severe deficiency in the number of masonry ties holding the brick veneer of the building in place. The shortage of brick ties means the veneer is insufficiently supported and will need to be replaced with a properly anchored wall system. Aside from the walls, windows are steel, original to the building and in need of replacement. Doors are aluminum, and while not original, also aging. The roof is in good condition, but coping from the roof installation is crudely detailed, probably the result of accommodating the removed fin walls at the windows.

Building Interior

LoGrasso Hall's interiors are generally in good condition. Ceilings are original 1x1 tiles, but they have held up well over time. Original solid wood doors are also in good condition. Built-in reception desks and carpeting are relatively new to the building, but in good condition. LoGrasso Hall has a large basement area which is unfinished and used for storage. There is no elevator to the basement.

MEP Systems

The building MEP systems are generally in good condition. The air handling equipment needs to be replaced due to age. The existing emergency generator is being replaced this year (2010). The Fire alarm system for the building was recently totally replaced.

Building Environmental

There is asbestos-containing floor tile and mastic throughout the building. There is also exposed asbestos-containing mud fitting insulation in the basement and mechanical rooms and fitting insulation that is likely concealed above ceilings and inside wall chases throughout the building.

Past testing has returned both positive and negative results for mud fitting insulation. Sampling for individual projects should be conducted if these materials may be disturbed by planned renovations.

BUILDING EXTERIORS

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
	100				100			Building Framing
		100				100		Roof
100				100				Walls
		100				100		Foundations
100				100				Windows/Louvers
	100				100			Doors/Frames/Hardware

BUILDING INTERIORS

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
	50	50			50	50		Floors
	50	50			50	50		Walls
	50	50			50	50		Ceilings
			n/a				n/a	Elevators
50	50			50	50			Doors/Frames/Hardware
50	50			50	50			Stairs
			n/a				n/a	Specialty Systems
50	50			50	50			Built-in Furnishings

BUILDING MECHANICAL

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
100				100				AHU/Controls
			100				100	Boiler/Heat Exchanger/Controls
100				100				Chiller/Controls
		100				100		Fire Sprinkler/Standpipe Sys.
		100				100		HVAC Distribution & Controls
		100				100		Plumbing Systems/Fixtures
		100				100		Pumps/Motors/Compressors
N/A				N/A				Specialty Systems

- Some plumbing fixtures have been abandoned and need to be removed.
- Building is partially sprinkled.
- Chiller are air cooled condensing units.

BUILDING ELECTRICAL

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
		100				100		Electrical Distribution (wiring sys)
50		50		50		50		Emergency Power/Lighting Syst.
100							100	Fire Alarm System
		100				100		Lighting Syst. (inc. branch wiring)
		100				100		Power Wiring
NA								Master Clock
NA								Public Address
NA								Security
NA								Specialty Systems
50	50							Tele/Data Syst. (cabling only)

- The Fire Alarm System was recently upgraded.
- The emergency generator is being replaced –summer 2010.

Building No. 28

BUILDING ASSESSMENTS

Building Exterior

The small amount of cast in place concrete that is visible above the earthen berms appears to be in good condition. Exterior walls in the courtyard are concrete block and in fair condition, showing some signs of age-related deterioration and weather-related staining. The exterior plaster soffit above the vehicular entrance is cracking and cast concrete stairs to the facilities maintenance office have been stabilized with wood framing. A relatively new membrane roof is in good condition. Windows and doors are original to the building and in poor condition.

Building Interior

The interior of the Maintenance Building is in fair condition. The finishes are typical for basic office construction: acoustic ceiling tiles, drywall office partitions and commercial carpeting. The building is not accessible at its front entrance.

MEP Systems

The MEP Systems for the building are in need of replacement due to age except for the emergency power and fire alarm panel which is new. There have been many upgrades to various spaces however the systems are not integrated and thus a total replacement is needed.

Building Environmental

There is asbestos-containing floor tile and mastic throughout the building. Records indicate that there is exposed asbestos-containing pipe and fitting insulation that is also likely concealed above ceilings and inside wall chases throughout the building. Gaskets have been identified to be asbestos-containing.



Maintenance Building
(Building No. 28)

Building No:	28
GSF:	26,419
Const. Type:	Steel Construction Masonry
Const. Year:	1967
Floors Above:	1
Below:	0
Building Type:	Campus Service

BUILDING EXTERIORS

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
		100				100		Building Framing
		100				100		Roof
	25	75			50	50		Walls
	25	75			25	75		Foundations
0				0				Windows/Louvers
	100				100			Doors/Frames/Hardware

BUILDING MECHANICAL

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
50	50			100				AHU/Controls
N/A				N/A				Boiler/Heat Exchanger/Controls
			100		100			Chiller/Controls
N/A				N/A				Fire Sprinkler/Standpipe Sys.
100				100				HVAC Distribution & Controls
		100			100			Plumbing Systems/Fixtures
		100				100		Pumps/Motors/Compressors
		100				100		Specialty Systems

- AHU/Controls have exceeded their useful life.
- Chiller/Controls are approaching the end of their useful life.
- HVAC Distribution/Controls have exceeded their useful life.
- Plumbing Systems/Fixtures have exceeded their useful life.
- Boiler/Heat Exchanger/Controls served from Central Heating Plant.

BUILDING INTERIORS

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
	100				100			Floors
	100				100			Walls
		100				100		Ceilings
			n/a				n/a	Elevators
	100				100			Doors/Frames/Hardware
	100				100			Stairs
			n/a				n/a	Specialty Systems
			n/a				n/a	Built-In Furnishings

BUILDING ELECTRICAL

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
	100			100				Electrical Distribution (wiring sys)
			100				100	Emergency Power/Lighting Syst.
100				80		20		Fire Alarm System
		100			100			Lighting Syst. (inc. branch wiring)
		100			100			Power Wiring
NA								Master Clock
NA								Public Address
NA								Security
100								Specialty Systems
75	25							Tele/Data Syst. (cabling only)

- Fire alarm panel recently replaced.
- Building fed from boiler plant.

The Maintenance Building is part of the larger Service Building complex on the western perimeter of the Ring Road designed as part of the Pei Master Plan. The Service Complex is a one-story cast in place concrete structure that houses the former Central Heating Plant (Building 27) and Food Services (Building 29) in addition to the Maintenance Building. These program functions are arranged around a parking courtyard open to vehicular circulation. Earthen berms slope up to cover the exterior walls of the building on the perimeter outside of the courtyard, burying all but a continuous clerestory window and roof element. The Maintenance Building houses offices, shop and garage spaces for the campus facilities maintenance department.

Summary of Issues

- Mechanical:
- AHU/Controls have exceeded their useful life.
 - Chiller/Controls are approaching the end of their useful life.
 - HVAC Distribution/Controls have exceeded their useful life.
 - Plumbing Systems/Fixtures have exceeded their useful life.
- Electrical:
- Building Fire Alarm panel was replaced.

**Mason Hall Addition
(Building No. 2b)**

Building No: 2b
 GSF: 50,500
 Const. Type: Load Bearing Masonry & Steel
 Const. Year: 1972
 Floors Above: 3
 Below: 0
 Building Type: Instruction



To the west of Mason Hall sits the Mason Addition, built in 1971, and often referred to as “New Mason”. Like the Rosch Recital Hall, The Mason Addition also took out some parts of the Mason Annex when constructed. It runs the length of the entire Mason complex, facing Dods Hall to the West. Built with a dark brown brick in a late modernist style, the Mason Addition contrasts starkly with the original Georgian architecture of Mason Hall. It primarily houses offices and practice rooms.

Summary of Issues

- The irregular shape of practice rooms and faculty offices renders them less flexible and adaptable
- There is a general need for larger practice rooms than those found in the Mason Addition, which serve one or two people with instruments
- The existing heating system was upgraded.

Building Exterior

The Mason Hall Addition has an exterior enclosure of dark brown brick with series of narrow window openings on the upper stories and larger expanses of glazing on the ground floor. Windows are aluminum and thermally glazed, with slate sills that are in good condition. The main entrance doors were replaced in 2010 and the roof was replaced early 2010. Two separate courtyards exist in the residual spaces created where the Addition meets the original Mason Hall.

Building Interior

The interior of the Mason Addition is generally in poor to fair condition. Wall finishes are aging, slate stair treads are beginning to show wear and the elevator, which is original to the building, is in need of an upgrade. Flooring on the upper levels is in good condition, but at the ground level, unevenness in the slate flooring causes problems for pedestrian traffic and instruments that are wheeled over its surface. Ongoing above-ceiling work in portions of the corridors has enabled the College to install new ACT in these areas.

MEP Systems

The MEP Systems for the building are basically in fair condition. The systems are nearing the end of their useful life. The HVAC air handling units, duct distribution and reheat coils need extensive upgrades. The fire alarm system needs to be replaced.

Building Environmental

There is asbestos-containing floor tile and mastic throughout the building. Bulk sampling from past projects indicates that the insulation on exposed piping is non-asbestos-containing. However, insulation on concealed piping above ceilings and inside wall chases throughout the building is assumed to be asbestos-containing.

BUILDING EXTERIORS

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
		100				100		Building Framing
		100					100	Roof
		100				100		Walls
	100				100			Foundations
50		50		50		50		Windows/Louvers
	100				100			Doors/Frames/Hardware

- Roof replacement 2009

BUILDING INTERIORS

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
25		75		25		75		Floors
25	75			25	75			Walls
	100				75		25	Ceilings
100				100				Elevators
	100				100			Doors/Frames/Hardware
100				100				Stairs
100				100				Specialty Systems
			n/a				n/a	Built-In Furnishings

Comments:

- Change ceilings to 25% excellent due to 2010 corridor renovation

BUILDING MECHANICAL

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
100				100				AHU/Controls
100							100	Boiler/Heat Exchanger/Controls
		100				100		Chiller/Controls
	50	50			50	50		Fire Sprinkler/Standpipe Sys.
50	50			50	50			HVAC Distribution & Controls
		100				100		Plumbing Systems/Fixtures
	100				100			Pumps/Motors/Compressors
NA								Specialty Systems

- Heating provided from Jewett Hall
- HVAC requires upgrade of air handling units and a portion of the ductwork distribution. Also existing reheat coils are not working properly.

BUILDING ELECTRICAL

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
		100				100		Electrical Distribution (wiring sys)
	100				100			Emergency Power/Lighting Syst.
100				100				Fire Alarm System
		100				100		Lighting Syst. (inc. branch wiring)
		100				100		Power Wiring
NA								Master Clock
NA								Public Address
NA								Security
NA								Specialty Systems
50	50							Tele/Data Syst. (cabling only)

Building No. 2a

BUILDING ASSESSMENTS

Building Exterior

The Mason Hall Annex has an exterior enclosure of red brick to match the adjacent Mason Hall, though it is a modernist building in its detailing. Due to the additions on almost all sides of the Annex, only those facing Reed Library maintains an exterior exposure. What few doors and windows remain are original to the building and in poor condition.

Building Interior

The interior of the Mason Hall Annex is generally in poor to fair condition. Wall finishes, flooring, ceilings and doors are primarily original to the building's construction. The condition of the Mason Hall Annex merits a full interior renovation.

MEP Systems

The building MEP systems are from fair to poor condition. Recent alterations will replace and upgrade some of the HVAC systems. The fire alarm systems is in the process of being upgraded.

Building Environmental

There is asbestos-containing floor tile and mastic throughout the building. Bulk sampling from past projects indicates that the insulation on exposed piping is non-asbestos-containing. This piping is associated with the updated heating system. However, insulation on concealed piping above ceilings and inside wall chases throughout the building is assumed to be asbestos-containing. Asbestos-containing wire insulation has been identified on some light fixtures in the building.

Mason Hall Annex
(Building No. 2a)

Building No: 2a
 GSF: 12,760
 Const. Type: Steel Construction
 Masonry
 Const. Year: 1961
 Floors Above: 2
 Below: 0
 Building Type: Instruction

In 1961, the Mason Hall Annex was built to expand practice rooms and offices for Mason Hall. When both the Mason Addition and the Mason Recital Hall were constructed, portions of the Annex were demolished to accommodate the new buildings. What remains of the Mason Hall Annex houses a limited number of practice rooms and offices. Linked to the Annex at the north of the building, two new recital rooms are being constructed, due to be completed in 2010.

Summary of Issues

- Renovations are needed to both interior and exterior elements
- An addition to the Mason Hall complex directly adjacent to the Annex will relieve some of the overuse of now-problematic rehearsal spaces.

BUILDING EXTERIORS

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
		100				100		Building Framing
		100				100		Roof
		100				100		Walls
		100				100		Foundations
100				100				Windows/Louvers
100				100				Doors/Frames/Hardware

BUILDING MECHANICAL

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
	100				100			AHU/Controls
NA								Boiler/Heat Exchanger/Controls
		100				100		Chiller/Controls
NA								Fire Sprinkler/Standpipe Sys.
	100				100			HVAC Distribution & Controls
	100				100			Plumbing Systems/Fixtures
	100				100			Pumps/Motors/Compressors
NA								Specialty Systems

- Heating provided by Jewett Hall.
- Extensive HVAC renovations ongoing including new chiller which will handle the new addition.

BUILDING INTERIORS

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
100				100				Floors
100				100				Walls
	75	25			75	25		Ceilings
			n/a				n/a	Elevators
100				100				Doors/Frames/Hardware
		100				100		Stairs
100				100				Specialty Systems
			n/a				n/a	Built-In Furnishings

BUILDING ELECTRICAL

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
		100				100		Electrical Distribution (wiring sys)
100				100				Emergency Power/Lighting Syst.
100				100				Fire Alarm System
	100				100			Lighting Syst. (inc. branch wiring)
		100				100		Power Wiring
NA								Master Clock
NA								Public Address
NA								Security
NA								Specialty Systems
100								Tele/Data Syst. (cabling only)

- Fire alarm system being upgraded.

**Mason Recital Hall
(Building No. 2c)**

Building No: 2c
 GSF: 23,191
 Const. Type: Steel Construction
 Const. Year: 2004
 Floors Above: 2
 Below: 1
 Building Type: Instruction

The Mason Recital Hall, also known as the Rosch Recital Hall, sits between the original Mason Hall building and the Mason Hall Annex. Built in 2004, the Recital Hall creates a dedicated entrance and lobby for performances in its state-of-the-art concert space. In addition to providing Fredonia with an outstanding small concert hall, the Mason Recital Hall includes premium sound studios for recording and engineering music.



Building Exterior

Similar to the Mason Hall Annex, the Mason Recital Hall has only a single exterior facade facing Reed Library. A large standing-seam copper light monitor sits atop a two-story brick façade. Set back from the brick façade is an extensive standing-seam copper volume which encloses the upper spaces of the recital hall. A copper and glass entry provides direct access to the Recital Hall lobby. The exterior of the Mason Recital Hall is generally in good condition.

