

THE REUSE OF MILL RUINS IN HERITAGE TOURISM: CASE STUDIES FROM THE
MINNEAPOLIS RIVERFRONT

by

LISA CATHERINE DEMARAIS

(Under the Direction of Eric MacDonald)

ABSTRACT

This thesis proposes a framework for approaching the rehabilitation of industrial mill ruins for heritage tourism in Great Lakes Region. The framework outlines how to determine if an industrial ruin site may be appropriate for this reuse and the best approaches to conversion. Maintenance, economic, and interpretive challenges to consider within the pre-planning project phase are also addressed. The framework is intended as a tool for preservation professionals. The methodology includes a survey of literature on Romanticism, ruin preservation, and industrial heritage tourism paired with a review of planning and survey documentation and cursory site surveys of two industrial ruin tourism sites in Minneapolis, Minnesota: Mill City Museum and Mill Ruins Park. Within the region, Minneapolis was chosen for its strong industrial history and economic stability. The framework is intended to diversify approaches to mill ruin preservation, provide guidance for their reuse, and streamline the planning process.

INDEX WORDS: Industrial Heritage, Heritage Tourism, Flour Mills, Adaptive Reuse, Ruin Preservation, Deindustrialization

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DEDICATION

I dedicate this work to my late father, Edward Lawrence Demarais III, for cultivating my love of learning and always motivating me to challenge myself.

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CHAPTER 1

INTRODUCTION

Just as industrialization has profoundly influenced the world, deindustrialization has also had a strong global influence. Both industrialization and deindustrialization have significantly altered the landscapes of cities across the world, including within the United States. Abandoned buildings and ruins are a side effect of the process of twentieth century deindustrialization. These structures exist in all regions of the United States, but some regions and cities have been more severely affected than others. Due to the high prevalence of decommissioned industrial architecture across the country, this thesis argues that it is economically beneficial to explore a variety of potential new uses for industrial ruins. Currently, they often are demolished or allowed to decay without much, if any, intervention and often become sites of urban exploration, leisure, art, adventure or play, homemaking, and plundering. While these actions can arguably be viewed as community engagement with historic places, these uses can also endanger the structures and hasten their demise.¹ When reused, decommissioned industrial sites are often completely restored and used for residential and/or commercial purposes. Another popular approach is the reuse of industrial sites as parks. However, not every industrial heritage site and surrounding community is ideal for this form of reuse. Further exploration into expanding heritage tourism by utilizing industrial ruins as artifacts, exhibits, museums, or parks can help cities in their attempts to determine the best approaches to preserving their industrial heritage while promoting tourism.

¹ Tim Edensor, *Industrial Ruins: Spaces, Aesthetics, and Materiality* (Oxford: Berg, 2005), 1.

New approaches toward the adaptive reuse of industrial structures could be particularly beneficial to cities with a very strong industrial past and a large quantity of remaining industrial sites, such as many cities in the Midwestern United States, including Chicago, Illinois; Minneapolis, Minnesota; and Gary, Indiana. Many deindustrialized cities continue to face economic problems such as a low rate of owner-occupied properties, high rates of homelessness, and higher-than-average unemployment. Although many of these cities throughout the United States have made efforts to rehabilitate their industrial heritage sites, gaps persist regarding the study of the reuse of American industrial ruins. As heritage tourism grows both domestically and internationally, it should be more heavily developed to face problems throughout industrial regions. Furthermore, growth in the tourism industry has developed alongside more experienced tourists' recent interest in attractions beyond well-known or popular destinations. As such, this thesis asserts that industrial ruin tourism is a niche heritage topic that is ready to be capitalized on and further developed.²

Further diversifying approaches to reusing industrial ruins could also help expand the understanding of the sites themselves, and help create or strengthen their connections to the human stories behind the sites. Additionally, industrial tourism sites housed in new construction can often lack authenticity and/or have interpretation that does not go beyond the discussion of technology and industry, rather than creating engaging human connections.³ Housing industrial tourism sites within historic industrial architecture could help provide a more authentic and immersive experience to visitors. As many of these ruins directly relate to the recent history of

² Alexander H. J. Otgaar, Rachel Xiang Feng, and Leo Van de Berg. *Industrial Tourism: Opportunities for City and Enterprise* (Ashgate Publishing Group, 2010), 6.

³ Thomas E. Leary and Elizabeth C. Sholes, "Authenticity of Place and Voice: Examples of Industrial Heritage Preservation and Interpretation in the U.S. and Europe," *The Public Historian* 22, no. 3 (2000): 50, doi:10.2307/3379578.

deindustrialization, they can also be used to better highlight the later period of American industrial history.

This thesis proposes a framework to aid preservation architects and historic preservation professionals in planning the rehabilitation of industrial ruins for uses in industrial heritage tourism. A framework is a “network of linked concepts and classifications.” Framework analysis is a type of thematic or qualitative content analysis. Like other forms of qualitative analysis, frameworks can be used to draw descriptive and/or explanatory conclusions. Qualitative studies often use this approach to understand how events, concepts, or other comparative data relate.⁴ The framework includes guidelines for how to determine appropriate sites for ruin reuse, how to determine specific appropriate reuse approaches, how to address economic constraints, and how to handle the unique challenges created by ruin reuse. Modern attempts at ruin reuse have been studied, but these ruins (such as Gas Works Park in Seattle, Washington and Duisburg-Nord in the Ruhr District in Germany) are most frequently within the context of parks and outside of the urban contexts. In the United States, historical industrial centers are frequently located in urban settings that introduce their own challenges and potential benefits.

The proposed framework for approaching industrial ruin reuse could be used for the diversification of industrial reuse, ruin preservation, and museum planning within the Great Lakes Region. To develop the framework and answer the research question posed in this thesis, first existing literature on romanticism, ruin preservation, and industrial heritage tourism was examined. Researching approaches to ruin reuse revealed very few extant examples of conversion

⁴ W. Newton Suter, "Qualitative Data, Analysis, and Design." In *Introduction to Educational Research: A Critical Thinking Approach*, 2nd ed. (Thousand Oaks, CA: SAGE Publications, Inc., 2012), 342-386, doi:10.4135/9781483384443.

projects outside of a park installation context and provided insight into what characteristics might make a ruin site attractive to tourists.

When considering a focus area within the Midwest, the epicenter of American deindustrialization, downtown Minneapolis was a prominent example of successfully rebranding ruins and local industrial history into popular tourist attractions. In fact, the flagship projects of Mill City Museum and Mill Ruins Park spurred a transformation of the entire historic milling district on the riverfront. To better understand how these site transformations occurred, helped revitalize downtown Minneapolis, and might be replicated, case studies were undertaken. The two flagship projects of Mill City Museum and Mill Ruins Park were chosen as the focus of the study. The sites were studied through archival research, site evaluation, and a review of planning and survey documentation.

Industrial remains have been preserved in parks throughout the world, but additional analysis is needed to determine the circumstances that make American industrial heritage sites successful as tourist destinations and to better inform guidelines for developing the sites and their tourism plans. The reuse of industrial ruins within the midwestern United States has not been adequately studied to determine best practices and approaches. While every industrial heritage site and each ruin offer unique challenges and features, a general framework would aid preservation professionals to complete the planning stages and anticipate challenges for ruin reuse projects.

Research Questions

This thesis seeks to answer the following main research question: How and why might industrial ruins be adapted for heritage tourism uses in the Great Lakes Region? To answer this main research question, this thesis proposes a project framework in Chapter Six. To develop the

framework, the review of existing literature and case studies will also explore the following sub-questions:

1. What circumstances and factors affect the reuse of industrial ruins in heritage museums?
2. What characteristics make an industrial ruin site appropriate for heritage tourism reuses?
3. How physically and financially feasible is this form of reuse in the Great Lakes Region?
4. What benefits, disadvantages, and challenges should be considered when adapting an industrial ruin for use as a heritage tourism site?

Definitions

This thesis uses terms and definitions that should be defined before continuing with further discussion. Additionally, ruin sites themselves vary greatly dependent on condition, location, representation, method of ruination, temporality, level of preservation intervention, and use. Thus, establishing a rigid typology for ruins is difficult and not ideal. However, broad fluid categories can be determined, with the acknowledgement that a particular ruin may fall into more than one type or may include qualities not typical of its type. This typology will be further addressed in the proposed framework, as it is helpful in demonstrating which qualities to consider as significant and in the comparative discussion of different ruins.

The following chart in table 1, proposed by André Jansson, was used as a basis for the broad categorization of ruins. Jansson divides ruins into three broad categories, (1) named ruins or heritage sites, (2) transitory ruins or regeneration sites, and (3) open-ended ruins or abandoned places.

