

ABSTRACT

Title of Thesis:

RECLAIMING IDENTITY: UTILIZING
HISTORIC FABRIC TO REVITALIZE
DOWNTOWN ROCHESTER

Kelly Marie Haley, Master's of Architecture
and Master's of Historic Preservation, Spring
2019

Thesis Directed By:

Professor Matthew Bell, FAIA, School of
Architecture, Planning & Preservation
Dean and Professor Donald W. Linebaugh,
PhD, RPA, School of Architecture, Planning &
Preservation

America's first boomtown, Rochester, New York, rapidly decentralized after World War II. Like other mid-sized industrial cities, Rochester struggled to retain residents and businesses as suburbia flourished. Recently, the city is witnessing a resurgence as national trends favor urban living. This growth coupled with initiatives to develop downtown, leads to Rochester's obligation to reclaim its identity on the Genesee River by adaptively reusing its historic structures, establishing public spaces, and developing vacant lots to benefit current and future residents and businesses. The development of downtown by respectfully utilizing historic fabric will address the unused skeletons of past endeavors by reclaiming these spaces.

The opportunity to reclaim the abandoned Erie Canal aqueduct and Broad Street Bridge, through programming will fit the needs of the downtown. The

development of the structure as a centerpiece will assist in the city's revitalization effort and breathe life into the central business district.

RECLAIMING IDENTITY: UTILIZING HISTORIC FABRIC TO REVITALIZE
DOWNTOWN ROCHESTER

by

Kelly Marie Haley

Thesis submitted to the Faculty of the Graduate School of the
University of Maryland, College Park, in partial fulfillment
of the requirements for the degree of
Master's of Architecture and
Master's of Historic
Preservation
2019

Advisory Committee:

Professor Matthew Bell, FAIA, Chair

Dr. Donald Linebaugh, PhD, RPA, Chair

Professor Emeritus Karl F.G. Du Puy, AIA

© Copyright by
Kelly Marie Haley
2019

Disclaimer

This thesis or dissertation document that follows has had referenced material removed in respect for the owner's copyright.

Dedication

For Maizey.

Acknowledgements

I would like to thank my thesis committee for their time and dedication throughout the production of this thesis project. In addition, I would like to thank my thesis mentor, Christian Calleri, for offering to critique this project throughout its design stages.

In preparing an existing wall section of the aqueduct and bridge structure, as well as understanding the infill possibilities, I would like to thank Christine S Cho, AIA, LEED AP, and Amanda R. Lewkowicz, AIA, LEED AP.

I would additionally like to thank the Rochester Public Library and the City of Rochester for its vast collection in regard to Rochester's history and specific structures, including the Broad Street Bridge and the Erie Canal aqueduct. I would specifically like to thank Librarian Brandon Fess for his knowledge on this subject and guidance towards finding research materials, and city employee Cheryl Lovall for allowing me to access original drawings of the aqueduct and its changes over the course of the 1900s. In understanding the potentials for this project, I would like to thank former city planner, Thomas P. Riley, for his wisdom and passion for urban design and its transformative qualities and how these can be applied to Rochester.

Lastly, I would like to thank my friends and family for their support, including my parents, my brothers and my fiancé. Thank you all for believing in my project and pushing me to do my best every day.

Table of Contents

Disclaimer.....	5
Dedication.....	ii
Acknowledgements	iii
Table of Contents	iv
List of Figures.....	vi
Chapter 1: Introduction.....	1
Chapter 2: A Brief Overview of Rochester, NY	4
The Young Lion of the West	4
The Flour City	10
The Flower City.....	13
Conclusion	15
Chapter 3: The Second Genesee Aqueduct	17
The First (and Second) Aqueduct.....	17
Broad Street Bridge and the Rochester Subway.....	22
Void in the Heart of Downtown	33
Conclusion	38
Chapter 4: The Fate of the Broad Street Bridge and Aqueduct.....	39
1990s and Early 2000s City Planning Efforts	39
2018: ROC the Riverway	43
Broad Street Bridge and Aqueduct Proposals	48
William Rawn & the Winter Garden.....	49
Broad Street Underground.....	52
Conclusion	53
Chapter 5: Preservation and Adaptive Reuse	55
Definitions	56
Federal, State and Local Governments and Preservation	59
Conclusion	63
Chapter 6: Urban Revitalization and Historic Preservation	65
Historic Preservation as a Revitalization Tool	66
Why Preservation is Important	66
How Urban Preservation Can be Achieved.....	74
ReUrbanism and Rochester	78
Conclusion	81
Chapter 7: Architectural Intervention.....	83
Site Analysis	83
Program and Precedents	87
Design Strategies	91
Final Design.....	92
Conclusion	94
Chapter 8: Conclusion	96
Appendices	97
Appendix A	97
Downtown Decentralization: Constraining the City	98

Civic Pride	101
Urban Renewal Efforts	105
Conclusion	112
Appendix B.....	114
Zoning.....	114
Population and Demographics.....	115
Transportation.....	117
Tourism and Program	120
Climate	125
Bibliography	128

List of Figures

Figure 1 Map of Phelps and Gorham Purchase 1790, second survey, Monroe County Library System, Rochester Municipal Archives, accessed December 14, 2018,	5
Figure 2 Diagram by Author.	5
Figure 3 Site of Allan’s Mills on the One Hundred Acre Tract, from: Blake McKelvey and Ruth Rosenberg-Naparsteck, Rochester: A Panoramic History (Sun Valley, CA: American Historical Press, 2001). Page 19.....	6
Figure 4 Rochester Map, 1817, A Town Square: Conversations About Where We Live, accessed November 13, 2018, https://heckeranddecker.wordpress.com/tag/blocks-and-streets/	6
Figure 5 Map of Village of Frankfort, New York, Monroe County Library System, Rochester Municipal Archives, accessed December 14, 2018, https://catalogplus.libraryweb.org/?section=resource&resourceid=1115904430&currentIndex=0&view=fullDetailsDetailsTab	7
Figure 6 From: Marjorie Wickes and Tim O’Connell. “The Legacy of Frederick Law Olmsted.” Rochester History 50, no. 2 (April 1988). http://www.rochester.lib.ny.us/~rochhist/v50_1988/v50i2.pdf	7
Figure 7 Rochester Map, 1820, A Town Square: Conversations About Where We Live, accessed November 13, 2018, https://heckeranddecker.wordpress.com/tag/blocks-and-streets/	8
Figure 8 New York : [with] Profile of the Champlain Canal from Lake Champlain to the Hudson River [and] Profile of levels of the Grand [i.e. Erie] Canal. (pub. by New York State, Albany, 1825), The Erie Canal, accessed December 14, 2018, http://www.eriecanal.org	9
Figure 9 Valentine Gill, Jonathon Child, and John F. Morin. Map of Rochester from a correct survey. Library of Congress, accessed December 14, 2018, https://www.loc.gov/item/2003623826/	11
Figure 10 Current City of Rochester Logo. Illustration by Author.	15
Figure 11 Everard Peck. Plan of the first aqueduct carrying the Erie Canal over the Genesee River at Rochester, New York. Monroe County Library System, Rochester Municipal Archives, accessed December 14, 2018, https://catalogplus.libraryweb.org/?section=resource&resourceid=111	18
Figure 12 Erie Canal Aqueduct, Rochester, N.Y. Monroe County Library System, Rochester Municipal Archives, accessed December 14, 2018, https://catalogplus.libraryweb.org/?section=resource&resourceid=1116790146&currentIndex=2&view=fullDetailsDetailsTab	19
Figure 13 Erie Canal Aqueduct, Rochester, N.Y. Monroe County Library System, Rochester Municipal Archives, accessed December 14, 2018, https://catalogplus.libraryweb.org/?section=resource&resourceid=1115909858&currentIndex=4&view=fullDetailsDetailsTab	20
Figure 14 Albert R. Stone. Canal Bed. Monroe County Library System, Albert R. Stone Negative Collection, Rochester Museum & Science Center, accessed December 14, 2018,	

https://catalogplus.libraryweb.org/?section=resource&resourceid=1115930011&currentIndex=5&view=fullDetailsDetailsTab	21
Figure 15 Illustration by Author.....	21
Figure 16 Albert R. Stone. Aqueduct with subway tracks. Monroe County Library System, Albert R. Stone Negative Collection, Rochester Museum & Science Center, accessed December 14, 2018, https://catalogplus.libraryweb.org/?section=resource&resourceid=1116174395&currentIndex=3&view=fullDetailsDetailsTab	23
Figure 17 Albert R. Stone. Aqueduct’s arches look like medieval cloister. Monroe County Library System, Albert R. Stone Negative Collection, Rochester Museum & Science Center, accessed December 14, 2018, https://catalogplus.libraryweb.org/?section=resource&resourceid=1116184200&currentIndex=2&view=fullDetailsDetailsTab	23
Figure 18 Illustration by Author.....	25
Figure 19 Illustration by Author.....	34
Figure 20 The Grasso-Zimmer Plan, from: “A Revitalization Report: Written for the Grasso-Zimmer Plan.”pg.6.....	40
Figure 21 Preferred Master Plan, from: “Historic Erie Canal Aqueduct & Broad Street Corridor: Master Plan,” May 2009. Pg. 76.....	41
Figure 22 View Looking East to Aqueduct Commons & Rewatered Historic Erie Canal Aqueduct, from: “Historic Erie Canal Aqueduct & Broad Street Corridor: Master Plan,” May 2009. Pg 83.....	42
Figure 23 RTR Overview Map, City of Rochester, accessed December 14, 2018, http://www.cityofrochester.gov/roctheriverway/	43
Figure 24 No title, from: ROC the Riverway Advisory Board “ROC the Riverway: A Vision Plan for the Future of Rochester’s Genesee Riverfront, Phase 1 – May 2018,” May 2018. http://www.cityofrochester.gov/roctheriverway/ , pg. 27.....	45
Figure 25 Phase I Recommended Projects, from: ROC the Riverway Advisory Board “ROC the Riverway: A Vision Plan for the Future of Rochester’s Genesee Riverfront, Phase 1 – May 2018,” May 2018. http://www.cityofrochester.gov/roctheriverway/ , pg. III-52.....	46
Figure 26 No title, from: Rochester Economic Development Corporation, Reuse Feasibility Study for the Broad Street Aqueduct, prepared by William Rawn Associates, Architects, Inc., LaBella Associates, PC, and Real Estate Enterprises, Inc. (September 1994), pg. 5.....	50
Figure 27 No title, from: Mike Governale, “Broad St. Underground: ANOTHER Proposal for the Abandoned Subway!,” Rochester Subway, September 23rd, 2013, accessed October 6, 2018, http://www.rochestersubway.com/topics/2013/09/broad-street-underground-proposal-for-abandoned-rochester-subway/	52
Figure 28 Illustration by Author.....	83
Figure 29 Illustration by Author.....	83
Figure 30 Illustration by Author.....	83
Figure 31 Google Earth Underlay, Illustration by Author.....	84
Figure 32 Google Earth Underlay, Illustration by Author.....	84
Figure 33 Google Image Underlay, Illustration by Author.....	84
Figure 34 Illustration by Author.....	85
Figure 35 Google Image Underlay, Diagram by Author.....	85

Figure 36 Illustration by Author.....	85
Figure 37 Google Image Underlay, Diagram by Author.....	86
Figure 38 Illustration by Author.....	86
Figure 39 Google Image Underlay, Diagram by Author.....	86
Figure 40 Illustration by Author.....	87
Figure 41 Illustration by Author.....	87
Figure 42 Illustrations by Author.....	88
Figure 43 Layout, Images and Illustrations by Author.....	88
Figure 44 Illustrations by Author.....	88
Figure 45 Layout, Images and Illustrations by Author.....	89
Figure 46 Illustration by Author.....	89
Figure 47 Illustration by Author.....	89
Figure 48 Illustration by Author.....	90
Figure 49 Illustration by Author.....	90
Figure 50 Illustration by Author.....	91
Figure 51 Illustration by Author.....	91
Figure 52 Illustration by Author.....	91
Figure 53 Illustration by Author.....	92
Figure 54 Illustration by Author.....	92
Figure 55 Illustration by Author.....	92
Figure 56 Illustration by Author.....	92
Figure 57 Illustration by Author.....	92
Figure 58 Illustration by Author.....	94
Figure 59 Boards, Images, and Illustrations by Author.....	95
Figure 60 Map showing Inner Loop Proposal, Rochester, N.Y., Monroe County Library System, Rochester Municipal Archives, accessed December 14, 2018, https://catalogplus.libraryweb.org/?section=resource&resourceid=1116102511&currentIndex=0&view=fullDetailsDetailsTab	99
Figure 61 Albert R. Stone. Aerial view showing Rundel Building under construction. Monroe County Library System, Albert R. Stone Negative Collection, Rochester Museum & Science Center, accessed December 14, 2018, https://catalogplus.libraryweb.org/?section=resource&resourceid=1116891499&currentIndex=0&view=fullDetailsDetailsTab	102
Figure 62 War Memorial, Rochester N.Y. Monroe County Library System, Rochester Municipal Archives, accessed December 14, 2018, https://catalogplus.libraryweb.org/?section=resource&resourceid=1117023429&currentIndex=3&view=fullDetailsDetailsTab	103
Figure 63 Civic Center Plan, from: “Civic Center: Rochester, New York,” 1956, http://mcnygenealogy.com/book/civic-center-1956.pdf pg 3.....	104
Figure 64 Cover Page from “Midtown Plaza: The New Business Center of Downtown Rochester, New York.”.....	106
Figure 65 No title, from: Daniel J. Palmer, Rochester’s Downtown Architecture: 1950-1975 (Charleston, SC: Arcadia Publishing, 2010). Pg. 46.....	109
Figure 66 No title, from: “Unloading Day,” Democrat & Chronicle, May 22, 1977.	111

Figure 67 Zoning Diagram, Google Earth Imagery with diagram drawn by Author.	114
Figure 68 Illustration by Author.	115
Figure 69 Illustration by Author.	115
Figure 70 Google Image Underlay, Illustration by Author.	116
Figure 71 Illustration by Author.	117
Figure 72 Illustration by Author.	117
Figure 73 Google Image Underlay, Illustration by Author.	118
Figure 74 Google Image Underlay, Illustration by Author.	118
Figure 75 Google Image Underlay, Illustration by Author.	119
Figure 76 Google Image Underlay, Illustration by Author.	119
Figure 77 Google Image Underlay, Illustration by Author.	120
Figure 78 Illustration by Author.	120
Figure 79 Google Image Underlay, Illustration by Author.	121
Figure 80 Google Image Underlay, Illustration by Author.	122
Figure 81 Google Image Underlay, Illustration by Author.	122
Figure 82 Google Image Underlay, Illustration by Author.	123
Figure 83 Google Image Underlay, Illustration by Author.	124
Figure 84 Google Image Underlay, Illustration by Author.	124
Figure 85 Illustration by Author.	125
Figure 86 Illustration by Author.	125
Figure 87 Illustration by Author.	125
Figure 89 Illustration by Author.	126
Figure 88 Google Image Underlay, Illustration by Author.	126
Figure 90 Illustration by Author.	127
Figure 91 Illustration by Author.	127

Chapter 1: Introduction

Eastman Kodak. Xerox. Bausch and Lomb. Wegmans. Each company made its start in the mid-size upstate New York city of Rochester. While these businesses may define Rochester's economy, industrial ingenuity, and job market, the physical city better resembles its famed dish, the garbage plate. Invented in 1918, this unique mixture of home fries, macaroni salad, hamburgers or hotdogs, doused in ketchup, meat sauce, and hot sauce is visually un-appealing though made up of individually appetizing ingredients. Rochester, too, is composed of various ingredients: thriving technology industries, a world-class health care system, and a prestigious music and arts scene. However, like the garbage plate, the city's unique qualities, history and architecture are not cohesively expressed and experienced. The lack of a defined and active city center has promoted a segmented city, which has further decentralized with the mid-20th century shift in population to the suburbs. As the city begins to see an increase in population back downtown, there is an opportunity to redefine the center city by focusing on an abandoned structure that has been a void in the heart of downtown since the mid-1950s: The Broad Street bridge.

Listed in the National Register of Historic Places as the Erie Canal: Second Genesee Aqueduct, the structure once carried the Erie Canal through the heart of the city before it was abandoned and reused for the city's subway system. Since the closure of the subway in 1956, the multi-layered bridge and aqueduct now carries vehicular and pedestrian traffic along the top of the structure, while the old subway and Erie Canal bed remain vacant. Prominently located in the center of the city,

extending across the Genesee River to connect the bisected city, the abandoned Broad Street bridge and aqueduct is an architectural and engineering gem that should be adaptively reused and celebrated for its role in Rochester's transportation history.

Rochester, once a thriving boomtown in the 19th century, has suffered the fate of many other mid-size cities due to the popularity of the automobile, rapid development of suburbia, and the notion of individualism and the "American Dream." As Rochesterians vacated the city for individual homes and accompanying yards, they left behind a charming city with a wide variety of historic structures and architectural styles. Though a sizeable amount of the city's architecture was demolished to make way for taller office buildings, superblock developments, and parking lots in the era of urban renewal, a healthy portion of historic 19th and 20th century architecture still exists in the city. As national trends in urban living have created a resurgence in downtown population, many historic structures are being adaptively reused for new residential living spaces. However, developers are filling in vacant buildings with residential units and therefore ignoring the need to create an active street presence downtown. While the increase in population is beneficial for the city, the lack of developing a retail environment and creating public park or plaza space will lead to a lifeless downtown.

The Broad Street bridge and aqueduct has transformed, shaped and attributed to life in downtown Rochester since the 1840s. By responding to the need to fill a void in the heart of downtown while also developing a mixed-use commercial and public space for Rochesterians, adaptively reusing the structure will spur the city's

revitalization efforts. The transformation and programming of this historic structure will allow the bridge to continue to define Rochester's identity in the 21st century.

This thesis will explore the history of the Broad Street bridge and aqueduct, looking at its uses throughout the course of Rochester's history and a variety of proposals made to either reuse or demolish the structure since the closing of the Erie Canal. The history of the structure will be placed in context of the city's history to explain the growth, expansion and decentralization of the city. Additionally, this thesis will explore and investigate the role of adaptive reuse in urban revitalization. Ultimately, this thesis will present a new opportunity for the Broad Street bridge and aqueduct as one system that can be plugged into the current city plans focusing on revitalizing and activating the Genesee River as a means to transform the character of Rochester.

Chapter 2: A Brief Overview of Rochester, NY

The creation of the Genesee valley and gorge is a product of the Cenozoic Era in which a melting glacier and north-flowing river cut into the Lockport dolomite outcrop (limestone) and created the region in which the city of Rochester resides today. Named Genesee, or “pleasant valley” by the Native Americans, the Genesee River and its three cataracts sponsored the ideal site for a mill town.¹ While early attempts to develop mills on the site were unsuccessful, by the 1810s the beginning of the city developed from small tracts of land sold to ambitious men. The fate of the mill town was sealed with the determined course of the Erie Canal running through the heart of the village in 1825. This chapter will briefly explain the history of the city in three categories corresponding to the three nicknames of Rochester.

The Young Lion of the West

In 1788, land speculator Oliver Phelps from New England negotiated with a Seneca tribe for 2.6 million acres of land in Buffalo Creek. The negotiations led to the

¹ Blake McKelvey, “Historic Origins,” in *Rochester on the Genesee: The Growth of a City*, Second Edition (Syracuse, NY: Syracuse University Press, 1993); Thomas X. Grasso, “Geology and Industrial History of the Rochester Gorge Part One,” *Rochester History* 54, no. 4 (Fall 1992).



Figure 1 Map of Phelps and Gorham Purchase 1790, second survey, Monroe County Library System, Rochester Municipal Archives, accessed December 14, 2018,

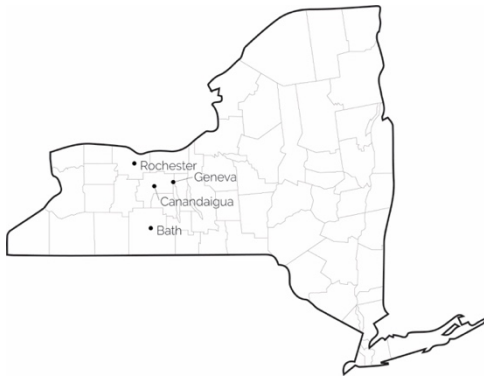


Figure 2 Diagram by Author.

addition of 200,000 acres to be used to develop a mill site for the Senecas to use. The negotiations, translated by Ebenezer “Indian” Allan, a frontiersman, resulted in Allan being given the title of a 100-acre tract west of the Genesee River to build a gristmill and sawmill.²

Mill construction began in 1789, with the mills being completed in late 1790 or early 1791. Utilizing the natural raceway on the west side of the river, the mills were to be used by settlers in the area and the Senecas. However, the closest inhabitants, other than Allan’s family, were more than two hours traveling distance.³ Additionally, towns like Canandaigua, Bath, and Geneva were better promoted due to their connections to east and west trade routes, versus the Genesee

² Blake McKelvey and Ruth Rosenberg-Naparsteck, *Rochester: A Panoramic History* (Sun Valley, CA: American Historical Press, 2001).; Blake McKelvey, “Historic Origins,” in *Rochester on the Genesee: The Growth of a City*, Second Edition (Syracuse, NY: Syracuse University Press, 1993); Blake McKelvey, “Indian Allan’s Mills,” *Rochester History* 1, no. 4 (October 1939).; Blake McKelvey, “A Sesquicentennial Review of Rochester’s History,” *Rochester History* 24, no. 3 (July 1962).; Edmond M. Beame, “Rochester’s Flour-Milling Industry in Pre-Canal Days,” *The Business History Review* 31, no. 2 (Summer 1957): accessed October 24, 2018.; Blake McKelvey, “The Population of Rochester,” *Rochester History* 12, no. 4 (October 1950).

³ Edmond M. Beame, “Rochester’s Flour-Milling Industry in Pre-Canal Days,” *The Business History Review* 31, no. 2 (Summer 1957): accessed October 24, 2018.



Figure 3 Site of Allan's Mills on the One Hundred Acre Tract, from: Blake McKelvey and Ruth Rosenberg-Naparsteck, *Rochester: A Panoramic History* (Sun Valley, CA: American Historical Press, 2001). Page 19.

mill site's northern trade route. By 1791, Allan left his mills in the care of his brother-in-law, Christopher Dugan, in pursuit of travelling further west.⁴

Development of the 100-acre tract was minimal after the initial building of the mills. The lack of inhabitants around the mill site and



Figure 4 Rochester Map, 1817, A Town Square: *Conversations About Where We Live*, accessed November 13, 2018, <https://heckeranddecker.wordpress.com/tag/blocks-and-streets/>.

poor promotional efforts led to the sites' abandonment. It was not until 1803 when three land speculators from Hagerstown, Maryland decided to purchase the 100-acre tract for \$17.50 per acre.⁵ Charles Carroll, William Fitzhugh and Colonel Nathaniel Rochester envisioned a developed mill site, but only Rochester returned to the site in 1810.⁶

Beginning in 1811, Colonel Rochester laid out the new town to be called Rochesterville in a gridiron layout similar to Baltimore and

⁴ Blake McKelvey, "Historic Origins," in *Rochester on the Genesee: The Growth of a City*, Second Edition (Syracuse, NY: Syracuse University Press, 1993); Blake McKelvey, "Indian Allan's Mills," *Rochester History* 1, no. 4 (October 1939).; Blake McKelvey and Ruth Rosenberg-Naparsteck, *Rochester: A Panoramic History* (Sun Valley, CA: American Historical Press, 2001).

⁵ Ibid.

⁶ Ibid.; Blake McKelvey., "The Physical Growth of Rochester," *Rochester History* 13, no. 4 (October 1951); Blake McKelvey, "A Sesquicentennial Review of Rochester's History," *Rochester History* 24, no. 3 (July 1962).; Edmond M. Beame, "Rochester's Flour-Milling Industry in Pre-Canal Days," *The Business History Review* 31, no. 2 (Summer 1957): accessed October 24, 2018.; Blake McKelvey, "The Population of Rochester," *Rochester History* 12, no. 4 (October 1950).



Figure 5 Map of Village of Frankfort, New York, Monroe County Library System, Rochester Municipal Archives, accessed December 14, 2018, <https://catalogplus.libraryweb.org/?section=resource&resourceid=1115904430¤tIndex=0&view=fullDetailsDetailsTab>.

Philadelphia. A major east-west street, Buffalo Street, measured six rods wide. Extending towards Buffalo to the west and towards the town of Pittsford to the east, Buffalo Street became the major commercial thoroughfare of the



Figure 6 From: Marjorie Wickes and Tim O'Connell. "The Legacy of Frederick Law Olmsted." *Rochester History* 50, no. 2 (April 1988). http://www.rochester.lib.ny.us/~rochhist/v50_1988/v50i2.pdf.

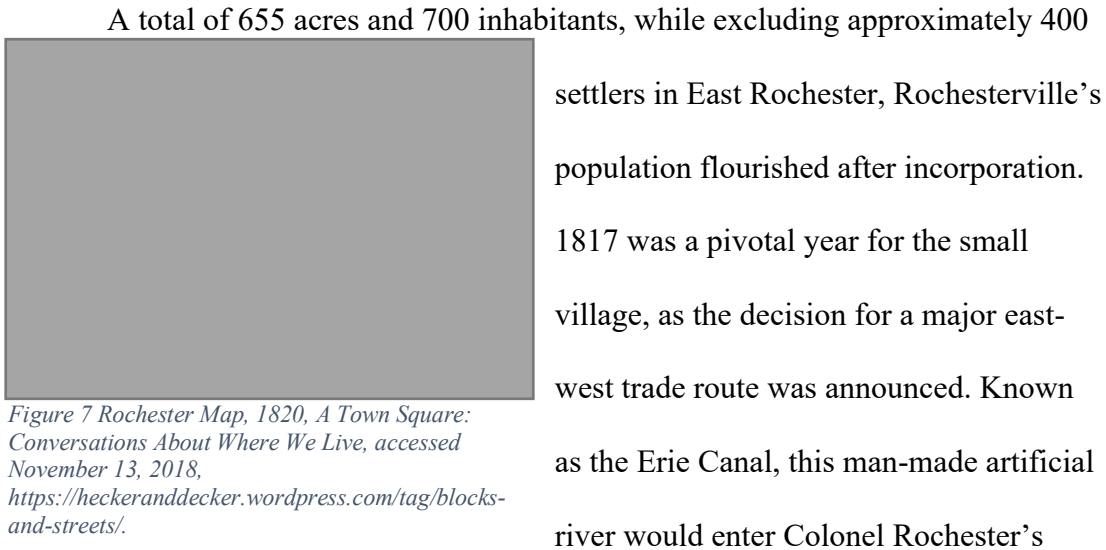
Genesee site. Once the street crossed the Genesee, the street name changed to Main Street.⁷

Simultaneously developing alongside Colonel Rochester's tract was the 200-acre tract known as Frankfort to the north, and the 80-acre tract known as East Rochester on the east side of the Genesee River.⁸ Both tracts were cognizant of Colonel Rochester's plan, developing off of Buffalo and Main Streets with separate gridiron layouts. Frankfort, which formerly incorporated with the 100-

⁷ Blake McKelvey, "The Physical Growth of Rochester," *Rochester History* 13, no. 4 (October 1951); Blake McKelvey, "Historic Origins," in *Rochester on the Genesee: The Growth of a City*, Second Edition (Syracuse, NY: Syracuse University Press, 1993); Blake McKelvey, "Rochester in Retrospect and Prospect," *Rochester History* 23, no. 3 (July 1961).; Blake McKelvey, "Rochester's 125th Birthday," *Rochester History* 21, no. 2 (April 1959).

⁸ Blake McKelvey, "Historic Origins," in *Rochester on the Genesee: The Growth of a City*, Second Edition (Syracuse, NY: Syracuse University Press, 1993).

acre tract in March of 1817 when the tracts became the village of Rochesterville, housed multiple mills and industrial factories, becoming the town's industrial neighborhood.⁹ East Rochester, purchased in 1816, would not be incorporated into Rochesterville until 1821, when Monroe County was created and encapsulated both sides of the Genesee River.¹⁰



100-acre tract and, over the course of ten years, expand the growth of the village's population by 804%.¹¹

⁹Edmond M. Beame, "Rochester's Flour-Milling Industry in Pre-Canal Days," *The Business History Review* 31, no. 2 (Summer 1957): accessed October 24, 2018.; Ruth Rosenberg-Naparsteck, "Frankfort: Birthplace of Rochester's Industry," *Rochester History* 50, no. 3 (July 1988).

¹⁰I Dexter Perkins and Blake McKelvey, "Touring Backwards: A Visit to Rochester in 1818, and Again in 1838," *Rochester History* 2, no. 1 (January 1940).; Blake McKelvey, "'Canaltown', A Focus on Historical Traditions," *Rochester History* 37, no. 2 (April 1975).; Blake McKelvey, "'Canaltown', A Focus on Historical Traditions," *Rochester History* 37, no. 2 (April 1975).

¹¹Blake McKelvey, "Rochester's 125th Birthday," *Rochester History* 21, no. 2 (April 1959).; Blake McKelvey, "Rochester in Retrospect and Prospect," *Rochester History* 23, no. 3 (July 1961).; Blake McKelvey, "The Population of Rochester," *Rochester History* 12, no. 4 (October 1950).; Blake McKelvey, "A Sesquicentennial Review of Rochester's History," *Rochester History* 24, no. 3 (July 1962).; Blake McKelvey., "The Physical Growth of Rochester," *Rochester History* 13, no. 4 (October 1951); Blake McKelvey, "Sesquicentennial of Rochesterville," *Rochester History* 29, no. 3 (June 1967).

In 1808, surveyor James Geddes began charting the route of the Erie Canal to extend from the state capital of Albany to the western New York city of Buffalo.¹²

However, the canal was not a method to connect two cities across the state, but the



bodies of water the cities were built upon, therefore creating a faster form of transportation between Lake Erie and the Hudson River, and ultimately the Atlantic Ocean.

Figure 8 New York : [with] Profile of the Champlain Canal from Lake Champlain to the Hudson River [and] Profile of levels of the Grand [i.e. Erie] Canal. (pub. by New York State, Albany, 1825), The Erie Canal, accessed December 14, 2018, <http://www.eriecanal.org>

Once again, Geddes surveyed New York State, finding the best route for this new canal in 1816. Based on geological contours along and not the development of villages, the canal was brought directly through Rochesterville.¹³ By July 4th, 1817, the Erie Canal broke ground in Rome, New York with workers digging in both directions.¹⁴

¹² Blake McKelvey, "Rochester and the Erie Canal," *Rochester History* 11, no. 3 & 4 (July & October 1949).

¹³ Blake McKelvey, "A Panoramic Review of Rochester's History," *Rochester History* 11, no. 2 (April 1949).; Thomas X. Grasso, "Geology and Industrial History of the Rochester Gorge Part One," *Rochester History* 54, no. 4 (Fall 1992).

¹⁴ Deborah Williams, *The Erie Canal: Exploring New York's Great Canals, Includes Oswego, Cayuga-Seneca & Champlain Canals*, (Woodstock, VA: The Countryman Press, 2009).; Blake McKelvey, "Rochester and the Erie Canal," *Rochester History* 11, no. 3 & 4 (July & October 1949).; Thomas X. Grasso, "The Erie Canal and Rochester: Past, Present, and Future," *Rochester History* 72, no. 1 (Spring 2010).

As the canal crept closer to Rochester in the early 1820s, a structure would need to be built to carry the Erie over the Genesee. Explored further in the next chapter, the Erie Canal aqueduct was created, extending across the river, carrying the artificial waterway into the village. The canal now able to extend across the Genesee River, officially opened in 1825 with an extensive ceremony starting in Buffalo.¹⁵ On October 26th, Governor Clinton boarded a packet at 10:20 AM, reaching Rochester on October 27th where local Rochesterians waited and celebrated his arrival. Another packet boat filled with Rochesterville politicians, called the *Young Lion of the West*, the thriving mill town's nickname at the time, continued with Governor Clinton on his journey to New York City. The Governor and the *Young Lion of the West*, which carried barrels of flour and other locally produced goods, reached New York on November 4th.¹⁶

The Flour City

The 363-mile-long canal placed Rochesterville on the map as an important commercial trade hub.¹⁷ The success of the Erie Canal, decreasing transportation

¹⁵ *National Register of Historic Preservation Nomination: The Second Genesee Aqueduct, Monroe County, New York*. 1976.; Blake McKelvey, "Rochester and the Erie Canal," *Rochester History* 11, no. 3 & 4 (July & October 1949).; Rochester Economic Development Corporation, *Reuse Feasibility Study for the Broad Street Aqueduct*, prepared by William Rawn Associates, Architects, Inc., LaBella Associates, PC, and Real Estate Enterprises, Inc. (September 1994).