Building Interior

The interior of the Mason Recital Hall is generally in very good condition. The lobby has an end-grain wood floor and built-in wood benches. The recital hall itself has extensive wood detailing and outstanding acoustics. Sound studios on the second floor have been out-fitted for professional-quality recording.

MEP Systems

The MEP Systems for the building are in good to excellent condition. The existing air distribution and access to air handling units are issues.

Building Environmental

The Mason Recital Hall was constructed in 2004 and has no record of asbestos sampling. In buildings of this era, there should be no suspect asbestos-containing materials.

BUILDING EXTERIORS

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
		100				100		Building Framing
		100				100		Roof
		100				100		Walls
		100				100		Foundations
		100				100		Windows/Louvers
		100				100		Doors/Frames/Hardware

BUILDING INTERIORS

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
		100				100		Floors
		100				100		Walls
		100				100		Ceilings
			100				100	Elevators
		100				100		Doors/Frames/Hardware
		100				100		Stairs
			100				100	Specialty Systems
		100				100		Built-In Furnishings

BUILDING MECHANICAL

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
		100				100		AHU/Controls
			100				100	Boiler/Heat Exchanger/Controls
			100				100	Chiller/Controls
			100				100	Fire Sprinkler/Standpipe Sys.
	50	50			50	50		HVAC Distribution & Controls
			100				100	Plumbing Systems/Fixtures
			100				100	Pumps/Motors/Compressors
			100				100	Specialty Systems

- HVAC Distribution and access to air handling units are issues.

BUILDING ELECTRICAL

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
			100				100	Electrical Distribution (wiring sys)
			100				100	Emergency Power/Lighting Syst.
			100				100	Fire Alarm System
			100				100	Lighting Syst. (inc. branch wiring)
			100				100	Power Wiring
								Master Clock
								Public Address
								Security
			100				100	Specialty Systems
		100				100		Tele/Data Syst. (cabling only)

Building No. 2

BUILDING ASSESSMENTS

Building Exterior

The exterior of Mason Hall is load-bearing red brick with wood detailing at the cornice, doors and windows. Due to the numerous additions, only Mason Hall's south and east façades reveal the building's original Georgian structure. The masonry is generally in good to fair condition, with re-pointing due to age and weathering needed in several locations, particularly at the water table. The windows were replaced in 2004 with wood, thermal pane double-hung windows, but the wood doors are original to the building and should be replaced as well. The roof, which is standing seam copper, is good condition.

Building Interior

Mason Hall's interior is generally in fair to poor condition, due to the fact that walls, floors and ceilings primarily date to the original construction of the building and clearly show their age. Classroom spaces are well-used, but the overall condition of Mason Hall's interior merits a full renovation.

MEP Systems

The MEP Systems in the building are in need of major upgrades. There is inadequate lighting, electrical distribution, Fire Alarm and lack of proper ventilation. Old steam system requires replacement. The plumbing infrastructure for the building is original and in need of replacement.

Building Environmental

There is asbestos-containing floor tile and mastic throughout the building. There is also asbestos-containing pipe and fitting insulation on exposed piping and likely concealed above ceilings and inside wall chases throughout the building. There is also asbestos-containing acoustical ceiling plaster.

A recent renovation project removed some floor tile/mastic and asbestos pipe insulation in various locations in the building. In addition, some of the acoustical ceiling material was removed as part of this project. Extensive abatement of pipe insulation was recently performed in the crawlspace as part of the recently completed Satellite Boiler project.



Mason Hall
(Building No. 2)

Building No:	2
GSF:	32,407
Const. Type:	Load Bearing Masonry, Steel
Const. Year:	1940
Floors Above:	2
Below:	0
Building Type:	Instruction

Completed in 1941, Mason Hall stands as the oldest building on the SUNY Fredonia campus – the first structure to be built on the land acquired in 1930 by the Fredonia Normal School. Built of red brick in the Georgian style, Mason was designed as a facility for music instruction. While still serving the same purpose today, Mason Hall has grown considerably. Three additions have been built to the north and west of its original footprint, (see buildings 2A, 2B and 2C), expanding the gross area of SUNY Fredonia's music facility from 32,000 to 118,000 square feet.

Summary of Issues

- Critical temperature and humidity controls are needed, especially in classrooms
 - Classrooms are not equipped with "smart" technology; renovations to classrooms may require infrastructure improvements
 - Some asbestos abatement remains to be completed
- Mechanical:
- AHU/Controls it is the consultant's opinion that the systems are in poor condition.
 - Boiler/Heat Exchanger/Controls were recently replaced.

BUILDING EXTERIORS

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
		100				100		Building Framing
		100				100		Roof
	50	50			50	50		Walls
	100				100			Foundations
		100				100		Windows/Louvers
100				100				Doors/Frames/Hardware

BUILDING MECHANICAL

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
	100			100				AHU/Controls
100							100	Boiler/Heat Exchanger/Controls
N/A				N/A				Chiller/Controls
N/A				N/A				Fire Sprinkler/Standpipe Sys.
	75	25			75	25		HVAC Distribution & Controls
100				100				Plumbing Systems/Fixtures
	50	50			50	50		Pumps/Motors/Compressors
N/A				N/A				Specialty Systems

- Poor ventilation in the building.
- Recently completed boiler project.
- No sprinklers in Old Mason.
- Plumbing Systems are original and need to be replaced.

BUILDING INTERIORS

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
100				100				Floors
50	50			50	50			Walls
50	50			50	50			Ceilings
		100				100		Elevators
100				100				Doors/Frames/Hardware
	100				100			Stairs
100				100				Specialty Systems
50	50			50	50			Built-In Furnishings

BUILDING ELECTRICAL

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
		100				100		Electrical Distribution (wiring sys)
100				100				Emergency Power/Lighting Syst.
100				100				Fire Alarm System
	100				100			Lighting Syst. (inc. branch wiring)
	100				100			Power Wiring
NA								Master Clock
								Public Address
								Security
		100				100		Specialty Systems
100				100				Tele/Data Syst. (cabling only)

- Card Access System (ADT) being installed (2010).
- Building Electrical infrastructure is in need of upgrades based on age and need for more circuitry and better lighting.

Maytum Hall (Building No. 05)

Building No: 05
 GSF: 53,242
 Const. Type: Reinforced Concrete
 Const. Year: 2004
 Floors Above: 9
 Below: 0
 Building Type: General Administration

Along with Reed Library and the Rockefeller Arts Center, Maytum Hall stands as one of SUNY Fredonia's most iconic structures from the Pei Master Plan. Crescent shaped and nine stories tall, Maytum rises high above any surrounding buildings and is easily visible throughout campus. It is built of cast-in-place concrete, and sits halfway along the paved walkway between Rockefeller Arts and Reed Library. Maytum Hall houses administrative offices for the University. It is undergoing an extensive interior renovation on all floors, due to be completed in 2010.

Summary of Issues

- Renovations underway include:
 - New chiller, new air handlers, new fan coil units with supplied ventilation air from roof
 - Abatement done on ceilings, only where affected by renovation
 - New carpeting, some new partitions, modular furnishing for electrical distribution
 - Fire alarm upgrades
 - Windows were replaced in 1998
 - Usefulness is always challenged by Maytum Hall's very small footprint and its height; building organization is inefficient and difficult to access
- Mechanical:
- AHU/Controls are presently being renovated.
 - Plumbing Systems/Fixtures are original and are in need of replacement.
- Electrical:
- Building is currently under construction, portions indicated as excellent are representative of the equipment being installed or recently installed.



Building Exterior

Maytum Hall is constructed of cast-in-place buff-colored concrete with the structural walls also serving as the exterior envelope of the building. The condition of the concrete is varied. On the walls interior to the crescent, there are numerous cracks which have been sealed with silicone caulking. While addressing potential water infiltration issues, the sealant has created an unsightly appearance. Minor cracking also appears in some locations at the building's foundation. Maytum's windows were replaced in 1998 and were caulked in 2008 to correct leaking issues. Various windows still occasionally leak depending on the severity of the rainfall and wind. The roof was also replaced around 2008 and is also in very good condition.

Building Interior

Maytum Hall is currently undergoing a full interior renovation.

MEP Systems

The existing MEP Systems for the building are undergoing extensive renovations. The Building Systems except for the plumbing infrastructure will be in good to excellent condition when renovations are completed.

Building Environmental

There is asbestos-containing drywall joint compound throughout the building. There is also an asbestos-containing textured ceiling coating on the concrete deck throughout the building. Some asbestos-containing floor tile is still present in the building.

Significant asbestos abatement was recently completed in the building that included the removal of large areas of drywall with asbestos-containing joint compound, textured ceiling material, roofing materials, HVAC sealants and floor tile. Significant quantities of drywall joint compound and textured ceiling material remain in the building.

BUILDING EXTERIORS

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
		100				100		Building Framing
			100				100	Roof
	100			25	75			Walls
25	75			25	75			Foundations
100				100				Windows/Louvers
	100				100			Doors/Frames/Hardware

- Walls change to 25% poor, 75% fair: extensive cracks at the interior face of crescent.

BUILDING INTERIORS

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
		100						Floors
	100							Walls
	100							Ceilings
50		50						Elevators
		100						Doors/Frames/Hardware
	100							Stairs
			n/a					Specialty Systems
		100						Built-In Furnishings

Comments:

- Interior assessment could not be completed due to ongoing interior construction

BUILDING MECHANICAL

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
100						100		AHU/Controls
			100				100	Boiler/Heat Exchanger/Controls
			100				100	Chiller/Controls
50	50			50	50			Fire Sprinkler/Standpipe Sys.
100				100				HVAC Distribution & Controls
	100			100				Plumbing Systems/Fixtures
		100				100		Pumps/Motors/Compressors
100				N/A				Specialty Systems

- Maytum Hall is undergoing HVAC alterations.
- Plumbing Systems/Fixtures are original and are in need of replacement.

BUILDING ELECTRICAL

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
		75	25		40		60	Electrical Distribution (wiring sys)
50		50			40		60	Emergency Power/Lighting Syst.
	100						100	Fire Alarm System
100					60		40	Lighting Syst. (inc. branch wiring)
		100			40		60	Power Wiring
				NA				Master Clock
								Public Address
							100	Security
	100							Specialty Systems
75	25				60		40	Tele/Data Syst. (cabling only)

- Building is currently under construction, portions indicated as excellent are representative of the equipment being installed or recently installed.
- Data cabling is Cat 5 and Cat 5e

Building No. 13

BUILDING ASSESSMENTS

Building Exterior

McEwen Hall is constructed of cast-in-place buff-colored concrete with the structural walls also serving as the exterior envelope of the building. To the north, the building is curved and primarily solid as it faces the raised plaza in front of Reed Library. To the south, the building becomes rectilinear with large glass bays cantilevering over the roadway between McEwen and Jewett Halls. The condition of the concrete is varied. In some locations it has weathered remarkably well, in others the concrete is cracked and deteriorated or has fallen away to expose reinforcing bars that in turn have rusted and stained the building. Concrete stairs from the building to the Spine exhibit severe, though not structural, deterioration. The non-thermally glazed steel windows are original to the building, and in poor condition, as are the doors. The roof has been replaced once and is in good condition.

exposed concrete structure. The lecture rooms also have Tectum sound panels and built-in furnishings original to the building.

MEP Systems

The MEP Systems for the building are nearing the end of their useful life. The HVAC Systems are currently being studied to provide alterations to correct AHU issues throughout the building. The Fire Alarm System and Emergency Power System requires upgrades.

Building Environmental

There is asbestos-containing floor tile and mastic throughout the building. Records indicate that asbestos-containing insulation and mudded fittings are present in the building.

Asbestos-containing acoustical ceiling plaster throughout the building was abated approximately 15 years ago.



**McEwen Hall
(Building No. 13)**

Building No: 13
 GSF: 50,894
 Const. Type: Reinforced Concrete
 Concrete
 Const. Year: 1968
 Floors Above: 3
 Below: 0
 Building Type: Instruction

McEwen Hall sits adjacent to Reed Library, one of the original structures of the I.M. Pei & Partners Master Plan. The building houses large lecture rooms for general use and studios for the campus radio station. McEwen Hall is linked at the ground level to Reed Library, and also has access to the Spine, where pedestrians can enter from the raised plaza in front of Reed Library or walk to the Williams Center.

Building Interior

McEwen Hall's interior is generally in fair condition. Most interior surfaces are concrete and have been highly durable. Flooring is generally tile original to the building, though the computer lab and tiered lecture rooms have aging carpet. The ceilings are generally plastered or "popcorn" texture, but the tiered lecture rooms have

BUILDING EXTERIORS

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
		100				100		Building Framing
		100				100		Roof
25	25	50		25	25	50		Walls
	25	75			25	75		Foundations
100				100				Windows/Louvers
	100				100			Doors/Frames/Hardware

BUILDING MECHANICAL

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
100				100				AHU/Controls
100							100	Boiler/Heat Exchanger/Controls
N/A				N/A				Chiller/Controls
		100				100		Fire Sprinkler/Standpipe Sys.
50	50			100				HVAC Distribution & Controls
		100		100				Plumbing Systems/Fixtures
		100				100		Pumps/Motors/Compressors
N/A				N/A				Specialty Systems

- Chiller/Controls are provided from Maytum Hall.
- Boiler/Heat Exchanger/Controls have been recently updated.
- HVAC Distribution/Controls have exceeded its useful life.

BUILDING INTERIORS

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
100					100			Floors
100					100			Walls
100					100			Ceilings
		100				100		Elevators
100					100			Doors/Frames/Hardware
100					100			Stairs
50	50			50	50			Specialty Systems
100				100				Built-In Furnishings

BUILDING ELECTRICAL

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
		100				100		Electrical Distribution (wiring sys)
50		50		50		50		Emergency Power/Lighting Syst.
100				100				Fire Alarm System
		100				100		Lighting Syst. (inc. branch wiring)
		100				100		Power Wiring
								Master Clock
								Public Address
								Security
		100				100		Specialty Systems
50	50			50	50			Tele/Data Syst. (cabling only)

- The Fire Alarm System and Emergency Power Systems need upgrades.

Summary of Issues

- Lecture halls are somewhat uncomfortable
 - Seating in large lecture hall has been replaced
 - Window replacement and concrete patching was recently submitted to SUCF as a project
 - HVAC to receive repairs due to ventilation issues in Summer 2010
 - Large amounts of circulation space make this building highly inefficient
- Mechanical:
- Boiler/Heat Exchanger/Controls have been recently updated.
 - HVAC Distribution/Controls have exceeded its useful life.
 - Plumbing Systems/Fixtures have exceeded its useful life.

