Unbuilt WPI an Interactive Qualifying Project submitted to the Faculty of WORCESTER POLYTECHNIC INSTITUTE in partial fulfillment of the requirements for the degree of Bachelor of Science



By Elizabeth Bernier Tyler Chaulk Katherine Tattersall

Date:

March 3, 2016 Report submitted to:

Professor David Samson

Worcester Polytechnic Institute

Acknowledgements

The project team would like to thank Professor Samson for his advice, guidance and support through this semester-long project. The team would also like to thank Michael Kemezis from WPI Curation, Preservation, and Archives for providing invaluable skills and dedication in helping see this project through. Additionally, WPI's Marketing Team, WPI Facilities, University Advancement, and Einhorn Yaffee Prescott (EYP) Architecture and Engineering P.C. have been incredibly helpful in aiding the team to make Unbuilt WPI all that it is.

Abstract

This report examines proposed and unbuilt buildings from the founding of WPI until the present, including buildings in the surrounding area of WPI. Comparisons between the current state of the buildings and needs at the time of plan proposals are discussed, as well as the reasoning behind why buildings look as they do today and/or why the proposed buildings may have been useful. Unbuilt buildings to be discussed include a proposed academic building, the Atwater Kent addition, Boynton Hall, various buildings in the WPI area, the Rubin Campus Center, Goddard Hall, Gordon Library, and a proposed humanities building. Diagrams and images will be dispersed throughout the report, and there will be a brief explanation of exhibits displayed around campus at the end. Most of the evidence of plans and proposals were mined from WPI's Archives for the purposes of this paper and the displays built around campus.

Table of Contents

Acknowledgements 1
Abstract
Table of Contents
Introduction
The WPI Campus
Unbuilt WPI
Boynton Hall
WPI of Tomorrow13
Transition to Modernism
Goddard Hall
Humanities Building and Theater
George C. Gordon Library
Atwater Kent Laboratories Addition
Campus Center
Proposed Academic Building
Exhibit Plans
Conclusion
Bibliography63
References

Table of Figures

Current campus map of WPI	8
Sketch of Boynton Hall's alternate design	11
Ground plan of alternate Boynton Hall design	12
Legend for ground plan of alternate Boynton Hall design	12
Woodbury and Company WPI of Tomorrow Sketch	17
Exterior sketch of proposed observatory	18
Cross-sectional sketch of proposed observatory	
Sketch of proposed administration building	21
Kaven Hall	22
Sketch of proposed administrative and classroom building	
Olin Hall	25
Sketch of alternate Goddard Hall design	25
Map of WPI's campus with alternate design of Goddard Hall	26
Basement level floor plan of alternate design of Goddard Hall	26
Article about the gift for a new chemistry building	27
Sketch of proposed humanities building, back view	29
Sketch of proposed humanities building, front view	29
Cross-sectional sketch of proposed humanities building	30
Site plan of proposed humanities building with alternate library design	30
First floor plan of proposed humanities building	31
Exterior sketch of alternate library design, entrance	32
Exterior sketch of proposed library	33
Sketch of main floor lobby of the alternate library design	

Main floor plan of alternate library design	34
Sketch of the first concept for the Atwater Kent Laboratories addition	36
Three-dimensional rendering of Atwater Kent Laboratories with the first concept	37
Sketch of the second concept for the Atwater Kent Laboratories addition	37
Three-dimensional rendering of Atwater Kent Laboratories with the second concept	38
Sketch of the third concept, part a for the Atwater Kent Laboratories addition	38
Sketch of the third concept, parts b and c for the Atwater Kent Laboratories addition	39
Three-dimensional rendering of Atwater Kent Laboratories with concept three, part a	39
Combination of concepts one and three for the Atwater Kent Laboratories addition	40
Additional sketch of concepts for the Atwater Kent Laboratories addition	41
Map of WPI campus with potential sites for a campus center	42
Campus plan from 1983 with conceptual designs for a campus center	43
Conceptual sketches of a campus center above the wedge	44
Sketch of an alternate campus center design adjacent to Alumni Gymnasium	45
Sketch of a campus center under the quad	47
East elevation sketch of proposed academic building and parking garage	49
South elevation of proposed academic building	50
First floor color sketch of inside the proposed academic building	50
Example floor plan of proposed academic building	51
Full detail rendering of the proposed academic building and parking garage	51
Images of constructed display cases	53

Introduction

Despite its continuity over the centuries, the American campus has experienced major changes in its form which reflect not only evolving notions of architectural planning but changing educational and social principles as well....[*Campus, An American Planning Tradition*]¹

In essence, architectural design and campus planning reflections of the ideals, developments, and goals of their institutions, whether they are executed or not. These goals may change over the course of time, and for over 150 years, throughout tenure of sixteen presidents, architectural visions have inevitably changed WPI over the decades. It is to be expected that the goals of the founders may have been modified or revised in certain ways. Many of the values of what began as the Worcester County Free Institute of Industrial Science are manifest in the design of its campus. It is through this report that the founding principles of this institution will be brought to light through proposals and utilization of architecture here at WPI.

¹ Paul Turner, Campus, An American Planning Tradition (Cambridge, MA: M.I.T. Press, 1984), 4.

The WPI Campus

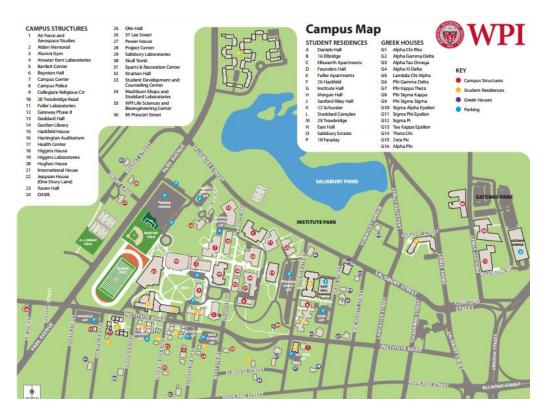
WPI is located in Worcester, a city commonly referred to as the "Heart of the Commonwealth" for its central location in Massachusetts. Present-day Worcester is well-known for its high college student population, with over nine colleges and universities in the city, and for its increasing medical and biotechnical research and practice. In the years between the Revolution and the Civil War, Worcester was characterized chiefly by its industrialization. This increase in industry contributed to an increase in wealth for several business entrepreneurs, who later became founders and donors of WPI.² It is evident from the many street and building names in the WPI area that these donors were an integral part of the Institute's tissue. For example, campus buildings named after donors and active founders include Washburn Laboratories, Boynton Hall, and Salisbury Labs, while Salisbury Street and Boynton Street provide two of WPI's campus boundaries. WPI's campus is relatively small and self-contained such that it feels like a close-knit community. Most of the campus is sectioned off between Salisbury Street, Park Avenue, Institute Road, and Boynton Street. Outside of these four streets is mostly housing, with a satellite campus at Gateway Park. Any vehicle circulation within these streets is campus traffic, and there are numerous walkways and open spaces to aid pedestrian travel.

The layout of the WPI campus is informal and naturalistic, which suits WPI's non-traditional curriculum. WPI buildings, however, tended until well into the 20th century to be modeled after traditional industrial buildings. This industrial style is by no means plain or utilitarian. Many of WPI's buildings have the kind of architectural details that give a building character, although they are sometimes only noticeable through careful study of the buildings. Almost all of WPI's buildings are made of brick with brick and stone decorations. Stone often surrounds windows and doors, and may be used to distinguish the lowest floor

² "Industrialization," *Worcester Historical Museum*, last modified 2013, accessed December 15, 2015, century/industrialization/.

from the upper ones. Often, bricks are set at different angles or on different planes from the rest of the bricks to add character, and sometimes darker bricks are used to make a pattern across flat surfaces.

WPI has buildings in a variety of architectural styles, including Gothic, Colonial Revival, Romanesque, Renaissance, and Modern. Each building has its own individuality while still maintaining a sense of uniformity with common building materials, windows, and architectural detailing, as well as rectilinear façades and layouts. Throughout the decades, the architectural style slowly changed, and remained mainly the same until the 1960s when the view on architecture changed from more of an application of function to a blend of function and expression of artistic style and authenticity.



Current campus map of WPI.³

³ "Campus Map," *Worcester Polytechnic Institute*, http://www.wpi.edu/Images/CMS/University-About/WPI_2-

D_Map_2014_web.pdf.

Unbuilt WPI

We gained our insights into the campus and its architecture in the course of preparing 'Unbuilt WPI,' an exhibition based on WPI archive materials and staged in C term as five different, simultaneous small exhibits in different campus buildings. The project was suggested by Prof. Samson on the basis of unrealized designs discovered by students in his 2012 Inquiry Seminar on campus architecture. We found our materials in various forms and locations, namely from WPI's Archives. The materials for our Academic Building display came mostly from EYP Architecture and Engineering. Sources that proved invaluable for historical context were Paul Turner's book *Campus*, and WPI's *Two Towers* and *Seventy Years of the Worcester Polytechnic Institute*.

Boynton Hall

The founders of WPI narrowed down the designs for Boynton Hall to the designs by Elbridge Boyden and Stephen Earle. Ultimately, they chose Earle's design for the first building at WPI. They named it after John Boynton, one of WPI's original founders.⁴ The alternate design by Boyden is a Gothic Revival building featuring buttresses, a gambrel roof, and a variety of window shapes. It is an L-shaped building with a rotunda that houses a natural history cabinet and a chapel. One side of the L features a large laboratory and lecture room on the floor above. The other side has rooms off a corridor with numerous windows that line the inside of the L. The design also features three towers, which function as prominent entrances to the building.

The towers in the first two buildings built at WPI, Boynton Hall and Washburn Shops, are known as the Two Towers.⁵ As Mildred Tymeson Petrie wrote,

They tell the whole story, these two towers on Tech Hill. For a hundred years they have stretched toward the sky in their telling, their own eloquent picture of the ideals for which they stand. In the old days their bid for attention was known as theory versus practice. Now there are terms of

⁴ Student Alumni Society, ed., Tech Bible (Worcester, MA: WPI, 2010),

https://www.wpi.edu/academics/library/history/techbible/index.html.

Michael W. Dorsey, "A New College for a New Era," WPI Journal 93, no. 2 (1990): 12.

⁵ Student Alumni Society

engineering and science. But whatever the words, the towers tell of the proverbial conflict between hand and mind and the long, aching travail of the heart to reconcile the two.⁶

Now, of course, the towers stand for the originality of WPI's unique project-based learning system.