Table 1. Ruin Typology (Source: André Jansson, “‘This Is not Ruin Tourism’: Social Media and the Quest for Authenticity in Urban Exploration,” 2018)

	<i>State of materiality</i>	<i>Dominant forms of representation</i>	<i>Dominant forms of imagination</i>
<i>Named ruins (heritage sites)</i>	Organized preservation; enclosed porosity	Touristic naming and framing	Staged historical imagination
<i>Transitory ruins (Regeneration sites)</i>	Organized abolishment or regenerations; solidification	Spatial planning	Non-staged historical imagination; encoded future
<i>Open-ended ruins (Abandoned Places)</i>	Open-ended decay; extended porosity	Incoherent forms of (non-)mediation	Open-ended imagination

Named ruins are defined as typical heritage sites with organized preservation, transitory ruins are ruin sites in flux due to planned demolition, restoration, or rehabilitation. Jansson also differentiates named ruins as having “enclosed porosity” and open-ended ruins as having “extended porosity.”⁵ Porosity in architecture, attributed to Australian architect Richard Goodwin, indicates a connection with a building’s private interior and exterior public space.⁶ For example, a porous building would have a blurred boundary between public and private space. Here, Jansson implies that open-ended ruins are more porous and accessible.

The typology proposed by Jansson fails to include *abrupt ruins*, or ruins suddenly created by an unnatural factor such as violence, natural disaster, or a destructive accident. The risk of

⁵ André Jansson, “‘This is not Ruin Tourism’: Social Media and the Quest for Authenticity in Urban Exploration,” in *Ruin Porn and the Obsession with Decay* (Sydney, Australia: July 2018), 220.

⁶ Richard Goodwin, *Porosity: The Architecture of Invagination*, (RMIT University Press, December 2011).

sudden partial or whole destruction is common in war-torn regions of the world, as well as in certain industrial regions where fires and explosions may occur at a site. It can be helpful for coherency to discuss ruins in the context of Jansson's categorization. However, ruin sites may be of one broad category but have characteristics of another, which limits the usefulness and accuracy of such a typology. Any ruin categorization is also in flux due to the natural impermanence of ruins. Even a ruin that has been stabilized, will generally not remain stable without continued intervention. Therefore, each site's characteristics must be individually evaluated and recognized before choosing an approach to preservation or interpretation and when determining whether a ruin site is appropriate for certain uses. This amalgamation of typologies should only be used as a starting line in analyzing a ruin site.

Other important terms used frequently throughout this thesis are (1) industry, (2) industrialization, and (3) deindustrialization. In this thesis, industry is defined as "(a) manufacturing activity as a whole, (b) a distinct group of productive or profit-making enterprises."⁷ For example, the first definition of industry might vaguely refer to an entire nation or region's *industry* which could be any number of unnamed sectors including manufacturing, mining, and milling. In the instance of the second definition, industry is used to refer to one specific sector such as the car manufacturing *industry* or flour milling *industry*. Industrialization is defined as "the widespread development of industries in a region, country, culture, etc.,"⁸ while deindustrialization is defined as "the reduction or destruction of a nation's or region's industrial capacity."⁹

⁷ *Merriam-Webster Online Dictionary*. "Industry," accessed September 12, 2018. <https://www.merriam-webster.com/dictionary/industry>.

⁸ *Merriam-Webster Online Dictionary*, "Industrialization," accessed September 12, 2018. <https://www.merriam-webster.com/dictionary/industrialization>.

⁹ *Merriam-Webster Online Dictionary*, "Deindustrialization," accessed September 12, 2018. <https://www.merriam-webster.com/dictionary/deindustrialization>.

Industrial tourism is a type of heritage tourism that focuses on visitation to sites such as mills, power plants, and factories.¹⁰ However, scholars often disagree on more specific definitions of industrial tourism. Some scholars restrict industrial tourism to currently operating facilities where the primary purpose of the facility is not tourism. This definition would exclude historical structures that no longer have active industrial uses. For the purpose of this thesis, I will use the following terms and definitions: (1) industrial heritage tourism sites, (2) operational industrial tourism sites, (3) industrial history museums, (4) historical-operational industrial sites. These four site categories are defined as:

1. *Historic industrial tourism sites*: Historical industrial sites that are no longer operating for industrial purposes and are instead treated as relics and tourist attractions.
2. *Operational industrial tourism sites*: Operating industrial facilities that also provide tours but may or may not consider it their main purpose.
3. *Industrial history museums*: Museums which are not housed within historic industrial structures or districts but focus on industrial history as their primary topic.
4. *Historical-operational industrial sites*: Industrial sites which are both historical and continue to operate for industrial purposes, where both production and tourism may provide revenue.

While industrial heritage tourism refers broadly to all four site categories, this thesis will primarily focus on category 1. Second, the term *ruin* is used throughout this thesis. The definition of ruins for this thesis will be: the visible remains of a building or series of buildings that have (1) outlived their original use(s), (2) stand as a physical reminder of the social conditions that created them and led to their abandonment, (3) have experienced a period of decay that has significantly altered the structure(s) from their original built condition.¹¹

¹⁰ Otgaar, et al., *Industrial Tourism*, 1.

¹¹ Sydney Schoof, "Preservation without Restoration: the Case for Ruins," (Master's thesis, Roger Williams University, 2011), 3, accessed December 18, 2017, https://docs.rwu.edu/cgi/viewcontent.cgi?article=1000&context=hp_theses.

Additional terms used throughout this thesis are taken from the guidelines for the treatment of historic properties as defined by the Secretary of Interior Standards. These standards outline four interrelated approaches: preservation, rehabilitation (or adaptive reuse), restoration, and reconstruction. Preservation is focused on “the maintenance and repair of existing historic materials and retention of a property's form as it has evolved over time.”¹² Rehabilitation involves alterations or additions to a historic property to “meet continuing or changing uses while retaining the property’s historic character.”¹³ Restoration portrays a historic property “at a particular period of time in its history, while removing evidence of other periods,”¹⁴ while reconstruction “recreates vanished or non-surviving portions of a property for interpretive purposes.”¹⁵ At a particular site, the decision to use one form of intervention over another is determined by a variety of factors such as physical condition or intended interpretation.

The Seven Aspects of Integrity, defined by the Secretary of Interior’s Standards in National Register Bulletin 15, are also referenced throughout this thesis and used to analyze the approaches to ruin reuse in the case studies. Integrity is the site or structure’s ability to convey its historic significance. The current conditions, surrounding environment, and interpretation at a site can all affect the level of integrity at a site. These seven aspects are location, design, materials, setting, workmanship, feeling, and association. The first five aspects of integrity are tangible and easier to evaluate and define. The evaluation of integrity can be subjective but should be grounded in an understanding of the site’s features and significance.¹⁶

¹² U.S. Department of the Interior, National Register of Historic Places, *Secretary of the Interior’s Standards for the Treatment of Historic Properties*, (Washington, D.C.: National Park Service), accessed September 14, 2018. <https://www.nps.gov/tps/standards/four-treatments.htm>

¹³ Ibid.

¹⁴ Ibid.

¹⁵ Ibid.

¹⁶ U.S. Department of the Interior, National Register of Historic Places, *National Register Bulletin 15: How to Apply the National Register Criteria for Evaluation* (Washington: U.S. DOI, National Park Service, revised 1995), https://www.nps.gov/nr/publications/bulletins/nrb15/nrb15_8.htm.

The National Register of Historic Places (NRHP), created by the National Historic Preservation Act of 1966, defines *location* as “the place where the historic property was constructed or the place where the historic event took place,” and integrity of location “refers to whether the property has been moved or relocated since its construction.”¹⁷ *Design* is defined as “the composition of elements that constitute the form, plan, space, structure, and style of a property.” Properties may change over time, and these changes may gain their own significance or may cause a loss of integrity of design. Additionally, losses of certain property aspect may constitute a loss of design integrity. The *setting* of a historic property refers to the physical environment surrounding it. Integrity of setting remains when the environment of the site has not been subjected to radical change. For example, “Integrity of setting of an isolated lighthouse would be compromised [...] if it were now completely surrounded by modern development.”¹⁸ *Materials* of a historic property are the physical elements that together, in a “particular pattern or configuration,” form the resource.¹⁹ Essentially, integrity of materials is determined by whether the resource still exists with its original materials. The NRHP also define integrity of *workmanship* as remaining “physical evidence of the crafts of a particular culture or people during any given period of history.”²⁰

Feeling and association are somewhat harder to define, recognize, and describe than the other five aspects of integrity. *Feeling* is an intangible characteristic, meaning that it is not itself a physical quality. Instead, feeling, in reference to historic properties, is the ability of the property to evoke “the aesthetic or historic sense of a past period of time.”²¹ *Association* is also an intangible

¹⁷ Ibid.

¹⁸ Ibid.

¹⁹ Ibid.

²⁰ Ibid.

²¹ Ibid.

characteristic of a historic property. It is defined as “direct link between a property and the event or person for which the property is significant.” The other aspects of integrity combine to convey whether the association of a historic property to the event(s) or person(s) for which it is significant still exists.