Steele Hall Natatorium (Building No. 71)

Building No: 71
 GSF: 38,782
 Const. Type: Steel Construction

Const. Year: 2002
 Floors Above: 2
 Below: 0
 Building Type: HPE

The Steele Hall Natatorium is a 2004 addition to Steele Hall which created a transparent and attractive new entrance to the existing field house and rink and also added an exceptional swimming facility to the SUNY Fredonia campus. A large open lobby offers direct views to the swimming and diving areas, while at night the building's extensive glazing provides a glow of activity within the athletic complex.

Summary of Issues

Mechanical:

- The Boiler Plant and Specialty Systems have been downgraded due to age.

Electrical:

- The Fire Alarm System, and Specialty Systems (clock and public address) need upgrades.



Building Exterior

The Steele Hall Natatorium's exterior is in excellent condition consistent with its age. The brown brick veneer contrasts with the red brick of Dod's Hall, but is consistent with the other modernist brick buildings on campus. Minor water infiltration at the east foundation has persisted since construction was completed. Remedial work to stop the leaking has been ongoing.

Building Interior

The interior of the Steele Hall Natatorium is generally in excellent condition consistent with its age. The lobby is floored with tile and has a high and open ceiling. Cast in place concrete piers with an elliptical profile on one side add a structural element that relates back to much of the concrete construction on campus. The natatorium floor has presented one of the few deficiencies to the building. Numerous tiles have been replaced after coming loose and the exact nature of the cause of the tile failure has not been fully determined. Some wood paneling at the pool level has also been damaged due to water infiltration from the foundation, cited above.

MEP Systems

The MEP Systems for the building are in good to excellent condition. There are upgrades required for the Fire Alarm System, Public Address System and Clock System to bring them up to current college standards.

Building Environmental

The Steele Hall Natatorium was constructed in 2002 and, therefore, has no record of asbestos sampling. In buildings of this era, there should be no suspect asbestos-containing materials.

BUILDING EXTERIORS

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
		100				100		Building Framing
		100			50	50		Roof
		100				100		Walls
		100				100		Foundations
		100				100		Windows/Louvers
		100			50	50		Doors/Frames/Hardware

- Exterior doors and door finish at original building deteriorating due to weathering.

BUILDING INTERIORS

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
		100				100		Floors
		100				100		Walls
		100				100		Ceilings
		100				100		Elevators
		100				100		Doors/Frames/Hardware
		100			50	50		Stairs
		NA				NA		Specialty Systems
		NA				NA		Built-In Furnishings

- Stair Comment: Rubber treads and landing tiles exhibiting wear.

BUILDING MECHANICAL

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
		100				100		AHU/Controls
			100				100	Boiler/Heat Exchanger/Controls
		100				100		Chiller/Controls
			100				100	Fire Sprinkler/Standpipe Sys.
		100				100		HVAC Distribution & Controls
			100				100	Plumbing Systems/Fixtures
			100				100	Pumps/Motors/Compressors
			100			100		Specialty Systems

- Specialty Systems have been downgraded due to age.

BUILDING ELECTRICAL

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
			100				100	Electrical Distribution (wiring sys)
			100				100	Emergency Power/Lighting Syst.
			100			100		Fire Alarm System
			100				100	Lighting Syst. (inc. branch wiring)
			100				100	Power Wiring
					50		50	Master Clock
					50		50	Public Address
								Security
			100				50	Specialty Systems
	100				100			Tele/Data Syst. (cabling only)

- The Fire Alarm System, Master Clock System and Public Address System need upgrades.

Building No. 12

BUILDING ASSESSMENTS

Building Exterior

Reed Library is constructed exclusively of cast-in-place buff-colored concrete. Serving as both structure and exterior envelope, cast concrete elements are composed in repeating patterns of solids and voids on all facades. Large plates of unframed glass fill the voids and bring extensive light into the building. Given the severe weather of Fredonia, the concrete exterior is in remarkable condition. However, there are numerous locations where the concrete is cracked and deteriorated or has fallen away to expose reinforcing bars that in turn have rusted and stained the building. The windows have remained undamaged in all but one location, but their non-thermal properties are problematic for energy efficiency and condensation. The roof is in poor condition and scheduled to be replaced.

has been recently upgraded. Most interior surfaces are either concrete or glass and very durable, but the carpeting is beginning to wear. The elevator is in poor condition.

Building Interior

Reed Library's interior is generally in fair condition. The vast open room of the library contains stacks, computer workstations and reading areas with soft seating. A cast concrete mezzanine serves as the music library, and cast-in-place carrels run along the eastern edge of the main level. Drywall partitions, not original to the building, have been inserted under the mezzanine and behind the circulation desk to create office areas for the registrar and library services, respectively. The main circulation desk

MEP Systems

The MEP systems are reaching the end of their useful life and need upgrades to the air handling systems and distribution, electrical systems and plumbing systems.

Building Environmental

There is asbestos-containing floor tile and mastic throughout the building. There is also asbestos-containing fitting insulation likely concealed above ceilings and inside wall chases throughout the building.



**Reed Library
(Building No. 12)**

Building No: 12
 GSF: 80,861
 Const. Type: Reinforced Concrete
 Concrete
 Const. Year: 1968
 Floors Above: 2
 Below: 0
 Building Type: Library

Reed Library is the centerpiece of the I.M. Pei & Partners Master Plan, visible from almost every other academic building in the area. Facing Mason Hall and the academic quadrangle to the west, the front entrance to Reed Library, with its monumental stairs, extensive glazing and monolithic convex roof, provides a striking iconic image for the college. Inside the library, the spacious stack and reading room area creates one of the most impressive interior rooms on campus.

Summary of Issues

- Technology and electrical service upgrades are needed to meet increased demands of electronic information and contemporary teaching and study
 - Space currently occupied by the Registrar's Office might be better used for student study/social space
 - Large expanses of single-pane glass, though integral to the I.M. Pei and Partners design, are difficult to repair and replace and decrease energy efficiency
- Mechanical:
- HVAC Distribution/Controls are nearing the end of their useful life.
 - Plumbing Systems/Fixtures are nearing the end of their useful life.

BUILDING EXTERIORS

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
		100				100		Building Framing
100				100				Roof
50	50			50	50			Walls
		100				100		Foundations
100				100				Windows/Louvers
	100				100			Doors/Frames/Hardware

BUILDING MECHANICAL

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
100				100				AHU/Controls
N/A				N/A				Boiler/Heat Exchanger/Controls
N/A				N/A				Chiller/Controls
N/A				N/A				Fire Sprinkler/Standpipe Sys.
25		75		100				HVAC Distribution & Controls
		100			100			Plumbing Systems/Fixtures
		100				100		Pumps/Motors/Compressors
N/A				N/A				Specialty Systems

- Boiler/Heat Exchanger/Controls are fed from Maytum Hall.
- Chiller/Controls are fed from Maytum Hall.

BUILDING INTERIORS

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
	100				100			Floors
	100				100			Walls
	100				100			Ceilings
		100				100		Elevators
	100				100			Doors/Frames/Hardware
		100				100		Stairs
			n/a				n/a	Specialty Systems
	100				100			Built-In Furnishings

BUILDING ELECTRICAL

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
	100				100			Electrical Distribution (wiring sys)
		100				100		Emergency Power/Lighting Syst.
100				100				Fire Alarm System
		100				100		Lighting Syst. (inc. branch wiring)
		100				100		Power Wiring
								Master Clock
								Public Address
								Security
		100				100		Specialty Systems
50		50		50		50		Tele/Data Syst. (cabling only)

Rockefeller Arts Center (Building No. 4)

Building No: 4
 GSF: 119,687
 Const. Type: Reinforced Concrete
 Concrete
 Const. Year: 1968
 Floors Above: 4
 Below: 1
 Building Type: Instruction



The Rockefeller Arts Center provides SUNY Fredonia with an impressive combined facility for instruction and performance in theater, dance and music, as well as studios and galleries for the fine arts. Designed as part of the I.M. Pei & Partners Master Plan to be the focus of the campus upon entry from Central Avenue, the building serves not just the University community, but the greater region as well. The King Concert Hall, suited for large orchestral performances, creates one of the most impressive interior spaces on campus and fine arts studios capitalize on views overlooking the wooded area inside the ring road. An addition to increase instructional space is planned to commence in 2010.

Summary of Issues

- Some theatre program is housed in spaces that were not intended for instruction, creating less-than-ideal academic environments
- Continual interior renovations are required at this facility because of its heavy use by students and the public
- Technological advancements in art and the performing arts requires improvements to the existing building, and additional space for contemporary programs to be built in a planned addition
- Building circulation is complicated and confusing, making communication between departments difficult

Building Mechanical:

- AHU/Controls are as old as the building and are in need of replacement.
- Plumbing Systems/Fixtures have exceeded their useful life.

Building Exterior

The Rockefeller Arts Center is constructed of cast-in-place buff-colored concrete with the structural walls also serving as the exterior envelope of the building. At the King Concert Hall, Rockefeller alternates between large expanses of uninterrupted concrete and glazed curtainwall, while in other parts of the complex, windows are expressed more as ribbon elements within the concrete walls. The condition of the concrete is varied. In some locations it has weathered remarkably well, in others the concrete is cracked and deteriorated or has fallen away to expose reinforcing bars that in turn have rusted and stained the building. Windows are generally in good condition – a window replacement was undertaken in 1996 (though some original windows were left in place). The roof has been repaired and partially replaced, and in 2009, the concrete plaza was waterproofed below the pavers.

Building Interior

The Rockefeller Art Center's interior is generally in fair to poor condition. While many interior surfaces are concrete and have been highly durable for those parts of the facility that are used for fine arts instruction, other areas are showing aging and wear. The seating at King Concert Hall is due to be replaced and the art gallery is also scheduled for renovation.

Floor tiles that are original to the building are present on all floors, and carpet in the lobbies is aged and wearing. Where ceiling tiles exist, they are in fair condition. An elevator for public access was added as part of the 2009 plaza waterproofing project, but the service elevator original to the building is in poor condition. The Bartlett Theater recently had its interior and seating upgraded and is in good condition.

MEP Systems

The MEP Systems for the building is in generally good condition however the systems are nearing the end of their useful life. There are portions of the building that are not air conditioned. There have been alterations that have added air conditioning to various spaces but the systems are not integrated. There is ongoing studies and renovations throughout the building.

Building Environmental

There is asbestos-containing drywall joint compound throughout the building. There is also asbestos-containing fitting insulation on piping in the building. An asbestos waterproofing coating has been identified on the interior of the building near the plaza elevator and may be present elsewhere. Most of stage lighting wire insulation had been identified as ACM but was removed previously. There is likely other incandescent light fixture wire insulation that contains asbestos. The stage curtain is known to contain asbestos but is scheduled to be removed this summer.

BUILDING EXTERIORS

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
	100				100			Building Framing
	25	50	25		25	50	25	Roof
25	75			25	75			Walls
25	75			25	75			Foundations
	25	75			25	75		Windows/Louvers
	100				100			Doors/Frames/Hardware

BUILDING INTERIORS

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
25	75			50	50			Floors
25	75			25	75			Walls
	100				100			Ceilings
50		50		50		50		Elevators
	100				100			Doors/Frames/Hardware
25	75			25	75			Stairs
	75		25		75		25	Specialty Systems
25	75			25	75			Built-In Furnishings

BUILDING MECHANICAL

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
		50	50			100		AHU/Controls
N/A				N/A				Boiler/Heat Exchanger/Controls
N/A				N/A				Chiller/Controls
		100				100		Fire Sprinkler/Standpipe Sys.
		100				100		HVAC Distribution & Controls
		100		100				Plumbing Systems/Fixtures
		100				100		Pumps/Motors/Compressors
N/A				N/A				Specialty Systems

- Chiller/Controls is provided from Maytum Hall.
- Boiler/Heat Exchanger/Controls are provided from Maytum Hall.
- Plumbing Systems/Fixtures are original and have exceeded their useful life.

BUILDING ELECTRICAL

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
		100				100		Electrical Distribution (wiring sys)
	50	25	25		50	25	25	Emergency Power/Lighting Syst.
			100				100	Fire Alarm System
		100				100		Lighting Syst. (inc. branch wiring)
		100				100		Power Wiring
								Master Clock
								Public Address
								Security
	25		75		25		75	Specialty Systems
25	50	25		25	50	25		Tele/Data Syst. (cabling only)

- Electrical Distribution, Power Wiring and Lighting Systems are original and nearing the end of their useful life.

Building No. 61

BUILDING ASSESSMENTS

Building Exterior

Thompson Hall's exterior is an expanse of unarticulated brickwork, with segments of ribbon windows at the upper stories. At the front facing Maytum Hall is an arcade that is little traveled and at the rear is a planted courtyard. The exterior brick is generally in good condition, though water stains are evident at window sills and mortar requires re-pointing in some areas. Minor cracking due to weathering is also evident in a few locations at the building's base, and the brick garden wall that encloses the courtyard was recently repaired due to extensive mortar deterioration. Thompson Hall's windows are single-glazed and aluminum, but in generally good condition, though small sections of curtainwall at the rear entrances are showing their age. The roof is in good condition.

Building Interior

The interior of Thompson Hall is generally in fair condition. Walls, floor tiles and ceiling tiles are original to the building and beginning to show their age. Corridors are long and lack natural light. There are also many rooms interior to the building without windows. A steel ramp has been inserted for access from the basement to the building's only large lecture room, but it encroaches on the elevator. Both building elevators are original to the building and will begin construction on upgrades in May 2011.

MEP Systems

The existing MEP systems for the building are in fair to good condition. The boiler and chiller in Thompson Hall were replaced in 2000.

Building Environmental

There is asbestos-containing floor tile and mastic throughout the building. Previous testing indicates that some mudded pipe fittings are asbestos-containing while others are non-asbestos-containing. Further testing will need to be conducted prior to future projects.



**Thompson Hall
(Building No. 61)**

Building No:	61
GSF:	136,400
Const. Type:	Steel Construction Masonry
Const. Year:	1973
Floors Above:	3
Below:	1
Building Type:	Instruction

Thompson Hall is the largest academic building on campus at 135,000 gross square feet. Designed in a late modernist style and executed in dark brown brick with minimal fenestration, the three story monolithic structure extends from the parking area next to Fenton Hall to the main campus entrance at University Way. It contains classrooms and offices for SUNY Fredonia's programs in education.