Earle's first proposal for Boynton would have given the new institute three towers, not two puncturing today's neat architectural balance of "Lehr und Kunst," or, as we know it in English, theory and practice. Theory and practice are married together by the placement of the current two towers, one on Boynton Hall, originally a place of lecture and learning, and the other on Washburn Shops, where the knowledge learned in class was put to the test in an industrial, real-life setting. One may suggest, however, that the original design may represent the architect's desire for the "life of the mind" aspect of the school to be more dominant than the mechanical side. As seen in the ground level floor plan shown on the next page and a bit in the front sketch of Earle's first design, there exists a large bulge or rounded room in the front left of the proposed building. This was to be used for a Natural History Cabinet (see legend below), and doesn't exist at all in today's Boynton Hall. While we may not miss that feature now, it speaks to the original purposes of Boynton, of which were mostly translated over with the design eventually chosen for Boynton Hall and erected in 1868. Even some of the exterior style choices remain, including the buttresses that Gothic Revival style buildings are known to have. Yet, had the original proposal for Boynton as illustrated below been chosen, those buttresses would have served more of a structural rather than aesthetic purpose, by supporting this rotunda of Natural History.

As can be seen by the floor plan below, this was a large building encompassing many rooms, and the Boynton Hall of today is smaller than this proposal. One can assume that perhaps a reason for the smaller choice winning may be that this was the first building to break ground on Free Institute soil, and it would determine whether or not the school would be a success. Given all the land that had been donated by Stephen Salisbury during the founding of the institute, it was perhaps a wise decision on the founders'

⁶ "The Two Towers Tradition," *Worcester Polytechnic Institute*, accessed December 15, 2015, https://www.wpi.edu/academics/library/collections/two-towers.html

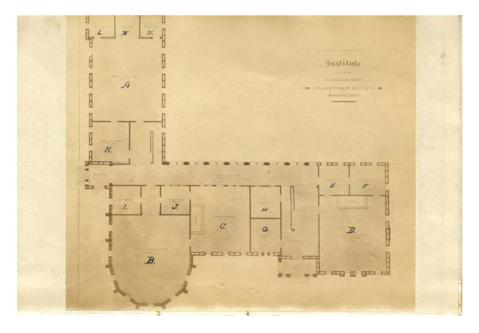
part to choose a smaller building, saving initial capital and erring on the side of caution to start, with the understanding that success would lead to expansion.⁷ Both buildings, the proposed and the current, fulfilled the needs of the founders to provide a place where a person of Worcester County could get a free education in the technical fields, one just might have satisfied the population of the institute for a greater period of time.



Sketch of Boynton Hall's alternate design.⁸

⁷ Student Alumni Socienty, ed.

⁸ Elbridge Boyden, Design for Buildings for the Worcester County Free Institute of Industrial Science, 1866, Series 1, Box 1, Folder 33, Founding of Worcester Polytechnic Institute and Early Records, WPI Curation, Preservation, and Archives, George C. Gordon Library, Worcester Polytechnic Institute.)



Ground floor plan of alternate Boynton Hall design: rooms labeled in legend on the next page⁹

1	References to Ground Plan.		
А	Chemical Laboratory.		
В	Natural History Cabinet.		
C	Lecture Room		
D	Mechanical Engineering Drawing Roo	1771 ,	
E	Professors Private Room		
• F	Nodo? Room		
G	Presidents Room		
H	Junitors Room.		
1	Anti Room		
J	Professors Room		
K	· · · ·		
J.	Balance Room		
M	Sand Bath		
N.	Reagants Room .		

Legend for ground plan of alternate Boynton Hall design.¹⁰

⁹ Boyden ¹⁰ Boyden

WPI of Tomorrow

During the late 19th century and early 20th century, American campus planning and architecture was developing in a new direction, into something that would be able to merge the utilitarian needs of all the students of the university and still represent the typical American college look and feel. As a trustee of Columbia University wrote in 1914 on the ideal situation of a campus,

The ideal site should be large enough to contain all the departments of a university, not only the college, but the technical schools and law and medicine, thus concentrating all its faculties and students and bringing them within the university atmosphere, and yet should be so situated as to afford its technical students easy access to machine shops and factories, and its medical students the advantages of a nearby hospital.¹¹

The following proposal follows this new architectural idea, generating a campus plan broad enough to house all the necessary buildings that the university might forsee a need for. It is especially interesting to see that many of the buildings are at the bottom of the hill on which WPI is currently situated, while the machine shops are at the top of the hill, thus still a focal point for the practical ideology of the institute. Not coincidentally, the overall student population and number of colleges in the Worcester area correlates to the location of several hospitals, particularly UMass Memorial branches, in the city. Ichabod Washburn, one of WPI's founders, was largely responsible for the establishment of Memorial Hospital in 1871, now located on Belmont Street and the first of several UMass hospital branches in Worcester.¹² These hospitals, including the later established UMass Medical School, serve as an important link to the medical and bio/biotechnological fields, especially for universities like WPI. In general this idea nation-wide lead to WPI migrating from an apprenticeship level education to a full on, multi-faceted engineering education, through the development of serious faculty, definitive departments, and the strictness of Dr. Fuller, who retired in 1894.¹³ With the need during Dr. Fuller's presidency for an increase in laboratory

¹¹ Turner, 167.

¹² "Who Was Ichabod Wasburn." *Washburn University*. Accessed on March 1 2016. http://www.washburn.edu/about/ichabod/washburn.html

¹³ Mildred Mclary Tymeson, *Two Towers: The Story of Worcester Tech 1865-1965*. (Worcester Polytechnic Institute, Worcester, 1965), 70.

space, in addition to a nation-wide stylistic choice for utilitarianism over good looks, Salisbury Laboratories was built to create more lab space than ever, regardless of the exterior look; this and Fuller's desire to mold a hardworking and obedient student body, as opposed to the foolish pranksters and controversial article writers the university hosted (some say in response to Fuller's actions), students were transformed from apprentices into engineers.¹⁴

After Boynton Hall and Washburn Shops were built (1868), and the Free Institute continued to expand, as a need for more space was heard. In 1886, the Magnetic Laboratory was built due to Stephen Salisbury III's "newfound interest in the development of electricity."¹⁵ In 1889, Salisbury Laboratories was built, as the name suggests, to provide necessary lab space for the growing student population.¹⁶

A proposed "WPI of tomorrow" sketch from the early part of the 20th century illustrates several buildings in the WPI area that follow a style similar to buildings on campus here, but also at other campuses like Harvard. Each building is unique in its own way, but with similar characteristics and themes that carry throughout, similar to buildings over the years erected atop WPI's hill. It was drawn by Woodbury and Company, a printing company founded by a WPI graduate.¹⁷ This sketch was interesting enough to include in the report, but perhaps lacking in information in terms of reasoning as to why it was not brought to completion. One possible, and common, reason this proposition died could be that a fundraising pitch associated with the plans failed. As seen in other proposals throughout this paper, and even at WPI today, many ideas that arrive at the drawing stage flop due to presumed lack of funding or interest. However, we can still imagine that the campus would be much different, given all of these unbuilt buildings, in comparison to what exists and locations of buildings now. In essence, this is more of a "dream" WPI that shows what its leaders believed at that time about the nature of the institute.

¹⁴ "Seventy Years of the Worcester Polytechnic Institute." *Worcester Polytechnic Institute*. Accessed March 3 2016. https://www.wpi.edu/academics/library/history/seventyyears/page132.html

¹⁵ Student Alumni Society, ed.

¹⁶ Student Alumni Society, ed.

¹⁷ Kent P. Ljungquist, James P. Hanlan, and Rodney G. Obien, ed., WPI Studies, Volume 24: History of Woodbury and Company (New York: Peter Lang Publishing, 2007), xi.

A sketch is included at the end of this section with labels added by the authors for clarity. The buildings that were not built are labelled A through H. Building A is on West Street across from Boynton Hall. The building is located approximately where the beech tree is now. It is a rectilinear, Victorian style building with a porch. It has a hipped roof with decorations along the ridgeline, a pitched roof, and chimneys.

Building B is between Salisbury Laboratories and Atwater Kent Laboratories. Its style is similar to that of Salisbury Laboratories, with its round arched entry and rows of windows that progressively become more arched as they go up the building. It is in Renaissance style, featuring pilasters and a hipped roof. As WPI stands today, instead of an additional building in between Salisbury Laboratories and Atwater Kent Laboratories, both buildings were modified with additions and a Facilities service road was installed instead. One advantage of having a building instead of a road between these two buildings would be the ease of fast travel between departments and facilities, particularly in bad weather.

Structure C is an observatory that Stephen Earle designed for Institute Park.¹⁸ It is a squat, round structure with round arched openings that circle the building. A spiral staircase with a seat circling its base leads to the floor of the observatory. At the time of the design, observatories were becoming popular structures that many universities were beginning to adopt. In fact, it was in John Boynton's original interest that astronomy may be studied at the Free Institute, but the observatory plan, for one reason or another, never came to fruition.¹⁹

Building D is along Salisbury Street, in Institute Park. It is a Renaissance style building with a gable above the entrance and an octagonal roof projecting up behind it. The first floor has small, rectangular windows and the floor above has large, round-arched windows with pilasters in between. Its windows reflect those of Atwater Kent Laboratories, which is across the street. As Stephen Salisbury

¹⁸ Stephen C. Earle, Observatory for Institute Park, Architectural Drawings, American Antiquarian Society.
¹⁹ Rev. Dr. Sweetser's Memoranda for John Boynton's Instructions, Series 1, Box 1, Folder 1, Founding of Worcester Polytechnic Institute and Early Records, WPI Curation, Preservation, and Archives, George C. Gordon Library, Worcester Polytechnic Institute.

donated much of the land for the Park to the City of Worcester in 1887, he had a very specific stipulations on when or what kind of structures would be built onto the park. Presumably this is why this building, aside from monetary reasons, was not built.²⁰

Buildings E, F, and G are on Boynton Street inside the wall that outlines the campus. Building E is a Victorian, L-shaped building with rectangular and round-arched openings, eyebrow dormers, and corner boards. The roof has crow-stepped gables which extend above the roofline and give the effect of chimneys projecting from the roof.