There are many options for approaches to the adaptive reuse of ruins in conjunction with heritage tourism. These uses can depend on a variety of factors and a site may include more than one type of use or may not have a formal use at all. Although the focus of this thesis is on ruins as systematized heritage tourism sites, the following common forms of reuse, while not an exhaustive list, may also be referenced throughout this thesis: (1) ruins as art, (2) ruins as artifact, (3) ruins as heritage exhibits, (4) ruins as functional public space. However, many unofficial forms of reuse also exist such as ruins as homes or ruins as frontiers for urban exploration.

Lastly, as for the term *museum*, this thesis will use the definition established by the International Council of Museums in 2007, which stated that a museum is a “non-profit, permanent institution in the service of society and its development, open to the public, which acquires, conserves, researches, and communicates and exhibits the tangible and intangible heritage of humanity and its environment for the purposes of education, study, and enjoyment.”²² This definition includes (1) natural, archaeological, ethnographic monuments, and historical monuments; (2) institutions holding collections of people and their environment; (3) science centers and planetariums; (4) art exhibition galleries; (5) exhibits maintained by libraries and archives; (6) cultural centers or other entities preserve and/or manage heritage resources.²³ Based

²² Standing Committee for Museum Definition, *Museum Definition Prospects and Potentials*, (Kyoto, Japan; International Council of Museums, December 2018), 3. Accessed July 20, 2019. https://icom.museum/wp-content/uploads/2019/01/MDPP-report-and-recommendations-adopted-by-the-ICOM-EB-December-2018_EN-2.pdf

²³ Ibid.

on this definition, both case study sites are not only sites of industrial heritage tourism but forms of museums.

Methodology and Methods

The primary methodology used to answer my research questions is a case study approach. Case studies are “a form of qualitative descriptive research,”²⁴ that often use direct observations, interviews, tests, record examinations, etc. to answer a research question. The main purpose of a case study is exploration through the collection and presentation of information, and it is a flexible research design. Different research strategies are indicated based on the research question, existing research available, and how much control can be exerted over the subject or environment. Case studies are often used in social sciences and often stem from primary research questions that begin with ‘how’ or ‘why.’²⁵ This means that case studies are useful for exploratory, descriptive, analytical, and explanatory research.²⁶

Depending on the research question, there are different options for the breadth and depth of a case study. Holistic case studies select a single case and examine it in depth to gather information to be processed and analyzed. On the other hand, a multiple-case study examines multiple cases under the same methods for further understanding and/or comparative analysis. An embedded case study is similar, but generally investigates multiple aspects, or units of analysis, of the cases to create a comparative analysis.²⁷ A single case study employs a variety of research

²⁴ "Writing@CSU: Case Studies." The Writing Studio, Colorado State University. Accessed September 14, 2018. <https://writing.colostate.edu/guides/guide.cfm?guideid=60>.

²⁵ Robert K. Yin, *Case Study Research: Design and Methods* (Sage Publications, Newbury Park: 1984), 17.

²⁶ *Ibid.*, 9.

²⁷ *Ibid.*

methods and can use one or multiple participants. Generally, even if multiple cases are used the study is limited to a small number of cases.²⁸

This thesis uses a multi-site, multi-modal case study approach. The literature review in Chapter Two lends itself to creating the foundation and defining the approaches used in the case studies of Mill City Museum and Mill Ruins Park, in Chapters Four and Five, respectively. The case studies along with the literature review were both used to form the framework in Chapter Six. This methodology was chosen because (1) the main research question of this thesis is exploratory in nature (2) multiple cases needed to be studied to make the argument that it could be broadly applicable, (3) the study of multiple sites allows for comparison between the sites, which could be used to determine how to evaluate a site to determine the best form of heritage-based reuse, (4) the research methods included a literature review and the collection of data from site reconnaissance, documents (such as historic structure reports, National Register of Historic Places nominations, planning documents, etc.), archival records, direct observations, and transcripts of conversations.

While industrial ruins and industrial heritage museums are located throughout the United States, the Midwest has been known as the key industrial center of the country. In the United States, the effects of deindustrialization have largely remained concentrated in specific regions such as the Rust Belt and in small to mid-sized cities. The most populous cities, such as Chicago and New York, have been able to better rebound economically since the period of deindustrialization through investment in other industries. In the U.S., this decrease in labor-intensive manufacturing industry has occurred over the course of the twentieth and twenty-first centuries and is expected to continue.

²⁸ "Writing@CSU: Case Studies." The Writing Studio, Colorado State University.

For these reasons, the focus of this thesis was narrowed to the midwestern United States. To focus on medium and medium-large cities within the region, the criteria for case study site selection was further narrowed to exclude cities with populations under 100,000 and over 500,000 throughout the region. Additionally, cities with population densities of 8,000 people per square mile or higher were also excluded from consideration due to the contribution of population density to the overall perceived size of a city. Other criteria included choosing case study sites located in cities with a history of economic and population decline over the twentieth century, but that are currently growing in population and have a stable economic climate. Lastly, to create the framework, the city chosen would need to have multiple industrial heritage sites to be comparatively analyzed. After reviewing the criteria, Minneapolis was determined as the best fit to answer the research question proposed in this thesis.

Within Minneapolis, two sites were chosen for in-depth study. First, Mill City Museum was selected because it is the only industrial heritage adaptive reuse project where a large-scale industrial ruin has been stabilized and houses a museum within it. Unlike similar approaches to industrial heritage projects in the United States, the type of ruin rehabilitation at Mill City Museum (MCM) has not been extensively studied or implemented. For the second case study, Mill Ruins Park (MRP) was chosen. The park is an example of a more frequently used type of industrial ruin reuse, in which ruins are used as heritage installations. The addition of MRP allowed for the development of additional branches of the proposed framework. Additionally, using multiple case studies strengthens the possibility that the framework could be utilized for other projects involving the reuse of industrial ruins in museum settings in the Great Lakes Region. Both cases are widely considered as the main draws of the historic mill district in Minneapolis, as well as flagship projects that spurred more widespread revitalization in the area.

To be consistent in documentation and analysis at both sites, a standard procedure was outlined using content from the Minnesota State Historic Preservation Office's historic resource survey form. Like many state survey forms, the Minnesota form documents building materials, building forms, construction methods, historical narrative, and assessment of integrity. The texts and case studies discussed in Chapter Two were also used to help structure the case study of Mill City Museum by analyzing their methods, critiques, and conclusions to include additional documentation criteria were included that were specific to ruins and industrial heritage sites, such as extend of decay, accessibility, and interpretation. For clarity, this thesis separates the existing literature into thematic categories: aesthetics, ruin preservation, and industrial heritage tourism.

First, specific aspects of the physical character of the area surrounding MCM and Mill Ruins Park in the St. Anthony Falls Heritage Area were defined and discussed. Then, the project development at each site was analyzed in reference to the site's history. This was completed using the U.S. Secretary of the Interior's Standards for Rehabilitation and the seven aspects of integrity that are used to evaluate a property for listing on the National Register of Historic Places. The site evaluation was used to document the physical aspects of the interior of the site and to analyze aspects of its rehabilitation, including preservation challenges, circulation, and site interpretation.

The locations of the two sites and other significant sites within the St. Anthony Falls Heritage Area are shown in in figure 1.1. Mills Ruins Park was selected for the following reasons: (1) MRP represents a more well-documented approach to the reuse of ruins in the United States, (2) the location, architectural firm, period of rehabilitation, historical background, and environmental factors of MRP and MCM are extremely similar, making them ideal for a comparative analysis, (3) MRP opened prior to MCM, (4) is also a popular site for school visits and tourists in Minneapolis.