Summary of Issues

- Thompson Hall's plan configuration creates many windowless classrooms and offices, confusing and uninteresting circulation, and limits the ability to distinguish between departments
 - Building does not accommodate high-tech classroom needs of many programs, including the School of Business and the Department of Psychology
 - A lecture hall located in the basement is not handicap accessible from the main level
- Mechanical:
- Air Handling Unit and Ductwork Distribution conditions downgraded based on review.
 - Boiler and Chiller Plant conditions revised based on current condition.
- Electrical:
- Fire Alarm System is new.
 - Power Wiring condition revised based on review.
 - Specialty Systems listed.

BUILDING EXTERIORS

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
		100				100		Building Framing
		100				100		Roof
25		75				100		Walls
	25	75			25	75		Foundations
	25	75			25	75		Windows/Louvers
	50	50			50	50		Doors/Frames/Hardware

Comments:

- Walls change to 100% good due to masonry repairs to courtyard wall in 2009

BUILDING INTERIORS

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
	50	50			50	50		Floors
	25	75			25	75		Walls
	25	75			25	75		Ceilings
50	50			50	50			Elevators
	25	75			25	75		Doors/Frames/Hardware
		100				100		Stairs
			n/a				n/a	Specialty Systems
			n/a				n/a	Built-In Furnishings

BUILDING MECHANICAL

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
		100			100			AHU/Controls
			100			100		Boiler/Heat Exchanger/Controls
			100			100		Chiller/Controls
	100				100			Fire Sprinkler/Standpipe Sys.
		100			100			HVAC Distribution & Controls
		100				100		Plumbing Systems/Fixtures
		100				100		Pumps/Motors/Compressors
		100				100		Specialty Systems

- The Air Handling Unit and Ductwork Distribution are nearing the end of their useful life and require upgrade.

BUILDING ELECTRICAL

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
		100				100		Electrical Distribution (wiring sys)
100				100				Emergency Power/Lighting Syst.
		100					100	Fire Alarm System
		100				100		Lighting Syst. (inc. branch wiring)
		100			50	50		Power Wiring
NA								Master Clock
NA								Public Address
NA								Security
NA					20	80		Specialty Systems
50		50		50		50		Tele/Data Syst. (cabling only)

- Generator is in need of replacement.
- New Fire Alarm System.

BUILDING ASSESSMENTS

Building No. 30

Williams Center
(Building No. 30)

Building No: 30
 GSF: 90,380
 Const. Type: Reinforced Concrete
 Concrete
 Const. Year: 1970
 Floors Above: 2
 Below: 1
 Building Type: Student Activity



The Williams Center was the last cast concrete building constructed as part of the original Pei Master Plan. It is the terminal point of the Spine leading from Reed Library and serves as a student activities center for the campus. The building is a two-story cylinder, open in the middle, with student services and activities rooms placed around the perimeter. A large linear skylight illuminates the open central space. There is a cafeteria in the basement, which was renovated in 2009. The Williams Center is the subject of an ongoing design study for an extensive renovation, including modifications to the Spine.

Summary of Issues

- New roof was installed in 2007
- Skylight replacement occurred in 2008
- Lowest level renovated for Connections Food Court
- Renovations in planning phase include upgrades to ventilation, elevators, floors, ceilings, entrances, and restrooms, as well as accessibility improvements, and reconfiguration of the loading dock

Mechanical:

- Boiler/Heat Exchanger/Controls have been recently upgraded.
- Chiller/Controls, in the consultant's opinion, is in good condition.
- HVAC Distribution/Controls have exceeded its useful life. Many of the reheat coils are plugged with dirt and debris, which reduces the air flow.

Electrical:

- The Emergency Power/ Lighting system has been downgraded to current conditions.
- The Fire Alarm System, Lighting System, Power System, Specialty System, and
- Telephone /Data systems have been revised based on review with facilities and field review.

Building Exterior

The Williams Center is constructed of cast-in-place buff-colored concrete with the structural walls also serving as the exterior envelope of the building. The condition of the concrete is varied. On most exterior walls around the cylinder, it has weathered remarkably well. However, in the locations below grade underneath the entrances, the concrete has deteriorated severely and is in poor condition. Windows are limited around the perimeter to a few small square openings, but there are larger expanses of glass at the two points of entry into the building. The windows are generally in fair condition. The linear skylight was replaced in 2008 and extends the length of the roof. The roof itself, which is in good condition, was replaced in 2007.

Building Interior

The Williams Center's interiors are generally in poor condition, with the exception of the newly renovated dining area in the basement, which is in excellent condition. Terrazzo flooring at the ground floor level has deteriorated severely due to snow melting agents tracked through the building by pedestrians in the winter. Stair treads had also deteriorated significantly, but have been covered with rubber treads as an ad hoc remediation. A flexible wall system that can close off the central space of the building form the rest of the Williams Center is aging and inefficient. A new elevator was added to the building several years ago, but the original elevator is still operational and in poor condition.

MEP Systems

The MEP Systems, except for the new boiler plant and chiller plant, are original and have exceeded their useful life. The air handling units and exhaust systems are all existing and require replacement. The existing distribution system which includes numerous reheat coils are plugged with dirt and thus do not supply sufficient airflow. The plumbing

infrastructure is original and should be replaced. Certain toilet rooms have been upgraded however some of the original piping exists. There have been some electrical upgrades throughout the years but most systems are in need of upgrades.

There have been ongoing MEP upgrades throughout the building including the lower level food court, toilet rooms and multipurpose room renovations.

Building Environmental

There is asbestos-containing floor tile and mastic throughout the building. Records indicate that asbestos-containing insulation and mudded fittings are present in the building. Asbestos-containing sprayed-on fireproofing is present in a portion of the penthouse mechanical room. The insulation on incandescent light fixture wiring throughout the ground and second floors is asbestos-containing. There is asbestos-containing insulation covering the kitchen exhaust on the exterior of the building. There is asbestos-containing mud fitting insulation throughout the ground and second floors. Much of the existing piping is inside pipe chases and/or above ceilings. Most of the asbestos-containing material in the basement level has been abated as the result of a recent renovation project.

A major renovation project that will result in the abatement of the majority of asbestos-containing material identified in the building is currently under design.

BUILDING EXTERIORS

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
		100				100		Building Framing
			100				100	Roof
25		75		25		75		Walls
		100				100		Foundations
50	50			50	50			Windows/Louvers
100				100				Doors/Frames/Hardware

BUILDING INTERIORS

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
50	50			50	50			Floors
		100				100		Walls
25	75			25	75			Ceilings
50			50	50			50	Elevators
		100				100		Doors/Frames/Hardware
100				100				Stairs
100				100				Specialty Systems
			n/a				n/a	Built-In Furnishings

BUILDING MECHANICAL

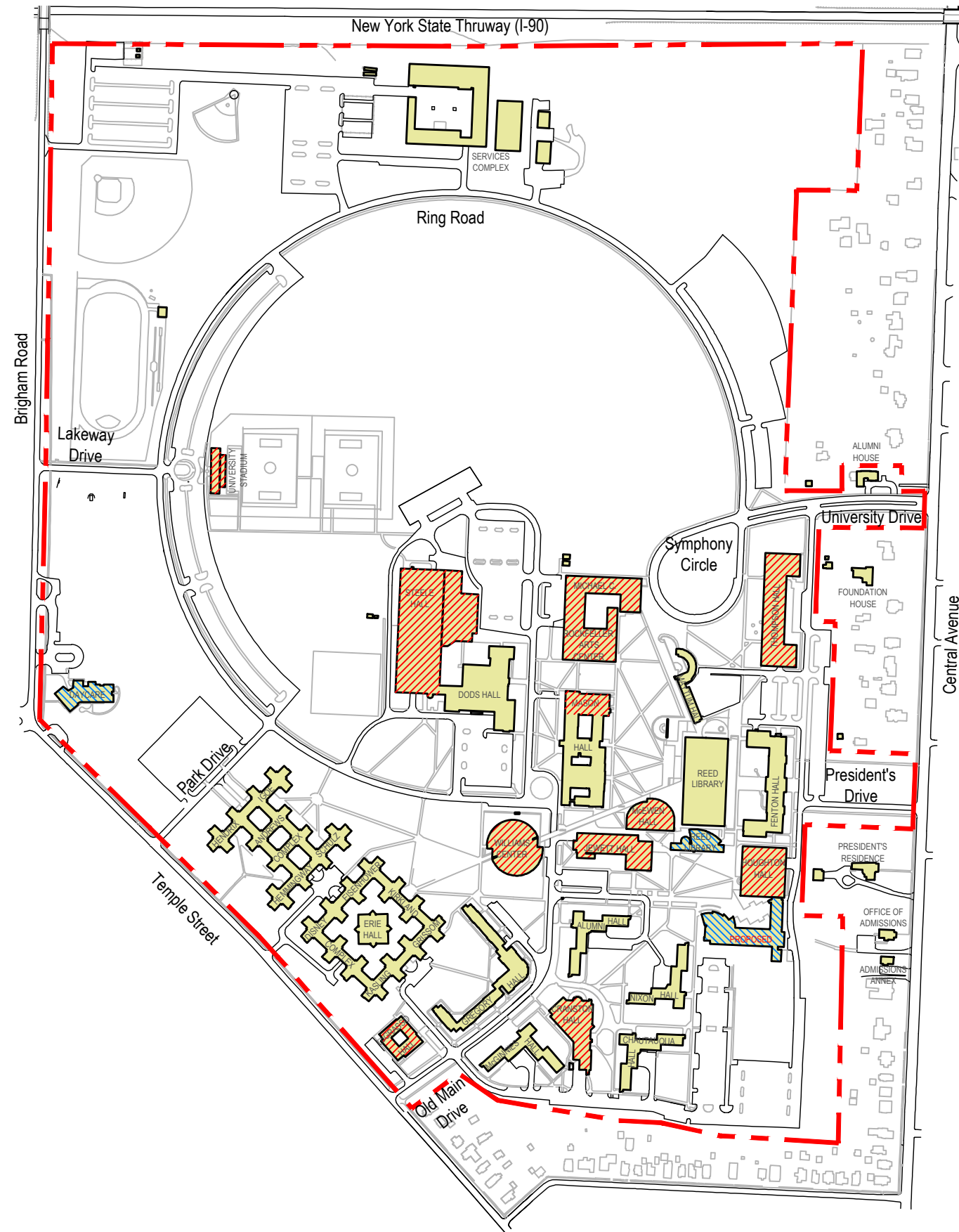
2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
100				100				AHU/Controls
100							100	Boiler/Heat Exchanger/Controls
			100			100		Chiller/Controls
		100				100		Fire Sprinkler/Standpipe Sys.
	100			100				HVAC Distribution & Controls
100				100				Plumbing Systems/Fixtures
		100				100		Pumps/Motors/Compressors
		100			100			Specialty Systems






- AHU/Controls have exceeded its useful life.
- Boiler/Heat Exchanger/Controls have been recently upgraded.

BUILDING ELECTRICAL

2007 BCAS				2010 FMP				
P	F	G	E	P	F	G	E	
	100				100			Electrical Distribution (wiring sys)
	100			50	50			Emergency Power/Lighting Syst.
75		25			50	50		Fire Alarm System
		100			70	30		Lighting Syst. (inc. branch wiring)
		100			100			Power Wiring
NA								Master Clock
NA								Public Address
NA								Security
		100		75			25	Specialty Systems
100				75			25	Tele/Data Syst. (cabling only)

- There have been upgrades over the years to the emergency power, fire alarm,
- specialty lighting systems and telephone /data systems however the systems are
- nearing the end of their useful life.



- KEY:**
-  Property Line
 -  Fire Alarm System
 -  Non-Sprinkler Building (No Cross-Hatch)
 -  Partially Sprinkler Building
 -  Fully Sprinkler Building



Life Safety

Fire alarm systems for most of the campus buildings and all of the dormitories have been replaced with a new fully addressable system. The campus fire alarm system manufacturer in the majority of the buildings is Simplex. Currently there minimal maintenance issues with the fire alarm system. The fully addressable fire alarm systems include manual pull stations, smoke detection in places of assembly and egress, and with audible visual notification devices throughout the building. Steele Hall and Thompson Hall include voice notification.

The Fire alarm systems in Mason and Jewett Halls are outdated zoned fire alarm systems with very minimal smoke detection.

Activation of a fire alarm system notifies campus personnel and the Village of Fredonia fire department of the alarm.

Most of the older buildings on campus, while equipped with fire alarm systems, are not equipped with sprinkler systems or have only partial coverage. Sprinkler systems provide reasonable measure of safety for buildings and occupants which the fire alarm system cannot provide. Many of the existing older buildings contain latent risk of fire due to deterioration, deferred maintenance, or basic details of construction that would not be permitted in newer construction. It is recommended where feasible that sprinkler systems be installed in buildings when major renovations are undertaken. The new buildings that have been built recently are equipped with automatic sprinkler systems.

Refer to the Security section for additional items such as Campus police, lighting, and public address.

Life Safety Summary

- Fire alarm systems in Mason and Jewett Halls are outdated and capable of minimal smoke detection
- Most buildings are not equipped with sprinkler systems; because of building age and construction detailing, installation of sprinklers is recommended



The ADA Issues Map illustrates the issues relevant to site accessibility: handicapped parking locations; accessible and inaccessible building entrances; areas of problems; and barriers to accessibility.

CAMPUS CORE ADA ISSUES MAP

- ▶ Accessible Entrance
- ▶ Non-Accessible Entrance
- Ⓟ Handicap Parking
- ▭ Areas of Accessibility Problems

*Data Source:
SUNY Fredonia CAD Base



Accessibility

The relatively flat campus topography in general does not present significant challenges to achieving site accessibility as per the Americans with Disabilities Act (ADA). Most of the circulation paths within campus are compliant with the ADA requirements.

The greater challenge to handicapped accessibility is associated with the campus buildings, the majority of which were built before the enactment of the ADA. In particular, Reed Library and Maytum Hall present the greatest problem to accessibility. For instance, the main entrances to both Maytum Hall and the Library feature stairs but no handicapped ramps for access. There is no clear signage to direct towards an alternative accessible route, which for the Library is located through the ground floor lobby of the adjacent McEwen Hall. The massive stairs of the Library, while being an impressive architectural element and a popular gathering space, are also the most difficult barrier to accessible circulation from the Academic Quad to Thompson Hall; although there is an alternate link through a maze-like tunnel under the library stairs, there is no signage to direct to the inconspicuous entrances of this indirect accessible route.

Another major problem area is the crossing of the Spine at Old Main Drive, with its poor visibility and the stairs directly from the crosswalk to the Williams Center entrance.