¹⁶ Blake McKelvey, "Rochester and the Erie Canal," *Rochester History* 11, no. 3 & 4 (July & October 1949).; Thomas X. Grasso, "The Erie Canal and Rochester: Past, Present, and Future," *Rochester History* 72, no. 1 (Spring 2010).

¹⁷ Thomas X. Grasso, "The Erie Canal and Rochester: Past, Present, and Future," *Rochester History* 72, no. 1 (Spring 2010).; Blake McKelvey, "Rochester and the Erie Canal," *Rochester History* 11, no. 3 & 4 (July & October 1949).

costs by 90%, opened up new markets to the thriving mill town. The small village



Figure 9 Valentine Gill, Jonathon Child, and John F. Morin. *Map of Rochester from a correct survey*. Library of Congress, accessed December 14, 2018, <https://www.loc.gov/item/2003623826/>.

became America's first boom town, and experienced a buildup of various industries, most notably flour.¹⁸ The decrease in transportation costs combined with the three millraces harnessing the power of the Genesee, led to Rochester's success as an

industrial city, known as the "Flour City." Starting with one gristmill in 1789, Rochester grew to twenty mills by 1851, with the ability to produce 561,818 barrels of flour annually.¹⁹ The development of the Erie Canal in the 1800s completely transformed the economy of New York, spurring the development villages and cities along the canal and influencing the building of canals in other states.

Prior to the digging of the Erie Canal through Rochesterville in the 1820s, the only waterways that defined the village pattern was the Genesee River and the millraces built for industry. Once the canal was completed, a series of slips and basins developed along the canal as it entered Rochester, creating areas for packet boats to load and unload goods and for products to be traded. Boat, lumber, and mill yards

¹⁸Thomas X. Grasso, "Geology and Industrial History of the Rochester Gorge Part One," *Rochester History* 54, no. 4 (Fall 1992).; Edmond M. Beame, "Rochester's Flour-Milling Industry in Pre-Canal Days," *The Business History Review* 31, no. 2 (Summer 1957): accessed October 24, 2018.

¹⁹ Ruth Rosenberg-Naparsteck, "Frankfort: Birthplace of Rochester's Industry," *Rochester History* 50, no. 3 (July 1988).

additionally utilized these basins. Child's Basin, located north of the canal just after it crosses to the west via the aqueduct, became the most popular boating dock in Rochester. Due to Child's Basin's popularity, a series of stores and exchange houses were erected between Mill Street (Exchange Street) and the basin, while mills bordered the east side. Bridges were additionally created to carry roads across the canal, while buildings built up to the edges of the towpath. Known as "Canaltown," the southwest quadrant of the city became a bustling sector of the mill town. The canal sponsored growth and development of hotels, mills, warehouses, shops and residences, therefore densifying current blocks and expanding the village beyond its 1810s borders.

In addition to the expansion and growth of the city and its population, the Erie Canal connected Rochester to new markets. The Flour City's chief export had made its way to England, becoming Queen Victoria's favorite flour used in cakes. In 1844, the Queen ordered 6,000 barrels of flour for her kitchens, which were sent to London by way of the Erie Canal.²⁰ Although Rochester had other prosperous industries producing goods like edge tools, machinery, cloth, furniture, and boats, flour remained the city's chief export, becoming a recognizable export of the city.

The Erie Canal sparked growth and development, leading to the incorporation of Rochester as a city in 1834. Growing from a humble mill town, Rochester developed into a boom town with the digging of the Erie Canal through the heart of the city. The canal *made* Rochester, defining it as a unique village on the canal's

²⁰ Thomas X. Grasso, "The Erie Canal and Rochester: Past, Present, and Future," *Rochester History* 72, no. 1 (Spring 2010).; Deborah Williams, *The Erie Canal: Exploring New York's Great Canals, Includes Oswego, Cayuga-Seneca & Champlain Canals*, (Woodstock, VA: The Countryman Press, 2009).

route filled with many industries and products. Rochester's urban pattern that developed in the early 1800s as a result of independent entrepreneurs' efforts to harness the power of the Genesee, is still evident today. However, the Erie Canal no longer defined the character of downtown by 1920 when the State of New York decided to create a larger barge canal, rerouting the Erie south of the city.

The Flower City

Around 1888, Frederick Law Olmsted, Sr. declared "some day persons will make it a point to stop off at Rochester to visit your parks."²¹ At this point in time Rochester recently established its Park Commission, a twenty-person committee which tasked Frederick Law Olmsted, Sr. to assist Rochester in developing a park system. This new park system, consisting of three major parks throughout the city: Highland, Genesee Valley and Seneca Parks (originally included Maplewood Park); fulfilled Olmsted's prediction by the early 1900s as Rochester transitioned from the Flour City to the Flower City.²²

Following the larger trend in beautifying cities, as well as the newly developed Niagara Falls tourist attraction, Rochester seized the opportunity to legitimize its landscape and emphasize its beauty. Prior to the acceptance of plans for the cities three newest parks, Rochesterians, like most other Americans, enjoyed picnicking and walking within the city's cemetery. Known as Mt. Hope Cemetery,

²¹ Marjorie Wickes and Tim O'Connell. "The Legacy of Frederick Law Olmsted." Rochester History 50, no. 2 (April 1988). http://www.rochester.lib.ny.us/~rochhist/v50_1988/v50i2.pdf. pg. 4

²² Blake McKelvey, "Historic Origins," in *Rochester on the Genesee: The Growth of a City*, Second Edition (Syracuse, NY: Syracuse University Press, 1993); Marjorie Wickes and Tim O'Connell. "The Legacy of Frederick Law Olmsted." Rochester History 50, no. 2 (April 1988). http://www.rochester.lib.ny.us/~rochhist/v50_1988/v50i2.pdf.

the Mt. Hope Nurseries was located nearby, further providing citizens with a park-like environment. The transition into the creation of parks for citizens to enjoy in the late 1880s, followed the creation of the Park Commission on April 27, 1888 as well as the commissions' visit to Buffalo, New York to witness the design work of Frederick Law Olmsted, Sr. and Calvert Vaux.²³

After hiring the infamous landscape architecture duo, Rochester's landscape slowly transformed into the Flower City. Olmsted Sr.'s three major parks, Highland. Genesee Valley and Seneca Parks, followed his design principles of incorporating trees and shrubs, water, and grass together to create a natural landscape. Adding to Olmsted's design, multiple donors and commission members insisted on the creation of pavilions or other buildings bearing their names. In Highland Park, which holds the Mt. Hope reservoir, \$20,000 was donated for the construction of a greenhouse to memorialize Alexander B. Lamberton, who was president of the Board of Park Commissioners between 1902 and 1918.²⁴

Although the Lamberton Conservatory was not part of Olmsted's design, the Genesee Valley Park mostly carries Olmsted's vision of tranquil meadows on the east side of the river and recreational function on the west, despite the intrusion of the Barge Canal in the early 1910s and later Interstate 390. Seneca Park, located along the Genesee River north of the central city, additionally featured a natural landscape,

²³ Ibid.

²⁴ Marjorie Wickes and Tim O'Connell. "The Legacy of Frederick Law Olmsted." Rochester History 50, no. 2 (April 1988). http://www.rochester.lib.ny.us/~rochhist/v50_1988/v50i2.pdf.

utilizing the Genesee as an amenity and allowing for recreation, including the creation of the Seneca Park Zoo, within the park.²⁵



Figure 10 Current City of Rochester Logo. Illustration by Author.

Beyond Olmsted's contributions to developing a park system and emphasizing the city's natural beauty, Rochester's transformation towards the Flower City was mostly due to the growing nursery trade within the city. Leaders in this industry included George Ellwanger and Patrick Barry, two key players in the donation of land to the Park Commission to develop parks for Rochesterians. For a time, Ellwanger, Barry, Joseph Harris, and James Vick adamantly advanced Rochester's horticultural scene to become the leading nursery center in America.²⁶ An 1859 brochure, written by Henry O'Reilly, entitled "The Greatest Nursery in the World," first gifted Rochester the moniker of the Flower City.

Conclusion

Still known as the Flower City today with its annual Lilac Festival hosted in Olmsted's Highland Park, Rochester prides itself in its beauty, character, and history. Over the course of the 19th and 20th centuries, Rochester rapidly transformed from a humble town with a few mills, to a booming city with a wide variety of innovative and technologically based industries. One piece of infrastructure, located in the heart

²⁵ Ibid.; Blake McKelvey, "Historic Origins," in *Rochester on the Genesee: The Growth of a City*, Second Edition (Syracuse, NY: Syracuse University Press, 1993)

²⁶ Blake McKelvey, "Historic Origins," in *Rochester on the Genesee: The Growth of a City*, Second Edition (Syracuse, NY: Syracuse University Press, 1993) pg. 68.

of downtown Rochester, best showcases Rochester's transformation over these two centuries through its design evolution.

Chapter 3: The Second Genesee Aqueduct

The Second Genesee Aqueduct, more popularly known as the Broad Street bridge, is a unique, historic structure in the heart of the central business district. The structure, built over the course of two centuries, displays two versions of Rochester's transportation history. A multi-layered structure, the base of the bridge is a 1840s canal aqueduct, while the top portion is a 1920s vehicular bridge, capping four railroad tracks placed in the original canal bed. Showcasing both 19th and 20th century transportation methods in Rochester, the historic bridge and aqueduct has a complex future, which remains unsolved today.

The First (and Second) Aqueduct

James Geddes' survey of Rochesterville in 1816, called for the damming of the Genesee to allow for the Erie Canal to cross the river. However, a disastrous flood in November of 1817 as a result of a milldam failure, proved the need for a new type of structure to carry the canal.²⁷ If Governor DeWitt Clinton's ditch was going to continue westward, an aqueduct would be necessary to cross the mighty Genesee. The Canal Commission, which already oversaw the development of three aqueducts for the Erie Canal, approved the creation of a fourth and final aqueduct in Rochesterville.²⁸

In June of 1821, the positioning of a stone aqueduct, 80 rods south of present-day Main Street bridge, was determined, channeling the Erie Canal into the heart of

²⁷ Ibid.

²⁸ Ibid.; *National Register of Historic Preservation Nomination: The Second Genesee Aqueduct, Monroe County, New York*. 1976.

the village.²⁹ This aqueduct, to be made of sandstone, was to be built by contractor William Britton. Britton, who had previously finished building the New York State prison in Auburn, brought 28 convicts with him to build the aqueduct. Beginning in



Figure 11 Everard Peck. Plan of the first aqueduct carrying the Erie Canal over the Genesee River at Rochester, New York. Monroe County Library System, Rochester Municipal Archives, accessed December 14, 2018, <https://catalogplus.libraryweb.org/?section=resource&resourceid=111>

fall of 1821, a series of delays and mishaps prolonged the aqueduct's construction. First, the convicts had a habit of escaping from their housing, proving hard to recapture. Secondly, one of the arches extending across the

river that had been placed in the fall, was carried away by ice in the winter of 1821.

Lastly, the sudden death of Britton halted the construction of the structure.³⁰ By 1822, under a new builder the aqueduct's construction rapidly continued as the Erie Canal reached the eastern edge of the Genesee.³¹

Completed in September 1823, the red sandstone aqueduct cost the State \$83,000 to construct.³² Hailed as one of the "largest and finest examples of bridge masonry in the world," the aqueduct slowly began to leak by the 1830s.³³ The 802-foot structure with nine roman arches and two smaller arches flanking the ends, was

²⁹ Blake McKelvey, "Rochester and the Erie Canal," *Rochester History* 11, no. 3 & 4 (July & October 1949).

³⁰ Blake McKelvey, "Rochester and the Erie Canal," *Rochester History* 11, no. 3 & 4 (July & October 1949).; Joseph W. Barnes, "Historic Broad Street Bridge and the Erie Canal Sesquicentennial, 1825-1975," *Rochester History* 37, no. 3 (July 1975).

³¹ Ibid,

³² Blake McKelvey, "Rochester and the Erie Canal," *Rochester History* 11, no. 3 & 4 (July & October 1949).; Judy Adams, "Old aqueduct plaque found under Broad St bridge: A Memento of Erie Canal," *Times Union*, May 22, 1973.

³³ Blake McKelvey, "Rochester and the Erie Canal," *Rochester History* 11, no. 3 & 4 (July & October 1949).; Judy Adams, "Old aqueduct plaque found under Broad St bridge: A Memento of Erie Canal," *Times Union*, May 22, 1973.; Ruth Rosenberg-Naparsteck, "Rochester's History: A Sketchbook: Broad Street Bridge," *Times Union*, May 23, 1989.

not as sturdy as it appeared.³⁴ Additionally, the 17-foot wide trough, also known as a trunk or canal bed, only allowed for one-way traffic. The narrow channel, combined with the sharp right turn to cross the river, lead to traffic jams and disputes over the right of way of boats and packets.³⁵ While the aqueduct was temporarily reinforced with wooden timbers, the Canal Commissioners decided to build a new aqueduct in



Figure 12 Erie Canal Aqueduct, Rochester, N.Y. Monroe County Library System, Rochester Municipal Archives, accessed December 14, 2018, <https://catalogplus.libraryweb.org/?section=resource&resourceid=1116790146¤tIndex=2&view=fullDetailsDetailsTab>.

1837.³⁶

Proposals for the new aqueduct are seen as early as 1834, most notably by Holmes Hutchinson, an Erie Canal engineer. Hutchinson proposed six alternative plans, calling for various stone or wooden aqueduct structures, as well as a solution to create a

wooden trunk to fit within the existing structure.³⁷ Ultimately, a completely new structure, built with limestone was chosen. The gray, Onondaga limestone for the new structure, sourced from the Split Rock quarry outside of Syracuse, was shipped via the canal.³⁸ Designed by self-educated architect Nathan S. Roberts of Piles Grove,

³⁴ Judy Adams, "Old aqueduct plaque found under Broad St bridge: A Memento of Erie Canal," *Times Union*, May 22, 1973.; Blake McKelvey, "Rochester and the Erie Canal," *Rochester History* 11, no. 3 & 4 (July & October 1949).; Joseph W. Barnes, "Historic Broad Street Bridge and the Erie Canal Sesquicentennial, 1825-1975," *Rochester History* 37, no. 3 (July 1975).

³⁵ Thomas X. Grasso, "The Erie Canal and Rochester: Past, Present, and Future," *Rochester History* 72, no. 1 (Spring 2010).; Judy Adams, "Old aqueduct plaque found under Broad St bridge: A Memento of Erie Canal," *Times Union*, May 22, 1973.

³⁶ Dexter Perkins and Blake McKelvey, "Early Rochester Illustrated," *Rochester History* 5, no. 3 (July 1943).

³⁷ Joseph W. Barnes, "Historic Broad Street Bridge and the Erie Canal Sesquicentennial, 1825-1975," *Rochester History* 37, no. 3 (July 1975).

³⁸ *Ibid.*; *National Register of Historic Preservation Nomination: The Second Genesee Aqueduct, Monroe County, New York*. 1976.; Blake McKelvey, "Rochester and the Erie Canal," *Rochester*

NY, the new aqueduct extended 444 feet across the Genesee with seven roman arches. Including the abutments, the new aqueduct totaled 800 feet. Several improvements, beyond a leak-resistant aqueduct were designed into the new structure. The canal bed now measured 45 feet across, allowing for two-way traffic.

Additionally, the east side of the aqueduct was located slightly south of the first



aqueduct, eliminating the harsh ninety-degree angle turn.³⁹

Completed in 1842 the second aqueduct was officially opened on April 21st, just before the construction would be affected by the “Stop Law.”

Figure 13 Erie Canal Aqueduct, Rochester, N.Y. Monroe County Library System, Rochester Municipal Archives, accessed December 14, 2018, <https://catalogplus.libraryweb.org/?section=resource&resourceid=1115909858¤tIndex=4&view=fullDetailsDetailsTab>.

This law, enacted by the State, ended any canal construction at the end of April. Since the opening of the Erie

Canal in 1825, the village of Rochesterville dramatically expanded from a tiny milling village on the Genesee River, to a boomtown and popular trading post on the route of the Erie Canal. The Young Lion of the West, with a population of 700 in 1817, grew to 5,000 people when the canal opened in 1825. Rochesterville became the City of Rochester in 1834, with a total population of 12,252.⁴⁰ Between 1825 and

History 11, no. 3 & 4 (July & October 1949).; William Murphy, “New Look for Old Lady of Broad St.: Plan to Widen Span, Street Calls for Repair of Bridge Superstructure,” *Democrat & Chronicle*, July 14, 1957.

³⁹ Blake McKelvey, “Rochester and the Erie Canal,” *Rochester History* 11, no. 3 & 4 (July & October 1949).; Joseph W. Barnes, “Historic Broad Street Bridge and the Erie Canal Sesquicentennial, 1825-1975,” *Rochester History* 37, no. 3 (July 1975).; Blake McKelvey, “‘Canaltown’, A Focus on Historical Traditions,” *Rochester History* 37, no. 2 (April 1975).

⁴⁰ Thomas X. Grasso, “The Erie Canal and Rochester: Past, Present, and Future,” *Rochester History* 72, no. 1 (Spring 2010).

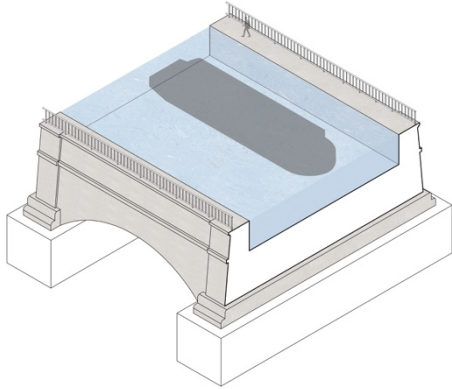


Figure 15 Illustration by Author.

1860, the population continued to grow on average of 1,000 people per year, totaling at 48,200 by 1860.⁴¹

Over the course of the 1850s and 1860s, the Erie Canal was widened to better compete with the railroads which offered the country a faster and

more convenient way to ship goods. To combat the transition from canal to rail,

Governor Theodore Roosevelt hoped to revitalize the usage of canals in New York



Figure 14 Albert R. Stone. Canal Bed. Monroe County Library System, Albert R. Stone Negative Collection, Rochester Museum & Science Center, accessed December 14, 2018, <https://catalogplus.libraryweb.org/?section=resource&resourceid=1115930011¤tIndex=5&view=fullDetailsDetailsTab>.

State by constructing the Barge Canal.

⁴² This new canal would improve not only the Erie Canal, but also the Oswego, Champlain, Seneca and Cayuga canals throughout the State.

Completed in 1918, the Barge Canal

varied between 120 to 200 feet wide, therefore larger barges than the previous New York State canals.⁴³

The new canal, which mostly followed the original Erie Canal path, was unable to

⁴¹ Ibid.; Joseph W. Barnes, "Historic Broad Street Bridge and the Erie Canal Sesquicentennial, 1825-1975," *Rochester History* 37, no. 3 (July 1975).

⁴² Ibid.; Deborah Williams, *The Erie Canal: Exploring New York's Great Canals, Includes Oswego, Cayuga-Seneca & Champlain Canals*, (Woodstock, VA: The Countryman Press, 2009).

⁴³ Ibid.

bypass the heart of Rochester. Instead, the canal was rerouted south of the city, going through Genesee Valley Park and crossing the Genesee River without an aqueduct.⁴⁴

The re-routing of the canal south of the city, therefore left Rochester with a ditch in the heart of downtown. Officially abandoned by the 1920 canal season, the city formally purchased the right-of-way from the state for \$1,500,000 in 1922.⁴⁵ In less than 100 years, the Erie Canal transformed a small village of 1,000 people into a growing, industrial city that no longer needed the canal to dictate its future. The memory of the canal left its mark on downtown Rochester after its abandonment in the form of an empty ditch, but due to the city's forward-thinking nature, the ditch was about to be transformed into a new form of transportation.

Broad Street Bridge and the Rochester Subway

The abandonment of the Erie Canal in various towns and cities across New York State led to the conversion of empty ditches into streets. However, the City of Rochester believed the ditch running through the heart of downtown could be used for a much more ambitious and pragmatic purpose. Other prosperous American cities, like New York, Chicago, and Boston, were developing subterranean rapid transit systems to improve street congestion. Rochester, too, experienced severe traffic

⁴⁴ Thomas X. Grasso, "The Erie Canal and Rochester: Past, Present, and Future," *Rochester History* 72, no. 1 (Spring 2010).

⁴⁵ Judy Adams, "Old aqueduct plaque found under Broad St bridge: A Memento of Erie Canal," *Times Union*, May 22, 1973.; *National Register of Historic Preservation Nomination: The Second Genesee Aqueduct, Monroe County, New York*. 1976.; Rochester Economic Development Corporation, *Reuse Feasibility Study for the Broad Street Aqueduct*, prepared by William Rawn Associates, Architects, Inc., LaBella Associates, PC, and Real Estate Enterprises, Inc. (September 1994).; Andrew Wolfe, "The Big Subway Puzzle: De Witt Clinton's Big Ditch Made Rochester, Almost Bankrupted City a Century Later," *Times Union*, August 7, 1950.



Figure 16 Albert R. Stone. Aqueduct with subway tracks. Monroe County Library System, Albert R. Stone Negative Collection, Rochester Museum & Science Center, accessed December 14, 2018, <https://catalogplus.libraryweb.org/?section=resource&resourceid=1116174395¤tIndex=3&view=fullDetailsDetailsTab>.



Figure 17 Albert R. Stone. Aqueduct's arches look like medieval cloister. Monroe County Library System, Albert R. Stone Negative Collection, Rochester Museum & Science Center, accessed December 14, 2018, <https://catalogplus.libraryweb.org/?section=resource&resourceid=1116184200¤tIndex=2&view=fullDetailsDetailsTab>.

congestion on its major thoroughfare, Main Street, due to its ever-growing population, the rising popularity of the personal automobile, as well as the abundance of interurban streetcars. These clunky streetcars often derailed, causing severe traffic congestion and delays. The abandoned ditch in the heart of downtown was seen as a half-dug subway system, ready for a new transportation purpose.

Instead of converting the aqueduct into a flower-decked promenade, the alternative proposal of utilizing both the aqueduct and canal bed for freight and passenger rail seemed a viable solution.⁴⁶ The abandoned Erie Canal comprised of three miles within the city and included

four locks; varying between 100 to 150 feet wide, the right-of-way could easily fit

⁴⁶ Blake McKelvey, "Rochester and the Erie Canal," *Rochester History* 11, no. 3 & 4 (July & October 1949).; "City's Plan for Using Old Erie Canal," *Times Union*, December 23, 1920.; "Parallel Thoroughfare to Main Street and Subway May Replace Canal Through Center of City: Tentative Plan for Scheme Announced by City Today," *Times Union*, December 23, 1920.

four rail tracks.⁴⁷ Two tracks would be used for freight, while the other two would be used by the interurban cars for passenger transportation. Costing close to \$10 million to develop the thirteen miles of industrial track and 8.3 miles of passenger track, the City of Rochester hoped the subway would foster further industrial development within the city.⁴⁸

Unlike other subway systems, the Rochester subway would only be underground on the west side of the Genesee River, for about one mile.⁴⁹ On top of the underground subway, a new street, named Broad Street developed. As the new street and subway approached the river, it extended over the aqueduct, effectively creating a multi-layered transportation viaduct.⁵⁰ Designed by City Planning Superintendent Edwin A. Fisher and Assistant City Engineer LeGrand Brown, the new Broad Street bridge that capped the aqueduct emulated the roman arches of the aqueduct structure below.⁵¹ Gradually inclining between Exchange St on the west

⁴⁷ "Subway Ordinance Presented Before the Common Council," *Times Union*, November 16, 1921

⁴⁸ Andrew Wolfe, "The Big Subway Puzzle: De Witt Clinton's Big Ditch Made Rochester, Almost Bankrupted City a Century Later," *Times Union*, August 7, 1950.; "Snyder Scores Mayor On Subway Development; Cost \$9,151,000, He Says: VanZandt Severely Criticised for Launching Project Without Assurance of Adequate Return, Democratic Candidate Says in Address to Rochester Banking Chapter," *Times Union*, October 16, 1925.; "Rochester Councilmen Vote to Hire Expert to Survey City's Subway Line: Ask R.T.C. To Continue Operation," *Syracuse Herald-American*, December 11, 1949.

⁴⁹ "'Digest' Tells Story of Local Subway Project: National Magazine Describes How Rochester Has Met Its Traffic Problem by Using Abandoned Canal Bed as Artery," *Times Union*, August 16, 1923

⁵⁰ "What the Subway Means to Rochester and Towns in Rapid Transit Zone; Article 2," *Post Express*, November 18, 1922; "What the Subway Means to Rochester and Towns in Rapid Transit Zone; Article 3," *Post Express*, November 20, 1922; "What the Subway Means to Rochester and Towns in Rapid Transit Zone; Article 2," *Post Express*, November 18, 1922; "Erie Canal Subway Plan Meets with Strong Support," *Times Union*, November 18, 1921; "'Digest' Tells Story of Local Subway Project: National Magazine Describes How Rochester Has Met Its Traffic Problem by Using Abandoned Canal Bed as Artery," *Times Union*, August 16, 1923; "Trolleys Whiz Where Canal Boats Used to Glide," *Democrat & Chronicle*, July 3, 1929

⁵¹ *National Register of Historic Preservation Nomination: The Second Genesee Aqueduct, Monroe County, New York*. 1976.; "Erie Canal Subway Plan Meets with Strong Support," *Times Union*, November 18, 1921.

towards the level of South Avenue on the east side of the river, the \$600,000 concrete superstructure gave the aqueduct a new transportation related purpose.⁵²

The new Broad Street bridge carried both Broad Street and the Rochester subway across the Genesee. The original canal bed, a total of 45 feet wide, would be

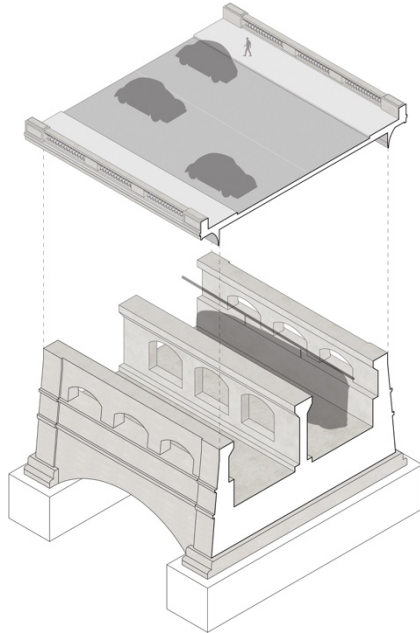


Figure 18 Illustration by Author.

further widened by cutting the stone walls of the canal's trunk, to allow for the four new rail lines.⁵³

Shy of 80 feet wide, the new concrete structure built on top of the aqueduct, overhanging 5 feet on either side of the aqueduct to allow for a 52-foot-wide right-of-way and 14-foot-wide sidewalks.⁵⁴

The bridge structure articulated the aqueduct's seven bays, however instead of repeating the 52-foot arches, a series of three roman arches per structural bay was designed.⁵⁵ Faced with

limestone to match the aqueduct, the new Broad Street bridge, a block south of Main Street, alleviated the city's congestion issues on two levels.⁵⁶

⁵² "What the Subway Means to Rochester and Towns in Rapid Transit Zone; Article 1," *Post Express*, November 17, 1922.; "Facts about Rochester's Subway Street and Industrial Railway." N.d.

⁵³ "Farsighted Vision Vindicated Today: Opening of Subway Street Marks Completion of Third Project Conceived by Public-Spirited Rochester Man Nearly Two Decades Ago -- Means Growth of City Comparable to That Canal Brought," *Times Union*, August 19, 1924; "What the Subway Means to Rochester and Towns in Rapid Transit Zone; Article 2," *Post Express*, November 18, 1922

⁵⁴ "Erie Canal Subway Plan Meets with Strong Support," *Times Union*, November 18, 1921; "Parallel Thoroughfare to Main Street and Subway May Replace Canal Through Center of City: Tentative Plan for Scheme Announced by City Today," *Times Union*, December 23, 1920.

⁵⁵ *National Register of Historic Preservation Nomination: The Second Genesee Aqueduct, Monroe County, New York*. 1976.

⁵⁶ *Ibid.*

Beyond a creative solution for the ditch left behind by the abandoned canal, there were two major objectives for the creation of the Rochester Subway. First, for industrial purposes to carry freight through the heart of downtown, thereby connecting the five rail lines in Rochester: New York Central, Baltimore and Ohio (previously the Buffalo, Rochester and Pittsburgh), Pennsylvania, Erie, and Lehigh Valley.⁵⁷ The connection of the Rochester subway to these railroads would offer industries a more efficient system to navigate products to desired markets, and also lead to the expansion of industrial uses along the new subway route. The second purpose was to get the interurban streetcars off the city streets in downtown. As the number of interurbans and automobiles increased on city streets, so did the number of accidents. The four interurban lines: Rochester and Syracuse; Rochester, Lockport and Buffalo; Rochester and Eastern; and Rochester and Sodus Bay; built between 1900 and 1910, were a nuisance for the city streets. The severe street level congestion combined with a horrendous streetcar accident in which an interurban car jumped its track, injuring six and killing one, hastened the pressure on the city to fix the problem.⁵⁸

⁵⁷ "Letters from Readers: Subway User Wants Local Trolley Service Retained," *Democrat & Chronicle*, June 22, 1932.; Paul Benton, "Rochester," *Times Union*, n.d.; "The Subway: Outmoded, Not Built for Local Passenger Service? -- Or a Priceless Asset the City is Throwing Away?" *Times Union*, June 21, 1956.; "Five Railroads Prepared to Co-Operate With City in Plans for Subway R.R.: Independent Corporation, the Rochester Terminal Railroad Corporation, To Control All Operations -- Subway Railroad Probably Completed Within Year and a Half," *Times Union*, April 10, 1925; "Handling of Freight in Subway Constitutes Big Problem For City: Plan Suggested Whereby City Would Lease Subway in Its Entirety to Association of Five Steam Railroads, Providing for Passenger Service by N.Y.S. Railways Under Contract With Leasing Assn.," *Times Union*, December 16, 1926.; "Rochester in Pictures," *Rochester Journal*, August 17, 1928.; Andrew David Lipman, "The Rochester Subway: Experiment in Municipal Rapid Transit," *Rochester History* 36, no. 2 (April 1974).

⁵⁸ Andrew David Lipman, "The Rochester Subway: Experiment in Municipal Rapid Transit," *Rochester History* 36, no. 2 (April 1974).; Arch Merrill, "Great Experiment: High Hopes, Fanfare Marked Start in 1922 Of Subway Building," *Democrat & Chronicle*, March 12, 1950.

Construction of the subway began on May 2nd, 1922 in the old Erie Canal ditch. The project, which received national attention in the August 18th, 1923 issue of *The Literary Digest*, was heralded as solution solving the issue of Clinton's ditch and Main Street traffic.⁵⁹ Throughout the early 1920s, multiple articles recalled the progress of the subway, often reiterating the ambition of the city to create such a project. One article, from the *Rochester Herald* in December of 1923, declared the project one of "Rochester's most pretentious engineering project[s]."⁶⁰ Furthermore, the article stated that 110 lineal feet of structure was being built per day by 400 men.⁶¹

While the subway gained national attention and was supported by many Rochesterians, the subway was also met with skepticism. Local journalist Livy S. Richard criticized the city's hastily planned subway in 1925. Though the subway was already undergoing construction, Richard pointed out that the city should have never begun construction on the subway system before properly handling the subway's operation. Continuously, by comparing the subway to the undergoing subway projects in New York City and Boston, Richard points out that these larger systems were both built because there was a demand. Rochester, due to its size and scale, as well as its distribution in population, according to Richard, does not warrant a subway system. Richard concludes that the subway "experience" strongly suggests the greater need for a comprehensive plan to guide the city's development.⁶²

⁵⁹ "'Digest' Tells Story of Local Subway Project: National Magazine Describes How Rochester Has Met Its Traffic Problem by Using Abandoned Canal Bed as Artery," *Times Union*, August 16, 1923.

⁶⁰ "Not Least of Interest in Subway Are Men Who Built It," *Rochester Herald*, December 2, 1923.

⁶¹ Ibid.

⁶² Livy S. Richard, "Looking Around," *Rochester Evening Journal*, June 11, 1925.; Livy S. Richard, "Looking Around," *Rochester Evening Journal*, May 24, 1925.