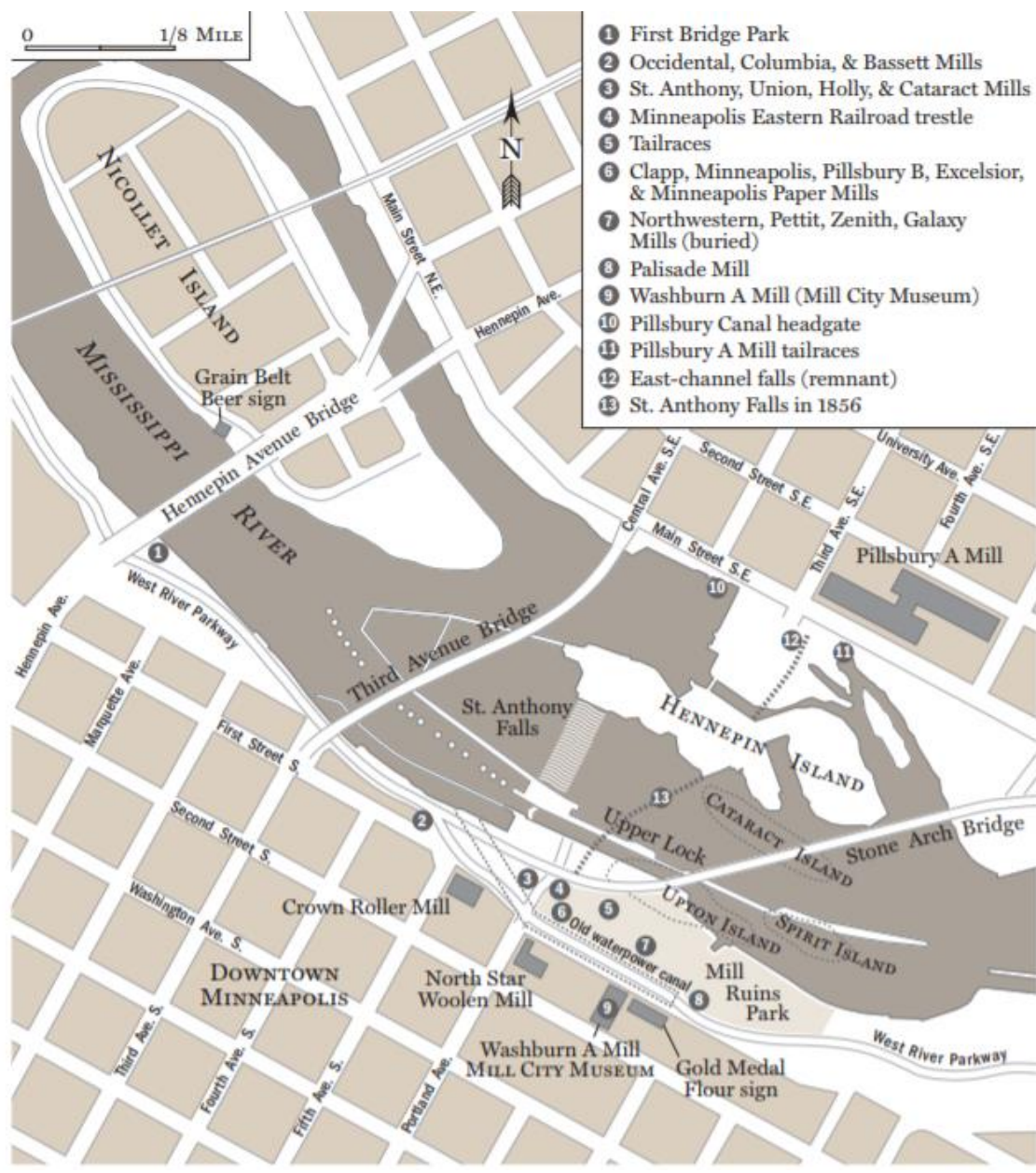


Figure 1.1: Map of structures near St. Anthony Falls, 2003. (Source: Scott F. Anfinson, "Unearthing the Invisible: Archaeology at the Riverfront," Minnesota Historical Society, *Minnesota History Magazine* 58, no. 5, Spring/Summer 2003: 320-331)

Background

The Washburn 'A' Mill Ruin is part of the Washburn-Crosby Milling Complex. A flour milling museum, named Mill City Museum, was built within the ruin in a redevelopment project

that began during the late 1990s. Currently, the main structure remains intact and is used for traditional museum exhibits and rented offices on the upper floors. The stabilized ruinous portion of the structure, named the ruin courtyard, serves as its own exhibit, public gathering space, and rentable space for private events.



Figure 1.2: Mill City Museum from the Mississippi River, facing the northwest corner of the ruin courtyard. (*Source:* Minnesota Historical Society, Minneapolis, Minnesota)

The original flour mill was built in 1874 but was entirely rebuilt on the same site during 1879 and 1880 due to its complete destruction in a flour explosion. In 1928, another large fire occurred at the mill, this time due to an equipment malfunction. In 1991, a third large fire occurred, commonly thought to have been started by homeless occupants. It is the only structure remaining of the original Minneapolis milling complex established by Cadwallader C. Washburn during the

1870s. Washburn A Mill was also technologically significant as the first automatic, all-roller, gradual reduction mill. It preceded expansion of the American milling industry and contributed to the birth of General Mills. The building operated as a mill until 1965, when it was abandoned.²⁹ During the 1980s, planning began on the St. Anthony Falls Heritage Area which included the Washburn-Crosby Milling Complex and more than ten other mills located along the Mississippi River. The plan included a museum and welcome center, but no design or construction had begun prior to the 1991 fire. Mill City Museum opened to the public in 2003.³⁰

In 1983, the Minneapolis Park and Recreation Board hired MHS archaeologists to conduct test excavations along the west bank of the Mississippi Riverfront for the development of West River Parkway. The project uncovered various mill ruins, but they were reburied at the time with gravel and dirt, with no future plans to unearth and maintain them. The remains discovered included, low wall ruins of early flour mills between Fifth and Portland Avenues along First Street, two trestle supports for a railroad were easy to spot on near the Stone Arch Bridge, and the back of the basement ruins of the Empire Mill. In 1985, the City of Minneapolis acquired the land with the plan to develop it into a park. The second excavation of the ruins began in 1998, and the park was opened in 2001. However, the excavation of the ruins was not completed until 2003. Additional structural elements are planned to be unearthed as part of a new park project called Water Works.

The park is adjacent to the Stone Arch Bridge, a historic railroad bridge that crosses the Mississippi River at St. Anthony Falls. The park includes the remains of the Cataract Flour Mill,

²⁹ James B. Gardner, "Washburn A Mill Complex." National Register of Historic Places Inventory/Nomination Form. Historic Landmarks Project, American Association for State and Local History, (Nashville, Tennessee, May 3, 1984.) <https://npgallery.nps.gov/GetAsset/63633654-cbdb-4dc3-99e4-b9a5775dff13>.

³⁰"Mill City Museum: Learn." Minnesota Historical Society. Webpage. Accessed September 14, 2018. <http://www.mnhs.org/millcity/learn>.

Artic Flour Mill/St. Anthony Mill, Union Flour Mill, and Holly Flour Mill, Clapp Woolen Mill/Empire Mill, and Pillsbury B Elevator/King Midas Elevator (1865-1881). Following their demolition during the 1960s, the ruins were filled with gravel and sand.³¹ The Cataract Mill opened in 1859 and was the first flour mill built on the west side of the river after the construction of the canal. The Union, Artic, and Holly mills were built soon after in 1863, 1866, 1867, respectively. The Cataract Four Mill operated until 1928. The Holly Flour Mill and Artic Flour Mill both operated until 1919. The Union Mill operated until 1929. The companies operated in connected buildings, with some operating on a few floors only. A drawing of the layout of the companies is shown in figure 1.3 and the current configuration of the mill ruins is shown in figure 1.4.³²



BLOCK OF MILLS BUILT IN 1859-60-61.

³¹ Kent Kirkby and Du Anne Heeren, *A History of St. Anthony Falls Virtual Walking Tour* (Minneapolis, MN: University of Minnesota Press, 2011), 29.

³² Scott F. Anfinson "Archaeology at the Riverfront: Unearthing the Invisible," *Minnesota History Magazine* 58, no. 5 (Spring/Summer 2003), 326-328.

Figure 1.3: Mill Ruins Park includes remains from many of the depicted mills. (*Source:* Minnesota Historical Society, Minneapolis, Minnesota)



Figure 1.4: Mill Ruins Park, facing the mill district. (*Source:* David Berg, Flickr, Minneapolis, Minnesota, October 7, 2011, <https://www.flickr.com/photos/bergsli/6232103353>)

Limitations

The site visits for this thesis were conducted during January 2018 in Minneapolis, Minnesota. Due to weather conditions, assessments of the exterior of Mill City Museum and a close study of Mill Ruins Park were not possible. The application of the framework proposed in Chapter Six is also limited to mill ruins in the Great Lakes Region, since only mills in Minneapolis, Minnesota were evaluated. Future study throughout the Great Lakes Region and for industrial ruin resources other than flour mill ruins would likely lead to alterations in the framework and allow it to be applied more broadly.

Organization of Thesis

The second chapter reviews relevant research and the existing literature on the picturesque theory, aesthetics, ruin preservation, and industrial heritage tourism. The third chapter provides a history of the development of flour milling in the United States and the Great Lakes Region. Chapter Three also thoroughly discusses the context of Minneapolis and the St. Anthony Falls Heritage Area in relation to Mill Ruins Park and Mill City Museum. The fourth chapter is the case study of Mill City Museum, while Chapter Five is the case study of Mill Ruins Park. Chapter Six then analyzes and synthesizes the literature review with the information uncovered in the case studies and presents the industrial ruin reuse framework. Lastly, Chapter Seven is the conclusion of this thesis and includes recommendations and final thoughts from the author.