Elsewhere on campus, many ongoing efforts have been made to make the older building entrances accessible, by providing handicapped ramps and automated door openers. Where the main entrances are not accessible, such as at Fenton Hall, there are side entrances that provide ADA-compliant building access. Handicapped parking spaces are provided at multiple locations throughout the core, convenient to accessible entrances.

Crosswalks are well-marked. Almost all crosswalk locations feature handicapped curb cuts. Over 60% of the curb cuts also feature detectable warning strips as tactile cues for visually impaired.

In summary, the College has been doing admirable efforts to create an environment that is universally accessible, by providing accessible building entrances, convenient handicapped parking at multiple locations, well marked crosswalks, and handicapped curb cuts with detectable warning strips. Where the site conditions make it difficult to provide accessible routes, such as at the Library steps, alternative accessible routes exist through buildings. The critical areas that need to be addressed are the intersection of the Spine with Old Main Drive, the main entrance to the Library, and the main entrance to Maytum Hall.



The crosswalk and Williams Center entrance lack direct accessibility from the Spine walkway.



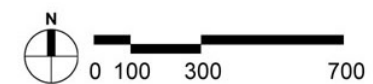
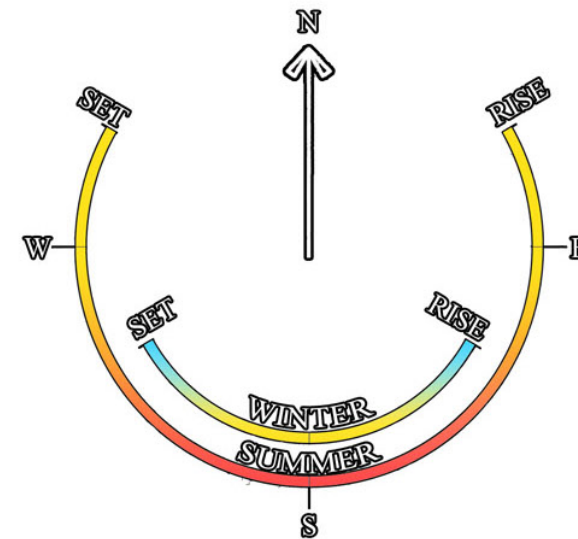
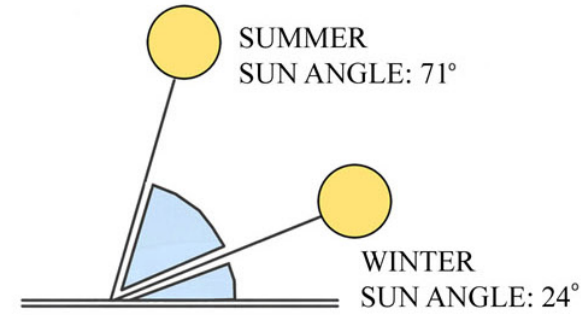
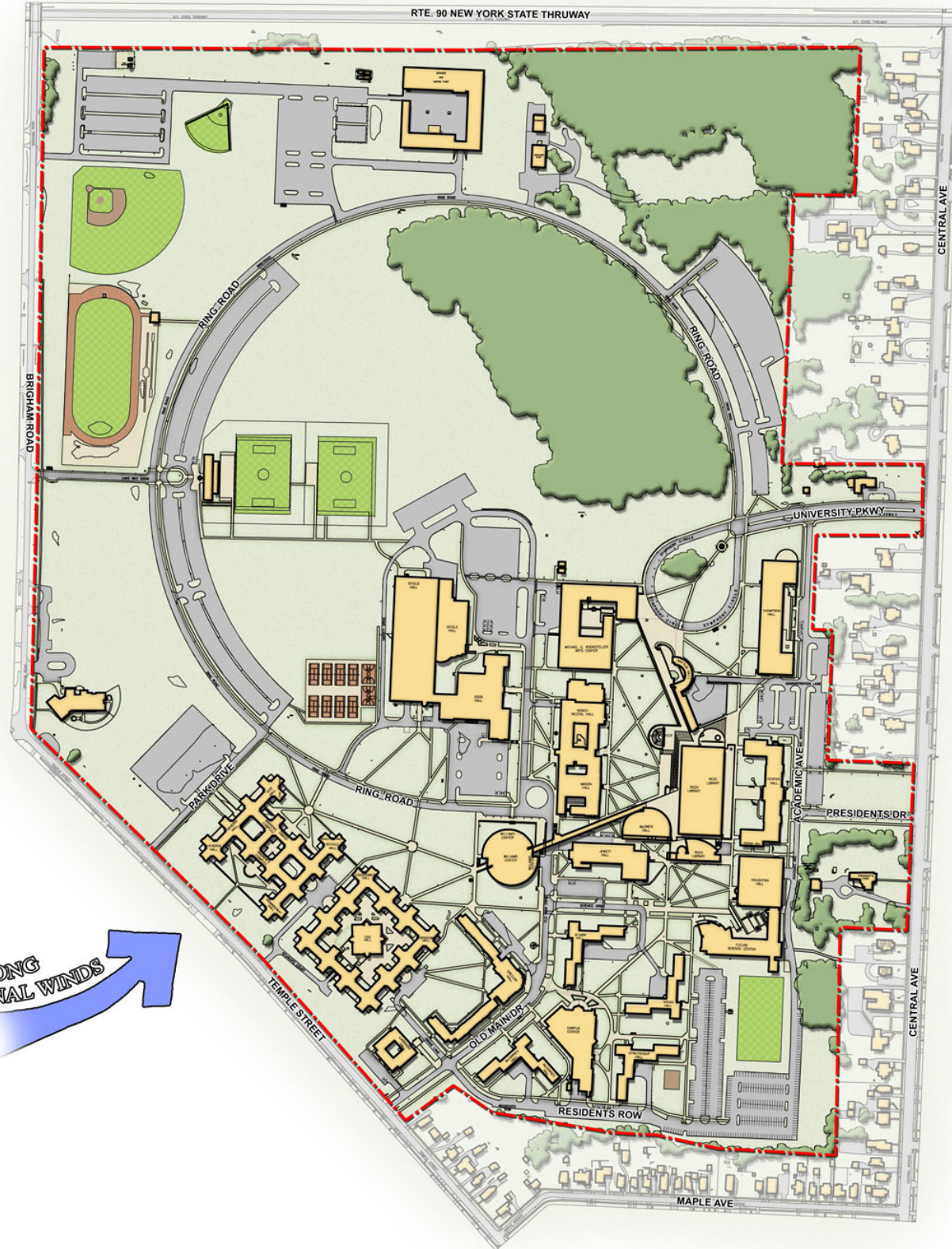
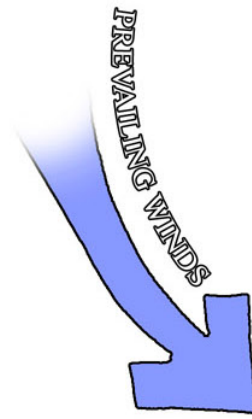
Handicapped parking is located at multiple locations, convenient to accessible entrances.



Long flights of stairs at the Library are a barrier to universal site accessibility. An alternate path exists, but it is not well marked.

Accessibility Summary

- Though the campus landscape is relatively accessible, entrances and interiors of older campus buildings provide significant challenges to accessibility
- Maytum Hall and Reed Library contain the most accessibility issues
- On the campus grounds, long flights of stairs and the elevated Spine are not able to be used by students with disabilities



Environmental Issues Map shows info on light angles, solar exposure, and wind.

ENVIRONMENTAL ISSUES MAP

*Data Source:
US Census. Wikipedia. US NOAA Dept.

Environmental Issues

Orientation and Solar Exposure

The buildings in the campus core are oriented orthogonally in North /South direction. The residence halls west of Old Main Drive are oriented in northwest / southeast direction. The building and site configuration allows adequate solar exposure and natural light within buildings.

Lighting, Shade

The mature tree canopy within the campus core offers a pleasant environment of light filtered through tree branches and foliage. The honey locusts in the quad, even though spaced very closely, have small foliage that allows dappled shade on the ground and enough sunlight for lawn growth. The areas that have more dramatic extremes of light and shade are the Library stairs and plaza, and the Rockefeller Arts Center with its deeply shaded passages and brightly lit paved plaza. Glare could be a problem at the wide expanses of light-colored pavement and facades around the Library and Maytum Hall.

An area that was identified as a heat pocket is the patio of the Japanese Garden, the walled-in semi-circular garden accessed through the Library. The recent small-scale planting in the garden will not contribute much shade. Planting of larger shade trees, and adding umbrellas or other shade structures at the patio would help with the environmental comfort in this area.

Wind

The prevailing winds are from the northwest from the direction of Lake Erie, year round. On occasion strong winds come from the southwest direction and “wreak havoc” on existing vegetation, as described by a campus official. The effect of the strong unobstructed wind front is clearly visible along the west edge of Ring Road, where the Armstrong maples are tilted away from the prevailing wind. The consequence of the wind on the planting palette is that there are not many evergreen trees, because their roots are shallower and the college has lost many due to the strong winds. Along with the long and snowy upstate New York winters, the wind makes for a rather harsh winter environment, so the physical proximity of the buildings in the campus core, as well as the circulation tunnel under the Library stairs, are helpful conveniences. Likewise, moving through an environment of dense tall-canopied trees in the Honey Locust quad creates a more pleasant microclimate than moving along more exposed stretches such as Rockefeller Arts Center Plaza, or the walks from the west residence halls to Williams Center.



Trees along the Ring Road have suffered from strong westerly winds; many replacement have been made over the years and the uniformity of planting has been lost.



Sharp transitions from dense shade to bright light could be difficult on the eye. At the Rockefeller Center colonnade, the deep building shadow helps bring out the framed vista beyond.

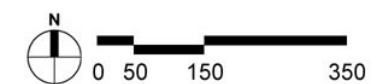
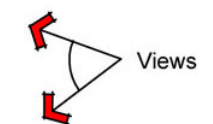
Environmental Summary

- Shade cover is generally good, with potential for a heat pocket at the Japanese garden accessed through Reed Library
- Occasional strong winds from the southwest are damaging to vegetation, especially along the Ring Road; tall trees and dense building context alleviate harsh winter conditions common to the region



The Views and Spatial Sequences Map identifies key views and sequences that have been selected to illustrate some of the positive and negative issues that were discussed in the site assessment. Highlights of the assessment are given in the image captions.

VIEWS & SEQUENCES MAP



Arrival Sequence: University Parkway

The University Parkway is the formal arrival to the campus and particularly the Rockefeller Arts Center. The formality of a divided road is reinforced by the formal planting of columnar oaks and vase-shaped Kwanzan cherries. The sloped lawn with sculpture set against woodland greets the visitor with a serene view. The iconic views of I.M.Pei and Partners complex are best experienced from this arrival sequence.



1a. University Parkway entry from Central Avenue.



1b. View to Maytum Hall from the parking off of Ring Road.



1c. Symphony Circle wood grove and clock tower are landmarks denoting the campus arrival.



1d. The walkway to the campus core, looking south towards Maytum Hall. The path to the right leads towards Rockefeller Arts Center.



1e, 1 f. Iconic views of Maytum Hall and Rockefeller Arts Center.



1e, 1 f. Iconic views of Maytum Hall and Rockefeller Arts Center.



1g. View of the sloped lawn with sculpture from Symphony Circle.



1 i, 1 j. View to the Library and the Academic Quad.



1 i, 1 j. View to the Library and the Academic Quad.



1k. Iconic view of the Library.

View from Central Avenue towards Fenton Hall



2. The formal lawn with the flag and brick college building as the focal point present a traditional institutional image. There are no signs to identify the college.

Arrival Sequence: Old Main Drive

The Old Main Drive offers a more traditional-looking college arrival, with its tall oak boulevard and brick buildings along both sides of the road. As it nears the campus core, the architectural style changes abruptly with the visual dominance of the concrete Spine. Beyond the Spine is a traffic turnaround at the intersection with Ring Road. The only visual element that attempts at prominence in this counter-climatic arrival are the globe chandeliers at the Williams Center drop-off plaza.



3a. Entering Old Main Drive from Temple Street



3b. Gregory Hall to the left, Alumni Hall ahead.



3c. The Spine. Williams Center is to the left.



3d. The traffic turnaround as seen from the Spine. Ring Road is to the left.

The Spine

The upper deck of the spine was conceived as an active promenade lined with sitting niches. However it is closed for traffic during the winter, and the ground level passage has become a more heavily used circulation path because of its direct link to the Library and McEwen Halls entries. Its massive semi-cylindrical support structures and large columns constrict the width of the lower passage.



4a. The Spine in winter. McEwen Hall is to the right and the Reed Library straight ahead.



4b. View from the Spine to the Academic Quad and Library stairs.



4c. A framed view of the Academic Quad from the passage under the Spine.

Academic Quad



4d. The Academic Quad appears tired with its mature trees, bituminous paths, and lack of amenities.

Library Terrace Views



5. The Academic Quad as seen from the Library terrace. The plaza and the Quad would benefit from design improvements.



6. View to Maytum Hall and Rockefeller Arts Center beyond.



7. View of the Library Terrace towards McEwen Hall and Carnahan Jackson.

Honey Locust Quad



8. View from Carnahan Jackson gateway looking south towards Nixon Hall..



9. View towards University Commons.



10. View from University Commons. The honey locust granching pattern and grid layout create interest during winter.



11. View west towards University Commons – Nixon Hall is to the right.

Promenade from Houghton Hall to Thompson Hall



12. The strong linear form of the promenade, which extends from Houghton Hall along Fenton and Thompson Hall to Symphony Circle, is reinforced by the row of pedestrian luminaires and the long seat wall. The gravel bed to the left presents an opportunity to create an attractive green landscape, which would enrich this environment and provide a better setting for Reed Library.

Promenade to the West Residence Halls



13. View from the second floor of Williams Center to the promenade that leads to Andrews Complex residence halls. The landscape in this part of campus has the more conventional "campus" look with informal tree planting. The strong walkway axis is punctuated by circular sitting nodes.

Ring Road



14. The Armstrong Maples along the ring road have had many replacements due to their damage from wind. The new plantings are 2" caliper saplings, which will take years to catch up in size to the existing older maples. The visual continuity of a "green colonnade" has been lost.

Steele Hall



15. View from Ring Road over the parking lot towards Steele Hall. The long windowless façade creates a severe edge in winter, when the deciduous trees in front of have lost their foliage.