Building F is an I-shaped, Renaissance style building with rectangular and round arched entries and windows. The center of the building features an entry under a porch, pilasters, and a gable on the top floor. It features chimneys and a decorative cornice.

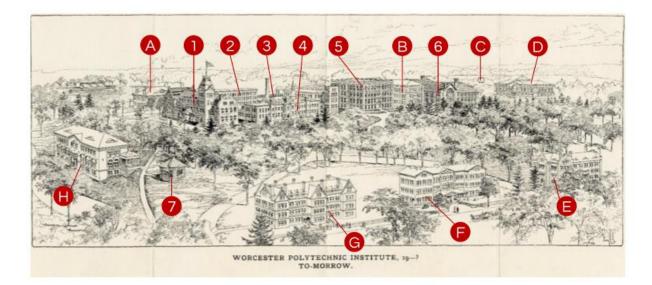
Building G is of a Victorian style with rectangular and round-arched windows and entries. It features porches at the entries, dormers, numerous chimneys, gables that extend above the roofline, and decorations at the ridgeline. This building is very similar to Hastings Hall, a residence hall at Harvard Law School. Noticeable differences from building G include bay windows and a lack of decoration at the tops of the windows.

Building H is located on Institute Road near the Magnetic Laboratory. It is a Renaissance style building with rectangular windows and round arches above the second floor windows. There is a porch at one corner and a balcony above the entry. The hipped roof has a decorative cornice, eyebrow dormers, chimneys, and a gable above the entry.

It's interesting to see all of these proposed buildings, and how many of them are located at the bottom of the hill. The way WPI is now, with many buildings atop one of Worcester's seven hills, it feels so much more condensed and isolated, and serves as a safe haven for students who may be unfamiliar with city life. WPI would be much different with only a few buildings at the peak of campus. Would

²⁰ Antonelli, Robert, Jr., "Institute Park," *Worcester, MA*, accessed December 15, 2015. http://www.worcesterma.gov/dpw/parks-rec/city-parks/institute-park

those buildings still be used for academia? As much as students living in off campus apartments or in residence halls at the bottom of the hill dread walking up and down the hill to go to and from classes, maybe not. But the iconic Two Towers, rising above the rest of the buildings, standing tall and proud above all else, it would symbolize our ideas of theory and practice in a much more obvious and visual way, much as a church tower would stand higher than any other building in early towns and settlements. Additionally, having a campus that is more spread out on the streets instead of atop the hill could make our campus comparable to Becker College—just dropped in the middle of the city and integrated with the rest of the small street shops and wooden houses of the seemingly residential district.



Existing Buildings

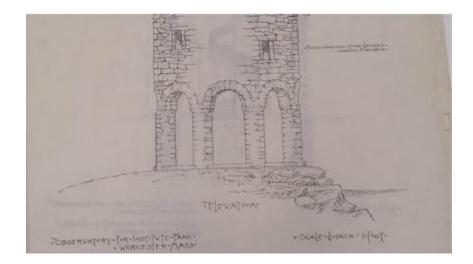
- 1. Boynton Hall
- 2. Stratton Hall
- 3. Foundry
- 4. Washburn Shops
- 5. Salisbury Laboratories
- 6. Atwater Kent Laboratories
- 7. Magnetic Laboratory

"WPI of Tomorrow" sketch of proposed buildings in area of WPI from Woodbury and Company, illustrating what WPI could look like with these buildings. Annotated by the authors for reference purposes.²¹

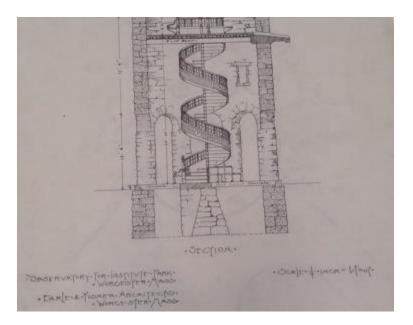
Unbuilt Buildings

A-H

²¹ Woodbury-Company, Worcester Polytechnic Institute, Tomorrow; Series 1, Folder 215, University Photograph Collection, WPI Curation, Preservation, and Archives, George C. Gordon Library, Worcester Polytechnic Institute.



Exterior sketch of proposed observatory.²²



Cross-sectional sketch of proposed observatory.²³

 ²² Earle, Stephen C., Observatory for Institute Park, Architectural Drawings, American Antiquarian Society.
 ²³ Earle, Stephen C., Observatory...

Transition to Modernism

During WPI's period of stability, from the early 20th century until after World War II, few alternate realities were envisioned. The Quad was established with Alumni Gym built (1916); Higgins Laboratories was being planned (1925), and then was later built in 1941.²⁴ The late 1950s and early 1960s were the years that marked a period of transition at WPI from traditional styles of building to modern styles. Modern architecture rejects historical tradition and emphasizes functionalism and flexibility of planning, and colleges often resisted modern movements in architecture. When the baby boomer generation rapidly increased student enrollments during the 1950s and 1960s, campus planning began to reflect the dynamism, change, and growth of this period.²⁵ Modernism introduced fluidity and continuity "that articulates space as a dynamic movement," rather than strictly separated rooms and areas.²⁶ This change in architectural design are still maintained throughout campus, even on the newest of buildings like the Sports and Recreation Center.

Proposed Administration Buildings

A proposed administration building was sketched ca. 1960. It is a colonial revival style building; its façades are brick with stone decoration. It has a hipped roof with two central chimneys and small, semicircular dormers. It is similar in style to other WPI buildings, especially Kaven Hall. As the needs of the university continued to grow over the years, Boynton Hall became the dedicated administration building, mainly because the classrooms were no longer suitable for student volume.²⁷ Other

²⁴ Student Alumni Society, ed.

²⁵ Turner, 249-251

 ²⁶ Robert McCarter and Juhani Pallasmaa, *Understanding Architecture* (New York: Phaidon Press Inc., 2012), 13.
 ²⁷ To the Trustees and Faculty of the Worcester Free Institute, Series 1, Box 2, Folder 100, Founding of Worcester Polytechnic Institute and Early Records, WPI Curation, Preservation, and Archives, George C. Gordon Library, Worcester Polytechnic Institute.

administrative offices are currently in the second floor of the Higgins House as well as the Bartlett Center, which was built in 2007 for the purposes of Financial Aid and Undergraduate Admissions. If this administration building had been built, what then would Boynton Hall be used for? And would there be an opening on the quad where the Bartlett Center currently stands? The ease of access to many administrative offices would have been very convenient for students, but there are many other things that would be more useful to house in this building.

A proposed administration and classroom building was sketched ca. 1960. It is modern, rectilinear, and made of concrete. The lowest floor is surrounded by glass, with square windows on the rest of the building, except for a balcony floor near the middle of the building and the top floor, both of which do not have windows. Skyscrapers are powerful manifestations of modern technology, technology being a major part of WPI's culture. In the 1940s in England, Brutalist Architecture was developing. It consisted more of blunt concrete and heavy metal structures sticking out from their current surroundings.²⁸ A similar style can be seen in the US, particularly in colleges as well. UMass Amherst's Southwest Towers, used as high volume residence halls for the university of more than 20,000 undergrads, was built in 1964, and can be seen towering over the agricultural farmland surrounding Amherst from miles away.²⁹ The function of the building is obvious from its sheer size, but the expression of its form is more powerful: the feeling that one gets traveling nearby is similar to the feeling of driving by a city on the highway. And today, UMass Amherst practically is a city dropped in the middle of farmland, rendering the statement made by the architecture successful. It could have been the purpose of the designers to try to illicit the same response and feeling by passerby and students alike with an administrative building like the Southwest Complex at UMass. And as an administrative building, it would likely become the new focal point of campus, visually, and creates a composite center for all

²⁸ Waters, Suzanne. "Brutalism." *Royal Institute of British Architects*. Accessed on February 24 2016. https://www.architecture.com/Explore/ArchitecturalStyles/Brutalism.aspx

²⁹ "150 Years of UMass Amherst History." *150 Years UMass Amherst*. Last updated 2016. Accessed on February 24 2016. https://www.umass.edu/150/timeline

student administrative needs and likely "gen-ed" type classes that many students have to take. The most glaring issue with this type of structure is that WPI is close enough to the Worcester Airport that it must conform to strict guidelines in terms of how many feet over sea level buildings may be in order for airplanes to safely land and ascend.³⁰ It also is so radically different from the traditional characteristic that WPI portrays—it would have stuck out like a sore thumb had it been built. The fact that such radically different styles were floated at the same time suggest WPI saw modernism more of an aesthetic, not a complete re-orientation of architecture, as modern architects had hoped.



Sketch of proposed administration building.³¹

³⁰ "A Model Zoning Ordinance to Limit Height of Objects Around Airports." *U.S. Department of Transportation: Federal Aviation Administration.* Last updated December 14 1987. Accessed on December 22 2015. http://www.faa.gov/documentLibrary/media/advisory circular/150-5190-4A/150 5190 4A.PDF

³¹ Proposed Administration Building, c.1960, Series 1, Folder 127, University Photograph Collection, WPI Curation, Preservation, and Archives, George C. Gordon Library, Worcester Polytechnic Institute.



Photograph of Kaven Hall, for reference with above proposed administration building.³²

³² "Desktop Wallpaper." *Worcester Polytechnic Institute*. Accessed on December 16 2015. https://www.wpi.edu/about/wallpaper.html



Sketch of proposed administrative and classroom building.³³

³³ Proposed Administrative and Classroom Building, c.1960, Series 1, Folder 127, University Photograph Collection, WPI Curation, Preservation, and Archives, George C. Gordon Library, Worcester Polytechnic Institute.

Goddard Hall

In the 1950s, a nation-wide push for science education led inevitably to the proposal of a building dedication to the life sciences.³⁴ The proposed site for Goddard Hall was adjacent to Olin Hall, the physics building. The proposed design for Goddard Hall by Rogers & Butler is virtually a mirror image of Olin Hall, and is attached to it.³⁵ The proposed design is of a Colonial Revival style with a hipped roof, chimneys, simply paned windows, and gabled areas around the entrances that jut out slightly. The design of the main entrance has a balcony supported by columns and a window with decorative trim overlooking the balcony, decorative windows above the doors. The layout consists of a long corridor running down the middle of the building with rooms coming off both sides of the hall.