CHAPTER 2
LITERATURE REVIEW

“Research is the highest form of adoration.”

— Pierre Teilhard de Chardin

The literature review discusses the most significant literature on industrial heritage museums, the aesthetics of ruins, and the preservation of ruins. Various disciplines have examined both the complex issues behind their reuse and public perspectives of their value. Problems include but are not limited to: site contamination and other site dangers, illegal activity at the sites, encroachment of development, poor public perception, and difficulty securing both a new purpose and funding. The fields that have attempted to address these various issues include historic preservation, landscape architecture, economics, sociology, museum studies, urban planning, and environmentalism. Correspondingly, the complex nature of the adaptive reuse of industrial ruins also requires a multi-disciplinary approach to thoroughly study the existing literature toward better understanding ruin-to-museum conversion.

To begin suggesting the stabilization of ruins for reuse in tourism, it is necessary to discuss the history of ruins in historic preservation and the public imagination, as well as the history of heritage tourism. This discussion involves how to establish the value of ruins, how to define success and best practices for industrial tourism, and how industrial ruins have been managed in previously studied examples due to the lack of academic analysis of relevant extant American projects in this area. These factors were important in developing a planning framework for industrial ruin heritage

tourism, specifically in determining the criteria to evaluate ruin aesthetics, a nebulous criterion for analysis. Due to the absence of a large body of American study in this area, European examples and analysis will serve as the starting point for the literature review on this topic. Special attention will be given to literature concerning Lowell National Historic Park in Massachusetts, as it is one of the few industrial heritage tourism sites to have been extensively studied and has interpretation that focuses on social history as well as technological history. While there are many differences between Lowell and the case studies within this thesis, Lowell National Historic Park is one of the few industrial tourism destinations in the United States that has both longevity and has been well-studied.³³

The texts and case studies reviewed in this chapter were primarily used to help answer the main research question of how and why industrial ruins might be adaptive for heritage museums in the Great Lakes Region. Through analyzing the methods, critiques, and conclusions of similar studies and related literature, this review contributed to the analytical structure of the case studies. Primarily, the literature review guided the development of the assessment rubric of the framework. As mentioned previously, the texts discussed in this chapter span different fields and utilize varied perspectives and approaches to accessing the value of ruins and their reuse. For clarity, this thesis will separate the existing literature into overarching categories: aestheticism, ruin preservation, and heritage tourism.

The literature overview in the aestheticism section lends itself to answering the first part of the research question of this thesis: Why might industrial ruins be adapted for heritage museum uses in the Great Lakes Region? This literature was also helpful in choosing characteristics of focus for

³³ Carolyn M. Goldstein, "Many Voices, True Stories, and the Experiences We Are Creating in Industrial History Museums: Reinterpreting Lowell, Massachusetts," *The Public Historian* 22, no. 3 (Summer 2000): 129-137. doi:10.2307/3379583, 130.

the case study evaluations as well as choosing to include aesthetic qualities as a component of the framework. This included qualities such as determining whether a specific site is authentic, picturesque, and whether it stimulates nostalgia.

The section which discusses the significant literature regarding ruin preservation molded the final framework as well. The framework includes indicators of specific approaches to the conversion of ruins to tourism practices such as a ruins park or ruin museum. Including information regarding the best practices of ruin preservation is vital to the decision-making process and long-term maintenance for preservation architects and historic preservation specialists. Essentially, the section helped to answer the second part of the main research question of this thesis: How might industrial ruins be adapted for heritage museum uses in the Great Lakes Region?

Finally, the third section, heritage tourism, covers literature on both ruin tourism and industrial heritage tourism to discuss their intersection in industrial ruin heritage tourism. This section also seeks to answer the second part of the main research question of this thesis: How might industrial ruins be adapted for heritage museum uses in the Great Lakes Region? As industrial ruins in the context of tourism is the specific focus of this thesis, it was necessary to synthesize the literature on the topics of ruin tourism and industrial heritage tourism, as they are frequently discussed in separate texts. Furthermore, this is the reason ruin tourism and industrial heritage tourism were not discussed in separate sections or as disparate topics within this literature review and were instead discussed under the umbrella of heritage tourism.

This well-rounded survey of existing research helped bridge the gap between the reuse of industrial ruins and the adaptive reuse of historic buildings as museums, and it helped to establish the criteria used for my own case study.

Aestheticism

This discussion of literature on aestheticism begins with a discussion of the picturesque. Overall, this section helped to establish the value of ruins and major elements that contribute to aesthetic value, a consideration for determining project viability within the proposed framework of this thesis. The appreciation of ruins is well documented in many cultures over many different time periods. This appreciation can be attributed to the combination of aesthetics and nostalgia, which are both key aspects of the picturesque theory.

The term ‘picturesque’ describes an aesthetic category that became well known in the late eighteenth century. Picturesque originates from the Italian word *pittresco*, which translated into English means ‘from a picture.’ Uvedale Price, an early theorist of the picturesque, defined it as an aesthetic concept between serene beauty and the sublime.³⁴ The idea of the sublime dates back to the first century CE. It became more well known in Europe during the eighteenth century. British philosopher Edmund Burke theorized that the sublime differed from beauty and the picturesque due to its ability to inspire awe and intense emotion.³⁵

Also, during the eighteenth century an artistic movement called Romanticism began in Europe in response to the Industrial Revolution, the Enlightenment, and modernity. Romanticism was closely related to the picturesque theory. It emphasized emotion and individualism along with a connection to nature. Romanticism reached the United States during the early nineteenth century. In the U.S., the principles of Romanticism influenced political ideals, encouraging individualism and westward expansion, commonly known as the concept of Manifest Destiny.³⁶ Also formed in

³⁴ Uvedale Price, “Conclusion,” in *An Essay on the Picturesque as Compared with the Sublime and the Beautiful: And, on the Use of Studying Pictures, for the Purpose of Improving Real Landscape* (Cambridge Library Collection, Cambridge University Press, London: 2014), 268-288, accessed April 6, 2019, doi:10.1017/cbo9781107360532.

³⁵ The Blanton. "American Scenery: Different Views in Hudson River School Painting." Blanton Museum. Accessed September 24, 2018. https://blantonmuseum.org/files/american_scenery/sublime_guide.pdf.

³⁶ Kathryn Calley Galitz, "Romanticism," in *Heilbrunn Timeline of Art History*. (New York, Metropolitan Museum of Art: October 2003), accessed September 24, 2018. http://www.Metmuseum.org/toah/hd/roma/hd_roma.htm.

the U.S. at the time was the Hudson River School, the name given to nineteenth century painters in the Northeast who were influenced by Romanticism. The art from Hudson River School artists frequently included landscapes dotted with ruins, although they were not the first artists to include ruins in paintings.³⁷

While Romanticism is often heavily associated with literature and art, it also influenced architecture. In architecture, Romanticism is often connected to the Gothic Revival style and led to an increase of discourse on ruins. Augustus Welby Northmore Pugin's *Contrasts*, originally published in 1841, suggested that Gothic Revival architecture should replicate the methods of construction for authenticity, or "truth," in the architecture.³⁸ Romanticism and Pugin's concept of truth in architecture both influenced John Ruskin, one of the most prominent architectural theorists of the nineteenth century.³⁹

Ruskin first used Romantic ideas to critique art, but then wrote on architecture in *The Poetry of Architecture* in 1837 and *The Seven Lamps of Architecture* in 1849. Ruskin built upon Pugin's idea of truth in architecture and argued against restoration of any kind, instead defending the authenticity and aesthetic value of ruins left as-is. Ruskin also saw the age of a building as its "greatest glory."⁴⁰ His outlined seven 'lamps,' or principles, were the Lamps of Sacrifice, Truth, Power, Beauty, Life, Memory, and Obedience.⁴¹

³⁷ *Encyclopedia Britannica Online*, "Hudson River School," July 08, 2013. Accessed September 24, 2018. <https://www.britannica.com/art/Hudson-River-school>.

³⁸ Augustus Welby Northmore Pugin, *Contrasts: Or, a Parallel between the Noble Edifices of the Middle Ages, and Corresponding Buildings of the Present Day Shewing the Present Decay of Taste. Accompanied by Appropriate Art* (London: Ch. Dolman, 1841).

³⁹ Patrick R. M. Conner, "Pugin and Ruskin," *Journal of the Warburg and Courtauld Institutes* 41 (1978): 344, accessed September 24, 2018, doi:10.2307/750883.

⁴⁰ John Ruskin, *The Seven Lamps of Architecture* (New York: J.B. Alden, 1885), viii.

[http://academics.triton.edu/faculty/fheitzman/Ruskin, John The Seven Lamps of Architecture 1849.pdf](http://academics.triton.edu/faculty/fheitzman/Ruskin,JohnTheSevenLampsOfArchitecture1849.pdf).