As referenced in Livy S. Richard's criticism regarding the poor planning of the subway, the question of who would control the subway remained unanswered leading up the project's completion in 1927. Additionally, one of the project's major objectives, to rid the streets of the large and dangerous interurban cars, was no longer a reality. Beginning in 1929, the Rochester and Sodus Bay interurban line closed, and never entered the subway. By 1931, all four interurban lines were closed.⁶³ While the interurban cars had limited use of the subway, the city finally agreed to an operating plan. Since the 1920s, the fight over who will operate the subway further prolonged the construction and opening of the system. Early promoters of the subway wished for city-control of the subway, allowing the city to have direct control and reap the benefits.⁶⁴ In April of 1925, newspapers reported an independent corporation, called the Rochester Terminal Railroad Corporation, to run the subway.⁶⁵ However, the New York Central Railroad refused to cooperate, arguing that the city does not know how to manage rail service while alternatively offering its service as the subway operator. It was decided in October of 1927 that the New York Central Railroad - later the Rochester Transit Corporation - would operate the subway with the city using a service-at-cost plan.⁶⁶

⁶³ Arch Merrill, "Great Experiment: High Hopes, Fanfare Marked Start in 1922 Of Subway Building," *Democrat & Chronicle*, March 12, 1950.

⁶⁴ "Municipal Operation of Subway," *Times Union*, July 30, 1923.; "Blast Shakes Old Tomes From Dusty Retreat: Early History of City Records Dislodged at City Hall as Result of Subway Explosions," *Times Union*, August 3, 1923.

⁶⁵ "Five Railroads Prepared to Co-Operate With City in Plans for Subway R.R.: Independent Corporation, the Rochester Terminal Railroad Corporation, To Control All Operations -- Subway Railroad Probably Completed Within Year and a Half," *Times Union*, April 10, 1925.

⁶⁶ "Trolleys Plan to Control Subway," *Rochester Evening Journal*, May 23, 1925.; "Argetsinger Not to Press Subway Idea: Motor Route Proposed Only as Alternative If Rail Deal Fails, He Says," *Democrat & Chronicle*, June 26, 1925.; "Subway Cars Under Service At Cost Plan: Argetsinger Intimates Satisfactory Agreement for Operation of Road Will Be Reached Soon With N.Y.S. Railways," *Times Union*, July 31, 1925.; "Three-Year Trial Period In Operating New Subway Wins Much

On December 1st, 1927, the first passenger train departed the Winton Road Station at 6:45 AM. Traveling east, the train arrived at City Hall by 7AM. John Legeer, the first passenger from Winton Station to City Hall, paid a total fare of nine cents.⁶⁷ Going an average speed of 22 miles per hour by 1948, the subway was seen as a more efficient way to navigate downtown.⁶⁸ However, since its opening, the subway became known as a white elephant, due to the city's lack of planning efforts to extend the subway.⁶⁹ Seen as a subway that "starts nowhere and ends nowhere," calls for extensions dominated the city's newspapers throughout the 1930s, '40s and '50s.⁷⁰ Multiple proposals existed with possible extensions to popular destinations like Kodak Park or Lake Ontario, and with the exception of ending the subway line at the General Motors Plant, the subway truly had no real destination.⁷¹

Commendation: Will Give City Opportunity to See Advantageous Features of Plan, Declaration of Officials: Mayor O'Neil Will Send Report and Recommendations to Council," *Democrat & Chronicle*, December 11, 1926.; "Council Refers Contract For Subway To Committees: Common Council Takes Action on Subway Contract: Contract Between City and N.Y. State Railways Is Referred to Law and Railroads Commit[t]ee -- Statements of Mayor and Com. Barnes," *Times Union*, October 26, 1927.

⁶⁷ "Subway Will Open: City's Development in Rapid Transit To Be Opened Officially With First Car Departing From Oak St. at 5:40," *Times Union*, November 30, 1927.; "City and Interurban Service Launched In Rochester's Subway: Submerged Tracks at Winton Road Station Delays Operation in Eastern Section -- Officials of Municipality Predict Taxpayers Will Benefit," *Times Union*, December 1, 1927.

⁶⁸ Bruce R. Holcomb, "Extend the Subway, Makes Buses Feed it Better, Young Reader Urges, Has Plan," *Democrat & Chronicle*, February 6, 1948.

⁶⁹ Andrew David Lipman, "The Rochester Subway: Experiment in Municipal Rapid Transit," *Rochester History* 36, no. 2 (April 1974).; "A White Elephant," *Rochester Journal-American*, May 27, 1932.; Paul Benton, "Rochester," *Times Union*, n.d.; Henry A. Shafer, "Letters: Use Subway More," *Democrat & Chronicle*, January 20, 1943.; "The Subway: Outmoded, Not Built for Local Passenger Service? -- Or a Priceless Asset the City is Throwing Away?" *Times Union*, June 21, 1956.;

"'Underground' Had Its Palmy Days, But Almost Always Lost Money," *Times Union*, June 21, 1956.; "Arch Merrill's History: Subway's Ill-Fated First Trip," *Democrat & Chronicle*, November 30, 1969.

⁷⁰ Andrew Wolfe, "The Big Subway Puzzle: Subway Struggled Through 30s But Seldom Got Out of Red," *Times Union*, August 8, 1950.; Calvin Mayne, "Lost Out to Highway: Old Rochester Subway Bears Lessons in Today's Transit-vs.-Auto Argument," *Times Union*, August 21, 1971.; "Arch Merrill's History: Subway's Ill-Fated First Trip," *Democrat & Chronicle*, November 30, 1969.

⁷¹ "Making the Subway Useful," *Democrat & Chronicle*, July 21, 1937.; Andrew Wolfe, "The Big Subway Puzzle: \$20,000 Report Leaves Future of Transit System Still Moot Question," *Times Union*, August 10, 1950.; "What the Subway Means to Rochester and Towns in Rapid Transit Zone; Article 1," *Post Express*, November 17, 1922.; Frank Dostal, "By Using Old Railroad Tracks: Our Subway

In the first year of operation, a total number of 1,469,381 passengers used the subway. The next year, 1,815,546 passengers boarded, and a net operating income of \$22,812 was reported. However, by 1933, only 593,749 Rochesterians used the subway.⁷² As early as 1932, four years after operation began, the subway was reported as “the most monumental example of LACK of foresight in local history.”⁷³ Even during its early days of conception, the subway was seen as a product of poor planning.⁷⁴ Numerous newspapers pointed out the continuous failure of the city and the subway’s operator to extend service in order to reach more Rochesterians. While Harold S. W. MacFarlin, Railways and Commerce Commissioner for the city, made continuous marketing efforts aimed at telling Rochesterians how much more efficient the subway is than a bus, as long as they are willing to walk several blocks to reach a station apart from these efforts, MacFarlin only made ornamental changes to the stations, including purchasing new (used) cars and installing picket fences at the City Hall Station.⁷⁵ Using the slogan “the Subway is the Fastway,” MacFarlin attempted to develop the subway into the major form of transportation for the city, a task no one achieved.⁷⁶

COULD Go Someplace!” *Democrat & Chronicle*, January 10, 1954.; Lloyd E. Klos, “A More Attractive Subway--5 Steps Suggested,” *Times Union*, March 16, 1954.

⁷² Bruce Mann, “Subway Aids City Planning: Speed Accented in Comparison with Buses,” *Times Union*, June 15, 1943.; Andrew Wolfe, “The Big Subway Puzzle: War’s Outbreak Adds to Confusion Over Continued Use of Rail Line,” *Times Union*, August 11, 1950.

⁷³ “A White Elephant,” *Rochester Journal-American*, May 27, 1932.

⁷⁴ “City Hall is Eager for Return of Mayor As Subway Pot Boils,” *Times Union*, June 6, 1926.

⁷⁵ “Beauty, Safety Combined In Subway Station Fence,” *Democrat & Chronicle*, August 1, 1940; Andrew David Lipman, “The Rochester Subway: Experiment in Municipal Rapid Transit,” *Rochester History* 36, no. 2 (April 1974).; Andrew Wolfe, “The Big Subway Puzzle: Subway Struggled Through 30s But Seldom Got Out of Red,” *Times Union*, August 8, 1950.; “C.C. Part recalled in Shift From Horse Car to Trolley,” *Times Union*, January 11, 1938.; Bruce Mann, “Subway Aids City Planning: Speed Accented in Comparison with Buses,” *Times Union*, June 15, 1943.

⁷⁶ Andrew Wolfe, “The Big Subway Puzzle: Subway Struggled Through 30s But Seldom Got Out of Red,” *Times Union*, August 8, 1950.

The dark green cars, formerly being used for the Geneva, Syracuse and Sodus Point interurban lines, briefly shuttled more passengers during World War II.⁷⁷ Between 1937 and 1949, ridership began to increase slightly. Drastically, in 1942, 2,586,432 passengers rode the subway, many of which headed to work at the General Motors Plant. Throughout the duration of the war, and slightly afterward, ridership dramatically increased, hitting its ultimate high in 1947 with 5,112,596 passengers.⁷⁸ The success and usage of the subway during World War II, led to the belief that the subway was finally fulfilling its purpose as Rochester's main form of transportation. However, in comparison to bus ridership, the subway was falling behind. The subway operator, Rochester Transit Corporation (RTC), began its complaints regarding the subway as hemorrhaging money out of the company. Threatening to end service as early as 1949, the city began to subsidize the company to allow for continued operation. With the beginning of the Korean War in 1950, the city believed it crucial to continue subway service, hoping that once again ridership would increase.⁷⁹ The city continued subsidizing RTC until December 31st, 1955, paying RTC a total of \$105,000 in the last 22 months of the subway's operation.⁸⁰ As of January 1st, 1956, the subway was just another memory.

Tremendous public support for the subway, calling for improved cars and stations, as well as needed extensions, littered Rochester's newspapers from the

⁷⁷ "C.C. Part recalled in Shift From Horse Car to Trolley," *Times Union*, January 11, 1938.

⁷⁸ "City Could Operate Subway Itself, But Best Plan Would Be Cooperation With Intelligent Transit Operation," *Democrat & Chronicle*, February 19, 1948.

⁷⁹ Andrew David Lipman, "The Rochester Subway: Experiment in Municipal Rapid Transit," *Rochester History* 36, no. 2 (April 1974).; Calvin Mayne, "Passenger Service to End Dec. 31, 1955," *Times Union*, September 11, 1954.; "The Subway: Outmoded, Not Built for Local Passenger Service? - Or a Priceless Asset the City is Throwing Away?" *Times Union*, June 21, 1956.

⁸⁰ Calvin Mayne, "Passenger Service to End Dec. 31, 1955," *Times Union*, September 11, 1954.

opening of the subway in 1927, all the way to the end in 1956. One repeat writer, Lloyd E. Klos of Irondequoit, continuously responded to the city's actions in handling the subway. Klos tackled the issue of improving the subway and its stations, arguing for better city cooperation with the Rochester Transit Corporation. Klos, as well as many other outraged Rochesterians, blamed the RTC for treating the subway as an "unwanted stepchild" by not updating the cars and stations, as well as not using the bus lines to feed and connect to the subway.⁸¹ Additionally, through better promotion, Klos believed the subway ridership could increase, leading him to team with Rochester Institute of Technology (RIT) photography graduate student, Vitaly V. Uzoff, in filming the subway in color as a promotional effort. In 1954, two years prior to the ultimate closure of the subway, Klos continued stressing the importance of utilizing and bettering the subway. Klos warned that the city needed "a facility to move people" versus more automobiles on city streets that will lead to a more congested downtown.⁸² Offering five steps to improve the subway, Klos' vision was to reverse "the beginning of a decentralizing trend" which would result in "a slowly dying downtown district unless something is done to halt it."⁸³ Despite Klos and other Rochesterians best efforts to save the subway, a new void emerged in the heart of downtown, but unlike its predecessor, it was hidden from view.

⁸¹ Lloyd E. Klos, "Popularizing Subway," *Democrat & Chronicle*, January 1, 1951.

⁸² "Would 'Benefit the Many': Auto Expressway Called Answer," *Times Union*, March 17, 1954.

⁸³ Lloyd E. Klos, "A More Attractive Subway--5 Steps Suggested," *Times Union*, March 16, 1954.; Lloyd E. Klos, "Popularizing Subway," *Democrat & Chronicle*, January 1, 1951.; Lloyd E. Klos, "As Readers See It: Subway's Role in City's Life to be Shown in Color Film," *Times Union*, May 16, 1950.; Lloyd Klos, "The Subway's Emergency Role," *Times Union*, April 1, 1954.; "'Underground' Had Its Palmy Days, But Almost Always Lost Money," *Times Union*, June 21, 1956.; Lloyd E. Klos, "As Readers See It: New GM Plant, Memorial to Boost Subway Loads," *Times Union*, March 20, 1950.

Void in the Heart of Downtown

Once again, the Erie Canal bed was abandoned. This time, however, the abandoned ditch was tucked away from Rochesterians' sight. The subway, overtime, was erased from local memory, the tunnels sealed off, and entrances and exits demolished. The only surviving reminder of Rochester's past is the Broad Street bridge. This structure, placed in a prominent position in the heart of downtown is a silent void in the city, waiting for the opportunity to be filled and transformed for a new purpose.

The closing of the subway in 1955, led to the conversion of the eastern portion into an expressway, known as I-490. The conversion of the eastern portion into a highway connects to the arterial highway, known as the Inner Loop, was justified because it saved many homes that could have been torn down for this new highway system.⁸⁴ Supporters of the conversion of the eastern leg of the canal into a highway, proclaimed how much farther advanced Rochester would become with a modernized transportation system.⁸⁵ Meanwhile, the remaining mile of the underground subway on the west side of the city served no function. Over the years, even beginning in the 1930s, ideas to transform the underground for a highway for automobiles or buses never caught on. By the 1970s, a plan to develop rapid transit in the form of a rail line, to be known as the Charlotte-Henrietta line, was proposed without being

⁸⁴ "Text of Reports By 2 Committees On Subway Future," *Times Union*, December 5, 1949.; Andrew Wolfe, "The Big Subway Puzzle: War's Outbreak Adds to Confusion Over Continued Use of Rail Line," *Times Union*, August 11, 1950.; "Would 'Benefit the Many': Auto Expressway Called Answer," *Times Union*, March 17, 1954.

⁸⁵ "Would 'Benefit the Many': Auto Expressway Called Answer," *Times Union*, March 17, 1954.

conducted.⁸⁶ The only purpose the subway served was to bring paper to the Gannett Building for its newspapers, a service that ended in 1997.⁸⁷

Though vacant since 1956, multiple changes to the Broad Street bridge were implemented. Prior to the subway closing, the handrails and 125 concrete spindles

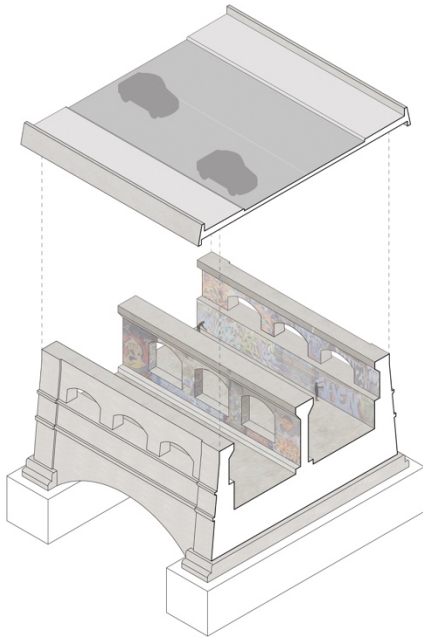


Figure 19 Illustration by Author.

were replaced.⁸⁸ After the closing of the subway, however, the bridge was modernized and widened to fit the city's need to accommodate for automobile traffic. The original balustrade was removed and replaced by aluminum railing, while the city began bidding for the repair work. Repairs included covering up the old subway ramp on the northside of Broad Street, adding 19 parking meters on the south side, new aluminum street lights, as well as widening and realigning the street

where subway kiosks previously were located -- these kiosks were also being removed. The contract additionally called for new bridge decking and concrete for the sidewalks. Completed in 1958, concrete on the Broad Street bridge began to crumble, leading to an additional \$10,000 of repair work during 1959 to the cracking sidewalks.⁸⁹

⁸⁶ Marsha Stanley, "Subway Transfer to Save \$3 Million for City," *Times Union*, January 15, 1974.

⁸⁷ Thomas X. Grasso, "The Erie Canal and Rochester: Past, Present, and Future," *Rochester History* 72, no. 1 (Spring 2010).; Rochester Economic Development Corporation, *Reuse Feasibility Study for the Broad Street Aqueduct*, prepared by William Rawn Associates, Architects, Inc., LaBella Associates, PC, and Real Estate Enterprises, Inc. (September 1994).

⁸⁸ "Modern Railing Planned for Broad St. Bridge," *Times Union*, December 7, 1955.; "Bridge Gets Beauty Treatment," *Times Union*, August 28, 1950.

⁸⁹ "Bridge Bids Sought for Broad Street," *Times Union*, June 21, 1957.; William Murphy, "New Look for Old Lady of Broad St.: Plan to Widen Span, Street Calls for Repair of Bridge Superstructure,"

Further repairs and alterations to the bridge were done in the 1970s and early 1990s. Beginning in February 1970, a 15-ton limit was placed on the bridge due to deterioration of the structure. The city then shortly began seeking bids for temporary repair work, including shoring up the bridge with steel between the old subway level and the street level.⁹⁰ Due to the need to repair the structure of the bridge and the high costs of a temporary shoring project, the project shifted towards reconstructing the bridge by replacing the street decking, widening the bridge to four lanes of traffic and two lanes of parking, and reducing the sidewalk width from 12 feet to 9 feet. Being rebuilt one lane at a time, the project cost \$3.2 million for widening and strengthening the structure. Opening in November 1974, the successful reinforcement of the bridge prepared the subway level for the Charlotte-Henrietta rail line that was never developed.⁹¹

The repairs and strengthening of the bridge were cited as necessary repairs needed due to heavy road salting. As these plans for rebuilding the bridge were being developed, a new design idea developed. In August 1972, New York City architect

Democrat & Chronicle, July 14, 1957.; "Why Bridge Job Delays?: Broad Street Work Slowed by Several Factors," *Times Union*, May 6, 1958.; Miles Cunningham, "Bridge Sidewalks Crumble: Surfaces on Broad Street Bridge Rebuilt in Last Two Years," *Times Union*, August 21, 1959.

⁹⁰"To Fix Broad Street Bridge: County Asked to Foot Bill," *Times Union*, August 4, 1970.; Kathy O'Toole, "Broad St. Bridge Plan Lags," *Democrat & Chronicle*, August 10, 1970.; "Broad St. Bridge Repairs Planned," *Times Union*, June 13, 1970.; Jack Garner, "Bridge Tieup Complicated," *Times Union*, June 14, 1971.

⁹¹ Gail Meadows, "138,863 Bridge Bid is Lowest," *Democrat & Chronicle*, September 18, 1971.; "Walks 'Unsqueezed'," *Democrat & Chronicle*, July 26, 1972.; "Cars OK but Pedestrians Will Detour City Bridge," *Democrat & Chronicle*, September 8, 1972.; "City Stamping Out Bridge Problems," *Democrat & Chronicle*, September 12, 1972.; "Rebuilding of Bridge Beginning," *Democrat & Chronicle*, October 31, 1972.; Jack Garner, "On Broad Street Bridge, Who's Crowding Whom?," *Times Union*, December 1, 1972.; "Bridge Work Shifts Lanes," *Democrat & Chronicle*, September 6, 1973.; Kevin Dilworth, "End Nearing on Latest Broad St. Bridge Facelift," *Democrat & Chronicle*, September 10, 1973.; "North Lanes to Open on Broad St Bridge," *Times Union*, September 17, 1973.; "Bridge Traffic Shift Delayed," *Times Union*, September 18, 1973.; "Broad Street Bridge Reopened," *Times Union*, November 19, 1974.; "After 2 Years of Rebuilding: Broad St. Bridge Open at Last," *Democrat & Chronicle*, November 20, 1974.

Robert Rotner advocated for using a porthole design, instead of arches, on the north and south elevations of the bridge. According to Rotner, a consultant on the project, the “arched openings on the second level now compete with the arched openings on the lower level.”⁹² Rotner further stated that the bridge looks like “a camel carrying a horse” and continued advocating that a porthole design would be a better design and cost less than the arches.⁹³ Ultimately, the Rochester Preservation Board stated that the arches should be retained in the strengthening repairs of the bridge, thereby preserving the original design intention.⁹⁴

Although the repair work was done in 1974, by 1977 further work to the bridge resolved sidewalk cracking. Earlier repairs done between 1972 to 1974 only placed 1½ inches of concrete on top of the sidewalks, rather than replacing the sidewalks entirely. Due to winter weather, water and improperly sealing the concrete, the cracking in the sidewalk worsened, leading towards the need to replace the sidewalks. Additionally, heavy salting on the roads seeped into the concrete decking and corroding the steel rebar. The entire roof of the subway tunnels underneath Broad Street were rebuilt and replaced as part of a \$5 million, Federally funded project.⁹⁵

Less than twenty years later, the bridge underwent another round of rehabilitation work. The work, completed by the local architecture and engineering firm, Bergmann Associates, focused on the upper deck by further widening the street and sidewalk of Broad Street. The \$1.75 million project, done in 1992, reconfigured

⁹² Dan Lovely, “Porthole Plan for Bridge Collapses,” *Democrat & Chronicle*, August 10, 1972.

⁹³ Ibid.

⁹⁴ Ibid.; W.D. Conklin, “The Great Bridge Debate,” *Democrat & Chronicle*, August 18, 1972.

⁹⁵ Jay Gallagher, “Traffic to Flow by End of Month: Broad St. Bridge to Open,” *Times Union*, August 16, 1977.; “Broad Street Detours Listed; Bridge to Reopen Wednesday,” *Times Union*, September 3, 1977.

the east and west approaches to the bridge, repaved the bridge, placed new limestone cladding, and replaced bridge joints.⁹⁶ Since the early 1990s, there have only been repairs to the old subway tunnels completed by the City of Rochester to further ensure stability for Broad Street.

While the Broad Street bridge is only used as a street today, its importance as a historic structure carrying two forms of transportation throughout the 1800s and 1900s was recorded in 1976 when the structure was listed in the National Register. Prior to listing, the bridge was recognized by the Prestressed Concrete Institute in 1974 and dedicated as a Rochester Historical Landmark by the local chapter of the American Society of Civil Engineers.⁹⁷ Both recognitions highlighted the aqueduct, as well as the bridge, as being important to Rochester's transportation history, connecting the city across the Genesee and serving the community.⁹⁸

The 1976 National Register listing followed the history of both the aqueduct and bridge, claiming both structures as vitally important to the expansion and development of Rochester. The nomination form additionally named the three other aqueducts constructed during the initial building of the Erie Canal. These three aqueducts, built east of Rochester, are no longer standing or partially intact, therefore displaying the importance of the Broad Street aqueduct as the only surviving aqueduct of the Erie Canal. The listing concludes that the "Broad Street Aqueduct and

⁹⁶ "Broad, Court St., Bridges Become 2-way Again," *Times Union*, December 2, 1992.; "Work Begins on Broad Street Bridge," *Democrat & Chronicle*, May 8, 1992.

⁹⁷ "Rebuilt Broad Street Bridge Wins Concrete Institute Award," *Times Union*, August 31, 1974.

⁹⁸ *Ibid.*; "Bridge Base is Landmark," *Times Union*, October 24, 1975.

Bridge is an unusual combination of nineteenth and twentieth century building materials applied to the transportation demands of each century.”⁹⁹

Conclusion

Extending across the Genesee, the Broad Street bridge and corresponding tunnels remain a covered void in the heart of downtown. The preference of the personal automobile, coupled with vehicle-centric design and the rise of suburbia after World War II, terminated the need for a rapid transit system. Over the next 50 years, Rochester continued to develop efficient highways, anticipating better access into the city, not out. In addition, the emphasis and shift in American culture to favor suburban living led to the decentralization of downtown (see Appendix A). However, the city planners vehemently strode to fix the decentralization issues throughout the course of the mid-1900s, leading to stronger emphasis on the canal that made Rochester by the 1990s as the guide to further revitalization plans.

⁹⁹ *National Register of Historic Preservation Nomination: The Second Genesee Aqueduct, Monroe County, New York*. 1976.

Chapter 4: The Fate of the Broad Street Bridge and Aqueduct

The city planners have a hefty task of redefining the central business district, mitigating the density issue onset by the amount of surface parking lots, and retaining population downtown outside of business hours. The city shifted its focus to retaining businesses and population downtown by establishing public-private partnerships, creating public spaces, and urging for residential development. Several projects emerged to revitalize certain neighborhoods throughout the city, however no comprehensive plan was enacted for the city in its entirety. The following chapter focuses on several city plans in the heart of downtown which fixate on the history of Rochester as a method to revitalize the city.

1990s and Early 2000s City Planning Efforts

In the 1990s through the early 2000s, multiple plans were developed by the City of Rochester. These plans focus on specific areas of development or areas needing attention, including the central business district. Plans like Vision 2000 produced in 1990, and the Renaissance 2010 Plan, originally developed in 1999 and reworked in the early 2000s, focused on stimulating downtown growth through private-public partnerships, developing residential, commercial and businesses throughout the city, and creating tourist attractions within specific areas of the city. Altogether, city planning efforts in the last 25 years have responded to the economic struggles of the city and updating zoning, or other strategic methods to foster downtown activity.

Majority of city plans in the 1990s and 2000s, ignored the Broad Street bridge and aqueduct, often wishing to improve the pedestrian sidewalks and focusing on the bridge as another path for cars and pedestrians to access more interesting developments throughout the city. While proposals for the adaptive reuse of the abandoned structure were increasing within this time period, the city neglected the bridge and aqueduct until the introduction of the Grasso-Zimmer Plan around 2006.



Figure 20 The Grasso-Zimmer Plan, from: “A Revitalization Report: Written for the Grasso-Zimmer Plan.”pg.6.

Tom Grasso, President of the Canal Society of New York, publicly introduced his vision for downtown in 2006. A local sixth grade class, working with Grasso, created a report to market the plan and its downtown revitalization efforts.¹⁰⁰ The plan

proposed to re-water the aqueduct by removing the top cap of the bridge. A re-watered Broad Street would extend west towards Brown Street, terminating in a newly created basin. To the east, the canal will continue south and link to the Genesee River, past the Inner Loop. A round lock, claimed to be the first of its kind, would allow for boats to enter or exit the new canal. The ambitious and unusual idea of reintroducing the Erie Canal back downtown was developed into the Historic Erie Canal Aqueduct and Broad Street Corridor Master Plan, published in May 2009.¹⁰¹

¹⁰⁰ “A Conversation with Tom Grasso, President of the Canal Society of New York,” https://www.wxxi.org/sites/default/files/a_conversation_with_tom_grasso.pdf: “A Revitalization Report: Written for the Grasso-Zimmer Plan.”

<https://modelsofexcellence.ededucation.org/writings/revitalize-rochester>

¹⁰¹ Ibid.; Thomas X. Grasso, “The Erie Canal and Rochester: Past, Present, and Future,” *Rochester History* 72, no. 1 (Spring 2010).

By celebrating the history of Rochester and the canal that made the city, the master plan proposed to bring the aqueduct back to its first period of significance by demolishing the Broad Street bridge and refilling the original canal bed that Broad Street currently covers. Developing a newly branded Canal District would create a unique downtown amenity, lined with public spaces, businesses and residential developments. The overarching goals of celebrating canal history and creating a mixed-use community would aid in revitalizing downtown. In order to connect to outlying communities, the plan also incorporated the potential use of light rail transit along Main Street and Plymouth Avenue to encourage more activity in this new district.¹⁰²

Apart from reintroducing the memory of the Erie Canal downtown, a series of



plazas, public spaces, and various mixed-use buildings would exist along the canal. Breaking down the square footages by program, 130,000 sq. ft. of retail, 498,000 sq. ft.

Figure 21 Preferred Master Plan, from: "Historic Erie Canal Aqueduct & Broad Street Corridor: Master Plan," May 2009. Pg. 76

of residential, 260,000 sq. ft. of hotel, and 58,000 sq. ft. of office space would be added along this new corridor. An additional 700,000 sq. ft. of parking and 326,000 sq. ft. of open space would accommodate those living, exploring, and working in the

¹⁰² "Historic Erie Canal Aqueduct & Broad Street Corridor: Master Plan," May 2009. www.cityofrochester.gov/WorkArea/DownloadAsset.aspx?id=21474837846.

District. Through private development initiatives, the master plan wished to create a place to shop, call home, work, and play.¹⁰³



Figure 22 View Looking East to Aqueduct Commons & Rewatered Historic Erie Canal Aqueduct, from: "Historic Erie Canal Aqueduct & Broad Street Corridor: Master Plan," May 2009. Pg 83.

In Phase I of the master plan, the Broad Street bridge cap would be demolished and the aqueduct re-watered for \$7.5 million. The demolishing of the Broad Street bridge would make way for the new Aqueduct Commons open space. On the eastern edge of the aqueduct, the Commons would be a tiered public space that could be utilized for retail and cafe programs as well as planned public events. The restored aqueduct, additionally, would be used as

open, public space. Featuring the new canal, the aqueduct could then be used by boats, becoming a place for recreational activity. Additionally, the master plan notes

that the removal of the Broad Street bridge allows users to be closer to the Genesee River, therefore further harnessing the overall vision of celebrating the waterways that made Rochester.¹⁰⁴

Presented to the public in September of 2008, three options of the master plan exist. The first option maintains Broad Street as a vehicular passageway but utilized watered medians and fountains to subtly introduce the Erie Canal back into downtown. Option two, which aligns closely to the Grasso-Zimmer Plan, is the most invasive, completely reintroducing the Erie Canal back downtown and forming plazas

¹⁰³ Ibid.

¹⁰⁴ Ibid.

on the eastern side of the aqueduct. Option three, favored by the public, would create a hybrid plan. The plan would maintain traffic between Washington and Exchange streets, implementing watered medians. The canal would be present on the original aqueduct, which would be bookended with two public spaces.¹⁰⁵

The Historic Erie Canal Aqueduct and Broad Street Corridor Master Plan, while innovative in re-establishing the Erie Canal downtown to capture the value of the Erie Canal as seen in two of Rochester's suburbs, Fairport and Pittsford. Although the extensive re-watered canal plans are no longer present in current city proposals, the demolishing of the Broad Street bridge and re-watering the aqueduct is maintained as the most viable solution for the abandoned structure according to the City of Rochester.¹⁰⁶

2018: ROC the Riverway

The City of Rochester's newest plan, entitled ROC the Riverway, focuses on



activating the Genesee River's edge with the development of 28 sites along the river. The overall plan is a

Figure 23 RTR Overview Map, City of Rochester, accessed December 14, 2018, <http://www.cityofrochester.gov/roctheriverway/>.

culmination of past city revitalization efforts, combined into a cohesive plan aimed at energizing Rochesterians and New York State into implementing these ideas. Since the plans debut in May of 2018, the City was awarded \$50 million by the State of

¹⁰⁵ Ibid.

¹⁰⁶ Ibid.

New York to implement Phase I plans.¹⁰⁷ A total of thirteen sites comprise Phase I, each site being in a different stage of development, from schematic design to construction ready. Overall, the ROC the Riverway plan has garnered the most publicity over other city planning initiatives in the past two decades due to the securing of funding.¹⁰⁸

Beyond the combination of multiple undeveloped or unrealized projects and sites in the past decades, the ROC the Riverway project is a result of three studies and recent events in Rochester. First, the Rose Fellowship focused on studying, “How can Rochester activate and revitalize Main Street, the Genesee River Corridor, and the Broad Street Aqueduct.”¹⁰⁹ Two recommendations from this study guided the creation of ROC the Riverway. The suggestion of establishing downtown and riverfront management entity to “spearhead programming, marketing, business attraction, public space enhancements, and beautification” and the idea to fully connect the Genesee Riverway Trail (GRT) on both side of the river.¹¹⁰ Secondly, the project looks to the 2017 Local Waterfront Revitalization Program (LWRP) which was created to improve the relationship of development and access to the Genesee River, as well as Lake Ontario and the Erie Canal waterfronts. In addition, LWRP wanted to enhance and complete the Genesee River Trail.¹¹¹

¹⁰⁷ ROC the Riverway Advisory Board “ROC the Riverway: A Vision Plan for the Future of Rochester’s Genesee Riverfront, Phase 1 – May 2018,” May 2018.

¹⁰⁸ Ibid.

¹⁰⁹ Ibid.; Rose Fellowship Panel Presentation, “Rochester, NY: Activating Downtown,” March 18, 2016, Accessed October 31, 2018.

<http://www.cityofrochester.gov/rosefellowship/>

¹¹⁰ ROC the Riverway Advisory Board “ROC the Riverway: A Vision Plan for the Future of Rochester’s Genesee Riverfront, Phase 1 – May 2018,” May 2018, pg. I-4.