Goddard Hall today is much less like this design. It instead represents several decades of maturity for the school in terms of architectural design, unlike the proposal for the building would. As we know it now, Goddard is more of a jagged L-shaped building, placed further down the hill than the proposed building. When walking by Olin Hall, the building seems to go on forever-- it's just a very long, thin building. Adding another building of a same shape and size onto the end of that would make that side of, what technically is West Street, very awkward and somewhat unwelcoming. When rounding the corner from Higgins Laboratories, all that would be seen is an endless mass of brick and small windows—not a pleasant sight. With Goddard Hall as it currently stands, it breaks up the monotony of brick and stone, allowing for a more interesting view. Goddard Hall's shape and exterior also serve as a sort of segue from traditional college campus architecture to the early stages of more modern architecture. The interesting shape of the building also fits better as it goes down into the hill towards Salisbury Street, creating an organic closure to the existing walking path as it reaches the edge of campus.

³⁴ Semper, Robert J., "Science Centers: Partners in Science Education." *American Physical Society*. Accessed on February 24 2016. https://www.aps.org/publications/apsnews/199704/education.cfm.

³⁵ T. W. Van Arsdale, Jr., Initial Data for Possible Chemical Engineering & Chemistry Building at Worcester Polytechnic Institute, 29 May 1959, Series 17, Goddard Hall; Box 1, Folder 5, Facilities: Building Specifications, WPI Curation, Preservation, and Archives, George C. Gordon Library, Worcester Polytechnic Institute



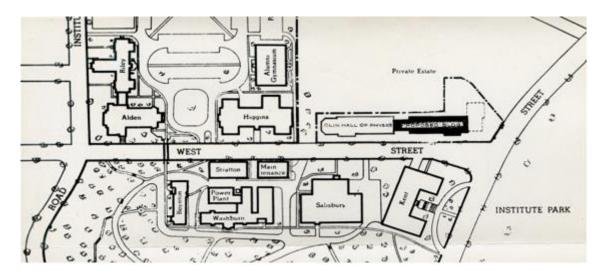
Photograph of Olin Hall.³⁶



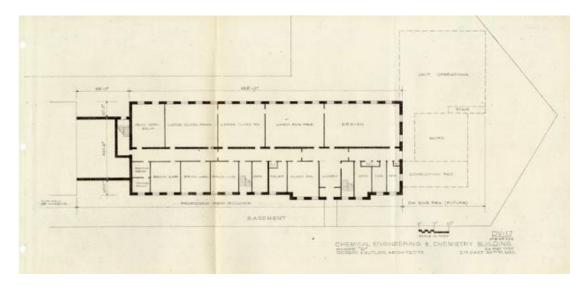
Sketch of alternate Goddard Hall design.³⁷

³⁶ "Olin Hall." *Worcester Polytechnic Institute*. Accessed on December 15 2015. https://www.wpi.edu/about/tour/olin.html

 ³⁷ Van Arsdale, T. W. Jr., Initial Data for Possible Chemical Engineering & Chemistry Building at Worcester
 Polytechnic Institute, 29 May 1959, Series 17, Goddard Hall; Box 1, Folder 5, Facilities: Building Specifications,
 WPI Curation, Preservation, and Archives, George C. Gordon Library, Worcester Polytechnic Institute



Map of WPI's campus with alternate design of Goddard Hall outlined thickly in black.³⁸



Basement level floor plan of alternate design of Goddard Hall.³⁹

 ³⁸ Olin Gift of Chemistry and Chemical Engineering Building, Series 17, Goddard Hall; Box 1, Folder 2, Facilities, Building Specifications, Goddard Hall, WPI Curation, Preservation, and Archives, George C. Gordon Library, Worcester Polytechnic Institute.
 ³⁹ Olin Gift of Chemistry and...



Article about the gift for a new chemistry building with a sketch of the alternate Goddard Hall design.⁴⁰

Humanities Building and Theater

As part of the newly established WPI Plan, where students are currently required to fulfill a Humanities and Arts Requirement, and Interactive Qualifying Project junior year, and a Major Qualifying Project senior year, during President Edmund Cranch's tenure, a proposed Humanities and Theater building was born.⁴¹ In theory, this would have allowed students a better atmosphere and facility to fulfill the Humanities and Arts portion of their requirement, allowing students to become more well-rounded and educated in the arts, which is to this day seen to be valuable for any student at any level of education. The proposed humanities building connected to a proposed lecture hall/theater was designed by Rogers &

⁴⁰ Olin Gift of Chemistry and...

⁴¹ Student Alumni Society, e.d.

Butler, Architects.⁴² The proposed site was on Boynton Street, with a parking lot between it and Kaven Hall. The Modern, rectilinear humanities building is suspended above a parking lot. It has numerous windows and balconies that let light and air into the classrooms and offices. The theater is a low, Modern building that is easily accessed from the humanities building and parking by a covered bridge. As radical as this design may sound, it would have been quite the unique addition to WPI's campus. As it stands today, many disciplines within WPI's Humanities department are spread among different buildings. Productions put on by student-run theater groups are held in the Little Theatre in the basement of Riley Hall as well as in Alden Hall, while humanities offices are located in Salisbury Labs, and yet some humanities classes and seminars may be held in Higgins Laboratories, the Mechanical Engineering building, or Atwater Kent, the Electrical and Computer Engineering building. Having a dedicated building for humanities would not only have allowed for all of the sub-classes of the discipline to be in the same space, but it would contribute to an ideal of well-roundedness in every student here at WPI. Aside from our minimal humanities requirements, there is very little focus brought to such an important field of learning and culture. This makes sense, as WPI is a technical institute, yet it is important to realize the value in humanities topics, and a building fully dedication to the cultivation and education of said topics would instill in everyone on campus a higher sense of respect and value of the arts, which would in turn contribute to graduating students who have more to offer than just a strong technical background. Had this proposition been acted upon, however, a cut or loss in another area of study would have had to have been made. Which technical departments would have had fewer professors and field experts hired? Which classrooms would have been left inadequate for climbing student acceptance rates? While it would have been convenient to have a dedicated humanities building on campus, and it is important to bridge the

⁴² Rogers & Butler, Architects, Proposed Humanities Building, 29 February 1964, Series 1, Folder 169, University Photograph Collection, WPI Curation, Preservation, and Archives, George C. Gordon Library, Worcester Polytechnic Institute.

gap between technology and humanistic ideals, WPI may not have been ready to commit that kind of money and time into the arts when it was still trying to become a leader as a technical institute.

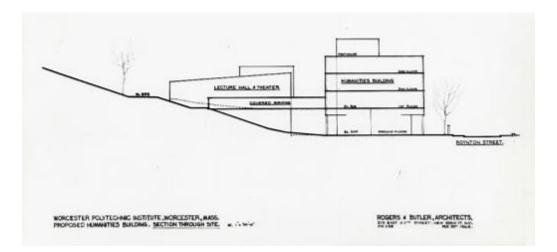


Sketch of proposed humanities building, back view.⁴³

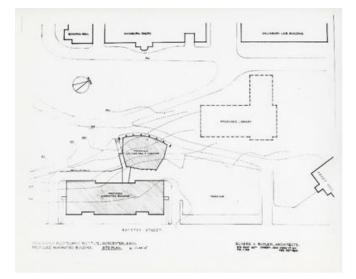


Sketch of proposed humanities building, front view.44

⁴³ Rogers & Butler, Architects
⁴⁴ Rogers & Butler, Architects

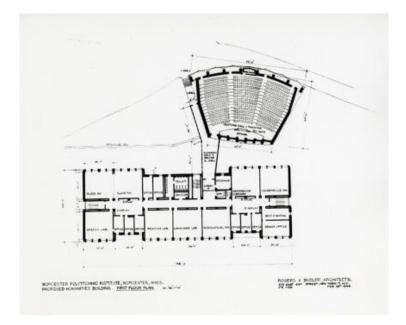


Cross-sectional sketch of proposed humanities building.45



Site plan of proposed humanities building, including alternate library design.⁴⁶

 ⁴⁵ Rogers & Butler, Architects
 ⁴⁶ Rogers & Butler, Architects



First floor plan of proposed humanities building.⁴⁷

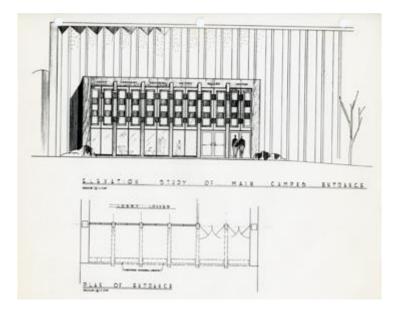
George C. Gordon Library

The architectural firm of O. E. Nault & Sons Inc., architects of Gordon Library as it stands now, designed an alternate plan.⁴⁸ The library is built into the side of the hill as it slopes toward Boynton Street, and the alternate plan of the library was designed on the same site. An outline of the alternate library is included in the site plan for the proposed humanities building. The alternate plan is a Modern, L-shaped building with stark, rectilinear façades and dynamic, interlocking spaces. The names of famous scientists are written on a front entrance that leads into a curvilinear lobby. One half of the building has open, expansive, rooms with high ceilings. One of these rooms in an exhibition hall, which is easily accessed by an additional entrance at the bottom of the hill. The other half of the building is split into smaller rooms on two levels per floor. The sloping site is reflected in the floor plan, where earth fill replaces what would otherwise be rooms deep underground.

⁴⁷ Rogers & Butler, Architects

⁴⁸ H. P. Storke, A Proposal for Assistance in the Proposed Library at Worcester Polytechnic Institute, 1 May 1964, Series 18, George C. Gordon Library; Box 1, Folder 2, Facilities: Building Specifications, WPI Curation, Preservation, and Archives, George C. Gordon Library, Worcester Polytechnic Institute.

With this design, one of the signature characteristics of WPI's landscape, its grassy hillsides, would have been overtaken. The interior design is more curvilinear than the rectilinear interior of the existing library. And that is exactly the main design flaw for this proposed library—after careful inspection of many of the floorplans, it is evident that there are many spaces that aren't being optimally utilized. Many of these late modernistic lines leave awkward and useless spaces, and high ceilings were favored over spatial efficiency. This, among other reasons, could be why this library plan was not the ultimate choice. This library would have, at the rate that WPI has grown, become insufficient in size very quickly. Our neoclassical style library is already almost always teeming with students, and it is quite a bit larger with many more group project areas than this proposed library has. Choosing this library plan would have led to a sooner need for library renovation and expansion.