⁴¹ *Ibid.*

Ruskin's lamps of architecture are well summarized by Cornelis J. Baljon in an article entitled "Interpreting Ruskin: The Argument of the Seven Lamps of Architecture."⁴² According to Baljon, the Lamp of Sacrifice is dedicated to "an almighty Biblical God, who demands love, obedience, and as visible proof of both, ornate churches."⁴³ Similar to writings by Pugin, the Lamp of Truth refers to the honest display of materials and structure. Baljon writes that the Lamp of Power establishes that massing and the sublime should be key considerations when constructing buildings. Additionally, the Lamp of Life represents that buildings should be made by human hands and show the "joy and happiness of masons and stone carvers."⁴⁴ The Lamp of Beauty, "deals with color in relation to form" and aspiring toward the ornamentation of nature.⁴⁵ He then summarizes the last two lamps—memory and obedience. He states that the Lamp of Memory means that "a building should speak of its own history"⁴⁶ Lastly, the Lamp of Obedience suggests avoiding originality for its own sake, and instead asserts that architecture should conform to universally accepted styles.⁴⁷

Ruskin held views diametrically opposed to another prominent nineteenth century architectural theorist, Eugene Viollet-le-Duc. Viollet-le-Duc's practices are theorized in *Dictionnaire raisonné de l'architecture française du XI au XVI siècle (1854)*.⁴⁸ They both appreciated Gothic art and architecture and supported the concept of truth in architecture. However, unlike Ruskin, Viollet-le-Duc spent his career restoring architecture in France and wrote in defense of restoration as a

⁴² Cornelis J. Baljon, "Interpreting Ruskin: The Argument of the Seven Lamps of Architecture and the Stones of Venice," *The Journal of Aesthetics and Art Criticism* 55, no. 4 (Autumn 1997): 401-414, accessed September 24, 2018, doi:10.2307/430927.

⁴³ Baljon, "Interpreting Ruskin," 401.

⁴⁴ *Ibid.*, 402.

⁴⁵ *Ibid.*

⁴⁶ *Ibid.*

⁴⁷ *Ibid.*

⁴⁸ Eugène Emmanuel Viollet-Le-Duc, *Dictionnaire Raisonné De L'architecture Française Du XIe Au XVIe Siècle* (Paris: Gründ, 1854).

practice and specifically for the preservation and restoration of ruins.⁴⁹ While Ruskin thought of ruins as a monument to the passage of time, Viollet-le-Duc used restoration as its own form of nostalgia to unify the object with its “ideal origins.”⁵⁰ This idealization was “independent of its concrete realization at any given historical moment.”⁵¹ This meant that Viollet-le-Duc would include architectural aspects in his restorations that he believed were ideal, despite not having proof they were part of the original structure. However, the current concept of restoration seeks to restore a structure back to a specific period in its history. Also, for Viollet-le-Duc, ruins had no inherent value as ruins themselves.

Romanticism heavily influenced the early theorists of historic preservation and active antiquarians. The origins of historic preservation can be traced back to 1853.⁵² Early preservation efforts were led by small groups and individuals to save sites with national significance such as Mount Vernon in 1858. Towns and cities began to develop laws centered around historic preservation while local and statewide historic preservation organizations formed such as Association for the Preservation of Virginia Antiquities and the Society for the Preservation of New England Antiquities. In turn, these efforts influence national legislation such as the National Historic Preservation Act in 1966 and agencies such as the U.S. National Park Service. Twentieth and twenty first century concerns regarding environmental conservation were also heavily influence by Romanticism and picturesque theory.

⁴⁹ David Spurr, "Figures of Ruin and Restoration: Ruskin and Violett-le-Duc," in *Architecture and Modern Literature*, 142-161 (Ann Arbor: University of Michigan Press, 2012),142, doi:10.2307/j.ctt1qv5nb5.9.

⁵⁰ Spurr, "Figures of Ruin and Restoration," 146.

⁵¹ *Ibid.*, 149.

⁵² Lucas A. Anderson, "Modernity and the 'History' of Historic Preservation," (Master's thesis, University of Wyoming, 2016), 4. Accessed September 20, 2018, https://repository.uwyo.edu/cgi/viewcontent.cgi?referer=https://www.google.com/&httpsredir=1&article=1016&context=honors_theses_15-16.

The influence of romanticism has been ongoing, and discourse on ruins has continued since the Romantic Era. The influence of Romanticism is not only visible in historic preservation, but in academic fields such as sociology, cultural geography, philosophy, and history. For example, urban theorist Ignasi de Sola-Morales wrote of vast ambiguous spaces that are considered internal to cities but outside of everyday use, with “fragile and ephemeral aesthetic qualities” in his 1995 essay, *Terrain Vague*.⁵³ The term for these picturesque spaces, or ‘terrains vagues,’ originates from French romantic author Victor Hugo’s description of Paris under its restructuring in the 1850s.⁵⁴ As industrial ruins have become more noticed and appreciated since the mid-twentieth century, the academic discussion of aesthetics, the Picturesque, and ruins has frequently centered on contemporary ruins, rather than ruins of antiquity. Contemporary ruins are also frequently referred to as modern ruins or recent ruins.

The early picturesque texts and theories that have continued to be influential in the twenty-first century have also been applied specifically to recent discourse on industrial ruins. In his 2001 book, *In Ruins: A Journey through History, Art, and Literature*, Woodward tried to understand the process by which ruins become places that are considered beautiful, uplifting, and comfortable.⁵⁵ Christopher Woodward, author and Director of the Garden Museum in London, has written books on architecture in Barcelona, London, Copenhagen, and ruins across the world. In addition to *In Ruins*, Woodward has written other articles on ruins including “Learning from Detroit,” published

⁵³ Ignasi De Sola-Morales, *Terrain Vague* (Barcelona: Higher Technical School of Architecture, 2002).

⁵⁴ Wolfram Nitsch, “Vague Land: Poetics of Intermediate Urban Spaces in Contemporary French Literature,” *Viatica Online, The Art of Others* (February 18, 2015), accessed September 25, 2018. http://viatica.univ-bpclermont.fr/l-art-des-autres/varia/terrain-vague-poetique-des-espaces-urbains-intermediaires-dans-la-litterature-francaise-contemporaine#_ftnref45

⁵⁵ Christopher Woodward, *In Ruins: A Journey through History, Art, and Literature* (New York: Vintage Books, 2003).

with other articles in a book called *Urban Wildscapes*.⁵⁶ Woodward harkens back to parts of the picturesque theory, stating that the incompleteness of ruins causes the viewer to supply missing pieces from their own imagination. He asserts that this means that public perception of ruins is always subjective. This theory is also used to propose that people often feel more connected to ruins and potentially feel more closely connected to history there than at other historic sites.⁵⁷ According to Woodward, the previously noted physical incompleteness, integration with landscape representing the dialectic between nature and people, and change over time often transform abandoned and derelict places into places of beauty and history. However, he recognizes that these qualities do not always cause ruins to be perceived as beautiful.

Woodward also suggests that twentieth and twenty-first century urban ruins pose challenges that preservationists, designers, and planners are beginning to solve. He argues that these challenges arise because modern ruins are often “on our doorstep” in contested urban space, and they are imbedded more in urbanity, rather than nature like the ruins of the Romantic Period. Rather than the familiar scene of a ruin in a forest or garden, these modern ruins sit between other buildings, chain-link fences, and asphalt.⁵⁸ Taking the challenges into consideration, Woodward suggests that we can begin to study the possibilities urban ruins can provide if they are treated and viewed more like traditional ruins. He proposes that urban ruins of modernity might then be better protected and more universally appreciated.⁵⁹ However, Woodward is unclear on how to change public perception of modern urban ruins while allowing them to remain, like many older ruins, in their ruinous state.

⁵⁶ Christopher Woodward, “Learning from Detroit,” in *Urban Wildscapes*, eds. Anna Jorgensen and Richard Keenan (London: Routledge, 2012): 16-31.

⁵⁷ *Ibid.*, 17.

⁵⁸ *Ibid.*, 18.

⁵⁹ *Ibid.*, 20.

Tim Edensor, an English professor and cultural geographer, makes a similar argument to Woodward. Edensor has studied ruins across Great Britain, with a focus on industrial ruins and perceptions of them. In his 2005 book, *Industrial Ruins: Space, Aesthetics and Materiality*, he discusses the various contemporary uses of industrial ruins and the official efforts to stop people from using ruined spaces.⁶⁰ While focused on his experiences in England, this text sheds light on common opinions of industrial ruins that reach across national borders. He attempts to dispel the myth that ruins are spaces of waste that contain nothing of value and can only be used for nefarious activities such as prostitution and drug use. *Industrial Ruins* does not use case studies, but instead discusses Edensor's theories and briefly refers to different ruins as examples of certain characteristics.