Technology

Data Distribution

The data distribution throughout the campus consists mainly of 12 strands of single-mode and 12 strands of multi-mode 62.5um fiber. The fiber between Gregory Hall is 36 single mode and 36 multimode fiber. The topology for the distribution can best be described as a star topology and is depicted in the campus Data Distribution Plan. The star topologies emanate from Maytum Hall, Gregory Hall and the Natatorium. This data distribution system is used for all campus activity including student, faculty and administrative purposes. This distribution does not have redundancy and is not conducive to adding items such as Voice over IP for telephones. The distribution within most of the buildings is less than ten years old and uses Category 5 and Category 5e distribution throughout the building. As of 2009, when buildings were renovated, the distribution cable is Category 6. The existing fiber distribution system currently meets the campus requirements. As additional demands are placed on the system, additional infra-structure will need to be added.

All campus buildings with the exception of the Maintenance Building have wireless internet coverage. This includes approximately 500 wireless access points.

Currently the Campus data center is located in Maytum Hall. The data center has some operational issues which include improper cooling system and multiple single phase UPS systems. A second data center should be included to allow for redundancy in case of a failure. Maytum Hall is currently being renovated; a new generator will serve the entire building including the data center. The individual building data rooms do not currently have emergency generator power; this should be considered to help maintain operating conditions.

Telephone lines serving the campus are maintained by local telephone provided DFT. The actual capacity and condition of this service is not currently known. Currently there are no known problems with telephone service.

Considerations for future data requirements are to provide additional fiber strands to each building in a redundant topology to allow for more bandwidth and flexibility. In addition, a "cold site" has been discussed for data recovery in the event of a loss on campus.

Technology Summary

- Existing data distribution meets current needs, but is not conducive to adding technology such as Voice Over IP
- Wireless coverage is available throughout the campus
- Emergency power and a second data center should be considered for campus data needs and backup in the event of an emergency

Suitability

Reed Library

Reed Library was originally designed to serve as the main library for the SUNY Fredonia campus, the function which it still serves today. While much of Reed Library was appropriately designed for its programmatic function, trends in undergraduate library usage and the rise of electronically stored information have made several of the building's original premises obsolete. Large areas of book stacks are no longer required (or used) and demand for computer work stations has greatly increased. Furthermore, academic libraries now often serve as campus social centers, usually with significant areas of comfortable seating and amenities such as study spaces and cafes. Given these trends, Reed Library is not making the best use of its space, and is in need of reprogramming and upgrades to its interior. Opportunities exist to reduce the number of stacks, take advantage of its flexible open plan for workstation and seating accommodations, and capitalize on the power of its grand space as well as its central location. Any future planning for programming Reed Library should take into account such possibilities.

Jewett Hall

Jewett Hall was originally designed to serve as a campus science facility, the function which it still serves today. Due to its age and changes on the demands of teaching facilities in the sciences, Jewett Hall is no longer suitable as a building for instruction in undergraduate science. Limitations in the building's infrastructure and overall footprint make the building obsolete for laboratories. Future reassignment possibilities for Jewett are limited without significant renovation efforts. The central, double loaded corridor is efficient and the current labs are large enough to be converted to classrooms, but bearing wall construction and low floor-to-floor heights limits flexibility. Re-use of Jewett for student activities functions has been suggested, based on its location along the Spine and near the center of campus. However, the building's limitations of age and construction type inevitably present problems for effectively satisfying such a program.

Fenton Hall

Fenton has long served as a building for general instruction in the liberal arts, housing faculty offices and classrooms. Designed in classic "Old Main" fashion, Fenton has a central entrance and wings to either side. Because it is built with load-bearing walls at its central corridor, the dimension from the corridor to the exterior is fixed. This inherent structural configuration makes Fenton well-suited for small to mid-sized classrooms and seminar rooms, but poorly suited to office configurations. Also, the interior space in the corners of Fenton's wings create relatively large areas without access to natural light – spaces poorly suited for offices or seminar rooms. While Fenton is not ideally suited to its use, its historical character and central location to other academic buildings still suggests its best programmatic assignment is to serve instruction in the liberal arts. A full interior renovation would be required to make the building more effective.

Rockefeller Arts Center

When considering the Rockefeller Arts Center's primary programmatic functions, the building is generally well-suited for its use as the campus fine and performing arts facility. King Concert Hall provides an excellent venue for large ensemble performances and the Bartlett Theater is well-equipped to serve undergraduate and professional theatrical performances. The fine arts studios for drawing, sculpture and painting are also generally well-suited to their use, though dance studios are substandard.

Where Rockefeller Arts becomes less suitable is in addressing the complexities of operations within some of the primary programmatic functions. The Center was designed as a performance facility; instruction in theatre arts and dance was not a part of the original intention of the building. For this reason, many instructional spaces are overcrowded or inadequate because they have been retrofitted for their current use. For example, the Scene Shop is used for instruction in addition to its original purpose – production and storage of elaborate theatre sets. Drafting rooms and computer labs equipping the theatre programs with the latest technologies have been inserted into storage rooms. Also, aside from limitations within specific areas, moving between the different program spaces is cumbersome, making communication between departments difficult. Lastly, as a building designed more than 40 years ago, Rockefeller Arts lacks teaching spaces to accommodate electronic arts and digital-based arts. SUNY Fredonia's plans to begin designing an addition to the complex should address this programmatic shortcoming.

Thompson Hall

Thompson Hall is poorly suited for use as a building for academic instruction. Certain inherent characteristics prevent the building from satisfying the programmatic needs of several functions in the College of Education and the Department of Communications Disorders and Sciences. For example, observation rooms for clinical instruction and research are shared between the two programs, which not only limits the time available for observation, but is also not ideal because of privacy and security concerns. The building's plan configuration leaves it with large amounts of windowless interior space, constrained by inflexible service elements and of a dimension that is neither suited for offices nor classrooms. Many classroom spaces are unsuitable because of disproportionate room dimensions and low ceiling heights for their designed occupancy. On the second floor, many rooms on the exterior of the building also lack windows. The corridors are very long, poorly lit and lack identifying features to distinguish differences in departments or programs. Because of weak relationships to the surrounding campus context, Thompson's primary entrance is seldom used, with most visitors to the building entering at a side entrance beside the building's loading dock.

Thompson's poor suitability is particularly problematic given its size. It is the largest academic building on campus and highly ineffective. It also is home to many academic departments and their faculty and staff, many of whom inhabit windowless offices that were originally intended as storage rooms. In a future reassignment of Thompson Hall program, extensive renovations to the building's plan configuration will be required in order to improve the experience of the building and provide enhanced learning environments.

Mason Hall

Mason Hall was originally designed as a building for instruction in music and has served that purpose ever since. While it was once able to satisfy the programmatic demands of the music department, the building's age and inherent limitations of construction now make it poorly suited for general music instruction. As in many other academic buildings at SUNY Fredonia, general-purpose classrooms are not equipped with "smart" technology, and infrastructure upgrades will be required to bring such technology to existing space in Mason. In addition, although numerous small practice rooms exist, Mason Hall lacks adequate space for small group and ensemble rehearsals. The building is not air conditioned, and the mechanical system is unable to provide appropriate temperature and humidity controls, creating serious issues with instrument tuning. Sound attenuation between rooms is poor and the bearing wall construction limits flexibility for plan changes. The large Diers Recital Hall provides a very good location for large band and orchestral rehearsals and small performances, but requires acoustical upgrades. Generally, the building would be better suited for use as offices and non-performance classrooms. Given its age, a significant interior renovation is necessary to bring the building up to current standards. Mason's connections to its various additions make it a poor candidate to serve any other department but music.

Mason Addition

The Mason Addition was originally designed as a building to support instruction in music and it is well-suited to that use. The Mason Addition plan is a long bar with practice rooms and faculty offices off of a central corridor. Practice rooms are appropriately sized and each is provided with natural light. Offices have an irregular plan configuration making them less adaptable to other uses. Since the Mason Addition runs the length of the entire Mason music complex, it is well connected to all of the other Mason buildings.

Mason Recital

The Mason Recital Hall was designed and constructed with the purpose of providing an outstanding concert venue for student recitals and performances. The building is very well-suited to this distinct purpose. The Rosch Recital Hall is a highly regarded performance space and the support areas in the building, such as the recording studios, are well-designed and highly functional. Given the specific nature of Mason recital Hall's program, it would be difficult to reassign the building to another use.

Mason Annex

The Mason Annex has been modified in so many ways it is difficult to distinguish it among the greater Mason music complex, let alone assess its suitability. Essentially, the building is a remnant of space, used mostly for practice rooms and storage. There is no cohesive building and what there is could be replaced with more purpose-directed program elements better suited to support the University's music program. Rehearsal space within the Mason Annex was deemed inadequately-sized for the types of rehearsals held within it. An addition to the Mason Hall complex is currently under construction that will alleviate the demand for Annex rehearsal space to accommodate large groups, which will address acoustical issues by limiting room occupancy. Once this addition is complete, the Mason Hall Annex may become better suited to the needs of the School of Music because of a more reasonable demand for its use.

McEwen Hall

McEwen Hall provides SUNY Fredonia with four large-format tiered lecture halls, a large computer room for general student use, and offices for student-run media outlets. McEwen Hall's functions make sense given its central location on campus, and the building's lecture rooms are clearly designed to serve their programmatic purpose (though they are in need of major upgrades due to their age). However, the building as a whole is highly inefficient, with large amounts of area given to circulation. Any future assignment for McEwen Hall should include making better use of this excess space, possibly building on such ideas as the café on the lower level of the building that activates the circulation zone where McEwen Hall connects to Reed Library.

Houghton Hall

Houghton Hall was designed as a teaching facility for the sciences as part of the I.M. Pei and Partners Master Plan. In concept it is well-suited to its use: adequately sized labs are arranged around the perimeter of the building with a central core and a continuous corridor in the middle. The structure of the floors is a precast concrete beam system, which allows large spans of open space for the labs. However, like many of the older buildings on campus, Houghton Hall lacks the flexibility and diversity of spaces needed in a contemporary science facility. While lab space is adequate, support space is poor. Computer rooms, lecture rooms and other non-laboratory teaching spaces are lacking or absent. Building systems also cannot satisfy the demands of today's laboratory environments. The University is addressing the building's shortcomings by building a new facility attached to Houghton at the south, which will greatly improve the capabilities of SUNY Fredonia's departments of science.

Maytum Hall

It is difficult to accurately assess Maytum Hall's suitability when it is undergoing such an extensive gut renovation. However, one basic aspect of Maytum Hall that will always affect its ability to satisfy programmatic requirements is its small footprint and its height. At 9 stories tall and with a typical floor of 6,285 square feet, it is difficult to fit a program of any significant size on one floor. Even if programmatic elements can be divided easily and distributed among floors, communication problems associated with such multi-floor divisions and potential absence of face-to-face interaction could be detrimental. How the Maytum renovation deals with its inherent shortcomings will be the key to making the building well-suited to its use.

Williams Center

The Williams Center is no longer suitable as the main student activities center at SUNY Fredonia. Designed as a location for student services, clubs and agencies, the Williams Center lacks the amenities and support areas typical to a contemporary collegiate student center. It is fairly effective in accommodating groups for meetings and medium to large gatherings, but the demand on this building far outweighs the availability of space. The Williams Center was designed to accommodate a student body much smaller than that of SUNY Fredonia today, and its overuse has placed a strain on the facility's capabilities. Furthermore, the large open space at the center of the building is unable to serve as an effective flexible open space. The moveable partitions create a substandard space when used to enclose the central area, and the circulation through the building becomes obscured when the partitions are deployed. Acoustical separation between the perimeter offices and the central space are problematic.

Carnahan-Jackson Center

The Carnahan-Jackson Center, which upon its construction 15 years ago, was well-suited to its program, is now beginning to become obsolete and poorly suited as a special-purpose addition to Reed Library. Conceived as an addition designed to provide stack space, rooms for special collections, private study areas and an undergraduate Writing Center, only the Writing Center remains truly relevant to library programming at a contemporary university. Electronic storage of information and the rise of computer-based research methods have made both the stack areas and study rooms less important to students. The Writing Center is well-used, and the special collections are fixed programmatic elements, but much of Carnahan-Jackson's space could be better and more efficiently used. If future reassignment were to be considered, Carnahan-Jackson's location at the heart of the campus core would be an important factor in determining program, in addition to the needs of the Colleges.

LoGrasso Hall

LoGrasso Hall was originally designed as the student health clinic and still serves that purpose today. In general it is well-suited to its use, allowing adequate space for exam rooms and staff. Hospital rooms with adjoining bathrooms are no longer used for overnight patients; these rooms have been repurposed for various other clinical functions. A small courtyard in the middle of the building provides a nice amenity to the building – one that could be capitalized on should student health services move to another location in the future. Counseling services and International Education are additions to the originally-designed program for the building. Though counseling services is a compatible use, the shared waiting room with the Health Center is not ideal for privacy. International Education is better suited in a more central campus location. LoGrasso Hall is located equidistant to the main residential complexes on campus, which is helpful to the function it serves. However, this central location places it at one of the gateways to campus – a site that in the future may better serve a different programmatic purpose with a more welcoming public component.

Dods Hall

While once an appropriately designed collegiate gymnasium, Dods Hall is, by today's standards, poorly suited to serve as SUNY Fredonia's main athletic building. Its location, both on the campus and at the center of the athletic complex, is well-suited to the function it serves, but the age of the facility renders most of its rooms inadequate. Locker rooms, showers and offices are all in need of renovation. Offices are small and storage space is at a minimum. More significantly, the gymnasium does not meet the necessary standards for Division 3 basketball competition, and is used only for practice and recreation. Current fitness rooms and weight rooms have been located in areas not originally designed for such functions and the old pool area is poorly utilized due to existing bleachers that have not been removed. A strategic addition to Dods Hall has been discussed to address issues of NCAA basketball standards; an enlargement of Dods existing basketball facility would allow proper walk-off space adjacent to courts and acceptable flooring surface not currently available in the Field House. Feasibility of such an addition has not been thoroughly studied. Separate renovation projects to address the pool area and create a varsity weight room are in process and should improve Dods Hall, but the larger fact of its deficiencies due to age remains.

Field House – Steele Hall

The Field House at Steele Hall was originally designed as a field house and ice rink, with supporting locker room and training spaces, and it still serves that function today. The building is generally suitable for its use, though certain shortcomings in its design impact the quality of the facility. The field house has a synthetic floor which prevents the basketball court in the infield from qualifying as an acceptable NCAA court for competition. The field house also has poor storage capabilities for athletic equipment, which is scattered around the track. The support spaces and locker areas for the facility as a whole are under-sized and aging. Any future reassignment of the building should consider more efficiently configuring the support spaces.

Steele Hall Natatorium

The Steele Hall Natatorium was designed for its specific purpose and is well-suited to meet its programmatic needs. The building provides an excellent venue for Division III swimming and diving competitions as well as an excellent amenity for intramural and recreational users on campus. The Steele Hall Natatorium also provides Steele Hall and the athletic complex with a bright, open and highly visible entry. Given the specific nature of the Steele Hall Natatorium, any future programmatic re-assignment would be difficult.