Exterior sketch of alternate library design, entrance.⁴⁹

⁴⁹ Storke

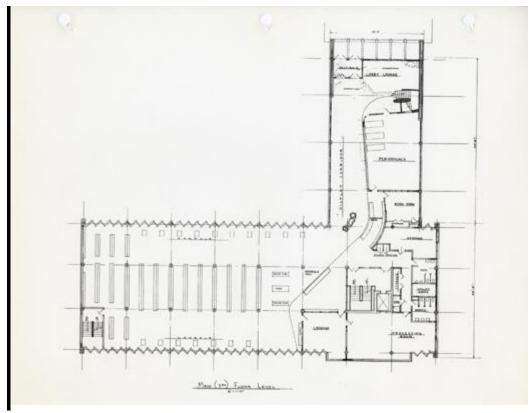


Exterior sketch of proposed library.⁵⁰



Sketch of main floor lobby of the alternate library design.⁵¹

⁵⁰ Storke ⁵¹ H. P. Storke.



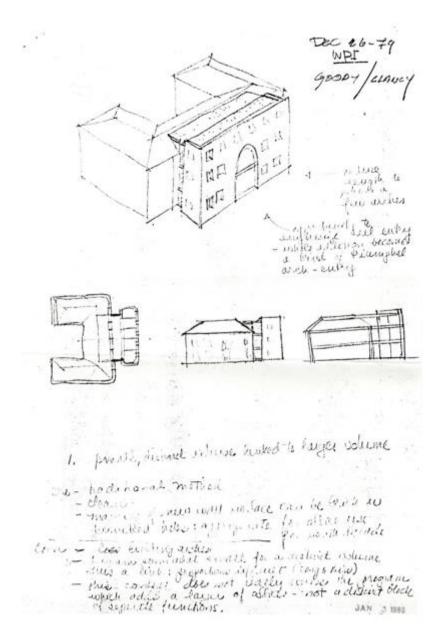
Main floor plan of alternate library design.⁵²

⁵² H. P. Storke.

Atwater Kent Laboratories Addition

When an addition onto Atwater Kent Laboratories was proposed, the architectural firm Goody Clancy discussed ideas for the addition with WPI. They sketched three concepts for the addition onto Atwater Kent's south facade and made notes about pros and cons. These concepts provided a new context for architecture at WPI; the idea that architecture presents not only a clue to the function of a building, but also to the image and overall artistry of the building. The first concept was to build a distinct brick structure connected to the existing building. The addition would be "somewhat small for a distinct volume." The second concept was to build an "exploded skin." The existing exterior wall would be pushed out where the building would need more space. The end walls would have to be made of glass, and the roof above the third story would be sloped. The notes below the sketch indicate that this slope would not be ideal, and the façade would not be an ideal office façade, prime reasoning to pass on the proposal. The third concept for the addition was layering, for which there were several sketches. The first sketch is of a Modern steel skeleton with a glass skin. This wouldn't have worked because the addition "requires heavier materials" and an "opaque wall." The second sketch is of a wall at the front of the building that is solid where required and open at the ends, which would be "very forced." The third sketch is a solid wall that is pushed out from the main volume of the building. The architects also drew a combination of the first concept and the third sketch of the third concept. The last page of sketches includes one sketch similar to the second sketch for the third concept and an addition that does not destroy the slope of the third story roof, but adds large, arched dormers to its slope.⁵³

⁵³ Goody/Clancy, WPI, 26 December 1979, Series 7, Atwater Kent Laboratories; Folder 4, Facilities: Building Specifications, WPI Curation, Preservation, and Archives, George C. Gordon Library, Worcester Polytechnic Institute.

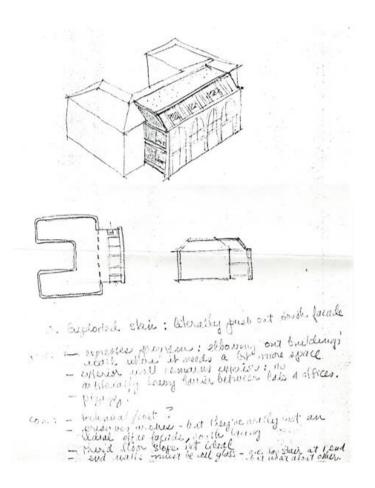


Sketch of the first concept for the Atwater Kent Laboratories addition.⁵⁴

⁵⁴ Goody/Clancy

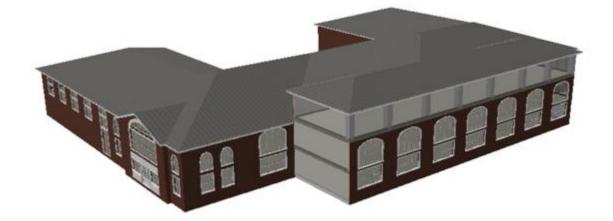


Three-dimensional rendering of Atwater Kent Laboratories with the first addition concept. Made by one of the authors.

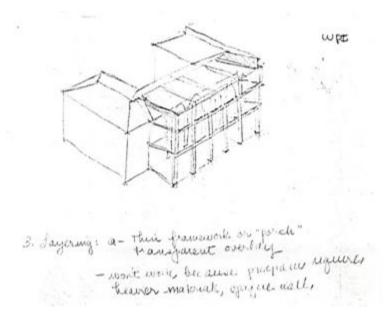


Sketch of the second concept for the Atwater Kent Laboratories addition.55

⁵⁵ Goody/Clancy

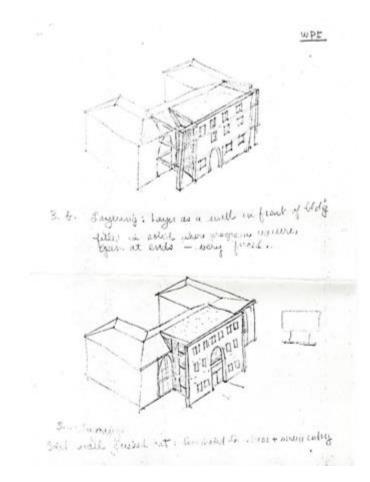


Three-dimensional rendering of Atwater Kent Laboratories with the second addition concept. Made by one of the authors.

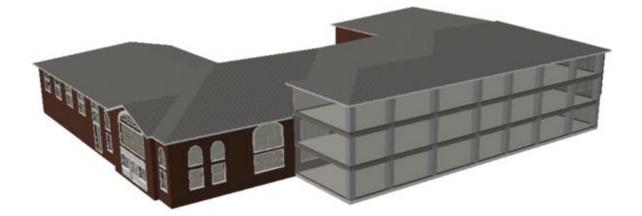


Sketch of the third concept, part a for the Atwater Kent Laboratories addition.⁵⁶

⁵⁶ Goody/Clancy



Sketch of the third concept, parts b and c for the Atwater Kent Laboratories addition.⁵⁷



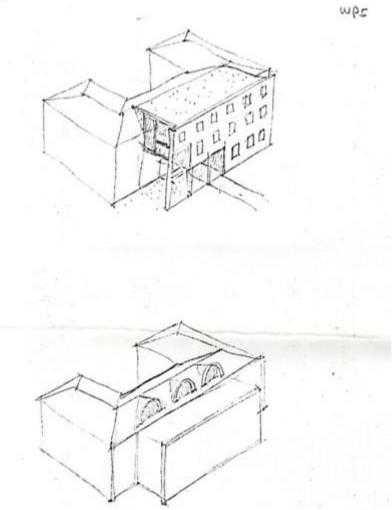
Three-dimensional rendering of Atwater Kent Laboratories with addition concept three, part a. Made by one of the authors.

⁵⁷ Goody/Clancy

5' unidu + (W) 00 0 U ¢1 coulul will as many back (LA 14 Course some. stein volume Frenapped wall? largered wall? Most promising defending on and grapations, Symetrica L Accurctions for caring - Armall anit glass in reasonable Brichas pice up regilien, proportions of Pas. tų. Cp unity ti

Sketch of a combination of concepts one and three for the Atwater Kent Laboratories addition.⁵⁸

⁵⁸ Goody/Clancy



Additional sketch of concepts for the Atwater Kent Laboratories addition.⁵⁹

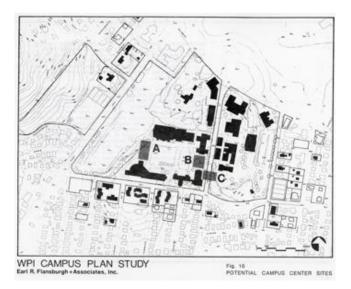
⁵⁹ Goody/Clancy

Campus Center

Plans for a campus center began over twenty years before it was built. Multiple sites and designs were proposed. Various alternate plans were designed by the architectural firms of Earl R. Flansburgh + Associates, Inc. and Stanmar Inc., as well as a location proposal presented to the Facilities Committee referencing a foot traffic study conducted by the university.

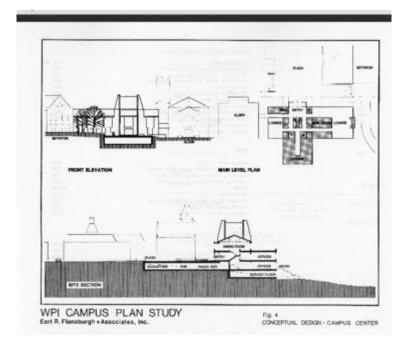
Design of Campus Center as Part of 1983 Facility Study

In a 1983 facility study performed by Earl R. Flansburgh + Associates, Inc., the firm proposed several sites for a new campus center.⁶⁰ The locations were: (A) between Morgan Hall and Harrington Auditorium, (B) between Higgins Laboratories and Alden Memorial, and (C) adjacent to Alden Memorial and crossing West Street. They chose location C to be the site of a conceptual sketch of the Rubin Campus Center. It is a modern, rectilinear building with an entrance that opens onto a plaza in front of Boynton Hall.