¹¹¹ “ROC the Riverway Advisory Board “ROC the Riverway: A Vision Plan for the Future of Rochester’s Genesee Riverfront, Phase 1 – May 2018,” May 2018, pg. I-5.

The last reasoning or push for the creation of the ROC the Riverway plan was, what the project determines as, “Downtown Resurgence.”¹¹² The plan recognizes the slump in downtown activity, mixed with high vacancies throughout the 1990s and 2000s, but enthusiastically praises new development efforts downtown. The increase in downtown’s population, from 3,250 people in 2000 to 7,200 in 2017, supports the city’s arguments that the ROC the Riverway project is necessary to transform and develop downtown due to the renewed interest in city living. The plan additionally notes the visibility of activity downtown, from the city’s multiple festivals to the

creation of a bike share program known as Pace in the last few years.¹¹³

Totaling \$500 million, the ROC the Riverway’s main goals include the creation of an accessible Genesee Riverway Trail to link all the developed sites together. Other goals, or objectives, include the creation of public spaces downtown, boosting private and public-private partnerships, developing neglected sites, and creating safe and four-season activity along the river. The plan has three

Figure 24 No title, from: ROC the Riverway Advisory Board “ROC the Riverway: A Vision Plan for the Future of Rochester’s Genesee Riverfront, Phase 1 – May 2018,” May 2018. <http://www.cityofrochester.gov/roctheriverway/>, pg. 27.

¹¹² Ibid.

¹¹³ ROC the Riverway Advisory Board “ROC the Riverway: A Vision Plan for the Future of Rochester’s Genesee Riverfront, Phase 1 – May 2018,” May 2018.

focus sites, South River, Downtown, and High Falls, hailing Downtown as the project's centerpiece. Both the South River and High Falls sites are more dedicated to open public space and development of recreation, while Downtown will feature a series of improvements to existing buildings like the Blue Cross Arena and Riverside Convention Center, while improving the neglected plazas of these buildings on the river side. The linkage of these three focus sites together via the GRT is most extensively seen Downtown with the proposal to create a series of elevated walkways on facades of many developments that were built right at the Genesee's edge.¹¹⁴

The combination of past city endeavors and projects is most evident at the



Broad Street Bridge and Aqueduct. Labeled as the “Aqueduct Re-Imagined,” the Grasso-Zimmer plan idea of removing the Broad Street bridge cap is once again prevalent guiding the development of this area.¹¹⁵

Figure 25 Phase I Recommended Projects, from: ROC the Riverway Advisory Board “ROC the Riverway: A Vision Plan for the Future of Rochester's Genesee Riverfront, Phase 1 – May 2018,” May 2018. <http://www.cityofrochester.gov/roctheriverway/>, pg. III-52.

Viewing the aqueduct as a

centerpiece within the Downtown focus area, the plans call for a plaza space on the eastern edge of the aqueduct, while also more fully develops the north terrace of the Rundel Memorial Library. The aqueduct itself is shown in several renderings, as a re-

¹¹⁴ ROC the Riverway Advisory Board “ROC the Riverway: A Vision Plan for the Future of Rochester's Genesee Riverfront, Phase 1 – May 2018,” May 2018.

¹¹⁵ Ibid.

watered pond to be used for ice-skating in the winter, or with plaza and green space mixed with water elements. Similar to the Historic Erie Canal & Broad Street Corridor Plan, the plans justify removing the top half of the Broad Street bridge claiming that in doing so, a dynamic public space can be created. Unlike its predecessor, the ROC the Riverway plan only features re-watering the aqueduct and having some sort of water feature on Broad Street between the western edge of the aqueduct and Exchange St.

An estimated cost of \$60 million for developing the aqueduct into a public space is further justified by the \$6 to \$7 million figure necessary for repairing and maintaining the structure every ten years. Additionally, as noted by the ROC the Riverway plan, removing the Broad Street bridge will open up new views downtown. Though the plan states views have been blocked by the bridge for a century or more, it does not reveal what is to be viewed.¹¹⁶

The design for the restored and re-watered aqueduct aligns to the previously proposed Erie Canal Aqueduct & Broad Street Corridor plans of 2009, often reusing the same graphics. Re-watering and bringing the aqueduct back to its period of significance as the carrier of the Erie Canal over the Genesee River is a missed opportunity by the city to fully revive a unique structure for programmatic purposes other than a stagnant reflection pond that can be used for ice skating during the winter months. Although the change in elevation resulting from the 20th century addition of the Broad Street bridge may hinder a continuous Genesee River Trail path along both sides of the river, the extension and creation of a walkway over the river alongside

¹¹⁶ Ibid.

historic facades is a failed opportunity to activate street life. While activity should be placed along the river edge, the segregation of hikers and bicyclists from the city further promotes the separation of the river and city by not completely integrating these pathways. Integrating the pathways into the streetscape of downtown, improving street conditions and developing retail along the integrated pathway may be a more beneficial opportunity than separating potential customers behind buildings on a narrow path elevated above a river.

The ROC the Riverway plan is the most extensive plan introduced by the city. While many different site developments seem feasible in their early schematic designs, the demolition of the Broad Street bridge for a reflection pond necessitates further exploration. Bringing back the bridge to its period of significance, although aiding the course of the Genesee River Trail, will not benefit the community and is a loss of revenue and opportunity to fully develop the space, creating a unique multi-tiered environment over the Genesee.

Broad Street Bridge and Aqueduct Proposals

While the ROC the Riverway project calls for the demolition of the Broad Street bridge which currently caps the aqueduct, numerous projects have developed over the years. The development of the second Erie Canal aqueduct into the Broad Street bridge is, in its own right, an adaptive reuse project that strategically reused the old canal bed for a new transportation purpose. A variety of proposals vary in form but consistently argue for the usage and retention of both layers of the bridges, therefore acknowledging the significance of the Erie Canal and the short-lived subway as well as the space left behind.

Several proposals for adaptively reusing the Broad Street bridge have shown up on the now defunct Rochester website, Rochester Subway (rochestersubway.com). The website, run by various Rochesterians and spearheaded by local graphic designer, Mike Governale, introduced the troubled history of the Rochester subway system. Other blog writers contributed to the conversation about Rochester's local government and planning ideas, sometimes denouncing the city's plans and offering alternatives. Overall, the website served as a platform for Rochesterians to voice their opinion regarding Rochester urban planning, architecture, and transportation projects proposed by the city.

The Broad Street bridge proposals vary from creating a running track through the interior of the bridge to nightclubs and concert spaces. Out of the wide range of proposals, two have garnered much attention: the downtown winter garden scheme proposed by William Rawn Associates of Boston and the Broad Street Underground led by local architect, Lewis Childs.

William Rawn & the Winter Garden

Prior to the mid-2000s plans to remove the Broad Street bridge, the City of Rochester allocated funding to figure out how to enliven the bridge and aqueduct. The Vision 2000 plan revealed the desire of developing the bridge and aqueduct into a public space. By 1993, a new and exciting proposal was unveiled.¹¹⁷

¹¹⁷ Sherrie Negrea, "Aqueduct could be altered: Consultants propose stores, winter garden," *Democrat & Chronicle*, July 25, 1994; Sherrie Negrea, "Study: Turn aqueduct into garden, bar, cafe: Three firms also suggest canal with replica of historic barge," *Times Union*, July 25, 1994.

In 1992, the city received \$50,000 from the New York State Urban

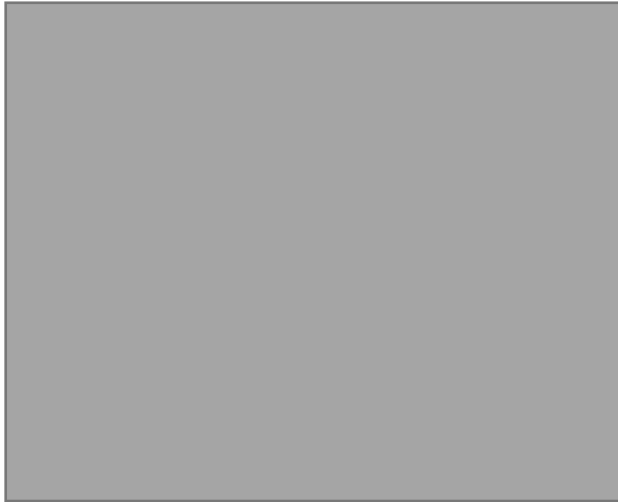


Figure 26 No title, from: Rochester Economic Development Corporation, *Reuse Feasibility Study for the Broad Street Aqueduct*, prepared by William Rawn Associates, Architects, Inc., LaBella Associates, PC, and Real Estate Enterprises, Inc. (September 1994), pg. 5.

Development Corporation to study reuse options for the aqueduct. The city additionally contributed \$8,5000 for this study. Appointing a committee of eleven Rochesterians, three portions of the study were completed within the first five months. The study included the structural integrity, marketability

and different architectural designs and uses of the aqueduct.¹¹⁸ By September of 1994, the Boston based firm, William Rawn Associates along with the Rochester firm, LaBella Associates, developed the “Reuse Feasibility Study for the Broad Street Aqueduct.” The study concluded that the design proposed by William Rawn Associates would play an important role in downtown revitalization as well as reclaim Rochester’s historic artifact as a “cultural highlight” in downtown.¹¹⁹

As early as July 1993, the design proposal of reusing the Broad Street Aqueduct debuted in the local newspapers. Architect William Rawn described the design as part of an effort to think about how people will use the space while simultaneously opening up the “subterranean atmosphere” to provide access to

¹¹⁸ Sherrie Negrea, “Downtown winter garden: Consultants advise development under Broad Street Bridge,” *Times Union*, July 27, 1993.

¹¹⁹ Rochester Economic Development Corporation, *Reuse Feasibility Study for the Broad Street Aqueduct*, prepared by William Rawn Associates, Architects, Inc., LaBella Associates, PC, and Real Estate Enterprises, Inc. (September 1994), pg. 31.

natural light.¹²⁰ This new design proposed to remove three lanes of traffic on the bridge to allow for a glass-enclosed Winter Garden along the southern edge. The two-story Winter Garden, a total of 14,5000 square feet, would completely transform the aqueduct and bridge, as well as provide a year-round function. Flanking the introduced Winter Garden at the original canal bed level, would be a café to the east and a sports bar to the west. At street level, the Winter Garden would emerge next to three lanes of traffic, and a park or plaza space could be created next to the War Memorial and the Rundel Memorial Library.¹²¹

A grand total of \$14 million, Rawn noted that the project is both visionary and practical. Rawn and the Aqueduct Study Committee in July of 1994 argued the importance of the aqueduct downtown and how the development of a Winter Garden can transform the historic structure and the center city. The designer added that a simulated canal could be installed on the north side of the aqueduct, complete with a packet boat to instill the memory of the Erie Canal.¹²²

While this inventive adaptive reuse project never actualized, it was highly publicized in the early 1990s throughout Rochester's newspapers. Though no funding or developer support ever emerged, it did resurrect the concerns over the use of the bridge and aqueduct, leading to more citizen-led design proposals throughout the 1990s through today.

¹²⁰ Sherrie Negrea, "Downtown winter garden: Consultants advise development under Broad Street Bridge," *Times Union*, July 27, 1993.

¹²¹ Ibid.; Sherrie Negrea, "Aqueduct could be altered: Consultants propose stores, winter garden," *Democrat & Chronicle*, July 25, 1994; Sherrie Negrea, "Downtown winter garden: Consultants advise development under Broad Street Bridge," *Times Union*, July 27, 1993.; Rochester Economic Development Corporation, *Reuse Feasibility Study for the Broad Street Aqueduct*, prepared by William Rawn Associates, Architects, Inc., LaBella Associates, PC, and Real Estate Enterprises, Inc. (September 1994).

¹²² Ibid.

Broad Street Underground

Posted in September of 2013 on the Rochester Subway website, a new proposal highlighted the reuse of the bridge. Architect Lewis Childs, photographer, writer and inventor, Neal Rudin and John da Silva, created the Broad Street Underground project. The team's vision was to create a galleria complete with retail that would connect the Riverside Convention Center to the Blue Cross Arena.¹²³ Through preserving the bridge and aqueduct in its entirety, the Broad Street Underground project would occupy and reactivate the vacant structure.



Figure 27 No title, from: Mike Governale, "Broad St. Underground: ANOTHER Proposal for the Abandoned Subway!," *Rochester Subway*, September 23rd, 2013, accessed October 6, 2018, <http://www.rochestersubway.com/topics/2013/09/broad-street-underground-proposal-for-abandoned-rochester-subway/>

interior of the bridge, complete with two promenades to lead users to the shops and restaurants housed within the structure. On the south side of the bridge, a voltaic glass galleria would bring natural light into the bridge as well as cover the street level sidewalk on this side. The project would additionally call for the closing of two

or three lanes of traffic to develop the galleria structure. Though not entirely set in its

¹²³ Mike Governale, "Broad St. Underground: ANOTHER Proposal for the Abandoned Subway!," *Rochester Subway*, September 23rd, 2013, accessed October 6, 2018, <http://www.rochestersubway.com/topics/2013/09/broad-street-underground-proposal-for-abandoned-rochester-subway/>

programmatic function, the project developed 80,000 square feet of usable space within the interior of the bridge that would result in taxable revenue for the city.¹²⁴

Estimated to cost \$21 million, the Broad Street Underground project further expanded the Winter Garden idea of utilizing the interior of the bridge as useable and inhabitable space.¹²⁵ However, like the Winter Garden project, the Broad Street Underground proposal was never realized or garnered a larger public or financial support to implement.

Conclusion

Rochester 2034 is the city's first comprehensive plan that aims to guide the city's future growth as national trends favor urban living. Though not fully complete, the current community workshops guiding city planners produced keywords and phrases like "vibrancy" and "sense of community" into the city's lexicon. While the city does not have a preservation department or employ preservationists, the sense of place wanted by Rochesterians could be achieved with the employment of preservation and adaptive reuse projects. As seen with the variety of proposals for the Broad Street bridge, adaptive reuse can transform a historic structure into a unique space, aiding the city in providing needed program to certain downtown areas or vacant structures while also retaining its historic fabric.

Since the urban renewal era, not much physical change has occurred in the center city. Downtown Rochester is still suffering from the decisions of city planners that altered the pattern of the city during the urban renewal era, but the national trend

¹²⁴ Ibid.

¹²⁵ Ibid.

for urban living offers new hope for the city. The challenge now is for Rochester to positively create and develop a downtown community and step away from automobile-centric design and planning. Without proper development and activation of downtown spaces, how long does Rochester expect its downtown to survive?

It is the ultimate purpose of this thesis to explore the adaptive reuse of the Broad Street bridge and aqueduct and how adaptively reusing the vacant structure can spur revitalization efforts downtown. While reusing the structure is not a new idea, the design will respond to the needs of the present and future community by programming both the interior structure as well as Broad Street into a mixed-use public space. Through the adaptive reuse of the Broad Street bridge and aqueduct, Rochester will be given a centerpiece in the heart of downtown that will further aid in the revitalization of the city.

Chapter 5: Preservation and Adaptive Reuse

The historic preservation movement has its origins in protecting our Founding Father's homes and altering them into house museums to educate the public and insight nationalism amongst the American people. As the urban renewal era in American history destroyed much of our built heritage, preservationists vehemently argued for the retention of significant buildings and neighborhoods that defined towns, cities, and the people who lived there. Though many urban neighborhoods and communities were destroyed for new buildings and highways, the preservationist movement grew out of the destruction leading to a piece of legislation in the 1960s that defined the field of historic preservation today.

For those outside of the field of historic preservation, the term "historic preservation" is often seen as a device to hinder future use and development of historic cities, or to dictate what color one can paint their front door. While certain cities and historic districts may regulate things like paint color, the field of historic preservation is more complex than being the "paint police." Generally, historic preservation promotes the continued use of a site or structure through the physical retention of the place while also interpreting and showcasing the historical significance and narrative for the purpose of education and garnering a connection with the past.

As the field of historic preservation progresses, theories and opinions as to *what* we preserve and *how* we preserve are continuously explored and debated. Additionally, the question as to what the appropriate course of action for preservation is often dependent upon personal opinions regarding the history of a specific site. The

complexity of historic preservation and determining what is appropriate or not is often placed on preservation professionals from government agencies. In order to further streamline appropriateness, the Secretary of the Interior produced standards and guidelines to aid preservation efforts. These standards are used by government agencies, planners, preservationists and architects as the ultimate guide to historic preservation best practices.

Despite the creation of legislation, standards and guidelines, the field of historic preservation is not static, it is changing and adapting to fit the needs of communities. Historic preservation is a tool for many cities to retain their historic character while also advancing and transforming their downtown economy and community. Historic preservation should not be seen as the paint police, the house museum creators, or as a field that wants to set-back progress. Rather, it should be seen as a field that encourages the transformation of cities into active and livable communities based on the sense of place our built heritage provides.

This chapter will define historic preservation terms in regard to *how* we save structures. The next portion of the chapter will briefly explore the Federal, New York State and City of Rochester's understanding of preservation at these governmental levels in order to understand how the development of the listed Broad Street bridge and aqueduct can be achieved.

Definitions

Emulating and learning from the past are embedded in the architecture profession prior to the inception of the professional field of preservation. From Viollet-le-Duc's stylistic improvements to Gothic churches to John Ruskin's anti-

preservation philosophies regarding authenticity and decay, the field is steeped in complex theories regarding what is deemed appropriate for the preservation, conservation, or reuse of a structure. Each term has an equally multifaceted history based on theory and the proper way to “preserve” memory.

It is important to define each of the three terms previously listed to articulate the role in which each term plays in the modern preservation movement and its relevance to the goals of this thesis. Prior to providing a succinct definition for each term, it is important to note the four treatments, and their definition, as defined by the National Park Service and the Secretary of the Interior. Each treatment is given its own set of standards and guidelines to assist in the “preservation” of properties.

- **Preservation:** the focus on the maintenance and repair of existing historic materials and retention of a property’s form as it has evolved over time.
- **Reconstruction:** acknowledges the need to alter or add to a historic property to meet continuing or changing uses while retaining the property’s history character.
- **Restoration:** depicts a property at a particular period of time in its history, while removing evidence of other periods.
- **Rehabilitation:** re-creates vanished or non-surviving portions of a property for interpretive purposes.¹²⁶

¹²⁶ Technical Preservation Services, “Four Approaches to the Treatment of Historic Properties,” National Park Service, U.S. Department of the Interior, <https://www.nps.gov/tps/standards/four-treatments.htm>.

While the technical descriptions are beneficial in understanding the role of these four categories in regard to historic structures, the definition of the terms preservation and adaptive reuse for this thesis is a conglomeration of both technical and theoretical concepts.

Throughout this thesis, *preservation* is used to broadly describe the intention of retaining and recognizing historic memory. Through preservation strategies, including the Secretary of the Interior's four technical approaches, historic thought, memory and/or character is recollected for the purpose of educating or maintaining the physical appearance of a building or neighborhood. Preservation most broadly captures the significance of place and the recognition that the memory and physical characteristics should be retained.

Lastly, *adaptive reuse* refers to the preservation of a historic structure through the creative reuse. Reusing a structure can include programming a vacant structure or altering or creating additions onto a historic structure for programming purposes. The most common example of adaptive reuse seen across North America, is the conversion of warehouses and factories into apartment buildings. Adaptive reuse is rooted in recycling a building for a new purpose. However, it is important to note that the best adaptive reuse practices are respectful of the historical and architectural integrity and attempt to highlight architectural features and exhibit the historic narrative within the new design. Good adaptive reuse practices should not be confused with facadism, or in which only the exterior façade is preserved while behind the front elevation a new building is constructed.

The most interesting and unique preservation projects celebrate the history of the building, its past inhabitants and the story the building can tell about a community or American history. The preservation of historic structures is not simply embedded in maintaining old buildings, but in identifying the building's history and role it played in defining a community.

Federal, State and Local Governments and Preservation

Historic preservation is regulated at three different levels in the United States in correspondence to three levels of government: Federal, State and local. In 1966, the National Historic Preservation Act (NHPA) was passed, establishing the need for preserving and reflecting upon our Nation's historic heritage, through creating the National Register of Historic Places, State Historic Preservation Offices, detailing the role of the Secretary of the Interior in regard to preservation, and creating the Section 106 Review process. Prior to 1966, preservation was seen as a grassroots movement, and not understood at the national level. Though some acts were passed since the early 1900s to protect sites, objects, and recording buildings, the NHPA was a major achievement that defined the preservation field in the United States.¹²⁷

While the NHPA created the State Historic Preservation Offices (SHPO) in 1966, states further protected their built heritage with other pieces of legislation. In the state of New York, the New York State Historic Preservation Act of 1980 serves as a counterpart to the NHPA. Like the NHPA, this piece of legislation created a list,

¹²⁷ *National Historic Preservation Act of 1966*, 16 U.S.C. § 470, et seq.; Andrew Hurley, *Beyond Preservation: Using Public History to Revitalize Inner Cities* (Philadelphia, PA: Temple University Press, 2010).; New York State Office of Parks, Recreation and Historic Preservation, "Federal & State Preservation Legislation," New York State Office of Parks, Recreation and Historic Preservation, <https://parks.ny.gov/shpo/environmental-review/preservation-legislation.aspx>

known as the New York State Register of Historic Places. Additionally, Section 14.09 of the act, which is similar to Section 106 of the NHPA, ensures that the SHPO will be consulted if any project that is being planned “may or will cause any change, beneficial or adverse” to a structure, site or object listed or eligible for listing on the State Register.¹²⁸ Using the same rhetoric as Section 106, State Agencies are required to avoid and mitigate any “adverse impacts” to the listed or eligible properties through consultation and producing alternative design schemes.¹²⁹

At the State level, the Division of Historic Preservation (DHP) within the State Historic Preservation Office generates a report every five years regarding the plan and direction of historic preservation across the entire state. The most recent report, the *New York State Historic Preservation Plan 2015-2020* highlighted the history of preservation in the state as part of a tribute to the 50th anniversary of the NHPA. The plan listed goals for the entire state which included the strengthening of the practice of preservation, promoting local and regional preservation and cultivating heritage tourism. Throughout the report, a timeline presented key moments in preservation history, and included successful preservation projects funded through the State or receiving Historic Tax Credits. The report highlighted the importance of preserving our built heritage and how preservation can fulfill the State’s “current needs, issues and opportunities.”¹³⁰

¹²⁸ New York State Office of Parks, Recreation and Historic Preservation, “Federal & State Preservation Legislation,” New York State Office of Parks, Recreation and Historic Preservation, <https://parks.ny.gov/shpo/environmental-review/preservation-legislation.aspx>

¹²⁹ Ibid.

¹³⁰ New York State Office of Parks, Recreation and Historic Preservation, *New York State Historic Preservation Plan, 2015-2020*, (Albany, NY: Division for Historic Preservation, 2015), <https://parks.ny.gov/shpo/preservation-plan/documents/NewYorkStateHistoricPreservationPlan20152020.pdf>, pg. 4.

Locally, historic preservation is not a prominent factor in city planning decisions. Firstly, the City of Rochester does not have a preservation division or department or employ preservationists. Though the city hires planners, engineers, architects and landscape architects, preservationists are kept out of the loop of major city planning decisions. The local preservation society, the Landmark Society of Western New York, however, has a relationship with the city and is consulted in regard to Rochester's built heritage as needed. The Landmark Society operates as a separate, non-governmental organization that is referred to by the city as a resource for preservation inquiries including listing a structure at the city-level.

The City of Rochester, however, established a Preservation Board in the City Code. This Board is comprised of seven citizen members who reside in the city limits. The seven members consist of one realtor, two registered architects, two residents of preservation districts, one city resident, and one member of a historical association. The Board's authority, provided by City Code Section §120-194, is to develop and adopt preservation guidelines, and to review Certificates of Appropriateness which are mandatory for those residing in a preservation district or a structure listed on the Designated Buildings of Historic Value. Currently, the city has eight preservation districts and approximately 1,750 properties listed. The districts are part of the city's Preservation Ordinance that was established in 1969, which determined how physical changes to properties within a district can be made. The Board's purpose, in

reviewing these Certificates of Appropriateness, is to ensure any repair or restoration is compatible with the historic design.¹³¹

Beyond the Preservation Board, historic preservation is not integral to the City of Rochester and its planning endeavors. As seen within the ROC the Riverway plan, preservation is not a driving force for the city, but an economic necessity to ensure development and programming is occurring downtown. Most recently, downtown residential developments have utilized vacant office buildings for apartment complexes. However, the reuse of these structures was not based on preservation policy or desire to preserve downtown's identity, but the economic benefit provided by reusing a structure rather than new construction. Additionally, the phrase "historic preservation" is scarcely mentioned, if at all, in current city plans. Perhaps seen as a negative term, preservation is often given the connotation that preserving the built environment will not allow a city to advance into the 21st century if it is stuck in the past. Despite the lack of recognition of preservation in the city plans, the altering of historic structures listed at the local, state and federal levels will be met with resistance, most significantly from the Landmark Society of Western New York.

Apart from the legislative process of Section 14.09 in the New York State Historic Preservation Act of 1980 which, like Section 106, will require a review process of state-funded plans that will impact historic properties, the Landmark

¹³¹ City of Rochester, NY, "Rochester Preservation Board," City of Rochester, <http://www.cityofrochester.gov/presboard/>; City of Rochester, NY, "Historic Preservation," City of Rochester, <http://www.cityofrochester.gov/historicpreservation/>; City of Rochester, NY, "Historic Preservation - Designated Building of Historic Value," City of Rochester, <http://www.cityofrochester.gov/article.aspx?id=8589947612>; Code of Rochester § 120-194

Society publicly voiced opposition to the lack of “historic voices” in the ROC the Riverway project.¹³² In October of 2018, the Landmark Society debuted its Five to Revive listing of five historic structures in Western New York that should be given attention and should play “an active role in the communities that surround them”¹³³. In a *Democrat & Chronicle* article dated October 10th, the Landmark Society named the Broad Street aqueduct as one of the organization’s Five to Revive. The article continued in stating that the Landmark Society wishes that the preservation community of Rochester would be more present in the ROC the Riverway plan. Overall, the Landmark Society acknowledges the importance of the historic structure and are supportive of the reuse of the structure as a centerpiece for downtown but assert that preservationists should be part of the planning process.¹³⁴

Conclusion

The fate of the Broad Street bridge and aqueduct, at this point in time, is uncertain. Due to state funding for the ROC the Riverway project, the State Historic Preservation Officer will review the demolition of the bridge and the re-watering of the aqueduct. If opposition within the local community is fierce enough, and the SHPO agrees that the demolition of the 20th century component of the structure is inappropriate, then the project will be halted.

¹³² Brian Sharp, “Landmark Society Seeks Role in Aqueduct Plan,” *Democrat & Chronicle*, October 10, 2018.

¹³³ Landmark Society, “Five to Revive | Landmark Society,” Landmark Society of Western New York, <http://landmarksociety.org/programs/five-to-revive/>.

¹³⁴ Ibid.; Brian Sharp, “Landmark Society Seeks Role in Aqueduct Plan,” *Democrat & Chronicle*, October 10, 2018.; Landmark Society, “2018 Five to Revive | Landmark Society,” Landmark Society of Western New York, <http://landmarksociety.org/2018-five-to-revive/>.

Further described within the next chapter, historic preservation is a tool for revitalizing urban cores and should be used as such. The City of Rochester has the opportunity to leverage its built heritage for new purposes which will positively affect the economics, local community, and vitality of the city. Preserving the character and identity of downtown will not hinder the future success of the city, but rather develop Rochester's sense of place rooted within the city's historical narrative.

Chapter 6: Urban Revitalization and Historic Preservation

Around the time of the Inner Loop planning in Rochester, an article appeared in the *Democrat & Chronicle* entitled “We Need a Loop... Not a Noose.” While the title certainly indicates the creation of the Inner Loop is similar to a noose, the rope around the city is the issue of traffic congestion. The newspaper article vehemently opposed the pleas of the Landmark Society to reevaluate the mass destruction of historic structures for the Inner Loop project. The article, like Rochester’s city planners, stressed the importance of the arterial highway to relieve downtown of its current “traffic strangulation” in order to combat blight. The plea to save historic structures was seen as negligent because the *need* to save downtown with the creation of an arterial highway outweighs preservation.¹³⁵ Ironically, the Inner Loop became the noose around the city’s neck, suffocating business endeavors and leading to economic decline.

Fortunately, the absurd notion that destroying a city will save a city is a theory of the past. The inactive and cookie-cutter atmosphere created during the urban renewal era with various modernization projects are being combatted with the use of historic preservation as an urban revitalization tool today. Through the recognition of historic structures as contributing to a city’s identity and character, retaining and adaptively reusing our built heritage affectively creates authentic, active and revitalized downtowns.

¹³⁵ “We Need a Loop...Not a Noose,” *Democrat & Chronicle*, July 13, 1952.

Historic Preservation as a Revitalization Tool

The preservation of our built heritage has a rich history in the United States. From its origins in preserving patriotic sites to saving individual, architecturally significant structures, preservation has become a tool for reimagining, reactivating, and revitalizing our neighborhoods, communities, and cities. As early as the 1970s with the rise of the preservation movement, preservationists like Jane Jacobs recognized the importance of retaining entire neighborhoods filled with an assortment of historic buildings. The emphasis of saving these places was not placed solely on the historic or architectural significance, but the connection these buildings have with the community who works, shops, plays, and lives within them. Put simply, preservation has evolved into saving the sense of place versus saving a singular piece of architecture. This chapter is distilled into two categories articulating *why* preservation is important in urban revitalization and *how* it can be achieved. Altogether, this chapter expresses the importance of preservation as a unique tool that should become the “default option” for urban revitalization.¹³⁶

Why Preservation is Important

As many preservation professionals will argue, preserving our past is the best way to learn, understand, and experience our heritage. The sense of connection gained from preserving our built heritage is embodied in our personal and communal identities, articulating a sense of pride in one’s community. The sense of belonging

¹³⁶ Forum Online, “Ten Principles for ReUrbanism: Reuse and Reinvestment in the 21st Century,” Preservation Leadership Forum, National Trust for Historic Preservation, <https://forum.savingplaces.org/blogs/forum-online/2016/09/07/ten-principles-for-reurbanism-reuse-and-reinvestment-in-the-21st-century>

and rootedness the past provides is one of many important reasons to preserve the built environment. Beyond the notion of saving the past saves our personal identities, the sustainable and economic benefits of preservation are also important to explore.

Perhaps over articulated by preservation professionals, the sense of place, identity, and authenticity that older buildings provide enriches communities by connecting people to the past. Preservation has expanded upon preserving individual places to preserving neighborhoods and districts with the emphasis on managing change to continue the vitality of place. Expressed by Jane Jacobs, “cities need old buildings so badly it is probably impossible for vigorous streets and districts to grow without them.”¹³⁷ The character older buildings provide, the communities created in older neighborhoods, and the connection to the past are vital elements seen within the urban landscape and emphasize the power and potential of older buildings, as noted by former NTHP CEO Stephanie Meeks.¹³⁸

In 2013, a Preservation Green Lab report tested Jane Jacobs ideas across six cities in the United States to understand the connection between our built heritage and urban vitality. Jacobs, who emphasized understanding how people used spaces through critical observation, understood the connection between place and community. As explored in the report entitled *Older, Smaller, Better: Measuring How*

¹³⁷ Preservation Green Lab, *The Greenest Building: Quantifying the Environmental Value of Building Reuse*, (Washington, D.C.: National Trust for Historic Preservation, 2011), https://living-future.org/wp-content/uploads/2016/11/The_Greenest_Building.pdf; Preservation Green Lab, *Older, Smaller, Better: Measuring how the character of buildings and blocks influences urban vitality*, (Washington, D.C.: National Trust for Historic Preservation, 2014), <https://forum.savingplaces.org/HigherLogic/System/DownloadDocumentFile.ashx?DocumentFileKey=bac17bb3-e9cf-1d28-7cae-558fa35820e5&forceDialog=0>; Stephanie Meeks, *The Past and Future City: How Historic Preservation is Reviving America's Communities* (Washington, D.C.: Island Press, 2016).