Fenner House

Fenner House was originally designed as a 19th century residence and now serves as the Admissions Office for SUNY Fredonia. Fenner house is generally suitable for an admissions office, though the age of the building, the size of its rooms and the bearing wall construction of the house greatly limit flexibility. The Victorian styling of the building contrasts significantly with SUNY Fredonia's architecture, but also presents a welcoming image for those who first visit the University. Any future reassignment for Fenner House is limited given the building's age and residential characteristics.

Erie Dining

The Erie Dining Hall was designed to serve half of the residential complex constructed as part of the I.M. Pei & Partners Master Plan. The building has dining rooms organized around a central kitchen and serving area, like many collegiate dining halls of its era. A terrace off of one of the dining rooms provides a potential outdoor eating area and is scheduled for a renovation in 2011. The Erie Dining Hall is able to satisfy its programmatic needs adequately, but it lacks some of the amenities now considered standard in food service facilities at many universities. Open serving stations with individual food preparation, trayless service, and sustainable practices such as composting are all lacking at Erie Dining Hall. Any future renovation should take into account such trends in food service.

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Executive Summary

With the exception of Fenner House and some local areas of other buildings, the buildings assessed by LERA at the SUNY Fredonia Campus were generally in good structural condition. A majority of the damage observed could be attributed to water infiltration and to the large temperature differentials experienced by the buildings. Other attributing factors include deicing chemicals and construction deficiencies.

Introduction

This report is a condition assessment of buildings located on the SUNY Fredonia campus. The condition assessment was performed by Leslie E. Robertson Associates for Chan Krieger NBBJ Architects. The project consists of a Facilities Master Planning study for the campus of SUNY Fredonia. The Facilities Master Plan will provide criteria and guidelines for campus improvements and facilities development that support the academic mission and strategic vision of the school. Located in Chautauqua County, the Fredonia campus includes 30 instructional and support facilities with an approximate gross area of 1,244,000 square feet. The condition assessment consisted of a visual inspection of building structural elements that were exposed to view and did not require destructive probing. Structural elements included, but were not limited to, the building's frames, foundation elements, floor systems, roof structures and the like. Elements that were not inspected include architectural features, facades, and MEP elements. At times, we commented on elements that were not structural but whose deteriorating condition may have adverse effects on structural elements. Site work structures were not inspected except for the pedestrian bridge that connects the Williams Center, McEwen Hall, and Reed Library, hereafter referred to as the Spine.

- Butler Building
- Dods Hall
- Erie Hall
- Fenner House
- Fenton Hall
- Field House
- Houghton Hall
- HPE
- Jewett Hall
- Lograsso Hall
- Mason Hall
- Mason Hall Annex
- Mason Recital Hall
- Mason Hall Addition
- McEwen Hall
- Nimo Switch
- Reed Library
- Reed Library Addition
- Rockefeller Arts Center
- Salt Storage
- Service Complex
- Spine
- Steele Hall
- Stockade Storage
- Thompson Hall
- Williams Center

Terminology

The following is a list of concrete conditions that is used in the building assessments.

Cracking: Separation of concrete into parts. Cracks are characterized by length, direction, width, and depth, and whether the crack is active or passive. Passive cracks may be caused by construction errors, shrinkage, variation in temperature, or shock waves. Active cracks may be caused by variations in atmospheric or internal temperature, absorption of moisture, reinforcement corrosion, chemical reactions, settlement or various loading conditions.

Hairline cracking is defined by ACI 224 as cracks having a width less than 0.003 inches wide. These are considered cosmetic and will not be addressed in the summary of building assessments.

Delamination: A horizontal splitting or separation of a concrete member in the plane parallel to the surface.

Efflorescence: Deposit of white salts, usually calcium carbonate, on the concrete surface.

Freeze Thaw: Surface damage to concrete resulting from the cycle actions of freeze thaw.

Peeling: A process in which thin flakes of mortar are broken away from a concrete surface, such as by deterioration or by adherence of surface mortar to forms as forms are removed.

Scaling: Local flaking or peeling away of the cement matrix near-surface portion of hardened concrete.

Spalling: Detachment of fragments (spalls), usually in the shape of flakes, from a concrete mass.

Condition Assessment Summary

Butler Building

Butler Building is a steel structure with metal panel facade and roof. It has an approximate gross area of 4,080 sq ft. The building is used to store Facilities Services equipment. Several locations were observed to have physical damage to exterior metal wall panels but the damage did not compromise the structural integrity of the building. The interior slab on ground was observed to have surface deterioration due to deicing chemicals and abrasion from plows. The Butler Building structure was in good condition.

Central Heating Plant

The Central Heating Plant facility is located within the Services Complex. It has an approximate gross area of 11,828 sq ft. The structure consists of steel framing with perimeter concrete retaining walls. We observed cracks and spalls in the concrete retaining walls located at the west entrance of the Services Complex. Architectural precast elements that form the window sills were observed to have surface erosion and exposed reinforcement.

Dods Hall

Dods Hall is a steel framed building with long span rigid steel frames and concrete foundations and floor systems including waffle slab and one-way slabs spanning between the steel frames. The exterior envelope consists of brick masonry. The building has an approximate gross area of 82,591 sq ft. The building has one gymnasium that is capable of being divided into two separate areas using a moveable partition. The brick facade was observed to have many cracks at the corners of the building allowing water intrusion. Similarly at these corners, the top of the concrete foundation walls were observed to have cracks. We recommend that probes on the interior faces of these walls be performed to assess the extent of cracking. Peeling was observed in an exterior stair entrance. A two-way joist slab was observed to have cracks in the slab located in the men's locker room. An abandoned swimming pool has been covered with a concrete floor supported by steel framing. This slab was observed to have many cracks. We understand the slab was too flexible and required retrofitting of the supporting steel frame. We recommend further assessment of this floor construction. Some of the pool concrete walls were observed to have efflorescence stains.

Erie Hall

Erie Hall is a concrete framed structure with shear walls. Floor systems include both waffle and flat slabs. The exterior envelope consists of brick masonry and architectural concrete. The building has an approximate gross area of 23,811 sq ft. The building houses student dining facilities. We observed several locations of spalled concrete and corroded rebar in concrete elements of the exterior facade. The exterior ADA entrance ramp was observed to have some cracks. Concrete deterioration was observed at pipe slab penetrations in the food preparation rooms located at the lower level. In the area of the loading dock we observed water infiltration in foundation walls and the upper slab supporting a plaza. There was evidence of vehicle impact on beams supporting plaza above. We recommend the installation of vehicle clearance signs. Some of the concrete facade elements were observed to have efflorescence stains.

Fenner House

The Fenner House is a 19th century-era residence that has been converted into an office for admissions for the university. The building consists of wood framing and masonry bearing walls. It has an approximate gross area of 4,175 sq ft. We observed that the floor was sagging at several locations. This may be attributed to the age of the structure and the change in occupancy loading. We observed that existing modifications to the first floor framing adversely affected the structural integrity of the building. These include the removal of beam supports, inadequate shoring, and cracked wood beams. In addition, the attic was observed to have existing fire damage with inadequate repairs. As stated on the day of our assessment of Fenner House, the damaged areas of the building were not to be occupied until adequate repairs designed by a licensed engineer are performed. (Update: Since the structural assessment, the campus hired a structural engineer to evaluate the condition of this building and additional shoring was added to remediate the problem areas identified)

Fenton Hall

The Fenton Hall structure consists of a steel frame with masonry bearing walls. The exterior envelope consists of brick masonry. Fenton Hall is an instructional facility with an approximate gross area of 72,759 sq ft. Perimeter foundation walls that extend above grade were observed to have both scaling and cracks. We observed a large crack in the brick facade that extended the entire height of the wall. Due to interior architectural finishes, we were not able to determine the condition of the structure behind the cracked facade. We recommend that probes on the interior of this wall be performed to assess the extent of cracking. In the interior of the building, we observed plaster cracking in several rooms. Upon further investigation in the interstitial space of the

Field House

The Field House is a steel framed building with long span steel trusses spanning over indoor courts and a hockey rink. Concrete slabs spanning between steel beams form the floor system. The exterior envelope consists of brick masonry. The building has an approximate gross area of 91,734 sq. ft. The building has several gymnasiums, and other athletic facilities. The Field House structure appeared to be in good condition.

Food Service

The Food Service facility is located within the Services Complex. It has an approximate gross area of 13,474 sq ft. The structure consists of steel framing with perimeter concrete retaining walls. Steel posts at the loading dock were observed to be splitting at their seams. Exterior wood shelving used for storage was observed to be weathered. Throughout the complex several sheds and mezzanine structures were constructed of wood and steel and did not appear to be part of the original construction. We recommend these structures be confirmed to have been adequately designed. Architectural precast elements that form the window sills were observed to have surface erosion and exposed reinforcement.

Houghton Hall

Houghton Hall is a concrete and precast concrete building with a brick facade. Houghton Hall is an instructional facility with an approximate gross area of 73,981 sq ft. The brick facade at the locations of the cantilever concrete roof structure were observed to have many cracks. This may be attributed to improper jointing of the brick masonry. Also, signs of water stains leading to the crack may have been caused by freeze-thaw cycles. The concrete structure at these locations did not show any signs of damage. In a lower level mechanical room we observed water infiltration in the concrete foundation wall.

HPE

The HPE building consists of masonry bearing walls and wood trusses supporting the roof structure. The structure is used for storage and as a restroom facility for the Athletic Field. The building has an approximate gross area of 896 sq ft. The HPE building structure appeared to be in good condition.

Jewett Hall

The Jewett Hall structure consists of a steel frame with masonry bearing walls. The exterior envelope consists of brick masonry. The building is an instructional facility with an approximate gross area of 65,530 sq ft. We observed a large crack in the facade that extended the entire height of the wall. Due to interior Architectural finishes, we were not able to determine the condition of the structure behind the cracked facade. We recommend that probes on the interior of this wall be performed to assess the extent of cracking. We observed some cracking in concrete slabs. The greenhouse slab on ground appeared to slope toward the main building. Clogged drains were also observed. We recommend the slopes and drains be assessed further to prevent water infiltration effects to the base building structure.

Lograsso Hall

The Lograsso Hall structure consists of a steel frame with masonry bearing walls. The exterior envelope consists of brick masonry. The building is mainly a health services facility with an approximate gross area of 24,445 sq ft. The brick facade was observed to have some cracking and in one wall it appeared to bow outward as if not connected to the base building structure. We recommend that this potentially unsafe condition be assessed further.

Maintenance Building

The Maintenance Building, including the Garage and Central Receiving facilities, are located within the Services Complex. It has an approximate gross area of 26,419 sq ft. The structure consists of steel framing with perimeter concrete retaining walls. We observed cracks and spalls in the concrete retaining walls located at the south entrance of the Service Complex. Throughout the complex several sheds and mezzanine structures were constructed of wood and steel and did not appear to be part of the original construction. We recommend these structures be confirmed to have been adequately designed. Architectural precast elements that form the window sills were observed to have surface erosion and exposed reinforcement.

Mason Hall

The Mason Hall structure consists of a steel frame with masonry bearing walls. The exterior envelope consists of brick masonry. The building is an instructional facility with an approximate gross area of 32,407 sq ft. We observed cracks in the concrete foundation wall and the masonry bearing wall. We also observed rusting in some of the steel roof trusses in the attic.

Mason Recital Hall

The Mason Recital Hall structure consists of a steel frame. The exterior envelope consists of brick masonry. The building is an instructional facility with an approximate gross area of 23,191 sq ft. The building structure appeared to be in good condition.

Mason Hall Annex

The Mason Hall Annex structure consists of a steel frame. The exterior envelope consists of brick masonry. The building is an instructional facility with an approximate gross area of 12,760 sq ft. The building structure appeared to be in good condition.

Mason Hall Addition

The Mason Hall Addition structure consists of a steel frame with masonry bearing walls. The exterior envelope consists of brick masonry. The building is an instructional facility with an approximate gross area of 50,500 sq ft. The building structure appeared to be in good condition.

McEwen Hall

The McEwen Hall structure consists of a concrete frame and shear walls. Floor systems are composed of framed concrete slabs and precast tees. The exterior façade consists of architecturally exposed concrete. The building is an instructional facility with an approximate gross area of 50,894 sq ft. We observed spalls on the exterior façade with exposed rebar. Large cracks were observed with existing caulking repairs. Exterior stairs leading to McEwen Hall were observed to have loose and rusting steel thread nosings.

Steele Hall Natatorium

Steele Hall Natatorium is a steel framed building with long span steel trusses spanning over the swimming pool. The front entrance contains concrete columns supporting steel trusses that support the roof. The building is a swimming facility with an approximate gross area of 38,782 sq ft. We observed several vertical cracks in the perimeter foundation walls that are exposed to view on the inside of the building. Stains indicated water infiltration.

Nimo Switch

Nimo Switch is a prefabricated metal building located near the Electric Tower on the outskirts of the campus. It has an approximate gross area of 100 sq ft. Access to Nimo Switch was not available. The exterior appeared in good condition with no visible signs of structural damage.

Reed Library

The Reed Library structure consists of a concrete frame, shear walls, and precast elements that are both decorative and structural. Floor systems are composed of framed concrete slabs and precast tees. The exterior façade consists of architecturally exposed concrete. The building is a library with an approximate gross area of 80,861 sq ft. We observed concrete spalls with exposed rebar on the exterior façade, benches, stairwell walls, and steps. Exterior precast elements were observed to have large cracks and splitting concrete. Exterior beams were observed to have large cracks and heavy rebar corrosion.

Reed Library Addition - Carnahan Jackson Center

Reed Library Addition is a concrete framed structure with a flat slab floor system. The exterior façade consists of brick and concrete masonry units. The building structure appeared to be in good condition.

Rockefeller Arts Center

Rockefeller Arts Center is a steel and concrete building with an architecturally exposed concrete façade. It is an instructional facility with an approximate gross area of 119,687 sq ft. We observed concrete spalls and cracking of exterior concrete walls. Interior foundation walls were observed to have cracks with water staining. There are several steel posts supporting a steel mezzanine that are not positively attached to the bearing surface. We recommend this condition be reviewed further to provide adequate connections.

Salt Storage

The Salt Storage structure consists of concrete foundation walls supporting masonry bearing walls, and wood trusses supporting the roof structure. The structure is used to store salt and sand for deicing. It has an approximate gross area of 2,000 sq ft. We observed many steel form ties that were left in place in the concrete foundation wall. These will corrode in time and spall the concrete. We recommend that these ties be shortened to a depth below the concrete surface and that the surface be patched with adequate material. We observed a masonry retaining wall in the interior of the building that was bowing. We recommend that this wall be further investigated.