Edensor's major objective is to contest the idea that ruins are spaces of waste that should be overwritten by development to be beneficial to a city. He argues that urban planners "erase the fabric of the past" (ruins) so a city can present a seamless appearance that signifies prosperity to attract tourists and investors.⁶¹ The core of Edensor's argument lies in the assertion that "all space can be transformed from useless to prosperous [...] through investment."⁶² Investment does not necessarily mean restoration or demolition. By investment, Edensor discusses primarily cultivating unofficial forms of reuse through ensuring spaces are safe and accessible. Unofficial reuses are activities such as urban exploration which are undertaken by small groups or individuals rather than as part of an official plan for recreation or tourism. However, he does not suggest a specific preservation approach, such as the creation of museums or park installations. Instead, he poses

⁶⁰ Tim Edensor, *Industrial Ruins: Spaces, Aesthetics, and Materiality* (Oxford: Berg, 2005), 10-12.

⁶¹ Ibid.

⁶² Ibid.

these as some options for cultivating reuse but suggests that preservation actions are not necessary for reuse to occur.⁶³

Both Woodward and Edensor note the variety of positive and negative perceptions surrounding ruins. In his later writings, Woodward attributes this mix to the concept of proximity that sociologist Alice Mah proposed in her early articles. These articles culminated in her 2012 book *Industrial Ruination, Community, and Place: Landscapes and Legacies of Urban Decline*.⁶⁴ Mah argues that distance from an event that caused the dereliction determines the aesthetic and emotional reactions to ruins.⁶⁵ The distance itself can be measured in a variety of ways, such as in time, physical distance, or wealth.⁶⁶ Her assertion is a natural addition to Woodward and Edensor's theories. For instance, Woodward's "Learning from Detroit" suggests that a former auto industry worker in Detroit who lost his job and lived through the shrinking of the city will likely have a more negative perception of Detroit's urban ruins than someone who does not have that direct damaging connection to any of the derelict sites. In this example, the person without direct personal connections to the ruins is more likely to focus on the history and aesthetic beauty.⁶⁷ Distance from the event(s) can be used in regard to physical distance, the passage of time, and/or direct or indirect personal impact. Mah's concept of distance became an important factor in the proposed framework, as a way to measure viability of a project.

Unlike Woodward and Edensor, Alice Mah uses case studies to support her assertions. Her site observations expand beyond the landscape of the sites themselves to better capture the idea of "sociological imagination," a term coined by sociologist C. Wright Mills to describe the insight of

⁶³ Edensor, 20.

⁶⁴ Alice Mah, *Industrial Ruination, Community, and Place: Landscapes and Legacies of Urban Decline* (Toronto: University of Toronto Press, 2013).

⁶⁵ Mah, *Industrial Ruination*, 59.

⁶⁶ Ibid.

⁶⁷ Woodward, "Learning from Detroit," 18-20.

sociology.⁶⁸ Mah's research approach of using site observations, tours, photography, interviews, and ethnographic data sought to determine how industrial ruins tell their own stories. Mah's case studies focused on Newcastle in the United Kingdom, Niagara Falls in both New York and Canada, and Ivanovo in Russia.⁶⁹ Her research uncovered the direct and indirect social impacts of the toxic pollution and industrial abandonment at the sites. She conducted interviews with former factory workers, local residents, local activists, and local officials. Mah outlines the various aspects that affect how to "read" a post-industrial landscape, such as paying special attention to signage, fences, broken windows, graffiti, spatial segregation, and other signs of degradation or neglect nearby such as potholes and abandoned shops.⁷⁰

Mah's research led her to three overarching conceptual conclusions regarding industrial ruins that she refers to as "1) landscapes and legacies as palimpsest, 2) devastation, yes, but also home, and 3) divided imaginings of past and present place." Her first conclusion stems from the idea of reading landscapes for both social and economic processes, and using that information to explore the legacies of ruination in daily life.⁷¹ Mah's second conclusion refers to the concept of landscapes of consumption and the geography of capitalism, which "produces winners and losers."⁷² Landscapes of deindustrialization, including those in her case studies, represent landscapes of devastation or of the 'losers' in uneven capitalist geography. Despite differences in lived experience, place identity led all three devastated landscapes to be considered 'home' to local communities. Therefore, view of these landscapes became mixed, referred to by Mah as "divided

⁶⁸ C. Wright Mills, *The Sociological Imagination* (Beijing Shi: Zhongguo Chuan Mei Da Xue Chu Ban She, 2016).

⁶⁹ Mah, *Industrial Ruination, Community, and Place*, 37-42.

⁷⁰ Alice Mah, "Devastation but Also Home: Place Attachment in Areas of Industrial Decline," *Home Cultures* 6, no. 3 (2009), 288: doi:10.2752/174063109x12462745321462

⁷¹ Alice Mah, *Landscapes and Legacies of Industrial Ruination*, (Master's Thesis, London School of Economics and Political Science, London, England: 2008): 275, accessed June 6, 2018, <http://etheses.lse.ac.uk/2729/1/U615678.pdf>.

⁷² *Ibid.*, 278.

imaginings of past and present place,” meaning both negative due to the presence of ruination and warm with nostalgia and a sense of community. Mah’s description of the sense of place of these sites as ‘home’ was added to the proposed framework as an instruction to research and analyze the social history of the surrounding area to determine project viability.

Another key twenty-first century academic scholar of industrial ruins, Elizabeth Scarbrough, has written about aesthetics, ruins, and the morality of cultural tourism. Scarbrough is a professor of philosophy at Florida International University, who focuses on “the aesthetic beauty of immovable cultural heritage,”⁷³ such as ruins, and the ethical obligation to protect cultural heritage. Since 2014, she has written articles including “Unimagined Beauty”⁷⁴ in 2014, “Authenticity of Ruins: Art Restoration, Architecture, and Beautiful Decay”⁷⁵ in 2015, her dissertation “The Aesthetic Appreciation of Ruins”⁷⁶ in 2015, “Visiting the Ruins of Detroit: Cultural Tourism or Poverty Tour”⁷⁷ in 2016, and “Ruminations on Ruinations”⁷⁸ in 2018. In her publications, she discusses both ruins of antiquity and contemporary ruins, including industrial ruins and ruins from war. She theorizes that to preserve the aesthetic value and integrity of ruins, they must be allowed to decay. However, Scarbrough recognizes that authenticity, and specifically authenticity regarding ruins, is difficult to define.⁷⁹

⁷³ "About," Elizabeth Scarbrough, accessed September 28, 2018, <https://elizabethscarbrough.com/>.

⁷⁴ Elizabeth Scarbrough, “Unimagined Beauty,” *The Journal of Aesthetics and Art Criticism* 72, no. 4 (2014): 445-446, doi:10.1111/jaac.12108.

⁷⁵ Elizabeth Scarbrough, “Authenticity of Ruins: Art Restoration, Architecture, and Beautiful Decay,” *Arcade Magazine*, Authenticity: Navigating the Real in Cities, Design and Art, Issue 33.2 (Fall 2015).

⁷⁶ Elizabeth Scarbrough, “The Aesthetic Appreciation of Ruins.” (PhD dissertation, University of Washington, ResearchWorks Archive, 2015) <http://hdl.handle.net/1773/35297>

⁷⁷ Elizabeth Scarbrough, “Visiting the Ruins of Detroit: Cultural Tourism or Poverty Tour,” *Journal of Applied Philosophy* 35, no. 3 (August 2, 2016): 549-566, doi: 10.1111/japp.12237.

⁷⁸ Elizabeth Scarbrough, “Ruminations on Ruinations,” *The Philosopher’s Magazine* no. 81 (2018), 62-67, doi: 10.5840/tpm20188149.

⁷⁹ Ibid.

In “Unimagined Beauty,” Scarbrough thoroughly discusses two other works on long-lost structures, "On Things That Are Not There Anymore" by Jennifer Judkins, and "Architectural Ghosts" by Jeanette Bicknell. She also mentions "The Triumph of Time: Romanticism Redux" by Carolyn Korsmey. Using these three works, Scarbrough outlines some of the different definitions used for ruins, which were integrated into the framework proposed in this thesis. Scarbrough explains that Judkins and Korsmey defined ruins as decaying structures that have experienced a significant passage of time, recently damaged objects as similar to ruins but not old enough to be considered historic, and the term architectural ghosts as referring to historic architecture that is no longer present at all. However, Scarbrough critiques these works by noting that they perpetuate the classical ideas of ruins, excluding new ruins such as those from deindustrialization or war.⁸⁰ Scarbrough’s attention to modern ruin definitions led to a clearer definition of ruin typology outlined in the introduction chapter and utilized in the framework of Chapter Six.