Map of WPI campus with potential sites for a campus center in gray labelled A, B, and C.⁶¹

 ⁶⁰ Earl Flansburgh + Associates, Inc., WPI Campus Plan Study, 1983, Box 34, Folder 1717, University Subject Files, WPI Curation, Preservation, and Archives, George C. Gordon Library, Worcester Polytechnic Institute.
 ⁶¹ Earl Flansburgh + Associates, Inc., WPI Campus Plan Study



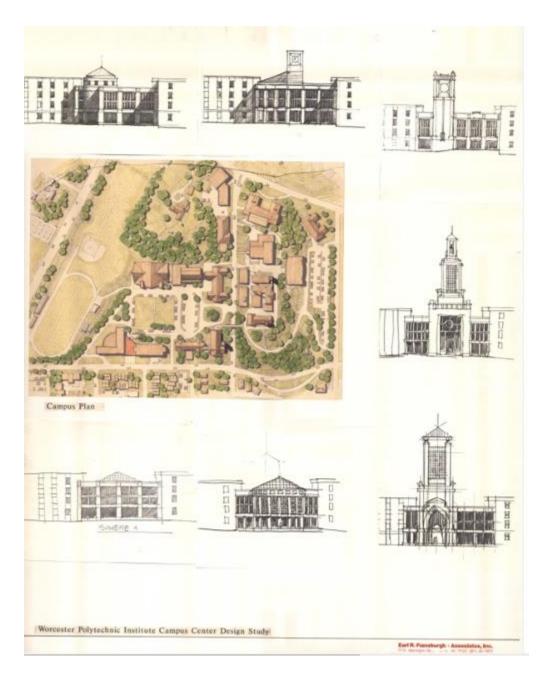
Campus plan from 1983 with conceptual designs for a campus center located at C in above figure.⁶²

Campus Center Design Study (1985-1993)

Earl R. Flansburgh + Associates, Inc. sketched ideas for a campus center.⁶³ The proposed site above what is commonly known as "the Wedge," a lounge area that connects Morgan Hall and Daniels Hall. The Wedge is a common meeting place for students, and leads into the dining hall in Morgan Hall and offices in Daniels Hall. The façades are Modern, rectilinear, skeleton-style buildings. Each sketch has a tower that is either round or square. The round towers have conical roofs and the square towers have pitched or flat roofs. The second sketch from the top left has a clock, and the sketch in the bottom right corner features a tunnel in the shape of a pointed arch going under the tower.

⁶² Earl Flansburgh + Associates, Inc., Worcester Polytechnic Institute Campus Center Design Study

⁶³ Earl Flansburgh + Associates, Inc., Worcester Polytechnic Institute Campus Center Design Study, Facilities: Building Plans, WPI Curation, Preservation, and Archives, George C. Gordon Library, Worcester Polytechnic Institute.

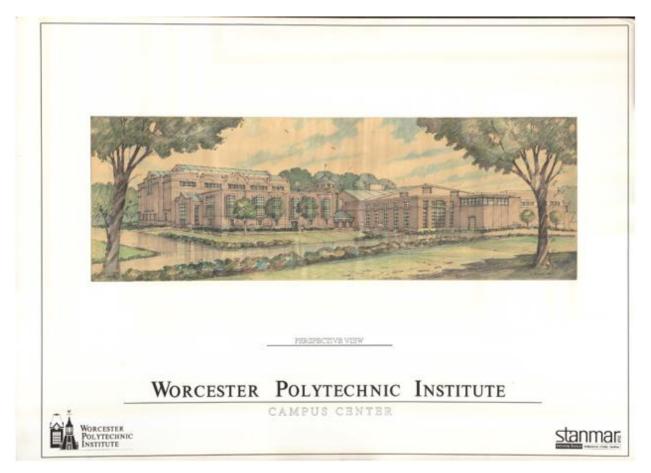


Conceptual sketches of a campus center above the wedge.⁶⁴

⁶⁴ Earl Flansburgh + Associates, Inc., Worcester Polytechnic Institute Campus Center Design Study

Campus Center Adjacent to Alumni Gymnasium (1996)

Stanmar Inc. designed a proposed campus center adjacent to, possibly even attached to, Alumni Gymnasium and Harrington Auditorium. It is a traditional, rectilinear, brick building with bay windows. One of the entrances has a gable that reflects the gable on the side of Alumni Gymnasium. The other entrance has a sloping roof adjacent to a round tower with a conical roof.



Sketch of an alternate campus center design adjacent to Alumni Gymnasium.⁶⁵

⁶⁵ Stanmar, Inc., Worcester Polytechnic Institute: Campus Center, Facilities: Building Plans, WPI Curation, Preservation, and Archives, George C. Gordon Library, Worcester Polytechnic Institute.

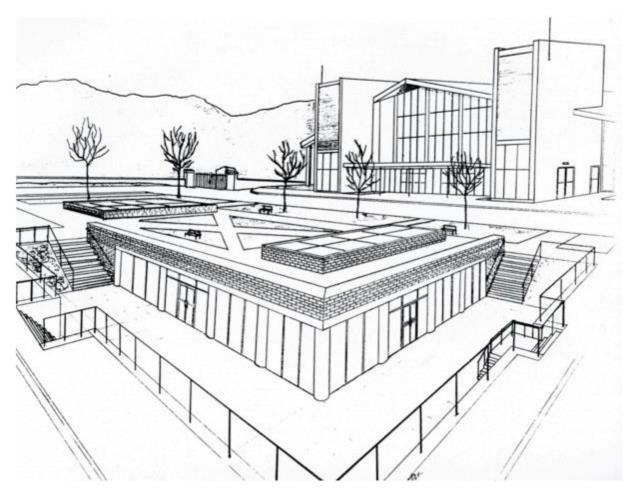
Campus Center Designed by WPI (1990)

After the study performed by Earl R. Flansburgh + Associates, the university made its own proposal for where to locate a new campus center, and what it may look like. The interior of the campus center was designed in a contemporary style to appeal to students, and the exterior is a traditional, brick style to fit in with the existing campus architecture. A sunken walkway would allow access to the building. The roof of the Rubin Campus Center would function as a quad, and skylights would allow light to filter down into the building. The roof would be covered in topsoil so that trees and grass could be planted, and paved walkways and benches would be provided.⁶⁶

Probably the most interesting thing about this third proposal is WPI's interest in taking student ideas to create a student generated legacy, a legacy that goes beyond a claw that helps people reach objects, or a paper discussing the unbuilt structures of campus. Had this proposal broken ground and seen to completion, the school would have a building created by students, for students, and with students in mind for decades. That kind of self-image allows students of WPI to be perceived as more than just part of a project-based curriculum; students would be viewed as capable of created landmarks for WPI and for other companies as well, reaching forward into the future and creating something that will have a lasting and tangible impression for generations to come.

All three of these designs, very unique in their own ways, were cast aside for the current Rubin Campus Center. A university study from 1994 showed that foot traffic campus-wide was actually highest in the spot that the Rubin Campus Center is located, and was the basis for its construction there.⁶⁷ It has proven today to be quite the high-traffic area indeed.

 ⁶⁶ John Bolduc, et. al., Structural Design for a Campus Center, Box 4, Folder 223, University Subject Files, WPI Curation, Preservation, and Archives, George C. Gordon Library, Worcester Polytechnic Institute, 8, 9, 12.
 ⁶⁷ The WPI Campus Center Program: A Report to the WPI Trustees' Physical Facilities Committee, (Worcester, MA: Worcester Polytechnic Institute, 17 February 1994), 11.



Sketch of a campus center under the quad.⁶⁸

⁶⁸ John Bolduc, et. al.

Proposed Academic Building

A proposed academic building and parking garage for WPI was designed by EYP Architecture and Engineering P.C between 1999 and 2000. This building was designed to house the Humanities and Arts and Computer Science departments.⁶⁹ The design included a "state-of-the-art global networked classroom that will provide a virtual link to remote project centers and support WPI's expanding distance learning efforts."⁷⁰ The proposed site for the building was adjacent to the library and built into the side of the hill below Washburn Shops,⁷¹ and the proposed parking garage is down the hill from that, where the Boynton parking lot is located now. As with the previous humanities building proposal, this building would somewhat ruin the typical WPI image of the grassy hill. It would also bring classrooms almost right down the street level, instead of atop the hill. Students living in Founders Hall or East Hall would have a deceivingly short walk to class, as the proposed parking garage for this building would be directly adjacent to the street.

The academic building is an eclectic style that borrows elements from other WPI buildings, including Boynton Hall and Washburn Shops, which is a French Renaissance style building. It has a Mansard roof in common with Washburn Shops and gables, which extend above the roofline, similar to Boynton Hall.⁷² The building is rectilinear with a brick chimney and a cast stone balustrade surrounding a balcony on the fourth floor. The exterior walls are brick cavity walls with concrete masonry units (CMUs) behind the brick. Most of the windows are rectangular with divided lights, with the exception of one circular window and a dormer in the shape of half of an ellipse. Decorations are made of brick, cast stone, and granite.

⁶⁹ Eric Bregman, Laurel Gionet, and Tzu Wen Wu, "Structural Design of the Proposed Campus Academic Building," (Major Qualifying Project, WPI, 2001), 10.

⁷⁰ Campaign for WPI, 1999, Box 5, Folder 9, Development and University Relations records, WPI Curation, Preservation, and Archives, George C. Gordon Library, Worcester Polytechnic Institute.

⁷¹ Bregman, Gionet, and Wen Wu, 10.

⁷² Bregman, Gionet, and Wen Wu, 2, 11.

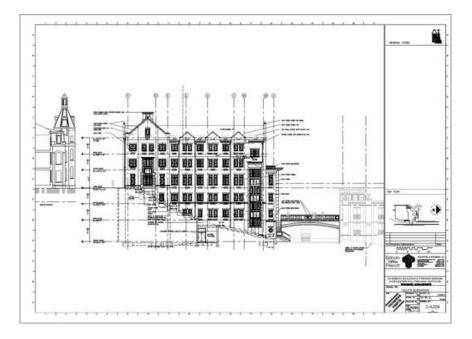
A curvilinear staircase approaches a plaza between the academic building and the library. The main entrance of the building leads into an atrium with tall windows, skylights, open staircases and balconies, and lounge seating. The circulation for offices and classrooms are separated in the building's six floors. A bridge with a cast stone balustrade supported by a precast concrete arch connects the building to the parking garage. The parking garage is brick with glass and steel towers.

All in all, this building would have probably been very useful for WPI. However, looking at the images below, it is clear that it does take away some of the integral characteristics of WPI's grassy hill, and gives the university a more industrial yet modern feel that many may be used to or open to. This idea, as far as it was taken, was quite radical, and would have involved a large amount of effort, capital, and time on the part of the university in order for it to be successful. For all of those reasons and more, this building remains unbuilt.



East elevation sketch of proposed academic building and parking garage.⁷³

⁷³ Courtesy of EYP Architecture & Engineering.