Spine

The Spine is a concrete pedestrian walkway that connects the Reed Library, William Center, and McEwen Hall. The structural system consists of flat slabs spanning between concrete columns and shear walls. The structure was observed to have spalled concrete, cracking of the parapet walls, and surface deterioration of the slab surface. Many cracks were observed at locations of the expansion joints along with noticeable movement. We recommend further investigation of the as-built condition.

Stockade Storage

The Stockade Storage is a wood structure with metal panel façade. It has an approximate gross area of 2,400 sq ft. The building is used to store Facilities Management equipment. Several locations were observed to have physical damage to metal panels but the damage did not compromise the structural integrity of the building other than possible exposure of structural elements to the weather.

Thompson Hall

Thompson Hall is a concrete and steel structure with a brick façade. It is an instructional facility with an approximate gross area of 136,400 sq ft. In areaways we observed cracking in concrete spandrel beams. The underside of first floor concrete slab was observed to have cracking.

Williams Center

The Williams Center is a concrete structure with an architecturally exposed concrete façade. It has an approximate gross area of 90,380 sq ft. We observed major concrete delamination in the underside of the roof slabs located at the lower entrances to the center. Rebar corrosion was evident and rebar was unbounded from the concrete. At the same location, rust stains were observed along the perimeter concrete support walls. Concrete spalling and rebar exposure was observed at several locations on the exterior walls. Splitting of a concrete beam was observed at the mechanical penthouse level. The loading dock steel was heavily corroded and concrete was deteriorating. We recommend a detailed investigation to repair the structure.

Conclusions

For purposes of comparing our condition assessment to the 2007 BCAS, we have similarly assigned percentages to the structural elements for each condition level. The structural elements include Frame, Exterior Walls, Foundation, and Roof. Structural elements were observed for signs of structural distress, physical damage, settlement, construction defects, and loss of durability.

Conditions for structural elements were assessed as follows:

Poor: Structural elements have been compromised and current conditions pose safety concerns which require immediate attention. These elements require engineering consultation and, possibly, occupancy restrictions.

Fair: Structural elements have conditions that require further detailed assessment. These elements do not seem to pose immediate danger but need to be repaired. These elements require engineering consultation for repair design.

Good: Structural elements have conditions that may affect durability, serviceability, or are cosmetic in nature. These repairs may be based on recommendations of this report or obtained by engineering consultation.

Excellent: Structural elements are performing as intended without any visible signs of damage, or require little to no cosmetic repairs.

It is important to note that the preceding descriptions may or may not follow those used in the 2007 BCAS. Also, our condition assessment is limited to structural elements whereas the 2007 BCAS may have included architectural components. For example, the 2007 BCAS may include facade elements in the Exterior Wall assessment, waterproofing conditions at foundation elements and roofing material in the Roof assessment but this report does not.

BUTLER BUILDING	Frame		Exterior Walls		Foundation		Roof	
	BCAS	LERA	BCAS	LERA	BCAS	LERA	BCAS	LERA
Poor								
Fair			100%				100%	
Good	100%	100%		100%	100%	100%		100%
Excellent								

	Frame		Exterior Walls		Foundation		Roof	
	BCAS	LERA	BCAS	LERA	BCAS	LERA	BCAS	LERA
Poor								
Fair			25%	25%	25%	25%		
Good	100%	100%	75%	75%	75%	75%	100%	100%
Excellent								

DODS HALL	Frame		Exterior Walls		Foundation		Roof	
	BCAS	LERA	BCAS	LERA	BCAS	LERA	BCAS	LERA
Poor			25%					
Fair			75%	50%			25%	
Good	100%	100%		50%	100%	100%	75%	100%
Excellent								

ERIE HALL	Frame		Exterior Walls		Foundation		Roof	
	BCAS	LERA	BCAS	LERA	BCAS	LERA	BCAS	LERA
Poor							100%	
Fair		25%	25%		25%			25%
Good	100%	75%	75%	100%	75%	100%		75%
Excellent								

FENNER HOUSE	Frame		Exterior Walls		Foundation		Roof	
	BCAS	LERA	BCAS	LERA	BCAS	LERA	BCAS	LERA
Poor		50%	50%					100%
Fair		50%	50%	100%		100%		
Good	100%				100%		100%	
Excellent								

FENTON HALL	Frame		Exterior Walls		Foundation		Roof	
	BCAS	LERA	BCAS	LERA	BCAS	LERA	BCAS	LERA
Poor								
Fair			25%	50%	25%	25%	100%	50%
Good	100%	100%	75%	50%	75%	75%		50%
Excellent								

FIELD HOUSE	Frame		Exterior Walls		Foundation		Roof	
	BCAS	LERA	BCAS	LERA	BCAS	LERA	BCAS	LERA
Poor							100%	
Fair								
Good	100%	100%	100%	100%	100%	100%		100%
Excellent								

HPE	Frame		Exterior Walls		Foundation		Roof	
	BCAS	LERA	BCAS	LERA	BCAS	LERA	BCAS	LERA
Poor								
Fair								
Good								
Excellent	100%	100%	100%	100%	100%	100%	100%	100%

FOOD SERVICE	Frame		Exterior Walls		Foundation		Roof	
	BCAS	LERA	BCAS	LERA	BCAS	LERA	BCAS	LERA
Poor								
Fair			25%	25%	25%	25%		
Good	100%	100%	75%	75%	75%	75%	100%	100%
Excellent								

JEWITT HALL	Frame		Exterior Walls		Foundation		Roof	
	BCAS	LERA	BCAS	LERA	BCAS	LERA	BCAS	LERA
Poor								
Fair			100%	50%	25%	25%		
Good	100%	100%		50%	75%	75%	100%	100%
Excellent								

HOUGHTON HALL	Frame		Exterior Walls		Foundation		Roof	
	BCAS	LERA	BCAS	LERA	BCAS	LERA	BCAS	LERA
Poor								
Fair								
Good	100%	100%	100%	100%	100%	100%	100%	100%
Excellent								

LOGRASSO HALL	Frame		Exterior Walls		Foundation		Roof	
	BCAS	LERA	BCAS	LERA	BCAS	LERA	BCAS	LERA
Poor							100%	
Fair	100%			50%				
Good		100%		50%	100%	100%	100%	100%
Excellent								

MAINTENANCE	Frame		Exterior Walls		Foundation		Roof	
	BCAS	LERA	BCAS	LERA	BCAS	LERA	BCAS	LERA
Poor								
Fair			25%	25%	25%	25%		
Good	100%	100%	75%	75%	75%	75%	100%	100%
Excellent								

MASON HALL	Frame		Exterior Walls		Foundation		Roof	
	BCAS	LERA	BCAS	LERA	BCAS	LERA	BCAS	LERA
Poor								
Fair			50%	50%	100%	50%		
Good	100%	100%	50%	50%		50%	100%	100%
Excellent								

MASON RECITAL HALL	Frame		Exterior Walls		Foundation		Roof	
	BCAS	LERA	BCAS	LERA	BCAS	LERA	BCAS	LERA
Poor								
Fair								
Good	100%	100%	100%	100%	100%	100%	100%	100%
Excellent								

MASON HALL ANNEX	Frame		Exterior Walls		Foundation		Roof	
	BCAS	LERA	BCAS	LERA	BCAS	LERA	BCAS	LERA
Poor								
Fair								
Good	100%	100%	100%	100%	100%	100%	100%	100%
Excellent								

MASON HALL ADDITION	Frame		Exterior Walls		Foundation		Roof	
	BCAS	LERA	BCAS	LERA	BCAS	LERA	BCAS	LERA
Poor								
Fair					100%	50%		
Good	100%	100%	100%	100%		50%	100%	100%
Excellent								

MCEWEN HALL	Frame		Exterior Walls		Foundation		Roof	
	BCAS	LERA	BCAS	LERA	BCAS	LERA	BCAS	LERA
Poor			25%					
Fair			25%		25%			
Good	100%	100%	50%	100%	75%	100%		100%
Excellent					100%			

NIMO SWITCH	Frame		Exterior Walls		Foundation		Roof	
	BCAS	LERA	BCAS	LERA	BCAS	LERA	BCAS	LERA
Poor								
Fair								
Good	100%	100%	100%	100%	100%	100%	100%	100%
Excellent								

REED LIBRARY	Frame		Exterior Walls		Foundation		Roof	
	BCAS	LERA	BCAS	LERA	BCAS	LERA	BCAS	LERA
Poor			50%				100%	
Fair			50%	50%				25%
Good	100%	100%		50%	100%	100%		75%
Excellent								

REED LIBRARY ADDITION	Frame		Exterior Walls		Foundation		Roof	
	BCAS	LERA	BCAS	LERA	BCAS	LERA	BCAS	LERA
Poor								
Fair								
Good	100%	100%	100%	100%	100%	100%	100%	100%
Excellent								

ROCKEFELLER ARTS CENTER	Frame		Exterior Walls		Foundation		Roof	
	BCAS	LERA	BCAS	LERA	BCAS	LERA	BCAS	LERA
Poor			25%		25%			
Fair	100%		75%	50%	75%	50%	25%	
Good		100%		50%		50%	50%	100%
Excellent							25%	

SALT STORAGE	Frame		Exterior Walls		Foundation		Roof	
	BCAS	LERA	BCAS	LERA	BCAS	LERA	BCAS	LERA
Poor								
Fair						50%		
Good	100%	100%	100%	100%	100%	50%	100%	100%
Excellent								

SPINE	Frame		Exterior Walls		Foundation		Roof	
	BCAS	LERA	BCAS	LERA	BCAS	LERA	BCAS	LERA
Poor								
Fair		50%		50%				50%
Good		50%		50%		100%		50%
Excellent								

STEELE HALL	Frame		Exterior Walls		Foundation		Roof	
	BCAS	LERA	BCAS	LERA	BCAS	LERA	BCAS	LERA
Poor					25%			
Fair						25%		
Good					75%	75%	25%	
Excellent	100%	100%	100%	100%			75%	100%

WILLIAM CENTER	Frame		Exterior Walls		Foundation		Roof	
	BCAS	LERA	BCAS	LERA	BCAS	LERA	BCAS	LERA
Poor					25%			
Fair						50%		50%
Good	100%	100%	75%	50%	100%	100%		50%
Excellent							100%	

STOCKADE STORAGE	Frame		Exterior Walls		Foundation		Roof	
	BCAS	LERA	BCAS	LERA	BCAS	LERA	BCAS	LERA
Poor								
Fair			100%					
Good	100%	100%		100%	100%	100%	100%	100%
Excellent								

THOMPSON HALL	Frame		Exterior Walls		Foundation		Roof	
	BCAS	LERA	BCAS	LERA	BCAS	LERA	BCAS	LERA
Poor					25%			
Fair					25%	25%		
Good	100%	100%	75%	100%	75%	75%	100%	100%
Excellent								

Appendix A: Recommendations

1. Maintenance can be differentiated between corrective maintenance – fixing obviously deficient items that are in a condition below acceptable standard – and preventive maintenance, which is to repair an item before its condition worsens to the point where it requires corrective maintenance. Both types of maintenance exist in the assessments addressed in this report. In addition, items that require immediate repair for structural integrity and safety will be mentioned specifically.
2. We recommend that Owner engage a special inspector to observe and document all repair work.
3. Contractor shall submit all repair procedures for review and approval by Owner.
4. For architecturally exposed concrete, contractor shall prepare mock-up repairs for Owner's review and approval. A mock-up shall be performed for each type of repair, concrete finish or color.
5. Existing, underlying conditions that resulted in damage to structural elements shall be remedied prior to repairing the structural elements. Underlying conditions include waterproofing failure and chemical attack (i.e. chloride from deicing chemicals).
6. Where damages are caused by apparent chloride attack, repairs shall be preceded by chloride content testing. Acceptable chloride content shall be less than 1.0 lb/yd³.
7. Where patching constitutes a large section of an element, consideration should be given to the complete replacement of said element.
8. All patching material shall be installed in accordance with Manufacturer's instructions.
9. A representative of the Manufacturer of any patch materials shall oversee initial repairs.

Appendix B: Repairs Concrete Patch Repairs

The following repairs are to restore concrete sections damaged by delaminations, spalls and the like.

1. Locations of required concrete patching shall first be identified and the extent of each repair shall be delineated and accepted by Owner prior to proceeding with any repair work.
2. In the removal of unsound concrete, Contractor shall use the lightest equipment practical so as not to damage sound concrete. Where possible, contractor should implement use of sand or water blasting.
3. Removal of unsound concrete shall include creating a uniform thickness so as to prevent feathered edges. Depth of repair patch shall be a minimum of 1 inch thick. Saw-cutting edges of patch areas shall terminate short of corners and remaining removal shall be performed with light chipping hammers.
4. Surfaces of sound concrete shall be roughened by means of sandblasting or light chipping.
5. Where existing concrete reinforcement is exposed, contractor shall first remove concrete to a depth of 1 inch behind the rebar. Any existing rust on rebar shall be removed. Where removal of rust on rebar results in a loss of steel greater than 10%, additional rebar shall be added per engineering design.
6. Existing exposed rebar shall be coated with zinc-rich primer.

Coatings shall not be spray applied but rather brushed on. Care must be taken not to coat existing sound concrete because the coating would create a bond breaker between the sound concrete and the patch material.

7. Prior to applying patch material, existing concrete surfaces shall be slightly drier than saturated, free of standing water, dust, debris or any other deleterious material.
8. No bonding agents shall be applied to existing concrete surfaces unless recommended by Manufacturer of patch material.
9. Curing of patch material shall be performed in accordance with Manufacturer's recommendations.
10. In selection of patch material, consideration shall be given to its thermal contraction and expansion properties as compared to the base concrete being patched.

Concrete Crack Repairs

The following repairs are to restore concrete sections damaged by cracks.

Cracks may have occurred during construction or after concrete has fully hardened. Cracks may be viewed as either passive (dormant) or active. Passive cracks typically occur during construction or immediately afterwards. These typically do not pose structural concerns and are merely cosmetic. These may be repaired at Owner's discretion. At times they may adversely affect durability and should be repaired as needed.

Active cracks are typically caused by the settlement of structure, large thermal changes, or structural overstressing. Active cracks may continue to increase in size and/or propagate, which may affect the structural capacity of members. Active cracks will require further detailed analysis and engineering consultation for repairs. Locations of active cracks will be mentioned and located in this report.

1. Locations of required concrete patching shall first be identified and the extent of each repair be delineated, to be accepted by Owner prior to any preceding work.