¹³⁸ Stephanie Meeks, *The Past and Future City: How Historic Preservation is Reviving America's Communities* (Washington, D.C.: Island Press, 2016).

the Character of Buildings and Blocks Influences Urban Vitality, neighborhoods filled with a mixture of different age buildings are more walkable, more diverse, have an active street life, provide affordable and flexible spaces, are filled with local businesses, and contain a hidden density of more people and businesses per square foot than newer buildings. The report continuously emphasized the importance of place and how younger people prefer living in neighborhoods with a mixture of old and new buildings. Meeks, in her book, further expressed the dominance in urban living preferences amongst college-graduates and empty-nesters, citing a *Time* magazine article from April of 2014 noting the shift in the American Dream of living in a city versus suburbia. Meeks further supports the preference for urban living by expressing that 80% of Americans live in urban areas, a growth of 12% between 2000 and 2010. As seen in Andrew Hurley's book, *Beyond Preservation: Using Public History to Revitalize Inner Cities*, the preference to move back to the cities began in the 2000s subsequently spurring the reuse of older buildings.¹³⁹

The reuse of older buildings provides a sense of authenticity that cannot be found in suburban America. The active street life, the urban density, and the mixed-use atmosphere of urban cores provide for a vital downtown community. However, through the connection to the past and growth in popularity of older neighborhoods, Hurley warns about the displacement of people through gentrification. To overcome

¹³⁹ Andrew Hurley, *Beyond Preservation: Using Public History to Revitalize Inner Cities* (Philadelphia, PA: Temple University Press, 2010).; Preservation Green Lab, *Older, Smaller, Better: Measuring how the character of buildings and blocks influences urban vitality*, (Washington, D.C.: National Trust for Historic Preservation, 2014), <https://forum.savingplaces.org/HigherLogic/System/DownloadDocumentFile.ashx?DocumentFileKey=bac17bb3-e9cf-1d28-7cae-558fa35820e5&forceDialog=0>.; Stephanie Meeks, *The Past and Future City: How Historic Preservation is Reviving America's Communities* (Washington, D.C.: Island Press, 2016).

over-inflating property values, Hurley argues that community engagement is key in future planning endeavors. Ultimately, the connection people have to urban landscapes develops and fosters community, a shared sense of place, and strengthens our community and individual identities. The tangible aspect of our built heritage further defines our community's narrative but also creates happy and healthy communities.¹⁴⁰

Today, sustainable and environmentally conscious design are a primary focus for many architects, planners and engineers. All aspects of the built environment are being assessed based on their ability to save energy and money, produce less waste, and environmental impact. Different rating systems and codes are being developed to guide sustainable design nationally and internationally. As designers continue to strive towards environmentally conscious design, these designers should be aware that preserving existing buildings is a sustainable design practice.

Existing buildings can easily be transformed and recycled into a building with a new purpose. As noted by the Whole Building Design Guide, a program from the National Institute of Building Sciences, historic buildings “were traditionally designed with many sustainable features that responded to climate and site.”¹⁴¹ Beyond the inherent “green” strategies of existing buildings, the ability to reuse and retrofit buildings with sustainable technologies will ensure optimal building performance. Organizations like the Whole Building Design Guide and the National

¹⁴⁰Ibid.; Thompson M. Mayes, *Why Old Places Matter: How Historic Preservation Affect Our Identity and Well-Being* (Washington, D.C.: Rowman & Littlefield, 2018).

¹⁴¹ WBDG Historic Preservation Subcommittee, “Sustainable Historic Preservation,” Whole Building Design Guide, <https://www.wbdg.org/design-objectives/historic-preservation/sustainable-historic-preservation>.

Trust for Historic Preservation's Preservation Green Lab (now the Research & Policy Lab) further stresses the benefits and importance of linking preservation and sustainability.¹⁴²

Within the design community, the United States Green Building Council's LEED rating system is the most widely known designation for sustainable designs. LEED, or Leadership in Energy and Environmental Design, has various categories focusing on various types of buildings or neighborhood development projects. Though the checklists used by LEED to comprehend how green a building only fixates on the sustainable measures and methods, rather than overall building performance, the rating system is pursued by developers due to the stigma surrounding LEED as *the* leader of sustainable rating systems. Additionally, LEED does not consider historic preservation and the necessity of retaining character defining features. For example, instead of replacing historic windows with energy efficient designs that are not historically accurate, additional tactics, including caulking or weather-stripping windows, and adding storm windows are more preservation-friendly methods to retain historic windows while improving energy performance. Additionally, the retention of historic windows effectively recycles original features and limits the amount of waste produced by the project.¹⁴³

¹⁴² WBDG Historic Preservation Subcommittee, "Sustainable Historic Preservation," Whole Building Design Guide, <https://www.wbdg.org/design-objectives/historic-preservation/sustainable-historic-preservation>; Sharon C. Park, "Sustainable Design and Historic Preservation," *CRM* 1998. Sustainable design and historic preservation. *CRM* 2 (1998): 13–16.

http://tuscolum.sbc.edu/toolkit/toolkit_pdfs/Park,Sharon_SustainableDesignHP.pdf

¹⁴³ Technical Preservation Services, "Sustainability," National Park Service, U.S. Department of the Interior, <https://www.nps.gov/tps/sustainability.htm>; USGBC, "LEED," U.S. Green Building Council, <https://new.usgbc.org/leed>; WBDG Historic Preservation Subcommittee, "Sustainable Historic Preservation," Whole Building Design Guide, <https://www.wbdg.org/design-objectives/historic-preservation/sustainable-historic-preservation>.

Though LEED is a desirable rating system for architectural firms to achieve, it is not the most attainable rating system for the reuse of existing buildings. While improvements can be made to LEED to better incorporate adaptive reuse into the scorecard system, applying green measures to historic buildings are still achievable and not limited to the LEED scorecard. As evidenced by the AIA COTE Top Ten Awards (American Institute of Architects Center on the Environment), sustainable strategies can be easily applied to historic structures, making these buildings comparable to new green construction. COTE Top Ten rigorously applies ten measures to sustainable design, ensuring the project is designed with the environment and community in mind. Various metrics for each measure are assessed, dictating the effectiveness of design strategies and solutions. Although new construction will allow for maximized control over sustainable design, last year's winners include three innovative adaptive reuse designs, proving that the implementation of sustainable measures can effectively produce a "green" historic building.¹⁴⁴

The three 2018 COTE Top Ten winners that reused existing buildings included the Ortlieb's Bottling House in Philadelphia, the Renwick Gallery in Washington, D.C. and the San Francisco Art Institute Fort Mason Center Pier 2. All three projects utilized the buildings' physical design and added sustainable measures including low-flow fixtures and energy efficient lighting fixtures. For example, the Ortlieb's Bottling House worked with the buildings design of high ceilings and operable windows to provide proper ventilation throughout the interior of the

¹⁴⁴ AIA, "COTE Top Ten Awards," American Institute of Architects, <https://www.aia.org/awards/7301-cote-top-ten-awards>.

building. Additionally, a cool roof was designed to reduce the building's heat island effect.¹⁴⁵ Similarly, the San Francisco Art Institute benefits from the natural ventilation and exposure to sunlight the original building design provides. The addition of a photovoltaic solar system resulted in producing 100% of the electricity for the building.¹⁴⁶

As seen with past COTE Top Ten winners, existing buildings are inherently green buildings that require few sustainable strategies to further improve the buildings' efficiency. Whether it is the original design intention that provided for proper ventilation or created a thermal mass to heat or cool a building, the reuse of historic structures has less of an impact on the environment than new construction.¹⁴⁷ As seen in the Preservation Green Lab study entitled "The Greenest Building," reusing existing buildings positively benefits the environment by diminishing environmental impacts associated with demolition and new construction. The study focuses on energy use, life cycle analysis, and embodied energy to report quantitative data regarding to the reuse of historic buildings. For example, over a 75-year period, adaptively reusing a building for commercial purposes yielded 13% less impact to climate change in the city of Portland, versus a newly developed commercial building of the same size in the same location.¹⁴⁸ Additionally, within Portland, the study concludes that 15% of the county's CO₂ reduction target could be met through the

¹⁴⁵ AIA, "Ortlieb's Bottling House," American Institute of Architects, 2018 COTE Top Ten, <https://www.aia.org/showcases/186146-ortliebs-bottling-house>.

¹⁴⁶ AIA, "San Francisco Art Institute - Fort Mason Center Pier 2," American Institute of Architects, 2018 COTE Top Ten, <https://www.aia.org/showcases/181821-san-francisco-art-institute---fort-mason-ce>.

¹⁴⁷ Preservation Green Lab, *The Greenest Building: Quantifying the Environmental Value of Building Reuse*, (Washington, D.C.: National Trust for Historic Preservation, 2011), https://living-future.org/wp-content/uploads/2016/11/The_Greenest_Building.pdf.

¹⁴⁸ Ibid.

adaptive reuse of existing buildings versus creating newer buildings with green strategies.¹⁴⁹ The report determines that further research is needed regarding sustainability and preservation, but concludes that the reuse of existing buildings is more sustainable than new construction.

Sustainability and historic preservation are inherently linked as the reuse of existing buildings limits the amount of landfill waste and embodied energy for the creation of new materials for new construction. However, a delicate balance is needed by architects and designers to appropriately apply sustainable measures to existing structures without compromising historical integrity. As the design world continuously promotes sustainable practices, preservationists must continue encouraging the reuse of historic structures for both the preservation of our built heritage and the environmental benefits of recycling existing buildings.

The economic benefits attributed to adaptively reusing our built heritage, like the social and environmental benefits, further justify reuse. In Thompson Mayes' 2018 book, *Old Places Matter*, Mayes expresses six reasonings behind the economic impact of preservation. Refined from the NTHP and Donovan Rypkema, Mayes' reasonings include: jobs, income, state and local taxes; heritage tourism; revitalization; attracting talent and investment; property values; and business incubation. Also stated by Meeks and Hurley, Mayes notes the reuse of historic buildings produces higher paying jobs and money generated remains in the local economy as compared to new construction, therefore benefitting local communities through employment, income, and taxes. The local economy is further benefitted by

¹⁴⁹ Ibid.

heritage tourists, new residents and small businesses that are attracted to older buildings and the sense of authenticity the buildings provide. The increase in interest alternatively increases property values, therefore further providing economic benefits to the local economy. Hurley, however, cautions against the exploitation of reusing old buildings for profit intentions. Preservation, then, should be seen as an economic tool, not *the* economic tool for revitalizing communities.¹⁵⁰

The reuse of historic buildings deeply impacts communities, the environment, and local economies, creating unique, vibrant and sustainable urban atmospheres. The transformation processes, however, should be gradual, and emphasis should be paid upon the existing community and defining a balance between old and new. Old buildings have the potential to serve a variety of functions, but also the power to define our sense of place and sense of self.

How Urban Preservation Can be Achieved

Recent endeavors by organizations like the National Trust for Historic Preservation (NTHP) and the Urban Land Institute (ULI) explore the role of preservation in revitalization, providing tips to overcome common hindrances. Within the October 2017 report, *Untapped Potential: Strategies for Revitalization and Reuse*,

¹⁵⁰Preservation Green Lab, *Older, Smaller, Better: Measuring how the character of buildings and blocks influences urban vitality*, (Washington, D.C.: National Trust for Historic Preservation, 2014), <https://forum.savingplaces.org/HigherLogic/System/DownloadDocumentFile.ashx?DocumentFileKey=bac17bb3-e9cf-1d28-7cae-558fa35820e5&forceDialog=0>.; Andrew Hurley, *Beyond Preservation: Using Public History to Revitalize Inner Cities* (Philadelphia, PA: Temple University Press, 2010).; Stephanie Meeks, *The Past and Future City: How Historic Preservation is Reviving America's Communities* (Washington, D.C.: Island Press, 2016).; Thompson M. Mayes, *Why Old Places Matter: How Historic Preservation Affect Our Identity and Well-Being* (Washington, D.C.: Rowman & Littlefield, 2018).

the NTHP Green Lab and ULI addressed four barriers to reuse: zoning, parking, financing, and codes.¹⁵¹

Within any city, a series of zoning laws dictates the development and appearance of new buildings and the environment of downtown. As argued by the NTHP and ULI report, various zoning barriers hindering the reuse of buildings includes the limitations of building use, development standards favoring new construction, non-conforming buildings to current standards, vulnerability of smaller buildings zoned for higher FARs, and complex zoning overlays. The solutions offered in the report include the rewriting of outdated zoning laws and creating form-based zoning codes. The creation of less segregated and structured zoning codes will promote reuse, mixed-use, and context sensitive development.¹⁵²

Across the United States, the invention of the automobile further progressed sprawl outside of our dense urban centers, the creation of highways, and the necessity for creating parking lots. The obligation to accommodate for cars has transformed urban patterns and dictates future development with parking requirements built into city codes. Though parking is a necessity, the report acknowledges that the elimination of minimum parking requirements, as well as exempting older buildings from requirements will further assist cities in reusing their built heritage.¹⁵³ For example, the Center City of Rochester does not require parking for new developments, due to the abundance of parking facilities downtown.

¹⁵¹Preservation Green Lab, *Untapped Potential: Strategies for Revitalization and Reuse*, (Washington, D.C.: National Trust for Historic Preservation, 2017), <https://forum.savingplaces.org/HigherLogic/System/DownloadDocumentFile.ashx?DocumentFileKey=a8afe694-4ca4-06db-a7d4-3ac98e470904&forceDialog=0>.

¹⁵²Ibid.

¹⁵³ Ibid.

As seen within the economic and authenticity factors reusing historic buildings provides, the market potential for reusing buildings is capitalized by small and start-up businesses that actively seek flexible, open plan workspaces older buildings provide. The added historic character of the building, as noted in the report, further impacts these businesses identity and marketing narrative. Additionally, financial barriers can be lifted with the implementation of Federal Historic Tax Credits which incentivizes adaptive reuse. Between 1977 and 2014, over 40,384 buildings were adaptively reused with Federal Tax Credits, generating \$22.6 billion. Additionally, \$98.6 billion income was generated from these reused properties, benefiting the local economies. Alternatives to Federal or State Tax Credits include finding alternative sources of funding, like revolving loan funds or grant programs like the NTHP's Main Street Program. The usage of tax credits and additional funding programs like the Main Street Program, spurs development and investment, which leads to an increase in property values, new jobs downtown, and new local businesses.¹⁵⁴

The report emphasizes codes as a fourth and final barrier to reuse. While codes are in place to ensure the health, safety, and welfare of the public, the adoption of a flexible approach to building codes would further allow for adaptive reuse. Though codes are necessary, the report argues that new codes could be written for the

¹⁵⁴ Preservation Green Lab, *Untapped Potential: Strategies for Revitalization and Reuse*, (Washington, D.C.: National Trust for Historic Preservation, 2017), <https://forum.savingplaces.org/HigherLogic/System/DownloadDocumentFile.ashx?DocumentFileKey=a8afe694-4ea4-06db-a7d4-3ac98e470904&forceDialog=0>; Stephanie Meeks, *The Past and Future City: How Historic Preservation is Reviving America's Communities* (Washington, D.C.: Island Press, 2016); David Listokin, Barbara Listokin, and Michael Lahr, "The Contributions of Historic Preservation to Housing and Economic Development," *Housing Policy Debate* 9, no. 3.

reuse of buildings to perpetuate the opportunity to reuse a city's existing fabric. The adjustment to existing codes additionally obstructs costly upgrades and aids in the retention of historical features.¹⁵⁵

Beyond the solutions provided in the *Untapped Potential* report, the NTHP also developed ten principles of ReUrbanism, which focused on reusing, reinvesting and revitalizing cities. Centering around preservation, reurbanism focuses on responding to the needs and issues of cities and is a guideline to transform these cities. The focus on preservation and on people results in the contribution to creating stable and vibrant cities. The lengthy titles of each principle promotes preservation, walkability, use of mass transit, sustainability, human scale development, and the sense of authenticity provided through adaptive reuse. Ultimately denoting the importance of preservation, the ten principles of reurbanism can be applied to any city or neighborhood to promote the preservation of our built heritage for future generations.¹⁵⁶

A myriad of barriers hinder the adaptive reuse and revitalization of buildings, neighborhoods and cities. As noted by the Advisory Council on Historic Preservation, the process of rightsizing cities through planning and zoning efforts will properly utilize reuse as a revitalization strategy to create sustainable and active

¹⁵⁵ Preservation Green Lab, *Untapped Potential: Strategies for Revitalization and Reuse*, (Washington, D.C.: National Trust for Historic Preservation, 2017), <https://forum.savingplaces.org/HigherLogic/System/DownloadDocumentFile.ashx?DocumentFileKey=a8afe694-4ca4-06db-a7d4-3ac98e470904&forceDialog=0>.

¹⁵⁶ Forum Online, "Ten Principles for ReUrbanism: Reuse and Reinvestment in the 21st Century," Preservation Leadership Forum, National Trust for Historic Preservation, <https://forum.savingplaces.org/blogs/forum-online/2016/09/07/ten-principles-for-reurbanism-reuse-and-reinvestment-in-the-21st-century>.

communities.¹⁵⁷ The opportunity for revitalization is nested in preservation and therefore barriers need to be eliminated to promote and achieve the desirable sense of place and authenticity sought after by start-up businesses, hipster bars and restaurants, and college graduates.

ReUrbanism and Rochester

Learning from the NTHP's exploration in ReUrbanism, the ten principles could easily be applied to Rochester. Exploring the city's history, after World War II Rochester accommodated vehicles, not people, by allowing for the demolitions of neighborhoods to make way for the Inner Loop, highways and other vehicular-oriented designs. With significant amounts of cars downtown, a parking situation surfaced, leading to the necessity to bulldoze buildings in order to build parking lots or garages. The remnants of designing with the automobile in mind as a response to traffic problems, led to the decline of businesses, outward sprawl, and a downtown riddled with seas of parking. Fortunately, the increase in downtown population, the eagerness of the city to improve, and the national trend favoring downtown residency, garners new hope for Rochester.

As seen in various parts of Rochester which retains its historic character, most notably Park Avenue, local businesses, shops, and boutiques are thriving. Stated in the ten principles of ReUrbanism, the charm of the historic sense of place is an economic engine. The tree covered streets, historic houses and storefronts, and

¹⁵⁷ Advisory Council on Historic Preservation, *Managing Change: Preservation and Rightsizing in America*, (Washington, D.C.: Advisory Council on Historic Preservation, 2014), <https://www.achp.gov/sites/default/files/documents/2018-07/RightsizingReport.pdf>.

walkable environment, attribute to both the sense of place and community of Park Avenue. The human scale nature of this portion of the city additionally maintains the sense of community coveted by various new developments around the county.

Downtown Rochester, too, could experience this atmosphere if greater efforts are placed on developing *place* for people rather than individual buildings with grander connections to streets and sidewalks. The physical environment of the city's streetscapes could be improved alongside development of vacant structures into inhabitable spaces for all. The notion of creating single-use buildings for offices or residences should be abolished from future development plans, therefore allowing for a mixed-use street environment that will lead to street activity. The redevelopment of historic buildings with multiple uses works in tandem with the improvements needed to the city's streetscape to offer a welcoming atmosphere that will be inhabited by people.

Embracing the historic character of downtown Rochester by adaptively reusing its structures for new, mix-use purposes is only part of the solution to revitalize a city. Developing a walkable and bike-able environment is also necessary. Reliance on cars further drives the notion that downtown is not for people, and therefore the creation of complete streets to accommodate people, bicycles and cars, should be attained downtown. In addition, mass transit options reduce the dependence on the automobile. Locally, a non-profit organization known as ReConnect Rochester focuses on creating safer streets designed for pedestrians, bicycles and mass transit. Headed by Mike Governale, the former director of the Rochester Subway website, ReConnect Rochester vigorously argues for improvement to public transportation.

Rochesterians rely on their automobiles to get them from point A to point B due to the lack of mass transit but also the convenience the automobile provides. The city only has a bus services to connect downtown with suburbia, and due to limited reach into the surrounding community, it is not a competitive alternative to automobile use. ReConnect Rochester emphasizes the need to improve the bus system, providing figures as to how the \$1 ride on the bus is more economically sustainable than owning or using a personal automobile. The non-profit additionally works on improving bus stop environments as well as developing the bike share initiative within the city.¹⁵⁸

Overall, the efforts to revitalize and transform Rochester into a vibrant community must be done in collaboration with preservation and adaptive reuse efforts. The necessity to create street activity downtown and harness a sense of place is rooted in working with the city's historic structures and transforming them to fit the needs of the community. The additional needs to address transportation problems by improving mass transit and creating safe streets, will support the new programs and activities occurring within the heart of the city. The following chapters provide a greater understanding of Rochester and the needs of the community leading up to the appropriate programs that can be applied downtown. Preservation is inherent to urban revitalization and is necessary for the rebirth of downtown Rochester by creating a sense of place revolving around the city's historic identity.

¹⁵⁸ Reconnect Rochester, "About Us," Reconnect Rochester, Inc., <https://reconnectrochester.org/about-us/>; Reconnect Rochester, "Public Transportation," Reconnect Rochester, Inc., <https://reconnectrochester.org/resources/public-transportation/>.

Conclusion

Historic preservation is no longer limited to preserving significant Americans' homes and converting them into house museums. Through the use of legislation and innovative design strategies, historic structures, sites, objects, and landscapes can be preserved for the continual use as homes, offices, or other facilities that serve the larger community. Adaptively reusing structures is a resourceful way to sustainably fulfill the needs of a community. The retention of our built heritage alternatively effects the community by harboring an authentic sense of place. Rather than destroying usable buildings, the sustainable, economic, and authenticity factors outweigh the notion that newer is better. Instead of repeating the mistakes of the past by demolishing buildings and creating non-descriptive architecture, cities should reuse their built environment to create active, sustainable, and authentic communities.

Neighborhoods along Park Avenue and Monroe Avenue are popular destinations with a series of shops, restaurants, bars, and apartments nestled into historic buildings. The charm of these neighborhoods is rooted in the historic architecture, providing residents with a sense of authenticity and community. Downtown Rochester, too, can provide new inhabitants with a sense of place and community seen in other parts of city, if it is willing to develop and occupy vacant buildings downtown for future shops, restaurants and other amenity spaces. Rather than building more parking lots and garages, Rochester should shift its focus to retaining a downtown population. With the development of new high-end condos along the Genesee River and the conversion of the Xerox office tower into residential apartments, now is the time for the development of grocery stores, restaurants, and

other amenities for this emerging community. The neglect to create this type of development, strengthens Rochester's automobile-centric design focus, forcing new downtown inhabitants to rely on their vehicles to take them outside of the city to stock their fridges

Chapter 7: Architectural Intervention

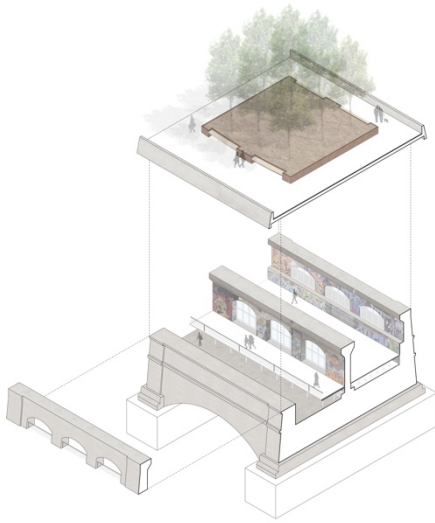


Figure 28 Illustration by Author.

The Broad Street bridge and aqueduct are integral to the historical narrative and identity of the City of Rochester. The aqueduct and cap of Broad Street characterize the expansion, growth, and development of the city. While the interior of the bridge was abandoned in the 1950s, the void left emphasizes the state of Rochester due to decentralization and shift towards suburbia after World War II. With the national trend towards

urban living, Rochester has the unique opportunity to once again reclaim its prosperous and active identity by reusing the one structure that best illustrates the city's history.

Site Analysis



Figure 29 Illustration by Author.



Figure 30 Illustration by Author.

Rochester is located in Upstate New York within Monroe County (Figures 29 and 30). The city limits extend upward to Lake Ontario, one of the Great Lakes, while

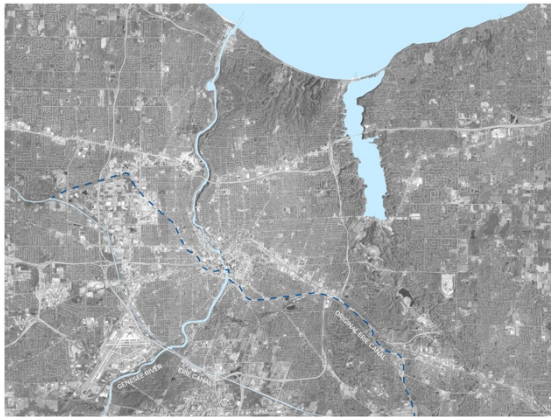


Figure 31 Google Earth Underlay, Illustration by Author.

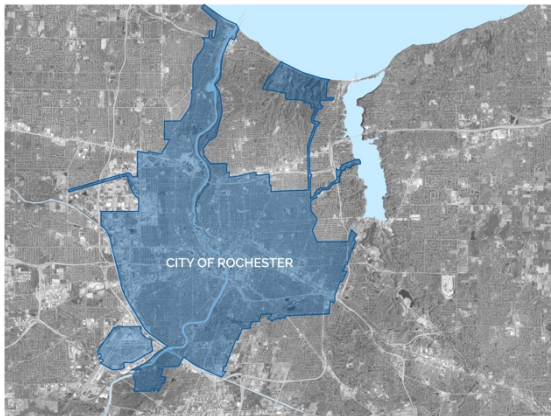


Figure 32 Google Earth Underlay, Illustration by Author.



Figure 33 Google Image Underlay, Illustration by Author.

the heart of the city sits eight miles south of the lake. As seen in the above figures, the Erie Canal extends from Albany to Buffalo, crossing through the center of the city. These diagrams, however, depict the Erie Canal Path as originally designed, and therefore is not accurate to the rerouted canal seen today.

Figures 31 and 32 showcase the boundaries of the city and include the Genesee River path north towards Lake Ontario as well as the current and original Erie Canal paths. Figure 33 further demonstrates the original Erie Canal path over the aqueduct and Genesee River in the heart of the city.

The character of downtown Rochester, or the center city which is defined by the Inner Loop, simply lacks program and “life.” (See Appendix B). In order to best develop an active downtown environment, new residential



Figure 34 Illustration by Author.



Figure 35 Google Image Underlay, Diagram by Author.



Figure 36 Illustration by Author.

needs to be added within the Inner Loop to populate, densify and justify additional program downtown. Figure 34 identifies the existing residential buildings downtown in brown, while suggesting the adaptive reuse and construction of new residential structures in yellow. New structures can be introduced in existing vacant lots or surface parking lots throughout downtown. However, in order to instill an active street environment, these new residences should be mixed-use buildings with commercial and office space available on the ground floor.

As the Genesee River passes through the city, an existing Genesee River Trail haphazardly meanders the river's edge. A continuous trail can be introduced along the river's edge by utilizing the first floor of the Aqueduct Building on the west side, which can be entered at the Broad Street level. On the east side, the trail can continue underneath the existing Rundel Memorial Library, extending north through the new plaza and on a

new walkway placed next to a new mixed-use residential building. The new trail path allows for continuous views of the Genesee River, thereby capturing it as an amenity.

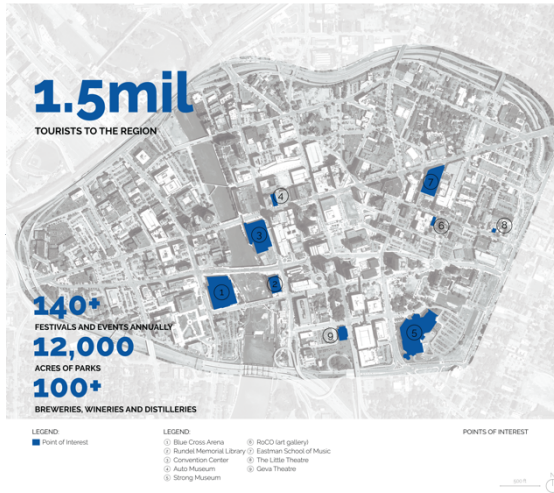


Figure 39 Google Image Underlay, Diagram by Author.

The surrounding context of the Broad Street bridge and aqueduct are important to comprehend in understanding the character and activeness of the city. Surrounding the bridge on the west side is the Blue Cross Arena. The Arena is home to Rochester's hockey and lacrosse teams,

but also serves as a venue for concerts, ice skating shows, and events like monster truck rallies. This Arena serves a wide demographic of the city and the surrounding suburbs. To the east side north of the bridge is the Rochester Riverside Convention Center, which also holds a variety of small to large scale public and private events.

Immediately south of the bridge on the east side is the Rundel Memorial Library. The

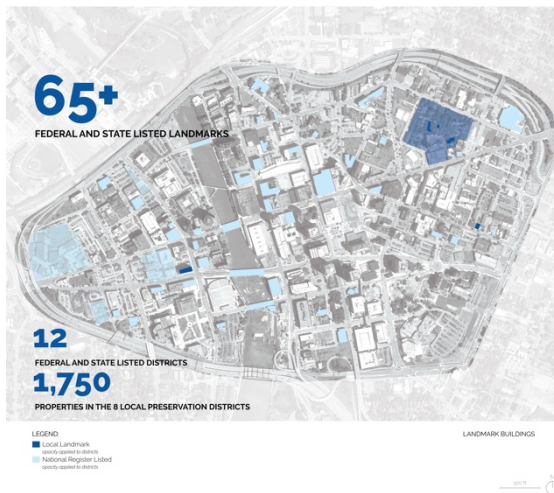


Figure 37 Google Image Underlay, Diagram by Author.

library, built in the 1930s, was built over a millrace and the railroad tracks, therefore this space is connected to the interior of the bridge. The library itself offers a multitude of events for Rochesterians of all ages, including lectures and classes throughout the weekdays.

As stated in prior chapters, the Broad Street bridge and aqueduct is listed on the National Register. However, Rochester's center city is also includes many other

listed buildings and structures, indicated in light blue on the diagram in Figure 37.

This diagram showcases Rochester’s architectural character, while further addressing the need to treat the bridge and aqueduct with the same respect as other listed structures by maintaining the structures’ in its entirety so it can further serve the city as a reminder of Rochester’s past while programming it for the future.

Program and Precedents

ROCHESTER, NEW YORK		
WEST SIDE	CRITERIA	EAST SIDE
	CIVIC AMENITIES	
	RESTAURANTS	
	RETAIL (SHOPS)	
	RESIDENTIAL	
	OFFICES	
	PUBLIC PARKS	
	PARKING	
	VACANCY (BUILDING)	
	VACANCY (LOT)	
	CURRENT DEVELOPMENT	
	TRANSPORTATION ACCESSIBILITY	
	PEDESTRIAN ACCESSIBILITY	
	HISTORIC LANDMARKS	
	STRUCTURAL STABILITY/MAINT.	
	PAST 5PM ACTIVITY	
	ACCESS TO RIVER	
	MUSEUM + GALLERY SPACE	

FULLFILLS CRITERIA:

■ HIGH

■ MEDIUM

■ LOW

Figure 40 Illustration by Author.

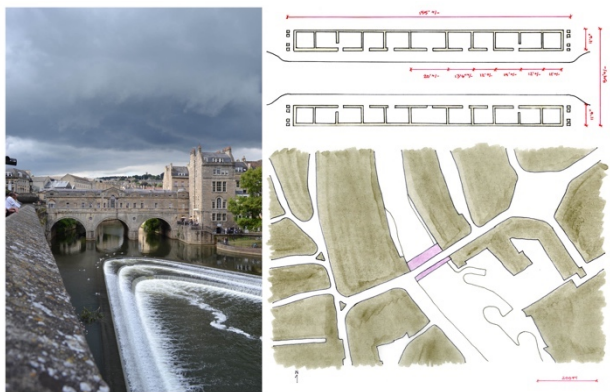


Figure 41 Illustration by Author.

The character of downtown Rochester lacks a centerpiece for the city, as well as programmed spaces for gathering and entertaining. Concluding the site analysis within the Inner City, a site matrix was developed to understand either side of the bridge. The matrix suggested the poor presence of restaurants, residential and retail along both sides of the river. Both sides, however, showcased a multitude of parking and office structures downtown, further cementing the city’s 9 to 5 operation.

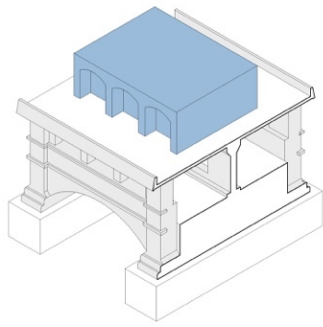


Figure 42 Illustrations by Author.