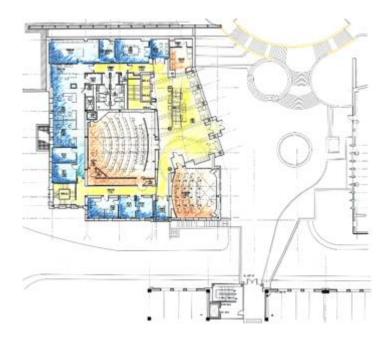


South elevation of proposed academic building, with a proposed bridge connecting the building to a proposed parking garage. Washburn Shops is to the left.⁷⁴



First floor sketch of inside the proposed academic building.⁷⁵

⁷⁴ Courtesy of EYP Architecture & Engineering.⁷⁵ Courtesy of EYP Architecture & Engineering.



Example floor plan of proposed academic building, including a large lecture hall.⁷⁶



Full detail rendering of the view of the proposed academic building and parking garage from Boynton Street. The parking garage blocks the view of the back of the library.⁷⁷

⁷⁶ Courtesy of EYP Architecture & Engineering.⁷⁷ Courtesy of EYP Architecture & Engineering.

Exhibit Plans

We designed several exhibits about our project, which are displayed during C term of 2016 throughout the WPI campus. We created a conceptual display case in SolidWorks. This display case prominently featured a simplistic design with a noticeably small footprint. We designed this in order to allow the display case to go almost anywhere on campus without interfering with the student traffic flow. We created a small plexiglass enclosure in order to allow for one or two items from the WPI Curation, Preservation, and Archives to be placed inside of it.

This design was scrapped due to a few reasons. Due to the proposed materials required, creating an exhibit for each building would be too costly and would exceed the given budget of \$150. Another factor that was not initially considered was the strict requirements laid out by the WPI Curation, Preservation, and Archives for displaying Archival material. Lastly, the display case was far too small to allow for the display of all the material needed to fully describe the unbuilt buildings using images.

We drew influence from the WPI archives and their simplistic, yet informative method of displaying information. This display choice led to the use of existing display cases as well as posters as methods of portraying the information to the student body. The primary goal for these exhibits was to ensure that they are placed in high traffic areas of campus in order to allow for the highest visibility and to allow the WPI population to become informed of these buildings that never came to be.

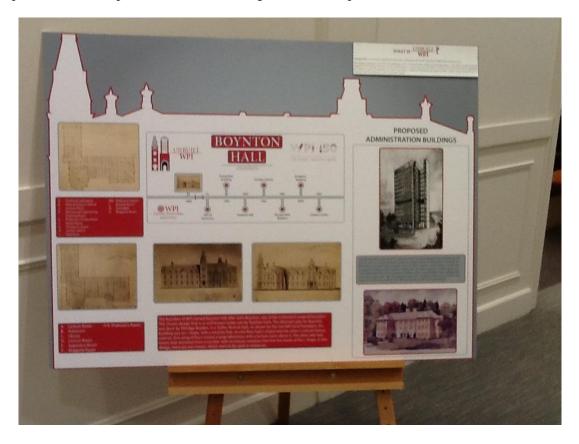
A common theme between all of the building displays is the Unbuilt Timeline, which shows when the unbuilt buildings were proposed. This organized all the exhibits in chronological order. The goal of the timeline is to encourage students, staff, and general public alike to seek out the other exhibits on campus to learn more about WPI's history as told by buildings.

Boynton Hall

When surveying locations around campus, we decided that Boynton Hall's alternate design created by Boyden would be best put in Boynton Hall in the hallway directly outside of the President's office. Due to the narrowness of the hallway and in order to ensure no fire codes are broken due to the exhibit's placement, we decided that a poster would be the best way to convey the information about the building.

Earle's depiction of Boynton hall consisted of an East elevation, South elevation, as well as floor plans for the ground and second floors. These four drawings will be included in the poster in order to ensure the best visualization of the building.

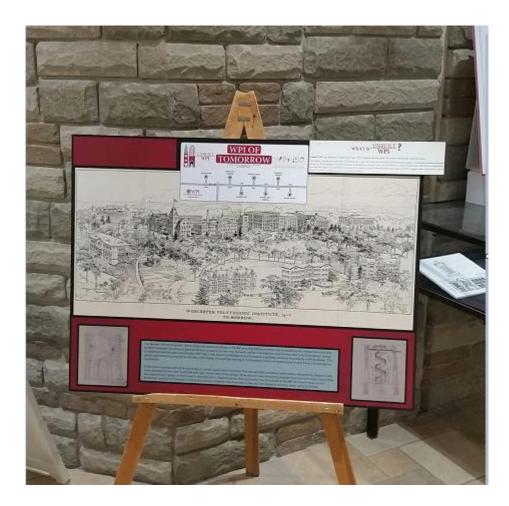
A section for other proposed administration buildings will be included on the poster. Due to the fact that these buildings serve the same purpose as Boynton Hall does today, it seemed fitting to include these pictures with this poster instead of creating an additional poster.



WPI of Tomorrow

The display for the "WPI of Tomorrow" sketch was not a building-specific display and did not have a place that people could directly relate to on campus. Because of this, we decided to put the display in the Rubin Campus Center due to it being a general meeting place for the WPI community.

Because of the detail in the picture as well as the lack of information regarding the large picture, we made a poster for this sketch. Two sketches of the observatory will also be seen in the display, prominently showing an elevation and section view of the proposed tower.



Goddard Hall

Due to the lack of foot traffic and area to put it, the Goddard Hall display will be placed in Atwater Kent Laboratories in the student lounge to allow for maximum visibility. Due to the close proximity of Atwater Kent and Goddard Hall, we believe it was the best choice for the building. Due to the fact that the proposed plan of Goddard Hall has an almost identical style to Olin hall, we decided that putting it in Olin Hall would cause too much confusion.

In order to create the best visualization of Goddard Hall, we put a few noteworthy pictures into the display. We used a prominent elevation view showing the proposed chemical engineering building attached to the existing Olin Hall to emphasize the similarities between the two buildings. We added labeled floor plans to the display to show what would have been put in each of the rooms. A news article from Tech News, a WPI student-led newspaper, displays a black and white sketch of the proposed building with a brief article talking more about the building. Newspaper articles show validity about the proposal and how far into development it went. The final image added was an enlarged version of the black and white sketch shown in the newspaper article in order to further allow the viewer to see a larger version of the image.



Humanities Building

We chose Salisbury Laboratories as the location of the display for the humanities building due to their purposes being nearly identical. Along with that, when walking into Salisbury Laboratories from the entrance closest to Washburn Shops, there are two built-in display cases. One of these cases was commandeered to serve as the space to display materials for the Humanities Building.

We used two colored pictures of elevation views in order to display the exterior of the proposed building. Along with that, we added the main floor plan, the site plan, and a sectioned elevation view to the display to describe how the building was built into the hill.



Gordon Library

We chose to place the display for the alternate plan of the Gordon Library in the transition space from the entrance to the lobby. The display allows for a large amount of flexibility and it is in a high traffic area of campus.

Inside the exhibit, the proposal for the unbuilt library will be displayed in order to add depth to the exhibit. The proposal will be open to the picture of the interior view of the proposed library. The first floor plans will be included in order to aid in visualizing what the library would look like if somebody walked into the lobby. Interior front and back views will also be displayed in order to emphasize the ease of accessibility in the building. A plot plan will also be included to show the new proposed walkways and paths around the building as well as show the shape of the building.



Atwater Kent Laboratories Addition

The Atwater Kent Laboratories Addition display will be placed on the nearest wall to the Goddard display across from the window in the student lounge. Due to the presence of one display case already, we found that the best way to display the information was using a poster.

Prominently displayed on the left hand side is an article detailing the opening of Atwater Kent Laboratories and its original use. We included this to inform the reader about Atwater Kent and possibly hint at the design decisions for the building when it was first built. It also will help them understand why renovation was. On the bottom right hand corner, rendered versions of the sketches proposing different designs of the addition are shown. Along with that, a picture of the construction of the addition and a sketch of Atwater Kent further show the building before it was altered to the building as it is known today.



Campus Center

Due to the high traffic coming and going through the entrance of the Rubin Campus Center, we decided that right inside the doorway was the ideal location for the display. In order to display the materials properly, a display case will be used for protection as well as to catch the viewer's eye when they are walking by.

Inside the display, multiple versions of the design of the Rubin Campus Center will be seen. The most noticeable version is the poster of a campus center attached to Alumni Gymnasium that will be displayed full size above the exhibit. Due to its large size, we decided that it would be better above the case while still catching the viewer's eye. On the left, conceptual sketches of a campus center above the wedge and quad are seen. This is to tell the viewer that there were many proposals for a campus center in many different locations.



Proposed Academic Building

The location of the proposed academic building resided next to the library. Because of this, the proposed academic building display was put in the same area as the Gordon Library exhibit except on the opposite wall.

Due to the extremely large amount of documentation for the academic building, we added a secondary level to the display in order to allow for more information to be displayed. Pictures of the North, South, and East elevations will be shown in order to give the viewer an idea of what this building would have looked like. Along with that, a picture of a rendered out version of what the building would have looked like will be included to give a more realistic view of what the building might look like. An interior sketch will be included to show the reader what it might have looked like when they stepped into the building from the main entrance. The floor plan and booklet further help the viewer visualize what it might have looked like if someone would be walking up to the building.



Conclusion

So what would all of these proposed buildings have meant for WPI? Why don't they exist today? Many reasons are monetarily based, many are feasibility oriented. But why were these buildings even proposed in the first place? From what it seems on the outside, WPI seemed to generate the most planning and vision for proposals when they became conscious of how special the school can be; for example, a campus center designed by a MQP team, or the realization of the institute's technical potential leading to the need for buildings like Salisbury and even plans as grand as "WPI of Tomorrow." The measures taken by the university seem to be, for the most part, reactionary instead of proactive, but still lend the school a feeling of progressiveness. This reactionary behavior drives the determination of which plans will ultimately be chosen to stand on WPI's campus.

John Boynton wanted the Worcester County Free Institute of Industrial Science, now known as Worcester Polytechnic Institute, to be a place where young men of any means were able to study for free or for a low cost to gain knowledge and life experience that had been denied to him during his education and younger years.⁷⁸ As successful as he had become over the course of his lifetime, he wanted a better opportunity for generations to come. He wanted somewhere where students could learn about the basic sciences, engineering principles, and applications of the most modern technologies and theories of the time, so that graduates could go on to have successful careers in science and engineering fields. These wants and needs of WPI have not changed. The marriage of theory and practice lives on today in every student's day-to-day classes. But today there is more to the goal than just being one of the best technical educations in the country.