In assessing the characteristics of downtown Rochester surrounding the bridge, it was clear that a new form of public space with retail and restaurant experiences was needed. This conclusion led to a precedent study which highlighted famous bridges, including the Pulteney Bridge and Ponte Vecchio, as

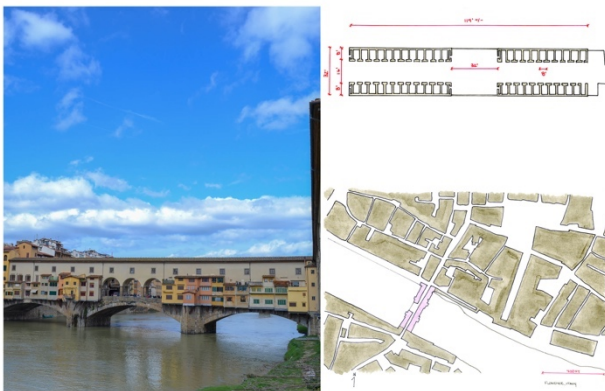


Figure 43 Layout, Images and Illustrations by Author.

well as transformed pieces of infrastructure now utilized for public spaces, including the High Line and Viaduc des Arts.

Earlier parti studies of the Broad Street bridge and aqueduct

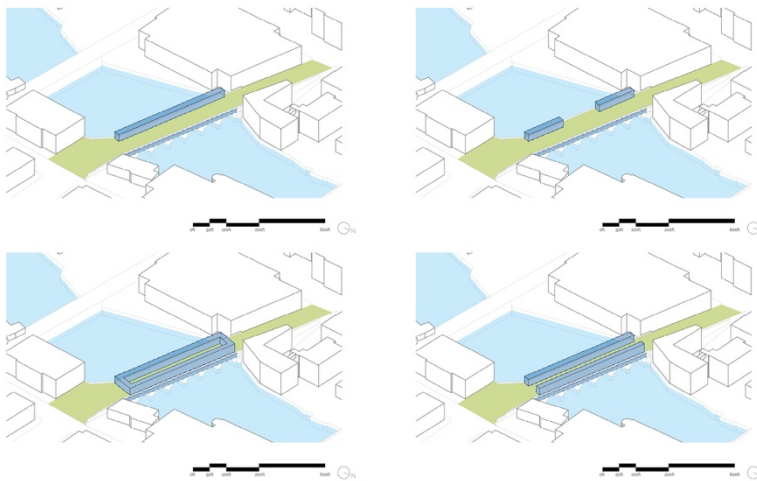


Figure 44 Illustrations by Author.

closely followed Pulteney Bridge and Ponte Vecchio in which the addition of a 21st Century layer of retail and restaurants would be added along the street level of the bridge, while

additionally converting the interior for commercial usage. Earlier ideas, seen in Figure 44, play with developing commercial space along the entirety of the bridge, or

breaking up the bar to allow for views towards the river, similar to the Ponte Vecchio.

Furthermore, Figure 43 illustrates the idea of reintroducing the arches of the façade



Figure 45 Layout, Images and Illustrations by Author.

on this new 21st century layer.

However, the final design focuses on creating a lantern with a simple rectilinear form to stand alone as a new piece of architecture introduced to the historic structure.

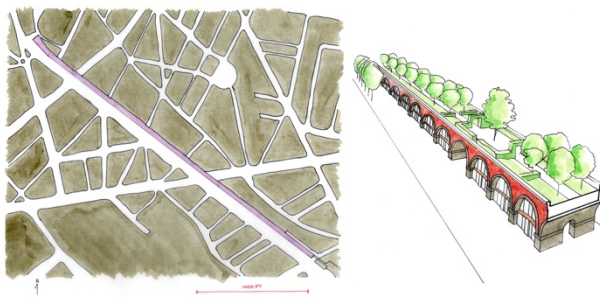


Figure 46 Illustration by Author.

As seen in Figure 44, the green path along the street level indicates the conversion of Broad Street into a pedestrian walkway. In this case, the Highline and Plantee Promenade of the Viaduc

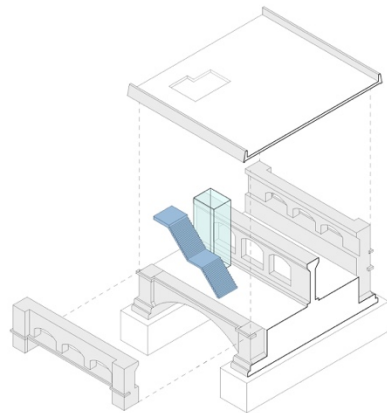


Figure 47 Illustration by Author

des Arts was explored with the creation of a public promenade in the heart of a city with foliage and native plants arranged to create a new form of public park. The study of the High Line lead to ideas about entry into the bridge structure in terms of entering the interior of the bridge at street level, as seen in Figure 47.



Figure 48 Illustration by Author.

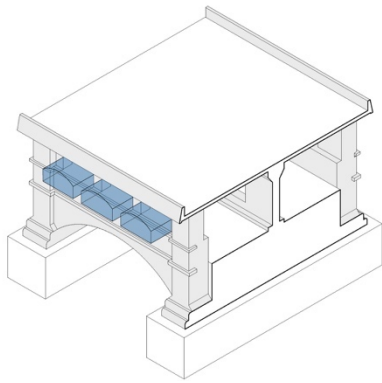


Figure 49 Illustration by Author.

Lastly, the Main Street Bridge in Rochester was also consulted as a case study due to its Ponte Vecchio quality in which many commercial buildings were built along either side of Main Street over the course of the 1800s. Prior to its demolition in the 1950s, the Main Street bridge extended retail across the Genesee River to allow for a continuous retail corridor. The imagery of the Main Street bridge with the irregularity of the river

façade led to the idea to create bump outs within the bridges' arches to extend program over the Genesee.

The preliminary design partis and ideas led to a more respectable approach in the architectural intervention of the bridge within the final design. The interior of the bridge would be utilized for programmed retail and restaurant space, while the street level

would be utilized for public park and gathering spaces with minimal construction to alter the appearance of the bridge. Although trees and planters are visible along the top of the bridge, the final design steps away from a new architectural language along the entirety of the bridge, thereby retaining views to the river and avoiding the development of two levels of commercial retail.

Design Strategies

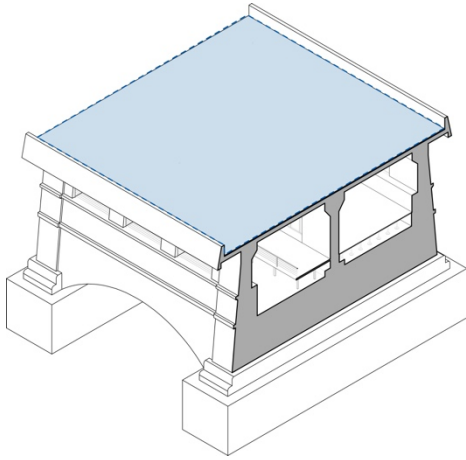


Figure 50 Illustration by Author.

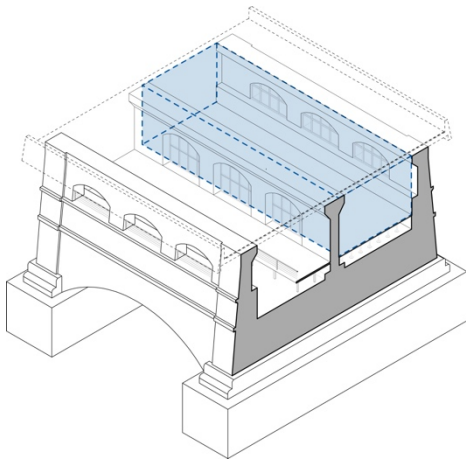


Figure 51 Illustration by Author.

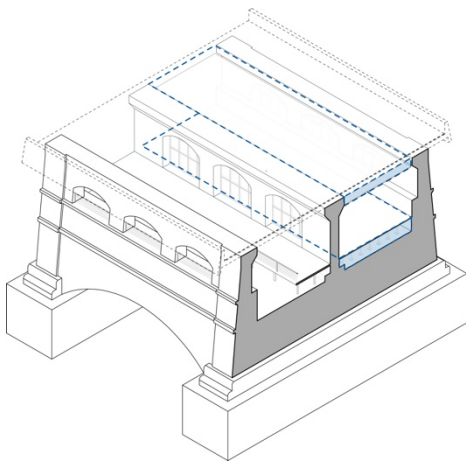


Figure 52 Illustration by Author.

Three rehabilitation strategies to activate and utilize the Broad Street bridge and aqueduct were developed following the early design schemes. These rehabilitation strategies: closing off Broad Street to vehicular traffic; infilling half the interior while retaining the other half for circulation; and using clouds and raised access flooring; were created to guide the design and minimize the impact of the architectural intervention on the historic structure. The ultimate design develops a respectful architectural intervention by minimally intruding on the current character of the bridge through the maintenance of the southern portion of the interior for circulation. The absence of new construction on the street level of the bridge, maintains the top as a public park and promenade, while a small lantern is centered and serves as a moment of entry into the interior. The infill portion of the project, on the northern side, features operable windows within the interior and exterior arches and

raised access flooring to allow for circulation between either sides due to the height of



Figure 53 Illustration by Author.

the interior arches, as well as provide for sight out of the interior bridge.

The raised access flooring further allows for the introduction of HVAC, electrical and other mechanical systems within the infilled portion.

Final Design



Figure 55 Illustration by Author

The final architectural intervention utilizes the three rehabilitation strategies and introduces a pub/restaurant on the western side of the bridge to serve the Blue Cross Arena attendees before or after games and performances. As one continues east within the bridge, the central lantern separates the pub/restaurant with a museum and gallery. This museum gallery will be the downtown branch for Rochester's Memorial Art Gallery, located outside of the Inner



Figure 56 Illustration by Author.

Loop. This museum also corresponds to the sculpture garden that is created on the top of the bridge, in which sculptures are nestled between planters.

As one leaves the bridge on the eastern side, a sunken plaza is situated at the raised floor access level to allow a continuous connection into the bridge and under the library. Beneath the library, a walkway extends across the mill race while a new restaurant and test kitchen are infilled. Over the course of the seasons, the infilled restaurants and museum can be used, while the sunken plaza on the east and plaza on the west could be used for multiple purposes. The sunken plaza could be used for cinema screens, concerts, plays and dance performances due to the design of amphitheater seating. Additional retail within the new mixed-use residential building serves both the sunken plaza and the upper portion of the plaza which is at street level.

On the western side of the bridge, another multi-use plaza allows for four seasonal use. During warmer months, festivals and farmers markets could utilize the plaza as market stall space. In addition, food trucks can serve the plaza, providing more food options for workers and residents downtown. During the colder months, an ice-skating rink can be placed on the plaza, while enclosed market stalls can use the sidewalk space to provide ice skaters with skates or a warm drink during the winter. An additional ramp permits entry to the bridge on the western side, allowing users to enter at the raised floor level and continue down to the original canal bed level.



Figure 58 Illustration by Author.

Conclusion

The final architectural intervention respectfully adaptively reuses the Broad Street bridge and aqueduct by placing programming within the interior of the structure. By filling the void in the heart of the city with a programmatic purpose and utilizing the top of the bridge for public space, the bridge serves a purpose for the city as a centerpiece of activity. Although the architectural interactions with the bridge itself create a unique design, there is a need for further city planning efforts within the surrounding context of the bridge to justify the development of retail within the bridge. The introduction of new residential downtown will support the development of commercial retail.

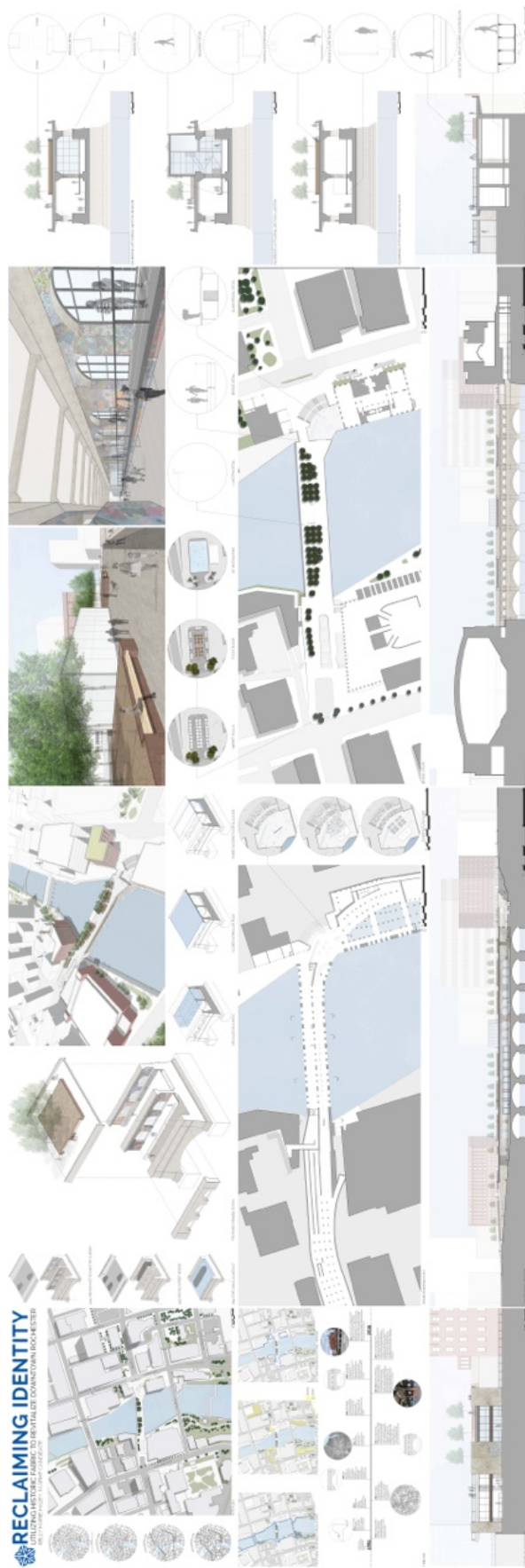


Figure 59 Boards, Images, and Illustrations by Author.

Chapter 8: Conclusion

Through the adaptive reuse of structures within the heart of the city, Rochester could revitalize and activate the city by creating an authentic sense of place that historic preservation provides. The struggles of the city, which have extended from the 1950s and 60s decentralization and urban renewal efforts, must be overcome through intentional and cohesive design approaches to allow the city to densify and populate. The awareness of the Genesee River and the countless historic structures downtown, should be seen as amenities and unique attributes to the city, and therefore efforts to celebrate, preserve and interact with these amenities are necessary.

Overall, the design intervention of adaptively reusing the Broad Street bridge and aqueduct focuses on introducing program into the interior of the bridge which will be supported by new residential on the periphery of the bridge. The further creation of public space along the existing Broad Street and two public plazas on either end of the bridge, will serve as key gathering spaces for dining and entertainment. As dictated within the verbal presentation of this project, further design manipulation is needed to create a cohesive public plaza and promenade at street level to fully integrate this new design into the city.

The design intervention is not a panacea for Rochester; would not singularly solve the city's needs for activating downtown. The design is, however, part of a larger vision for revitalizing downtown. The design guidelines, including adding new mixed-use residential, creating a continuous Genesee River Trail on both sides of the river, and creatively activating the void in the heart of the city, can be used as a formula for Rochester to respectfully and purposely revitalize.

Appendices

Appendix A

After World War II, cities across America noticed a shift in population from cities to the newly developed suburbs. 1950s America preferred individual homes centered on a green lawn, with a driveway to house one's automobile. Individualism and the "American Dream" of owning a home in the suburbs led to the decentralization of downtowns. As more affluent families preferred the comforts of suburbia, expensive highway projects continued to develop, therefore allowing workers to commute in and out of the city easily. As the popularity of the suburbs ensued, new shopping experiences, like the strip mall and enclosed mall, were favored destinations. These malls offered expansive parking lots, making it easier for suburbanites to drive and shop in contrast to downtown retailers. Soon, department stores and shops closed their downtown stores, relocating to the suburbs. Over the course of the 1950s, '60s and '70s, downtowns of American cities became uninviting and vacant places, only serving the purpose for office space - unless already moved to suburban office parks. The decline of downtown led to the rise of the urban renewal era, with the major idea that through destroying parts of the city, the city could be saved.

The vast majority of urban renewal projects throughout the 1950s to 1970s not only destroyed historic fabric of cities but displaced many people in the name of progress. Demolishing the blighted areas of cities filled with lower class residents, forced people out of their homes and communities. While urban renewal efforts were done within city limits, the primary goal was to get the suburbanites back downtown,

therefore series of highways or enticing architectural spaces were designed in effort to repopulate the city. However, the shortcomings of many urban renewal projects was the focus on designing with the automobile in mind, as well as creating spaces that people would visit, but not inhabit. The failure to retain people downtown past 9-to-5 endeavors, creating highways to make the city more accessible from the suburbs, and the development of parking lots or garages continued the vicious cycle of allowing downtowns to decline and suburbia to flourish.

Downtown Decentralization: Constraining the City

Argued by various urban historians, the decentralization of downtown can be pinpointed to a host of issues, technologies and changes in American thought post-WWII. In the case for Rochester, the creation of a series of highways connecting outlying towns and communities, spurred the development of the suburbs. The affordability of the automobile and ability to quickly travel downtown within twenty minutes, further supported the growth of the Rochester suburbs. In 1950, Rochester experienced its peak population of 332,488 downtown, but soon after a sharp decline resulting in 296,230 residents by 1970. Meanwhile, the suburbs continued to flourish and grow in population and size.¹⁵⁹

Built between 1949 and 1960, the New York State Thruway, known as the Governor Thomas E. Dewey Thruway, extended 2,800 lane miles and cost nearly \$1 billion to build.¹⁶⁰ The announcement of the path of the Thruway south of the city of

¹⁵⁹ Blake McKelvey, "A Panoramic Review of Rochester's History," *Rochester History* 11, no. 2 (April 1949).

¹⁶⁰ Thruway Authority, "Overview of the Thruway System," New York State Thruway Authority, <https://www.thruway.ny.gov/oursystem/overview.html>.

Rochester, prompted the need to connect the city to this new commercial and travel artery. The declining use of the Rochester subway, the Thruway system across the state, and increased traffic congestion in the center city, led to the support of creating an arterial highway around the city. The arterial highway, known as the Inner Loop,

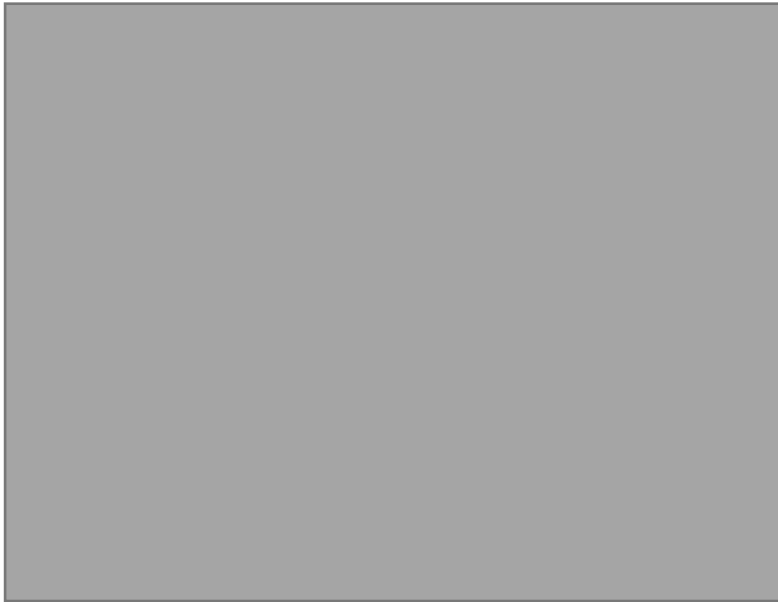


Figure 60 Map showing Inner Loop Proposal, Rochester, N.Y., Monroe County Library System, Rochester Municipal Archives, accessed December 14, 2018, <https://catalogplus.libraryweb.org/?section=resource&resourceid=1116102511¤tIndex=0&view=fullDetailsDetailsTab>.

would ease traffic congestion and connect Rochester to the Thruway and outlying communities. New York State additionally recognized the need for the creation of arterial highways in cities, offering to pay for the

construction costs and half the land costs. While opposition to the route proposed by the State was resolved by February 1949 by widening the Inner Loop around downtown, it was clear to both the State and the City that this arterial highway was necessary to improve traffic congestion downtown and to make the city better connected and accessible.¹⁶¹

“What will the Inner Loop be and what will it accomplish?” was the reigning question after the arterial highway map was debuted in February of 1949.¹⁶² The

¹⁶¹ “Arterial Highway Plan Goes Ahead on 2 Fronts,” *Times Union*, February 24, 1949.; “Loop Plan Highlights Fight on Congestion,” *Times Union*, February 25, 1949.

¹⁶² “Loop Plan Highlights Fight on Congestion,” *Times Union*, February 25, 1949.

Inner Loop was praised as the panacea to downtown traffic issues by allowing vehicles to utilize the various exits to reach their destination quicker without navigating the central business district. Previously known as the central traffic district, the City Planning Commission stressed the importance of denoting the center city as the central business district. This distinction would highlight the importance of downtown as an “economic entity, and not just a district through which automobiles pass.”¹⁶³ By depressing or elevating the Inner Loop, depending on its location around the city, the new highway would maintain higher speeds without the hindrance of stoplights and on-grade crossings, thereby decreasing downtown traffic by an estimated 60% to allow for more efficient usage of the center city streets.¹⁶⁴ The city additionally recognized the lack of parking facilities downtown and proposed to create new parking structures to additionally accommodate for the automobile. The 2.7 mile, \$34 million Inner Loop, and its at-grade partner, the Outer Loop located further outside of the center city, begun construction in 1951 and was officially completed by 1965.¹⁶⁵ Seen as a success of modernization and street improvement efforts, the Inner Loop now gave clear definition to the center city.¹⁶⁶

The resulting effects of the Inner Loop led to a more accessible downtown, achieving the goals of connecting downtown with the Thruway and suburbia. The

¹⁶³ Emmet N. O'Brien, "City Studies Loop Theory on Traffic: Business Area Become Key in Planning," *Democrat & Chronicle*, September 16, 1948.

¹⁶⁴ Truman Searle, "You'll Be Driving on Them: Are You Up-to-Date on Out Loops?" *Democrat & Chronicle*, July 12, 1953.

¹⁶⁵ Peter Stutz, "Final Segment Open on 3-Mile Inner Loop," *Democrat & Chronicle*, October 21, 1965.

¹⁶⁶ "Keep Arterial Program Moving," *Times Union*, January 20, 1949.; Kermit Hill, "LOOP-ing Our Traffic Problems," *Times Union*, February 28, 1953.; "National Expert Praises City's Loop Plan For Relieving Acute Traffic Congestion Problems," *Times Union*, September 30, 1953.; no title. *Times Union*, October 20, 1965.

creation of parking structures additionally contributed to the automobile-centric planning ideas. Alleviating downtown congestion through the Inner Loop creation and development of parking, further assisted in the growth of suburbia now that downtown was built for the suburbanite's car. Seen as positive planning throughout the urban renewal era, it soon became clear that the Inner Loop constrained the city, effectively disconnecting the center city and its businesses from the rest of Rochester with a six-lane moat.

The suffocating center city recently was released from its noose. In an effort to correct the urban renewal creation of the Inner Loop, the City of Rochester demolished the eastern portion of the arterial highway. The depressed portion closed in 2014 before being filled in completely in 2017, creating developable spaces downtown. Although no new development has occurred yet, there is an opportunity to reintegrate the center city with the eastern side of the city.¹⁶⁷

Civic Pride

Over the course of the rapid expansion of the Flour City, calls for a civic center were expressed. A series of proposals done by famous architects and planners, began emerging around 1911, extending through the urban renewal era. The development of a civic center would not only house important governmental offices and public buildings but invoke civic pride in Rochesterians. While a multitude of plans emerged, including plans by Alfred Brunner and Frederick Law Olmstead, and

¹⁶⁷ City of Rochester, NY, "Inner Loop East Project," City of Rochester, <http://www.cityofrochester.gov/innerloopeast/>; Keith Schneider, "Taking Out a Highway That Hemmed Rochester In," *The New York Times*, November 1, 2016, <https://www.nytimes.com/2016/11/02/business/old-highway-paves-road-for-recovery-in-rochester.html>.

Harland Bartholomew, it was not until the late 1950s that Rochester would develop its Civic Center. This center, however, only contained courthouses, the Police Department and a jail. Other civic buildings, including a library and public auditorium, were already constructed in the 1930s and mid-1950s.

Completed in 1936, the Rundel Memorial Building is in a peculiar location.



Figure 61 Albert R. Stone. Aerial view showing Rundel Building under construction. Monroe County Library System, Albert R. Stone Negative Collection, Rochester Museum & Science Center, accessed December 14, 2018, <https://catalogplus.libraryweb.org/?section=resource&resourceid=1116891499¤tIndex=0&view=fullDetailsDetailsTab>.

On the east side of the river, above the Johnson & Seymour Race and the Rochester Subway, the library was constructed on a series of piers to avoid the tracks. Constructed out of steel with the capacity to store 830,000 books, the Rundel Memorial Building is named after Morton W. Rundel, a local businessman whose fortune was

acquired in the stock market. Designed by architects Edwin Gordon and William Kaelber in the Beaux-Art and Art Deco styles, the library building is a prominent civic building, on a commanding site. Due to its placement over the Johnson & Seymour millrace, arched openings at the base of the building allow water to flow into the Genesee River. Funded by Rundel and the WPA, the symbolism and quotes placed throughout each building's elevation prompted Rochesterians to learn and the city to prosper.¹⁶⁸

¹⁶⁸ Blake McKelvey and Ruth Rosenberg-Naparstek, "The Origins of the Rochester Public Library," *Rochester History* 48, nos. 1 & 2 (January & April 1986).

Across the Genesee, on the west side, the War Memorial superblock was constructed. Now the Blue Cross Arena, the War Memorial was a public auditorium and memorial dedicated to Rochester-area veterans. Located on the original Kimball Tobacco Factory and the Carroll, Fitzhugh and Rochester millrace site, the first superblock in downtown demolished the factory and historic millrace. Designed by

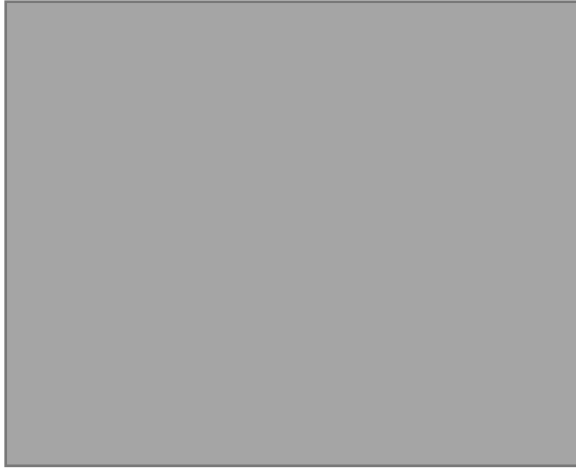


Figure 62 War Memorial, Rochester N.Y. Monroe County Library System, Rochester Municipal Archives, accessed December 14, 2018, <https://catalogplus.libraryweb.org/?section=resource&resourceid=1117023429¤tIndex=3&view=fullDetailsDetailsTab>.

architect Leonard A. Waasdorp, the War Memorial featured a chapel space with an eternal flame that linked to the community auditorium. Although funding was secured as early as 1945, demolition and construction did not begin until the early 1950s. Officially opening in 1955, the 7,000-person-capacity auditorium became an

amenity space for Rochesterians and suburbanites who would venture downtown for various performances, including the circus and hockey games.¹⁶⁹

Renovated in the 1990s, the chapel area was developed into a lobby space. Waasdorp, having visited multiple memorials before designing the War Memorial, wanted to create a sacred space to honor veterans and those who died in war. His intention was to separate the lobby space from this sacred chapel, however, the

¹⁶⁹ Daniel J. Palmer, *Rochester's Downtown Architecture: 1950-1975* (Charleston, SC: Arcadia Publishing, 2010).

redesign completely erased the chapel space, moving the memorial to veterans and the war dead to the exterior of the building along the river.¹⁷⁰

Continuous plans which emerged throughout Rochester's history stressed the importance of creating a Civic Center. However, by the late 1950s, buildings that would make up the Civic Center, including a library and public auditorium, were already constructed. While the city considered multiple sites, including building over the river between Main and Court Streets, the development of the Inner Loop led to

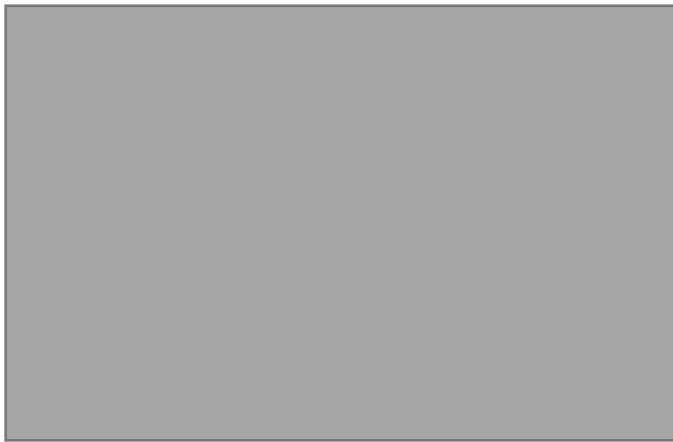


Figure 63 Civic Center Plan, from: "Civic Center: Rochester, New York," 1956, <http://mcnygenealogy.com/book/civic-center-1956.pdf> pg 3.

the chosen site in the southwestern quadrant of the city, using the new arterial highway as a border.¹⁷¹ This location was chosen based on the proximity to the library and War Memorial, effectively adding the two buildings as

part of the proposed plans. Raised on a plinth, the 1956 proposal of the Civic Center comprised of city and county buildings surrounding an open-air plaza with the capacity of 30,000 people, and a parking garage for 1,300 vehicles located underneath the plaza. The remaining space along the Inner Loop and extending along the river towards Court Street, would be dedicated to green space. The green space would additionally extend over Exchange Street which is submerged and built on top of for

¹⁷⁰ Ibid.

¹⁷¹ Calvin Mayne, "Civic Center Seen No Snag to Loop," *Times Union*, June 8, 1954.

this scheme. Lastly, a Federal Building and State building are proposed south of the Rundel Memorial Building on the east side of the Genesee.¹⁷²

The master plan, designed by Faragher & Macomber and Voorhees Walker Smith & Smith architectural firms, was half realized. The Hall of Justice (court building) and the Public Safety buildings were erected in their proposed locations, facing the massive public plaza space between 1958 and 1963. The green park space and the additional government office buildings on both sides of the river were never developed. However, in the late 1990s and early 2000s, the jail was expanded, and a new Public Safety building was created on the south side of the plaza, backing up to the Inner Loop. Additionally, in 2009, the vast plaza space was redesigned as a green space for the city, although the only inhabitants are jury members and those awaiting trial.¹⁷³

Urban Renewal Efforts

Similar to the War Memorial and Civic Center superblocks, a series of other superblocks were continually proposed and developed in downtown over the course of the 1950s to 1970s. Like other cities, the creation of superblocks destroyed neighborhoods and the historic fabric and character of downtown. In Rochester, the destruction of streets and historic buildings in the name of urban renewal led to large-scale projects with modern buildings and vast amounts of parking. Since the 1950s, Rochester experienced a density issue, where most of the urban fabric is made up of

¹⁷² "Civic Center: Rochester, New York," 1956, <http://mcnygenealogy.com/book/civic-center-1956.pdf>; Daniel J. Palmer, *Rochester's Downtown Architecture: 1950-1975* (Charleston, SC: Arcadia Publishing, 2010).

¹⁷³ "Civic Center: Rochester, New York," 1956, <http://mcnygenealogy.com/book/civic-center-1956.pdf>

parking lots instead of buildings, people, and activity. The efforts to construct with the automobile in mind, led to the demise of the city, as well as certain urban renewal projects too.

Rochester's most notorious superblock, Midtown Plaza was a product of the late 1950s that is still discussed today. Developed through private funding by two major Rochester retail families, the McCurdys and Formans, Midtown Plaza was the



Figure 64 Cover Page from "Midtown Plaza: The New Business Center of Downtown Rochester, New York."

America's first downtown enclosed shopping center. Designed by Victor Gruen, the architect behind the suburban shopping mall, this project transformed the Rochester skyline and commercial activity downtown. Unlike the

suburban shopping mall, Gruen and the city believed Midtown Plaza would transform downtown. Gruen's theory of transfiguration, similar to urban revitalization, suggested that Midtown Plaza, with its retail plaza, office space, hotel and restaurant, would revive downtown's economy. Although many view and remember Midtown Plaza as an enclosed mall, Gruen urged that all programmatic elements were integral to the project and its success.¹⁷⁴

¹⁷⁴ Karen McCally, "The Life and Times of Midtown Plaza," *Rochester History* 69, no. 1 (Spring 2007).

Announced in 1958 and completed in 1962, Gruen's vision of Midtown Plaza was an enclosed town square. Beyond two-stories of retailers, the interior plaza space was also for public art, performances, meetings and for people to congregate. Born in Austria, the town square was reminiscent to the active and multipurpose squares in Europe. Continuing from Gruen's transfiguration theory, he also believed in designing social environments, which was highlighted in his 1964 book, *The Heart of Our Cities*. This book dedicated a chapter to Midtown Plaza, again recalling its multi-program design. On top of the interior mall, Midtown Tower consisted of ten stories of office space, faced in grey brick, and four stories of hotel with a top floor restaurant, faced in diamond-shaped aluminum. Below the shopping mall, three stories of underground parking were constructed.¹⁷⁵

Over the course of the latter half of the 19th Century, downtown retail, as well as Midtown Plaza, declined. Closing its doors in 2008, Midtown Plaza had a high vacancy rate, was seen as unsafe due to loitering teenagers, and could not compare to Gruen's suburban malls. Suburban shopping centers dominated retail culture, being more convenient to the suburban shoppers Midtown Plaza was trying to entice. Additionally, the inwardly focused design was oriented around the suburbanites' experience. The suburban shopper, having drove downtown, entering the city on the Inner Loop, would enter the underground garage of Midtown Plaza. No longer would suburban shoppers walk the downtown streets since the garage escalators brought the

¹⁷⁵ Ibid.; Daniel J. Palmer, *Rochester's Downtown Architecture: 1950-1975* (Charleston, SC: Arcadia Publishing, 2010).

shopper into the interior plaza.¹⁷⁶ The design of the Plaza, as well as the shift in retail culture, led to Midtown's failure.

The 10-acre superblock complex of Midtown Plaza project consisted of six total buildings, all which were demolished around 2015. Only Midtown Plaza and Midtown Tower were newly constructed, while the arcade Gruen design connected McCurdy's and Forman's department stores and Rochester's largest hotel, the Manager Hotel.¹⁷⁷ All demolished, Midtown Tower was stripped of its facade, revealing its steel structure, and then transformed into Tower280, an apartment complex with offices and room for retail at street level. However, one lot, known as parcel 5, remains vacant in the heart of downtown. Despite the project's failure, the superblock allowed for the extension of Broad Street further east, finally allowing the street to have a proper terminus.¹⁷⁸

Another urban renewal project under the guidance of the city and Mayor Gillette's newly created Department of Urban Renewal and Economic Development, known as the Genesee Crossroads Urban Renewal Project was developed between 1965 and 1977.¹⁷⁹ Located north of the Main Street bridge and straddling the river, this 13-acre superblock demolished the site completely in order to create few, multi-storied structures and parking. Architects, including Midtown Plaza's Victor Gruen and I.M. Pei and Associates, developed proposals for this site in the early 1960s.

¹⁷⁶ Ibid.

¹⁷⁷ "Midtown Plaza: The New Business Center of Downtown Rochester, New York."

¹⁷⁸ "Midtown Plaza: The New Business Center of Downtown Rochester, New York."; ROC the Riverway Advisory Board "ROC the Riverway: A Vision Plan for the Future of Rochester's Genesee Riverfront, Phase 1 – May 2018," May 2018.

¹⁷⁹ Blake McKelvey and Ruth Rosenberg-Naparsteck, *Rochester: A Panoramic History* (Sun Valley, CA: American Historical Press, 2001).

Similar to various other proposals throughout the early 1920s and 30s, I.M. Pei's proposal included building on top of the Genesee River in the form of a twenty-story office building.¹⁸⁰

The 19th Century urban blocks were demolished in favor of singular buildings with adjacent parking lots. The first building to be completed in the Genesee

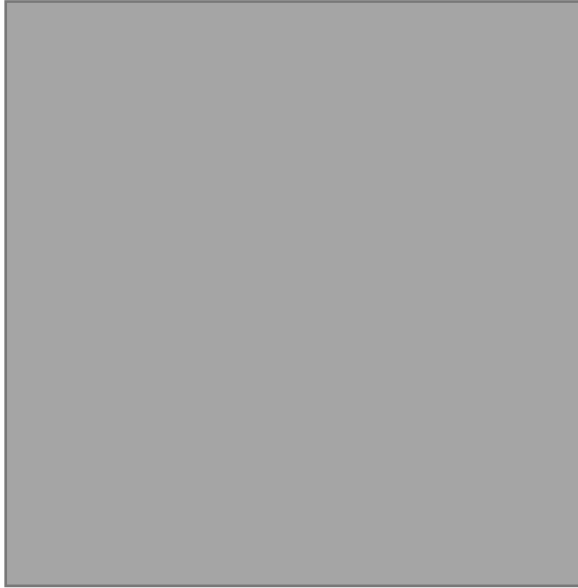


Figure 65 No title, from: Daniel J. Palmer, Rochester's Downtown Architecture: 1950-1975 (Charleston, SC: Arcadia Publishing, 2010). Pg. 46.

Crossroads project, the IBM building, a modern glass box of a building lifted on concrete stilts. A parking lot surrounded the four-story office building which was completed in 1968. Shortly thereafter, five more buildings were erected on the western side and one on the eastern side of the Genesee. These buildings, including a Federal Office building and

courthouse, a Holiday Inn, a brutalist apartment complex, and two additional office buildings, known as the Crossroads Building located at Four Corners and the First Federal Plaza building, which was completed in 1977. In addition to these buildings, a park known as Carroll Park was created. Designed by Frank Schlesinger, the 3-acre park was developed on top of a new underground parking garage to serve the office buildings. To connect both sides of the city, a y-shaped pedestrian bridge was erected.

¹⁸⁰ Daniel J. Palmer, *Rochester's Downtown Architecture: 1950-1975* (Charleston, SC: Arcadia Publishing, 2010).

Known as the Sister Cities Bridge, the bridge continues to fly flags of other countries in which Rochester has a sister city.¹⁸¹

Now one of Rochester's iconic bridges crossing the Genesee, the Sister Cities Bridge was a creation of the Genesee Crossroads project. However, as the project ventured to the east side of the river, another Rochester icon was to be demolished. The Main Street Bridge, which was rebuilt four times over the course of Rochester's history, continuously featured buildings on the bridge.¹⁸² Compared to Florence's Ponte Vecchio, the village of Rochester built a public market on the northern edge of the bridge in 1827, which prompted ad hoc building of commercial structures. Completely covering the river from view by the 1830s, the Main Street Bridge defined Main Street as the major economic and commercial thoroughfare of the city with the continuation of commercial retail along its edges. However, due to the dilapidated appearance of the bridge, the buildings were removed, revealing the stone bridge underneath and the Genesee River.¹⁸³

Unlike the Midtown Plaza and the Genesee Crossroads projects that fixated on developing office, hotel and commercial spaces, the 1970s Southeast Loop Urban Renewal project was oriented around creating residential and park space for the city. Similar to the other superblock urban renewal projects throughout the city, the Southeast Loop project called for further demolition of the city's existing fabric. Located on the southeastern side of the Inner Loop, the park was to serve as a

¹⁸¹ Ibid.; Blake McKelvey and Ruth Rosenberg-Naparsteck, *Rochester: A Panoramic History* (Sun Valley, CA: American Historical Press, 2001).

¹⁸² Dorothy S. Truesdale, "Historic Main Street Bridge," *Rochester History* 3, no. 2 (April 1941).

¹⁸³ Ibid.; Blake McKelvey and Ruth Rosenberg-Naparsteck, *Rochester: A Panoramic History* (Sun Valley, CA: American Historical Press, 2001).; Daniel J. Palmer, *Rochester's Downtown Architecture: 1950-1975* (Charleston, SC: Arcadia Publishing, 2010).

stimulus for residential development, but only three brutalist apartment complexes were ever built. However, in 1977, the decision to build the Strong International Museum of Play downtown, was hailed as a victory for the park. Opening in 1982, the Strong Museum fills in the rest of the 13.5-acre superblock project.¹⁸⁴

Known as Manhattan Square Park, the five-acre park was designed by



landscape architect Lawrence Halprin.

Opening in 1975, the park site in the Manhattan Square superblock was once occupied by tenements. Halprin designed six zones, with the focal point being a sunken, concrete plaza

Figure 66 No title, from: "Unloading Day," *Democrat & Chronicle*, May 22, 1977.

that was meant to be viewed by the

prospective high-rise apartment buildings in the superblock, or by the 100ft spaceframe observation structure. The angular concrete design, similar to other Halprin designs, featured a 2,000-seat amphitheater, waterfalls, and distinct spaces for an ice-skating rink that could be converted into tennis courts during the summer months.¹⁸⁵

Seen as "an enticement to bring suburban dwellers back into the city," the \$5.5 million, five-acre Manhattan Square Park became a place for festivals, concerts

¹⁸⁴ "Manhattan Square Pays Off Again," *Times Union*, September 2, 1977.; The Strong National Museum of Play, "History | The Strong," The Strong National Museum of Play, <http://www.museumofplay.org/about/history>.; Daniel J. Palmer, *Rochester's Downtown Architecture: 1950-1975* (Charleston, SC: Arcadia Publishing, 2010).; "Manhattan Park to Open with Music and Fireworks," *Democrat & Chronicle*, September 7, 1975.

¹⁸⁵ The Cultural Landscape Foundation, "The Landscape Architecture of Lawrence Halprin--Manhattan Square Park," Cultural Landscape Foundation, <https://tclf.org/sites/default/files/microsites/halprinlegacy/manhattan-square-park.html>

and special events since its opening in September of 1975.¹⁸⁶ However, as soon as the park opened, Rochester's newspapers reported the issues of retaining an attractive park, harping on the city to take the time and money to ensure the park is "kept lively" for Rochesterians.¹⁸⁷ While events, including the creation of a 200-foot ski mountain, have been held in the park over the years, the hopes that the park would revitalize the city was never realized.¹⁸⁸ The renovated ice-rink in 2008 and the creation of an indoor tennis bubble, simply do not garner enough pull downtown to transform the park, or the city, into an active community.¹⁸⁹

Conclusion

The decentralization of Rochester is an onslaught of several reasonings and planning choices. Throughout America, the end of WWII led to the creation of families and a baby boom. These families, in turn, sought the comforts of an individual home in the suburbs, versus the confines of an overcrowded city. Travelling farther distances than earlier transportation forms, the personal automobile was an affordable luxury that contributed to sprawl development. Coupled with the creation of highways, living outside of the city was now easier. The decline in downtown populations, taxpayer revenue, and activity downtown, led to urban renewal in the 1950s. Beginning with the of the Inner Loop, the "improvements"

¹⁸⁶Terry Dillman, "For Loop Appeal: \$3 Million Park," *Times Union*, March 28, 1973.; "Manhattan Park's a Gem; It Must be Kept Lively," *Times Union*, September 12, 1975.; "Manhattan Square Pays Off Again," *Times Union*, September 2, 1977.

¹⁸⁷ "Manhattan Park's a Gem; It Must be Kept Lively," *Times Union*, September 12, 1975.; "Manhattan Square Pays Off Again," *Times Union*, September 2, 1977.

¹⁸⁸ Claudette James, "CitySki Aims to Pack 'Em in Downtown," *Democrat & Chronicle*, November 4, 1985.

¹⁸⁹ Brian Sharp, "Renovated Ice Rink Draws Hundreds," *Democrat & Chronicle*, November 29, 2008.; "Tennis Players' 'Bubble' Proposed for Manhattan Sq.," *Times Union*, June 23, 1979.

made in Rochester demolished neighborhoods in favor of modernization. These projects that desperately tried to save the city, led to further decline.

The perception of cities by the 1970s and 1980s as crime and drug ridden places, furthered the economic decline of downtown. Due to influx of immigrants, downtown's demographics rapidly changed. To white suburbanites, downtown became a scary place attributed to vacancy rates and the large non-white and lower-class populations downtown. Race riots throughout America and in downtown Rochester furthered suburbanites fear of downtown. The perception of downtown damaged Rochester's reputation and economy, leading to the downtown office environment operating during business hours without street activity and inhabitants to sustain a vibrant city atmosphere. However, Rochester's city planners developed further strides throughout the 1990s and early 2000s to reverse the decentralization of downtown. (see chapter 4).

Appendix B

Zoning

Shown in the illustration below, the center city is designated under Chapter

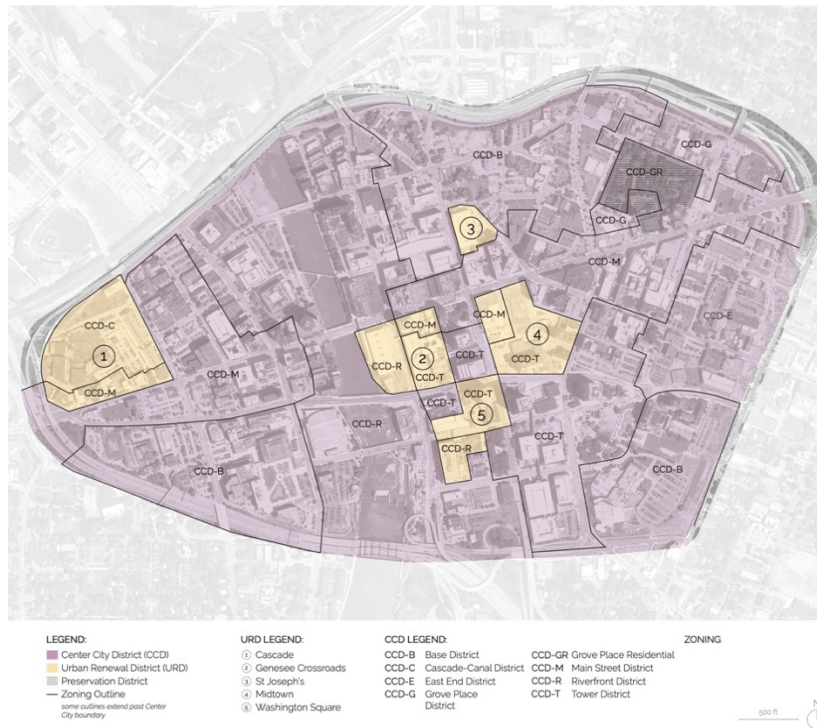


Figure 67 Zoning Diagram, Google Earth Imagery with diagram drawn by Author.

120, Article IX of the City Zoning Code as the Center City District, or CCD. Within the CCD, there are seven various districts with a set of specific regulations applied

to building heights, materials, and

building form. The overall goal of creating the CCD is to promote 24/7 activity downtown by increasing residential development within the Center City. Within the CCD, no parking is required but if parking is desired, a proposal with a parking analysis is necessary. The Broad Street bridge is in the Riverside District (CCD-R) and has six primary purposes: preserve the existing character of the riverfront; promote development compatible with the desirable built character of the riverfront; improve the visual and physical access to the riverfront; provide uninterrupted public access to the river's edge' promote the riverfront as a place for public gathering and

activity; and reduce the “barrier” effect of the river which separates the sides of the city.¹⁹⁰ Overall, the character of any new building within the district shall be compliant to the architectural character of the district, buildings should not exceed six stories, a setback of 30-feet is required for any riverfront buildings with a maximum of three stories before receding another 30-feet to build three additional stories. Additional regulations include the character of storefronts, signage, and lighting to maintain the architectural character of the Riverside District.

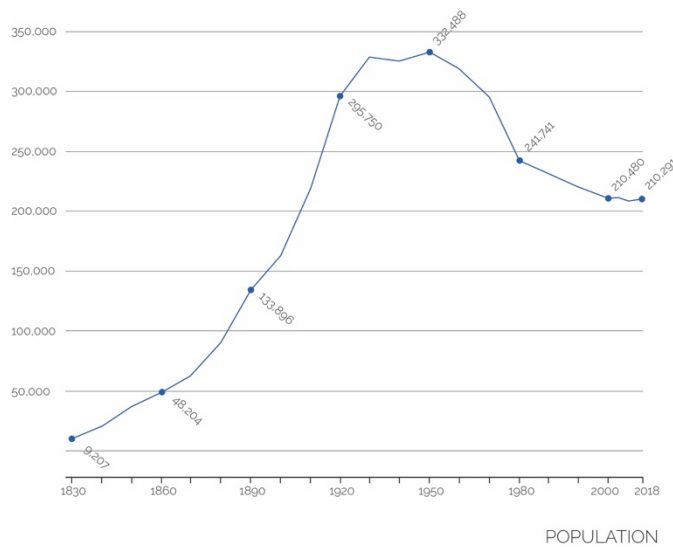


Figure 68 Illustration by Author.

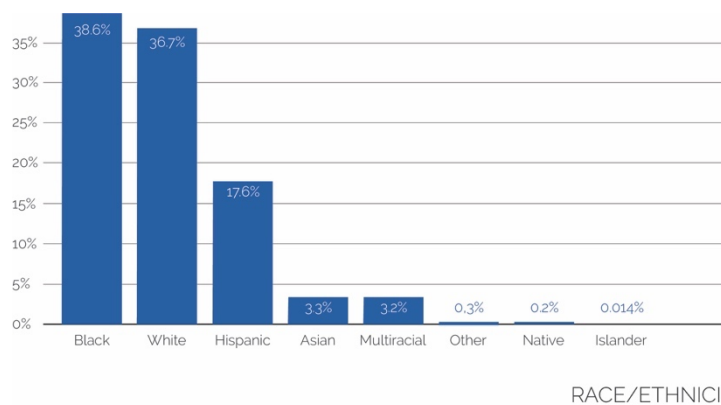


Figure 69 Illustration by Author.

Population and Demographics

The population of downtown has varied throughout the city’s history. Beginning as a boomtown with a massive influx of residents every year in the mid-1800s, Rochester flourished throughout the 19th and early 20th centuries as a hub on the Erie Canal, and then a major technology and photography center.

However, Since the 1950s,

¹⁹⁰ City of Rochester Code § 120-57 through § 120-67.

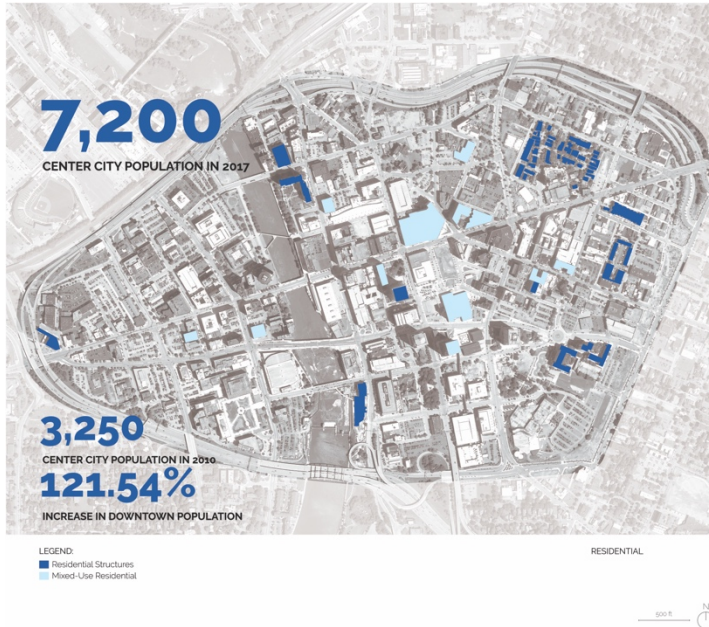


Figure 70 Google Image Underlay, Illustration by Author.

the population plummeted with the rise of suburbia, resulting in a lower concentration of population within city limits. Since 2016, Rochester's population has slightly increased, leading to the connotation that urban revitalization efforts are crucial to maintain downtown

population increases.

Out of the 210, 291 inhabitants recorded in 2018, majority of downtown residents are black (38.6%) and white (36.7%), with lower percentages of Rochesterians identifying as Hispanic, Asian, multiracial, Native American, and Islander, as seen in Figure 69.

Within the Center City, a total of 7,200 inhabitants reside as of 2017. In comparison to the Center City population in 2010, the 2017 population is a 121.54% increase. As seen in the diagram in Figure 70, the majority of residential units are located on the east side of the city. Downtown residences vary in form, from mid-rise apartment complexes to rowhomes, all built within a variety of time periods as residential units or as factories, mills or other structures that were adaptively reused for residential living.

Transportation

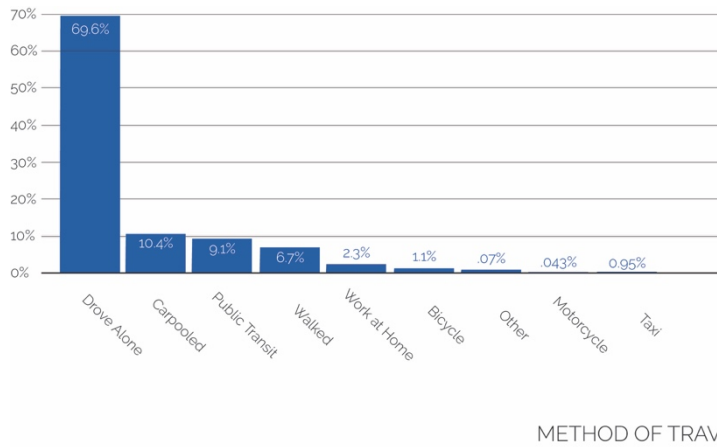


Figure 71 Illustration by Author.

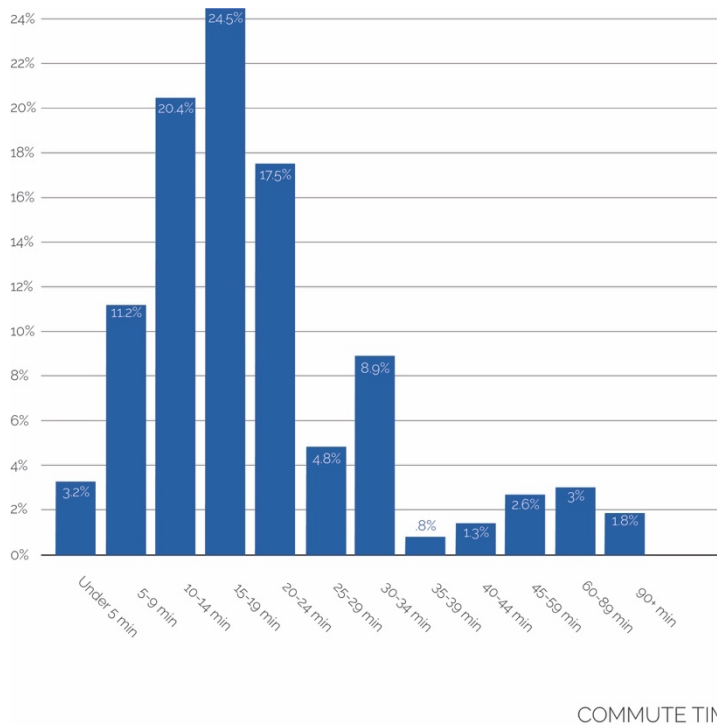


Figure 72 Illustration by Author.

Due to urban renewal efforts and the rise of suburban population, the automobile is the preferred mode of transportation in and around Rochester (Figure 71). Commute times, seen in Figure 72, average between 15-19 minutes from the suburbs to downtown, therefore cementing the reliance on automobiles over lengthier modes of travel like mass transit. The urban fabric of the city reflects the

vehicle-oriented design with the amount of parking lots and garages littering the Center City (Figure 73). The Center City, constrained by the Inner Loop, has a 30 mile per hour speed limit. As seen in Figure 74, the eastern portion of the Inner Loop

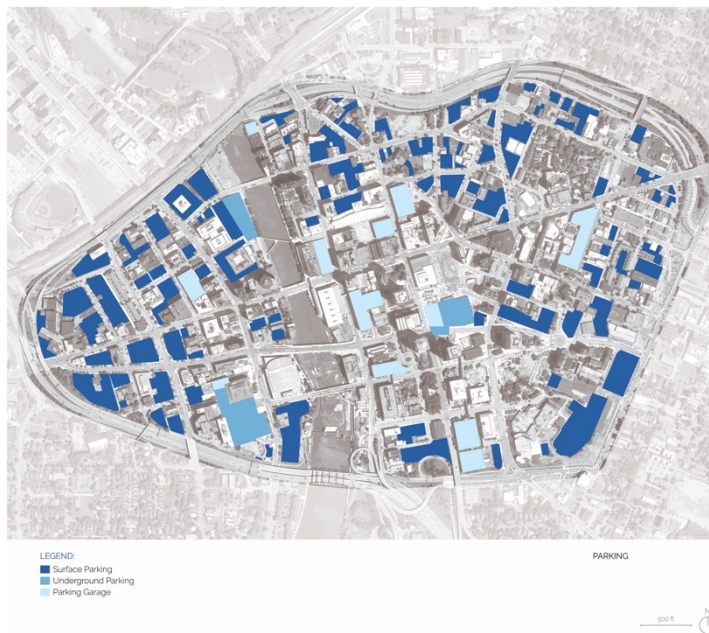


Figure 73 Google Image Underlay, Illustration by Author.

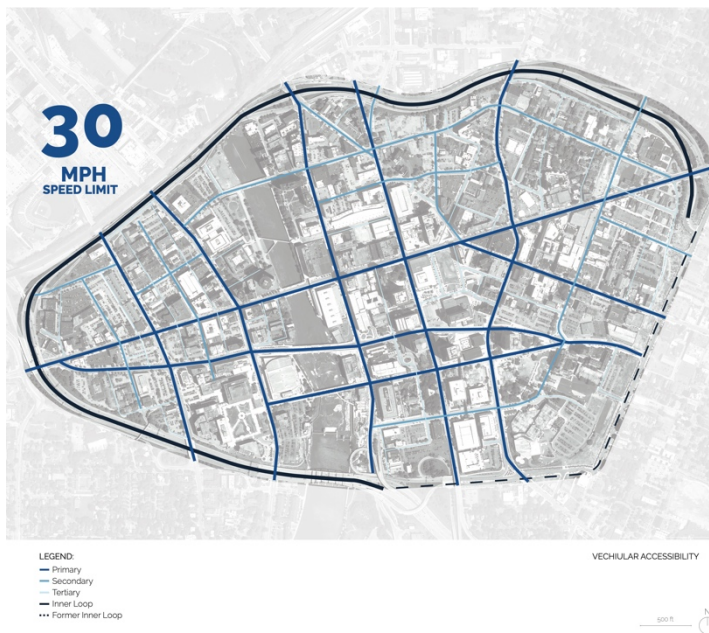


Figure 74 Google Image Underlay, Illustration by Author.

is demolished, thereby allowing for the integration of the east side of the city downtown.

Despite the reliance on the automobile, the city also has a public bus system operating within the city limits and extending outward to the suburbs.

Seen in Figure 75, the two bus service lines operate along primary and secondary city streets with a variety of stops along their routes. The buses terminate on the east side of the city at the major bus facility. In addition to mass transit,

recent initiatives for creating

bicycle lanes and a bike share program have evolved over the last five years. The bike share program, known as PACE, operates within the city and is an initiative set by ReConnect Rochester as an alternative to automobile dependence. One recent change

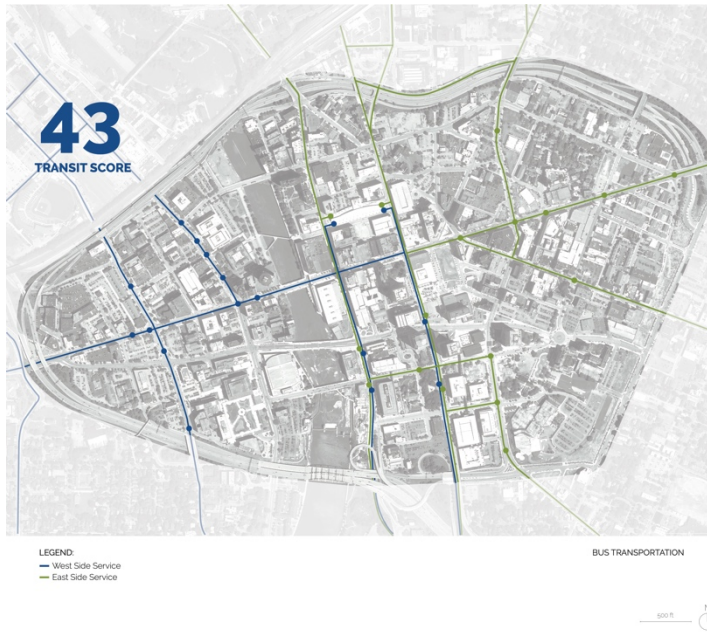


Figure 75 Google Image Underlay, Illustration by Author.

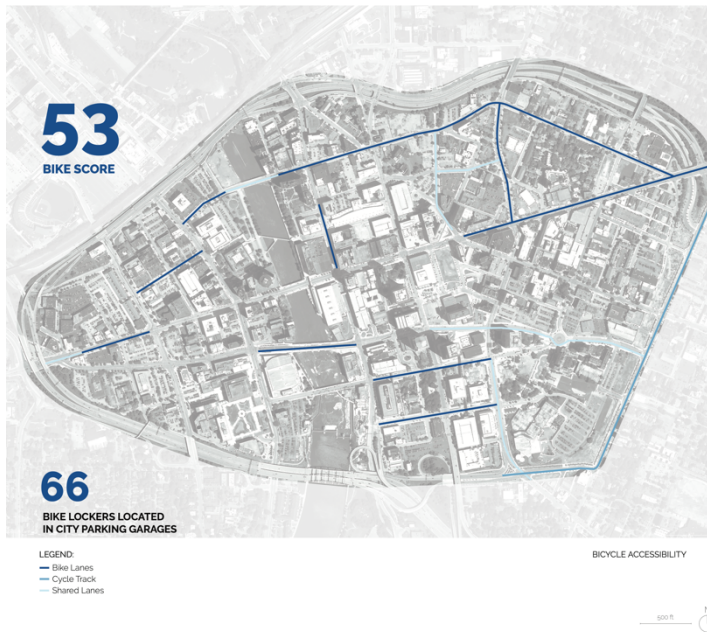


Figure 76 Google Image Underlay, Illustration by Author.

to the Broad Street bridge involved the inclusion of bike lanes instead of parking lanes for cars on either side of the street. The six-foot bike lanes are highlighted in green and have some plastic bollards but are not totally separated from vehicular traffic on the bridge. Other streets throughout the city use the same method of green painted bike lanes, without other methods to provide safety to the bikers from vehicular traffic.

Additionally, the Center City is highly walkable in terms of its size and also features trails along

the river's edge and heritage trails with various stops within the city highlighting the past, including the Heritage Trail which begins at the Rundel Memorial Library (Figure 77). With an overall walk score of 65, the City of Rochester is a highly

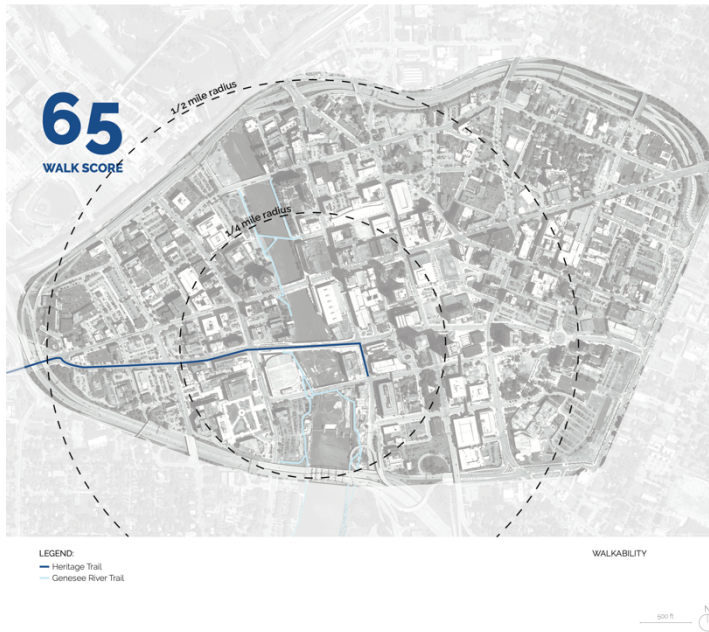


Figure 77 Google Image Underlay, Illustration by Author.

walkable city, though in need of the creation of complete streets to offer a more attractive and safer walking environment.