WPI's increasing focus on a living-and-learning community impresses upon undergraduates the importance of theory and practice, while increasing ease of access and convenience. In the near future, WPI hopes to reconstruct a building in place of the soon-to-be former Alumni Gymnasium. This new

⁷⁸ Rev. Dr. Sweetser

building, dedicated as the Foisie Innovation Studio, will be a place where first-year students may live in a residence hall where just two floors below is project space and robotics labs. The currently existing residence halls Faraday Hall and East Hall have group study rooms with computers, game rooms, and additional amenities. The end goal of WPI is to create a generation of engineers who live what they learn and practice classroom theory on a regular basis. It is this that gives WPI an edge against other institutions, and it is this end goal that makes Worcester Polytechnic Institute so unique and special.

Bibliography

- "150 Years of UMass Amherst History." *150 Years UMass Amherst*. Last updated 2016. Accessed on February 24 2016. https://www.umass.edu/150/timeline
- Antonelli, Robert, Jr., "Institute Park," *Worcester, MA*, accessed December 15, 2015. http://www.worcesterma.gov/dpw/parks-rec/city-parks/institute-park
- Black, Harold S., Atwater Kent Laboratories Rededication, 3 October 1981, Series 7, Atwater
 Kent Laboratories; Box 1, Folder 4, Facilities: Building Specifications, WPI Curation,
 Preservation, and Archives, George C. Gordon Library, Worcester Polytechnic Institute.
- Bolduc, John, Structural Design for a Campus Center, Box 4, Folder 223, University Subject Files, WPI Curation, Preservation, and Archives, George C. Gordon Library, Worcester Polytechnic Institute.
- Boyden, Elbridge. Design for Buildings for the Worcester County Free Institute of Industrial Science,
 1866, Series 1, Box 1, Folder 33, Founding of Worcester Polytechnic Institute and Early Records,
 WPI Curation, Preservation, and Archives, George C. Gordon Library, Worcester Polytechnic
 Institute.
- Bregman, Eric, Laurel Gionet, and Tzu Wen Wu, "Structural Design of the Proposed Campus Academic Building." Major Qualifying Project, WPI, 2001.
- Campaign for WPI, 1999, Box 5, Folder 9, Development and University Relations records, WPI Curation, Preservation, and Archives, George C. Gordon Library, Worcester Polytechnic Institute.
- "Campus Map." Worcester Polytechnic Institute. http://www.wpi.edu/Images/CMS/University-About/WPI_2-D_Map_2014__web.pdf.
- Correspondence between Lincoln and Vaux, 1866, Series 1, Box 1, Folder 32, Founding of Worcester Polytechnic Institute and Early Records, WPI Curation, Preservation, and Archives, George C. Gordon Library, Worcester Polytechnic Institute.

"Desktop Wallpaper." *Worcester Polytechnic Institute*. Accessed on December 16 2015. https://www.wpi.edu/about/wallpaper.html.

Dorsey, Michael W. "A New College for a New Era." WPI Journal 93, no. 2 (1990): 12.

- Earl Flansburgh + Associates, Inc., Worcester Polytechnic Institute Campus Center Design
 Study, Facilities: Building Plans, WPI Curation, Preservation, and Archives, George C.
 Gordon Library, Worcester Polytechnic Institute.
- ---, WPI Campus Plan Study, 1983, Box 34, Folder 1717, University Subject Files, WPI Curation, Preservation, and Archives, George C. Gordon Library, Worcester Polytechnic Institute.
- Earle, Stephen C., Observatory for Institute Park, Architectural Drawings, American Antiquarian Society.
- Goody/Clancy, WPI, 26 December 1979, Series 7, Atwater Kent Laboratories; Folder 4, Facilities: Building Specifications, WPI Curation, Preservation, and Archives, George C. Gordon Library, Worcester Polytechnic Institute.
- Ljungquist, Kent P., James P. Hanlan, and Rodney G. Obien, ed. WPI Studies, Volume 24: History of Woodbury and Company. New York: Peter Lang Publishing, 2007.
- McCarter, Robert and Juhani Pallasmaa. *Understanding Architecture*. New York: Phaidon Press Inc., 2012.
- Mildred Mclary Tymeson, *Two Towers: The Story of Worcester Tech 1865-1965*. (Worcester Polytechnic Institute, Worcester, 1965), 70.

"A Model Zoning Ordinance to Limit Height of Objects Around Airports." U.S. Department of Transportation: Federal Aviation Administration. Last updated December 14 1987. Accessed on December 22 2015. http://www.faa.gov/documentLibrary/media/advisory_circular/150-5190-4A/150_5190_4A.PDF

- Murphy, Rex. "Call the American Legion of Grief-- Harvard Law Students Have to Write Exams." *National Post.* Last modified December 13, 2014. Accessed December 15, 2015. http://news.nationalpost.com/full-comment/rex-murphy-call-the-american -legion-of-grief-harvard-law-students-have-to-write-exams.
- Newspaper Articles, Series 7, Atwater Kent Laboratories; Box 1, Folder 5, Facilities: Building Specifications, WPI Curation, Preservation, and Archives, George C. Gordon Library, Worcester Polytechnic Institute.
- Olin Gift of Chemistry and Chemical Engineering Building, Series 17, Goddard Hall; Box 1, Folder 2, Facilities, Building Specifications, Goddard Hall, WPI Curation, Preservation, and Archives, George C. Gordon Library, Worcester Polytechnic Institute.
- "Olin Hall." *Worcester Polytechnic Institute*. Accessed on December 15 2015. https://www.wpi.edu/about/tour/olin.html
- Proposed Administration Building, c.1960, Series 1, Folder 127, University Photograph Collection, WPI Curation, Preservation, and Archives, George C. Gordon Library, Worcester Polytechnic Institute.
- Proposed Administrative and Classroom Building, c.1960, Series 1, Folder 127, University Photograph Collection, WPI Curation, Preservation, and Archives, George C. Gordon Library, Worcester Polytechnic Institute.
- Rev. Dr. Sweetser's Memoranda for John Boynton's Instructions, Series 1, Box 1, Folder 1,
 Founding of Worcester Polytechnic Institute and Early Records, WPI Curation,
 Preservation, and Archives, George C. Gordon Library, Worcester Polytechnic Institute.
- Rogers & Butler, Architects, Proposed Humanities Building, 29 February 1964, Series 1, Folder
 169, University Photograph Collection, WPI Curation, Preservation, and Archives, George
 C. Gordon Library, Worcester Polytechnic Institute.

- Semper, Robert J., "Science Centers: Partners in Science Education." *American Physical Society*. Accessed on February 24 2016. https://www.aps.org/publications/ apsnews/199704/education.cfm.
- "Seventy Years of the Worcester Polytechnic Institute." *Worcester Polytechnic Institute*. Accessed March 3 2016. https://www.wpi.edu/academics/library/history/seventyyears/page132.html
- Stanmar, Inc., Worcester Polytechnic Institute: Campus Center, Facilities: Building Plans, WPI Curation, Preservation, and Archives, George C. Gordon Library, Worcester Polytechnic Institute.
- Storke, H. P., A Proposal for Assistance in the Proposed Library at Worcester Polytechnic
 Institute, 1 May 1964, Series 18, George C. Gordon Library; Box 1, Folder 2, Facilities:
 Building Specifications, WPI Curation, Preservation, and Archives, George C. Gordon
 Library, Worcester Polytechnic Institute.
- Student Alumni Society, ed. Tech Bible. Worcester, MA: WPI, 2010. https://www.wpi.edu/academics/library/history/techbible/index.html.
- To the Trustees and Faculty of the Worcester Free Institute, Series 1, Box 2, Folder 100, Founding of Worcester Polytechnic Institute and Early Records, WPI Curation, Preservation, and Archives, George C. Gordon Library, Worcester Polytechnic Institute.
- Turner, Paul. Campus, An American Planning Tradition. Cambridge, MA: M.I.T. Press, 1984.
- "The Two Towers Tradition," *Worcester Polytechnic Institute,* accessed December 15, 2015, https://www.wpi.edu/academics/library/collections/two-towers.html
- Van Arsdale, T. W. Jr., Initial Data for Possible Chemical Engineering & Chemistry Building at Worcester Polytechnic Institute, 29 May 1959, Series 17, Goddard Hall; Box 1, Folder 5, Facilities: Building Specifications, WPI Curation, Preservation, and Archives, George C. Gordon Library, Worcester Polytechnic Institute.

Waters, Suzanne. "Brutalism." *Royal Institute of British Architects*. Accessed on February 24 2016. https://www.architecture.com/Explore/ArchitecturalStyles/Brutalism.aspx

"Who Was Ichabod Washburn." *Washburn University*. Accessed on March 1 2016. http://www.washburn.edu/about/ichabod/washburn.html

- Woodbury-Company, Worcester Polytechnic Institute, Tomorrow; Series 1, Folder 215,
 University Photograph Collection, WPI Curation, Preservation, and Archives, George C.
 Gordon Library, Worcester Polytechnic Institute.
- The WPI Campus Center Program: A Report to the WPI Trustees' Physical Facilities Committee, (Worcester, MA: Worcester Polytechnic Institute, 17 February 1994), 11
- WPI Electrical Engineering Department, Electrical Engineering Department Pamphlet, May 1906, Series 7, Atwater Kent Laboratories; Box 1, Folder 3, Facilities: Building Specifications, WPI Curation, Preservation, and Archives, George C. Gordon Library, Worcester Polytechnic Institute.

References

Blundell Jones, Peter. Modern Architecture Through Case Studies. Boston: Architectural Press, 2002.

- Burke, Arthur E., J. Ralph Dalzell, and Gilbert Townsend. *Architectural and Building Trades Dictionary*. Chicago: American Technical Society, 1955.
- "Industrialization," *Worcester Historical Museum*, last modified 2013, accessed December 15, 2015, http://www.worcesterhistory.org/worcesters-history/worcester-in-the-19thcentury/industrialization/.
- Whiffen, Marcus. American Architecture Since 1780: A Guide to the Styles. Cambridge, MA: The M.I.T. Press, 1969.