Tourism and Program

Tourism statistics for Rochester include the larger Finger Lakes Region. An estimated total of 1.5

million tourist visit the region annually for the various festivals and events in Rochester, as well as the wineries around the Finger Lakes. A variety of festivals are

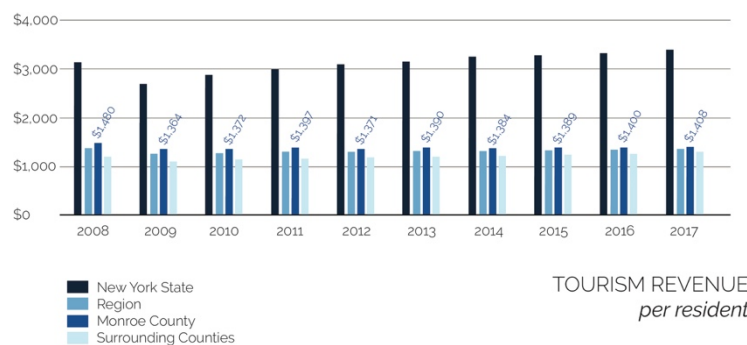


Figure 78 Illustration by Author.

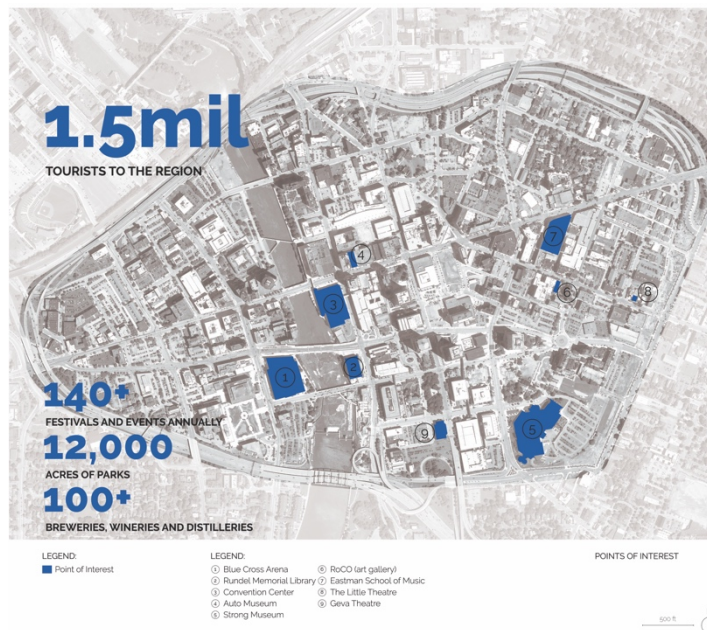
located within the Center City, or in certain city neighborhoods, provide street activity within the city. For example, the

International Jazz Festival,

a two-week event, closes down certain streets along East Avenue and the Eastman School of Music for concerts in the streets during the day and nights. Artists in a variety of genres from around the world perform during the festival, as well as local artists. Another popular festival is the Lilac Festival, which also attracts many tourists from around the State and Canada. This festival is located within Highland Park,

designed by Frederick Law Olmsted, during the peak bloom season for the lilacs. The festival offers concerts, food trucks, and artisan booths. The Lilac Festival is integral to the identity of the City of Rochester due to its nickname, the Flower City, which was established alongside the park system in the late 1800s.

Within the Center City, there are a variety of points of interests which attract



tourists and residents of the region. Most significantly, the Blue Cross Arena attracts a wide variety of people due to its events. Events include games by the Rochester Amerks (hockey), the Rochester Knighthawks (lacrosse), and the Razor Sharks (basketball);

Figure 79 Google Image Underlay, Illustration by Author.

travelling circuses, ice-skating shows, concerts, and even monster truck shows. The Rochester Riverside Convention Center also holds a wide variety of events, including concerts, lectures, larger city events, and corporate functions. Several theaters downtown and the Eastman School of Music also host a series of plays, concerts and movie screenings. A few museums reside within the city, including an Auto Museum on Main Street and the Strong National Museum of Play which developed within the Manhattan Square superblock.

In addition to the points of interest listed in the Figure 79 diagram, Figure 80

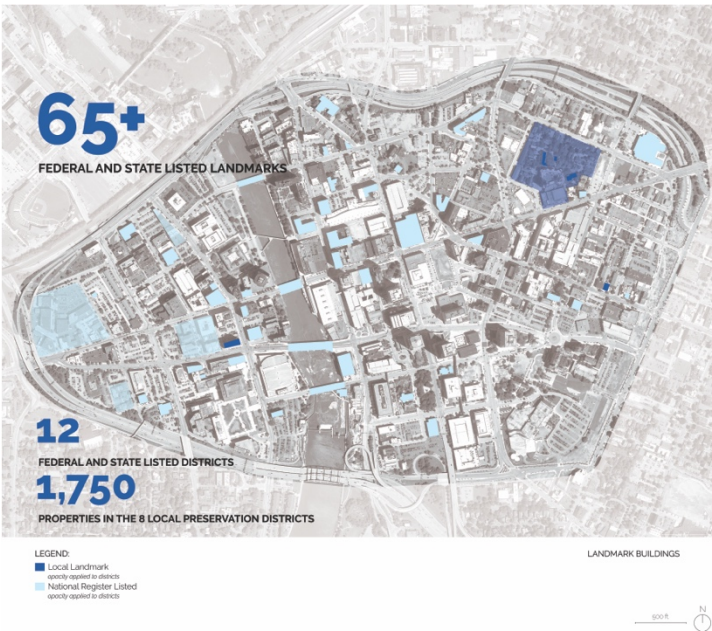


Figure 80 Google Image Underlay, Illustration by Author.

illustrates the nationally and locally listed buildings and structures residing in the Inner Loop. It is important to note that buildings are also listed on the New York State Register, but these are also nationally recognized and therefore appear as nationally listed in this

diagram. Within the Inner Loop, one preservation district is located, as well as roughly



Figure 81 Google Image Underlay, Illustration by Author.

The Flower City has fourteen parks within the Inner Loop. However, unlike the parks outside of the Inner Loop, these parks are smaller in size and often are not occupied by people other than at the lunch hour of the business day. Unlike the larger parks, there are no

recreational activities offered in these parks, besides the Martin Luther King Jr. Park (formerly the Manhattan Square Park) which has ice skating during the winter seasons. Most recently, the Genesee Gateway Park, labelled as number 2 in Figure 81, is being transformed into an urban skatepark known as the Roc City Skatepark for skateboarders downtown.

A small variety of restaurant and cafés are spattered downtown, mostly along East Avenue where the Eastman School of Music and a larger bar scene is located.



Figure 82 Google Image Underlay, Illustration by Author.

The restaurants on East Avenue, both within the Inner Loop boundaries and further outside the Center City, are well populated during nights and weekends by both suburbanites and city residents. Within the heart of downtown, few restaurants, cafés and coffee

shops exists, and often only operate during business hours. One of the most popular downtown restaurants for tourists and Rochesterians is the Syracuse-based Dinosaur Bar-B-Que, located south of the library in the old Lehigh Valley rail station. In addition, only one grocery store exists in downtown, further denoting the dependence on transportation outside of the Center City for groceries. The largest grocery chain,

Wegmans, originally had a store within downtown, but left during the decline of the city in the late 1900s.

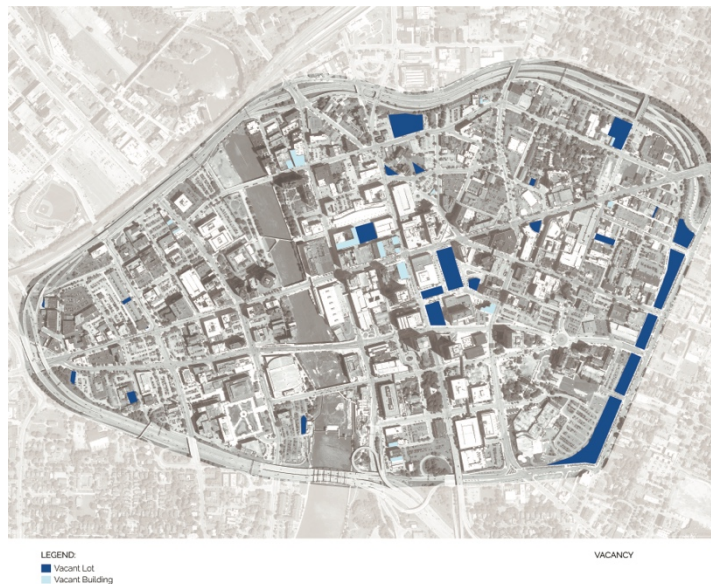


Figure 83 Google Image Underlay, Illustration by Author.

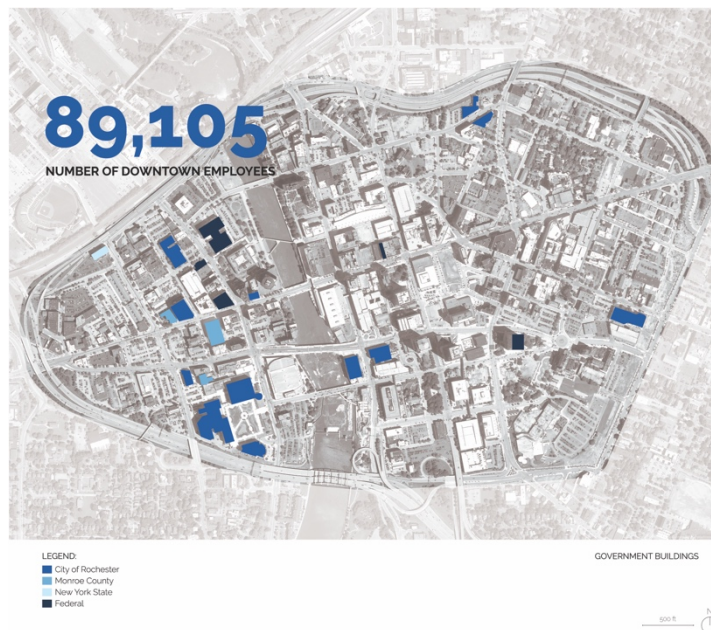


Figure 84 Google Image Underlay, Illustration by Author.

Downtown Rochester has a variety of vacant buildings and lots located on the east side of the river. Due to the filling in of the Inner Loop and the breaking apart the Midtown Plaza superblock, various large vacant lots appear waiting for attention and development (Figure 83). The diagram represents only lots and buildings that are reported vacant by the city, but excludes the vacant storefronts or floors of buildings downtown. Along Main Street, near the Auto Museum, various storefronts are vacant, further showing the decline in business population within the Center

City. Other parts of the city where local businesses thrive include along East Avenue and Park Avenue. Apart from the vacancy downtown, majority of downtown is devoted to office space. As seen in Figure 84, over 20 buildings are devoted to governmental offices at the local to federal level. As noted in Figure 84 regarding the downtown population, 89,105 downtown employees occupy the city, a stark juxtaposition from the 7,200 total residents within the Inner Loop.

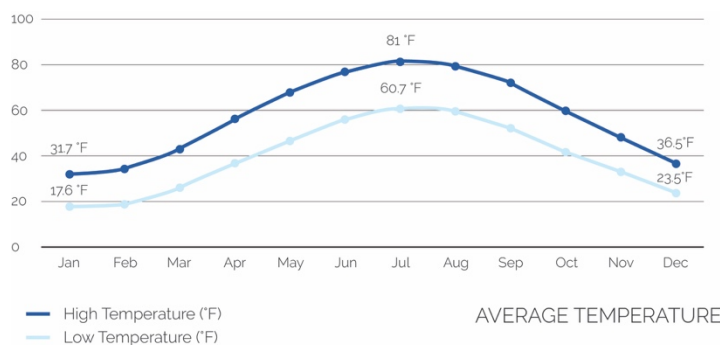


Figure 85 Illustration by Author.

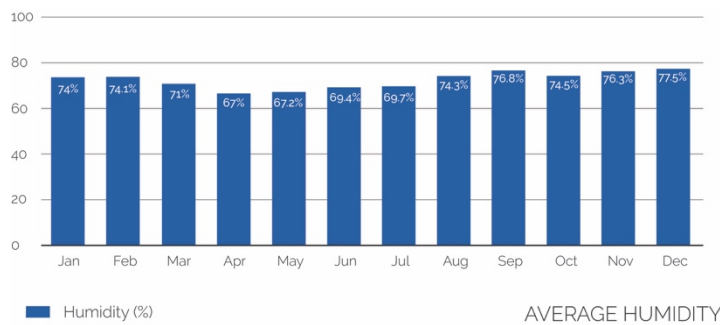


Figure 86 Illustration by Author.

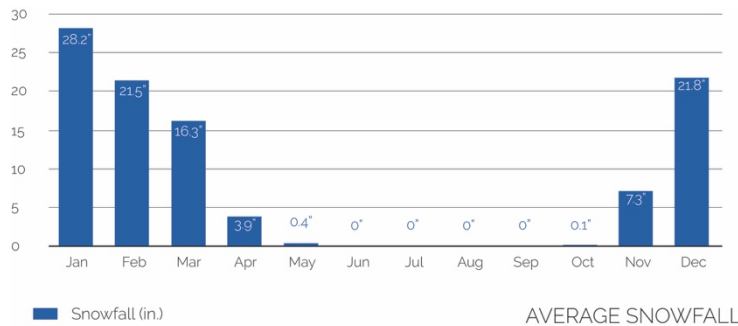


Figure 87 Illustration by Author.

Climate

Rochester and Upstate New York is known for the amount of snowfall annually. Rochester, Buffalo and Syracuse all compete amongst each other for the higher year snowfall average. Due to the location of all three cities along the Great Lakes, lake effect snow impacts the amount of snowfall. On average, Rochester receives around 100 inches of snowfall per year, with the most amount

of snow accruing from December to February.

Beyond snow, Rochester experiences all four seasons and has a mild summer

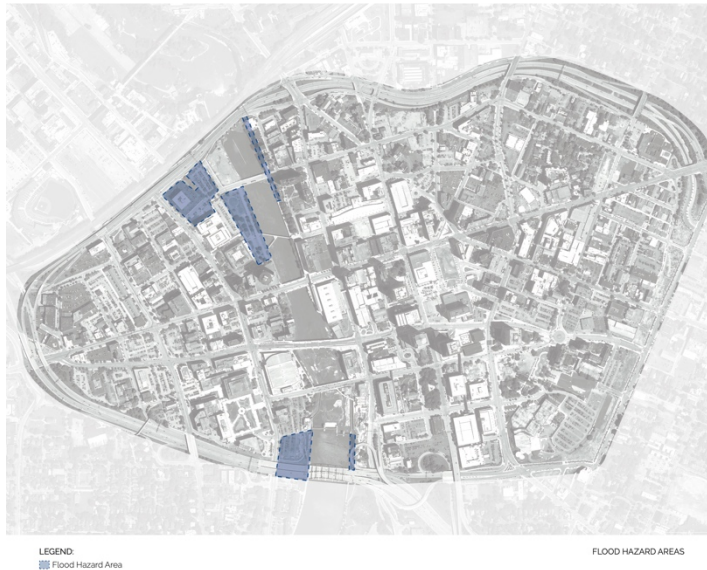


Figure 89 Google Image Underlay, Illustration by Author.

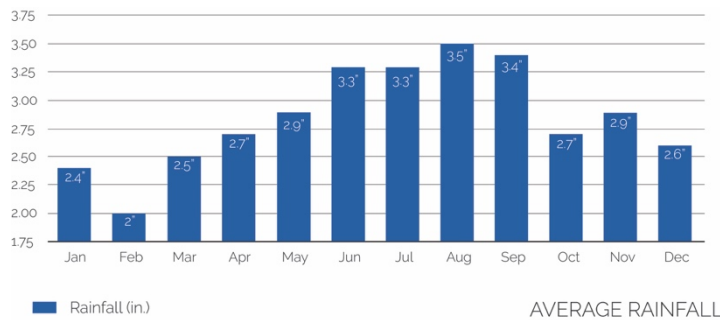


Figure 88 Illustration by Author.

exterior environment.

The average rainfall per month fluctuates between 2 inches to 3.5 inches a month, as seen within Figure 63. Information regarding the 100-year flood event is diagramed in Figure 62 and was found through FEMA's flood mapping and the City of Rochester. According to the mapping, the area north of the Main Street Bridge is subject to flooding on the west side of the river, as well as flooding south of the Court

with the average high temperature as 81°F and the average low as 60.7°F. During colder months, average temperatures range between 17.6°F and 31.7°F. Lower and higher temperatures are recorded, especially during winter months due to wind chill factors. During all four seasons, the average humidity within the city averages 67% and 76.8%, providing for a comfortable

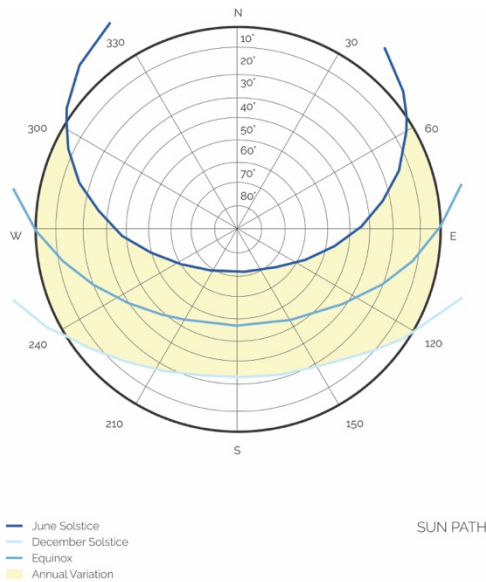


Figure 90 Illustration by Author.

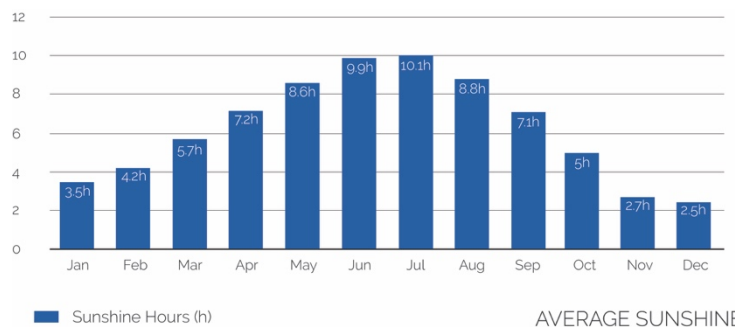


Figure 91 Illustration by Author.

Street dam on the west side. According to the city, the dam at Court Street, as well as the Mount Morris dam further south of the city which controls flooding in downtown Rochester.

Seen in Figures 90 and 91,

Rochester's sunshine hours vary regarding the month. In the winter season, the average hours

of sunshine are 2.5 hours in the month of December versus 10.1 hours in July.

The lack of sunshine during colder months is attributed mostly to the cloud

coverage, therefore producing many grey and overcast days during these months. The sun path diagram additionally showcases the path of the sun during the June solstice in dark blue, the December solstice in light blue, and the path during the equinoxes in the medium blue color.

Bibliography

“A Conversation with Tom Grasso, President of the Canal Society of New York.”

Accessed November 22, 2018.

https://www.wxxi.org/sites/default/files/a_conversation_with_tom_grasso.pdf.

Advisory Council on Historic Preservation. *Managing Change: Preservation and*

Rightsizing in America. Washington, D.C.: Advisory Council on Historic

Preservation, 2014. [https://www.achp.gov/sites/default/files/documents/2018-](https://www.achp.gov/sites/default/files/documents/2018-07/RightsizingReport.pdf)

[07/RightsizingReport.pdf](https://www.achp.gov/sites/default/files/documents/2018-07/RightsizingReport.pdf)

AIA. “COTE Top Ten Awards.” American Institute of Architects.

<https://www.aia.org/awards/7301-cote-top-ten-awards>

AIA. “Ortlieb’s Bottling House.” American Institute of Architects, 2018 COTE Top

Ten. <https://www.aia.org/showcases/186146-ortliebs-bottling-house>

AIA. “San Francisco Art Institute - Fort Mason Center Pier 2.” American Institute of

Architects, 2018 COTE Top Ten. [https://www.aia.org/showcases/181821-](https://www.aia.org/showcases/181821-san-francisco-art-institute---fort-mason-ce)

[san-francisco-art-institute---fort-mason-ce](https://www.aia.org/showcases/181821-san-francisco-art-institute---fort-mason-ce)

“A Revitalization Report: Written for the Grasso-Zimmer Plan.” Accessed November

22, 2018.

<https://modelsofexcellence.education.org/writings/revitalize-rochester>

Barnes, Joseph W. “Historic Broad Street Bridge and the Erie Canal

Sesquicentennial, 1825-1975.” *Rochester History* 37, no. 3 (July 1975).

http://www.rochester.lib.ny.us/~rochhist/v37_1975/v37i3.pdf

Beame, Edmond M. “Rochester’s Flour-Milling Industry in Pre-Canal Days.” *The*

Business History Review 31, no. 2 (Summer 1957): 209-225, accessed October 24, 2018.

Benfield, Kaid. "The Original High Line: La Promenade Plantée in Paris." *The Atlantic*. July 14, 2011.
<https://www.theatlantic.com/international/archive/2011/07/the-original-high-line-la-promenade-plant-acute-e-in-paris/241964/>

Berger, Patrick. "Le Viaduc des Arts." Patrick Berger Architect, Paris.
<http://patrickberger.fr/le-viaduc-des-arts-paris/3/>

Brunton, John. "A Magical, Green Walk Along Paris's Promenade Plantée." *The Guardian*. June 7, 2017.
<https://www.theguardian.com/travel/2017/jun/07/paris-promenade-plantee-free-elevated-park-walkway-bastille-bois-de-vincennes>

City of Rochester Code § 120-57 through § 120-67.

City of Rochester, NY. "Historic Preservation." City of Rochester.
<http://www.cityofrochester.gov/historicpreservation/>

City of Rochester, NY. "Rochester Preservation Board." City of Rochester.
<http://www.cityofrochester.gov/presboard/>

City of Rochester, NY. "Historic Preservation - Designated Building of Historic Value." City of Rochester.
<http://www.cityofrochester.gov/article.aspx?id=8589947612>

"Civic Center: Rochester, New York," 1956,
<http://mcnygenealogy.com/book/civic-center-1956.pdf>

Flanigan, Theresa. "The Ponte Vecchio and the Art of Urban Planning in Late

- Medieval Florence.” *Gesta* 47, no. 1 (2008): 1-15.
- Friends of the High Line. “Design | The High Line.” The High Line.
<https://www.thehighline.org/design/>
- Governale, Mike. “Broad St. Underground: ANOTHER Proposal for the Abandoned Subway!” *Rochester Subway*, September 23rd, 2013 Accessed October 6, 2018. <http://www.rochestersubway.com/topics/2013/09/broad-street-underground-proposal-for-abandoned-rochester-subway/>
- Grasso, Thomas X. “Geology and Industrial History of the Rochester Gorge Part One.” *Rochester History* 54, no. 4 (Fall, 1992).
http://www.rochester.lib.ny.us/~rochhist/v54_1992/v54i4.pdf
- Grasso, Thomas X. “The Erie Canal and Rochester: Past, Present, and Future.” *Rochester History* 72, no. 1 (Spring 2010).
http://www.rochester.lib.ny.us/~rochhist/v72_2010/v72i1.pdf
- “Historic Erie Canal Aqueduct & Broad Street Corridor: Master Plan.” May 2009.
www.cityofrochester.gov/WorkArea/DownloadAsset.aspx?id=21474837846.
- Hurley, Andrew. *Beyond Preservation: Using Public History to Revitalize Inner Cities*. Philadelphia, PA: Temple University Press, 2010.
- Landmark Society. “2018 Five to Revive | Landmark Society.” Landmark Society of Western New York. <http://landmarksociety.org/2018-five-to-revive/>.
- Landmark Society. “Five to Revive | Landmark Society.” Landmark Society of Western New York. <http://landmarksociety.org/programs/five-to-revive/>.
- Lipman, Andrew David. “The Rochester Subway: Experiment in Municipal Rapid

Transit.” *Rochester History* 36, no. 2 (April 1974).

http://www.rochester.lib.ny.us/~rochhist/v36_1974/v36i2.pdf

Listokin, David, Barbara Listokin, and Michael Lahr. “The Contributions of Historic Preservation to Housing and Economic Development.” *Housing Policy Debate* 9, no. 3: 431-478. <http://orcp.hustoj.com/wp-content/uploads/2016/01/1998-The-contributions-of-historic-preservation-to-housing-and-economic-development.pdf>

Manco, Jean. “Pulteney Bridge.” *Architectural History* 38 (1995): 129-145, accessed October 24, 2018.

Mayes, Thompson M. *Why Old Places Matter: How Historic Preservation Affect Our Identity and Well-Being*. (Washington, D.C.: Rowman & Littlefield, 2018).

McCally, Karen. “The Life and Times of Midtown Plaza.” *Rochester History* 69, no. 1 (Spring 2007). http://www.rochester.lib.ny.us/~rochhist/v69_2007/v69i1.pdf

McKelvey, Blake. “A Panoramic Review of Rochester’s History. *Rochester History* 11, no. 2 (April 1949).
http://www.rochester.lib.ny.us/~rochhist/v11_1949/v11i2.pdf

McKelvey, Blake. “A Sesquicentennial Review of Rochester’s History.” *Rochester History* 24, no. 3 (July 1962).
http://www.rochester.lib.ny.us/~rochhist/v24_1962/v24i3.pdf

McKelvey, Blake. “‘Canaltown’, A Focus on Historical Traditions.” *Rochester History* 37, no. 2 (April 1975).
http://www.rochester.lib.ny.us/~rochhist/v37_1975/v37i2.pdf

McKelvey, Blake. “Historic Origins.” In *Rochester on the Genesee: The Growth of a*

- City*, Second Edition. Syracuse, NY: Syracuse University Press, 1993.
- McKelvey, Blake. "Indian Allan's Mills." *Rochester History* 1, no. 4 (October 1939).
http://www.rochester.lib.ny.us/~rochhist/v1_1939/v1i4.pdf
- McKelvey, Blake. "The Physical Growth of Rochester." *Rochester History* 13, no. 4
 (October 1951). http://www.rochester.lib.ny.us/~rochhist/v13_1951/v13i4.pdf
- McKelvey, Blake. "The Population of Rochester." *Rochester History* 12, no. 4
 (October 1950). http://www.rochester.lib.ny.us/~rochhist/v12_1950/v12i4.pdf
- McKelvey, Blake. "Rochester's 125th Birthday." *Rochester History* 21, no. 2 (April
 1959). http://www.rochester.lib.ny.us/~rochhist/v21_1959/v21i2.pdf
- McKelvey, Blake. "Rochester and the Erie Canal." *Rochester History* 11, no. 3 & 4
 (July & October 1949).
http://www.rochester.lib.ny.us/~rochhist/v11_1949/v11i3-4.pdf
- McKelvey, Blake. "Rochester in Retrospect and Prospect." *Rochester History* 23, no.
 3 (July 1961). http://www.rochester.lib.ny.us/~rochhist/v23_1961/v23i3.pdf
- McKelvey, Blake. "Sesquicentennial of Rochesterville." *Rochester History* 29, no. 3
 (June 1967). http://www.rochester.lib.ny.us/~rochhist/v29_1967/v29i3.pdf
- McKelvey, Blake F. *Rochester: The Water-Power City 1812-1854*. Cambridge, MA:
 Harvard University Press, 1945.
- McKelvey, Blake and Ruth Rosenberg-Naparsteck. *Rochester: A Panoramic History*.
 Sun Valley, CA: American Historical Press, 2001.
- McKelvey, Blake and Ruth Rosenberg-Naparsteck. "The Origins of the Rochester
 Public Library." *Rochester History* 48, nos. 1 & 2 (January & April
 1986). http://www.rochester.lib.ny.us/~rochhist/v48_1986/v48i1-2.pdf

Meeks, Stephanie. *The Past and Future City: How Historic Preservation is Reviving America's Communities*. Washington, D.C.: Island Press, 2016.

“Midtown Plaza: The New Business Center of Downtown Rochester, New York.”

National Historic Preservation Act of 1966, 16 U.S.C. § 470, et seq.

National Register of Historic Preservation Nomination: The Second Genesee Aqueduct, Monroe County, New York. 1976.

New York State Office of Parks, Recreation and Historic Preservation. “Federal & State Preservation Legislation.” New York State Office of Parks, Recreation and Historic Preservation. <https://parks.ny.gov/shpo/environmental-review/preservation-legislation.aspx>

New York State Office of Parks, Recreation and Historic Preservation. *New York State Historic Preservation Plan, 2015-2020*. Albany, NY: Division for Historic Preservation, 2015. <https://parks.ny.gov/shpo/preservation-plan/documents/NewYorkStateHistoricPreservationPlan20152020.pdf>

Palmer, Daniel J. *Rochester's Downtown Architecture: 1950-1975*. Charleston, SC: Arcadia Publishing, 2010.

Park, Sharon C. “Sustainable Design and Historic Preservation.” *CRM* 2 (1998): 13-16.
http://tusculum.sbc.edu/toolkit/toolkit_pdfs/Park,Sharon_SustainableDesignHP.pdf

Perkins, Dexter and Blake McKelvey. “Early Rochester Illustrated.” *Rochester History* 5, no. 3 (July 1943).
http://www.rochester.lib.ny.us/~rochhist/v5_1943/v5i3.pdf

Perkins, Dexter and Blake McKelvey. "Touring Backwards: A Visit to Rochester in 1818, and Again in 1838." *Rochester History* 2, no 1 (January 1940).

https://www.libraryweb.org/~rochhist/v2_1940/v2i1.pdf

Preservation Green Lab. *Older, Smaller, Better: Measuring how the character of buildings and blocks influences urban vitality*. Washington, D.C.: National Trust for Historic Preservation, 2014.

<https://forum.savingplaces.org/HigherLogic/System/DownloadDocumentFile.ashx?DocumentFileKey=bac17bb3-e9cf-1d28-7cae-558fa35820e5&forceDialog=0>

Preservation Green Lab. *The Greenest Building: Quantifying the Environmental Value of Building Reuse*. Washington, D.C.: National Trust for Historic Preservation, 2011. [https://living-future.org/wp-](https://living-future.org/wp-content/uploads/2016/11/The_Greenest_Building.pdf)

[content/uploads/2016/11/The_Greenest_Building.pdf](https://living-future.org/wp-content/uploads/2016/11/The_Greenest_Building.pdf)

Preservation Green Lab. *Untapped Potential: Strategies for Revitalization and Reuse*. Washington, D.C.: National Trust for Historic Preservation, 2017.

<https://forum.savingplaces.org/HigherLogic/System/DownloadDocumentFile.ashx?DocumentFileKey=a8afe694-4ea4-06db-a7d4-3ac98e470904&forceDialog=0>.

Rochester Economic Development Corporation. *Reuse Feasibility Study for the Broad Street Aqueduct*. Prepared by William Rawn Associates, Architects, Inc., LaBella Associates, PC, and Real Estate Enterprises, Inc. September 1994.

ROC the Riverway Advisory Board "ROC the Riverway: A Vision Plan for the

- Future of Rochester's Genesee Riverfront, Phase 1 – May 2018," May 2018.
- Rose Fellowship Panel Presentation. "Rochester, NY: Activating Downtown." March 18, 2016. Accessed October 31, 2018.
<http://www.cityofrochester.gov/rosefellowship/>
- Rosenberg-Naparsteck, Ruth. "Frankfort: Birthplace of Rochester's Industry." *Rochester History* 50, no. 3 (July 1988).
http://www.rochester.lib.ny.us/~rochhist/v50_1988/v50i3.pdf
- Technical Preservation Services. "Four Approaches to the Treatment of Historic Properties." National Park Service, U.S. Department of the Interior.
<https://www.nps.gov/tps/standards/four-treatments.htm>
- The Cultural Landscape Foundation. "The Landscape Architecture of Lawrence Halprin--Manhattan Square Park." Cultural Landscape Foundation. Accessed November 22, 2018.
<https://tclf.org/sites/default/files/microsites/halprinlegacy/manhattan-square-park.html>
- The Strong National Museum of Play. "History | The Strong." The Strong National Museum of Play. Accessed November 22, 2018.
<http://www.museumofplay.org/about/history>
- Truesdale, Dorothy S. "Historic Main Street Bridge." *Rochester History* 3, no. 2 (April 1941). http://www.rochester.lib.ny.us/~rochhist/v3_1941/v3i2.pdf.
- USGBC. "LEED." U.S. Green Building Council. <https://new.usgbc.org/leed>
- WBDG Historic Preservation Subcommittee. "Sustainable Historic Preservation."

Whole Building Design Guide. <https://www.wbdg.org/design-objectives/historic-preservation/sustainable-historic-preservation>

Wickes, Marjorie and Tim O'Connell. "The Legacy of Frederick Law Olmsted."

Rochester History 50, no.2 (April 1988).

https://www.libraryweb.org/~rochhist/v50_1988/v50i2.pdf.

Williams, Deborah. *The Erie Canal: Exploring New York's Great Canals, Includes*

Oswego, Cayuga-Seneca & Champlain Canals. Woodstock, VA: The

Countryman Press, 2009.