The modern reframing of previous writings on Romanticism and ruins was extremely relevant to this thesis. Romanticism of the nineteenth century helped spur the rise of historic preservation organizations, the creation of laws regarding preservation, and the publishing of guidelines and suggested practices for different types of historic preservation in the twentieth century. However, published guidelines did not frequently focus on the preservation of ruins until the second half of the twentieth century. This section of the literature review provided much of the analytical basis of the case studies in Chapter Four and Chapter Five, heavily influenced the definitions established in this work, and helped determine the criteria for project viability within the framework proposed in Chapter Seven.

⁸⁰ Scarbrough, “Unimagined Beauty.”

Ruin Preservation

Policies and guidelines on ruin preservation have been influenced by the discourse on ruins from eighteenth century romanticism through the twenty-first century. Major institutions such as the United States' National Park Service (NPS), International Council on Monuments and Sites (ICOMOS), Interreg Europe, the Getty Conservation Institute, and the Australian Heritage Council have taken these theories and research to produce documents to guide the practices surrounding the preservation of ruins. This section of the literature reviews seeks to discuss the various policies, recommendations, and guidelines for the preservation and stabilization of ruins rather than specific practices for the for individual sites and/or building materials. These guidelines were used to evaluate the case studies of Mill Ruins Park and Mill City Museum as well as to better define and guide the approaches to the rehabilitation of industrial ruins within the proposed framework.

The Athens Charter for the Restoration of Historic Monuments, adopted by ICOMOS in 1931, briefly mentioned ruins, stating that “In the case of ruins, scrupulous conservation is necessary, and steps should be taken to reinstate any original fragments that may be recovered” and that in cases where this was not possible, taking accurate records and burying the ruins was the ideal practice.⁸¹ During the second half of the twentieth century, guidelines for planning and implementing ruin preservation and stabilization (without restoration) were written along with reports on specific attempted practices. A 1989 report, titled “Conservazione e Manutenzione di Manufatti Edilizi Ridotti allo Stato di Rudere,” by an Italian archaeological research group named Gruppo Di Ricerca Sul Restauro Archeologico, also focused on the preservation of ruins, although

⁸¹ Le Corbusier, "The Athens Charter for the Restoration of Historic Monuments." (Grossman, New York, 1973). Accessed September 14, 2018.

it did not propose a uniform approach or methodology to their preservation. The report features brief case studies of both stabilization and restoration approaches.⁸²

In the same year, in the United States, Todd Metzger authored *Current Issues in Ruins Stabilization in the Southwestern United States*. Metzger “emphasizes the absence of essential guidelines and even interest in ruins stabilization” to discuss the problems caused by “the use of incongruous materials and techniques, from insufficient documentation, and from a lack of guidance, training, and professional organizations.”⁸³ In 1989, the ghost town of Independence, Colorado, and issues regarding ruin stabilization were discussed in “Philosophical Issues of Ruins Stabilization” by Merril Ann Wilson. Wilson questioned the presumption that cultural resources should be preserved forever, and suggested that such massive intervention could itself compromise the integrity of a structure.⁸⁴ Wilson and Metzger’s writings influenced the suggested approaches to later ruin preservation guidelines by suggesting that preservation methods should be as minimal as possible—both visually and materially. This idea is also prominent in the framework proposed in Chapter Seven.

In 1997, the creation of a preservation guide titled “Draft Ruins Preservation Guidelines” was initiated within the NPS, but it was never finalized or published. It was not until ten years later that the NPS published such a guide as part of the Vanishing Treasures Program. *The Preservation and Management Guidelines for Vanishing Treasures Resources*, published in 2007, uses an analysis of three World Heritage Sites—Mesa Verde National Park, Chaco Culture National Historical Park and Grand Canyon National Park—to create planning procedures and benchmarks

⁸² Gruppo Di Ricerca Sul Restauro Archeologico. *Conservazione E Manutenzione Di Manufatti Edilizi Ridotti Allo Stato Di Rudere*, edited by Luigi Marino. (Florence, Italy: Opus Libri, 1989), 1.

⁸³ Todd Metzger, "Current Issues in Ruins Stabilization in the Southwestern United States," *Southwestern Lore* 55, no. 3 (1989): accessed September 1, 2018.

⁸⁴ Merril Ann Wilson, “Philosophical Issues of Ruins Stabilization,” in *International Perspectives on Cultural Parks* (Proceedings of the First World Conference, Mesa Verde National Park, Colorado, 1989), 91-94. U.S. National Park Service in association with the Colorado Historical Society.

for ruin preservation. The guidelines are written from a broad perspective to allow them to be used in the initiation of treatment programs. The introduction portion of the document recognizes that over time gaps might be discovered and “filled in.”⁸⁵ The goal of the document is to “minimize the loss of important scientific information, preserve examples of past technologies and architecture, and enhance the interpretation and appreciation of American cultures.”⁸⁶ The guidelines can be used to create actions plans that determine:

- which preservation alternative should be considered, such as structural repairs, site modification, indirect off-site treatments, data recovery, etc.
- what type and level of documentation or data recovery is appropriate
- what materials should or should not be used in the repair process, and how the repairs should be performed
- the appropriate forms and methods for documenting the treatment process
- guidance for long-term management⁸⁷

The guidelines begin with resource prioritization through research, site documentation, establishing priority criteria, and completing an analysis of information gathered. Next, it suggests eight steps: (1) Assembling a Multi-Disciplinary Team, (2) Accomplishing Archival Research and Planning, (3) Documenting and Analyzing the Resource, (4) Developing Alternatives for Resource Preservation, (5) Reviewing and Selecting the Preferred Alternative(s) for Resource Preservation, (6) Designing the Selected Preservation Treatment, (7) Implementing the Selected Preservation Treatment, and (8) Conducting Post-Treatment Maintenance and Management. The process for selecting and reviewing preferred alternatives for resource preservation, with recommended and

⁸⁵ John M. Barrow, *Preservation and Management Guidelines for Vanishing Treasures Resources*. (Department of the Interior, U.S. National Park Service, 2009): i-ii, accessed September 12, 2018. https://www.nps.gov/parkhistory/online_books/rmr/treasure_resource.pdf.

⁸⁶ *Ibid.*, 2.

⁸⁷ *Ibid.*

not recommended examples shown in figure 2.1, also contribute to the proposed framework in Chapter Seven.⁸⁸

Examples of the Process to Select from Alternatives, Making Decisions	
Recommended	Not Recommended
A multidisciplinary team working with management and consulting parties renders a decision selecting an alternative with its reasoning included.	A manager or other park personnel makes a unilateral decision about what they think is best for a resource without consideration of other input and without providing the reasoning for the selection.
Alternatives are measured against DO 28, NAGPRA and the Secretary of the Interior's Standards, as well as pertinent parts of VT Guidelines, to ensure compliance with the intent as well as specific requirements where appropriate.	Alternatives are considered without evaluating how they fit into the intent and definitions provided by Policies, Guidelines and Standards.
Related tribal entities are contacted to ensure that input is received concerning alternatives. If necessary, an appointment is made and the tribal offices are visited to adequately transmit important information and receive feedback.	A letter is sent to the tribal entity informing them of the selected alternatives and, if a response is not received, the assumption is made that they are not interested or have no comment.

Figure 2.1 Examples of the Process to Select from Alternatives, Making Decisions (Source: U.S. Department of the Interior. National Park Service. *Preservation and Management Guidelines for Vanishing Treasures Resources*. 2009)

In 2013, the Australian Heritage Council released a guide titled *Ruins: A Guide to Conservation and Management*. The guide was designed to be used by government agencies, private owners, and community groups to highlight best practices to ruin preservation in Australia. The document is very similar to the guidelines introduced by the NPS in 2007. However, it more thoroughly discusses the particular challenges that are posed by ruin preservation including the

⁸⁸ Ibid., 21.

frequent lack of management regime, varying definitions of ruins, their locations, community perceptions, condition, and risk management.⁸⁹ Many of these challenges mirror those introduced by Edensor, but from the perspective of a practical guide rather than philosophical theory. The document also proposes a process, based on the *Burra Charter*, for selecting the best management approach to a site, displayed in figure 2.2. The Burra Charter is a set of heritage conservation principles that are accepted as standard practice in Australia. It recommends an overall conservative preservation approach that involves as little repair work to a place as possible.⁹⁰

⁸⁹ Australian Heritage Council. Department of Environment, Water, and Natural Resources. Australian Heritage Council. *Ruins: A Guide to Conservation and Management*, (Commonwealth of Australia, 2013)19-21. Accessed September 1, 2018. <https://www.environment.gov.au/system/files/resources/e4e0fb1f-2553-4a3c-b454-2f7d630cdd6a/files/ruins.pdf>.

⁹⁰ Australia International Council on Monuments and Sites, *Charter for the Conservation of Places of Cultural Significance*, (Victoria: Australia, Deakin University, 2013). Accessed September 01, 2018. <http://australia.icomos.org/wp-content/uploads/The-Burra-Charter-2013-Adopted-31.10.2013.pdf>

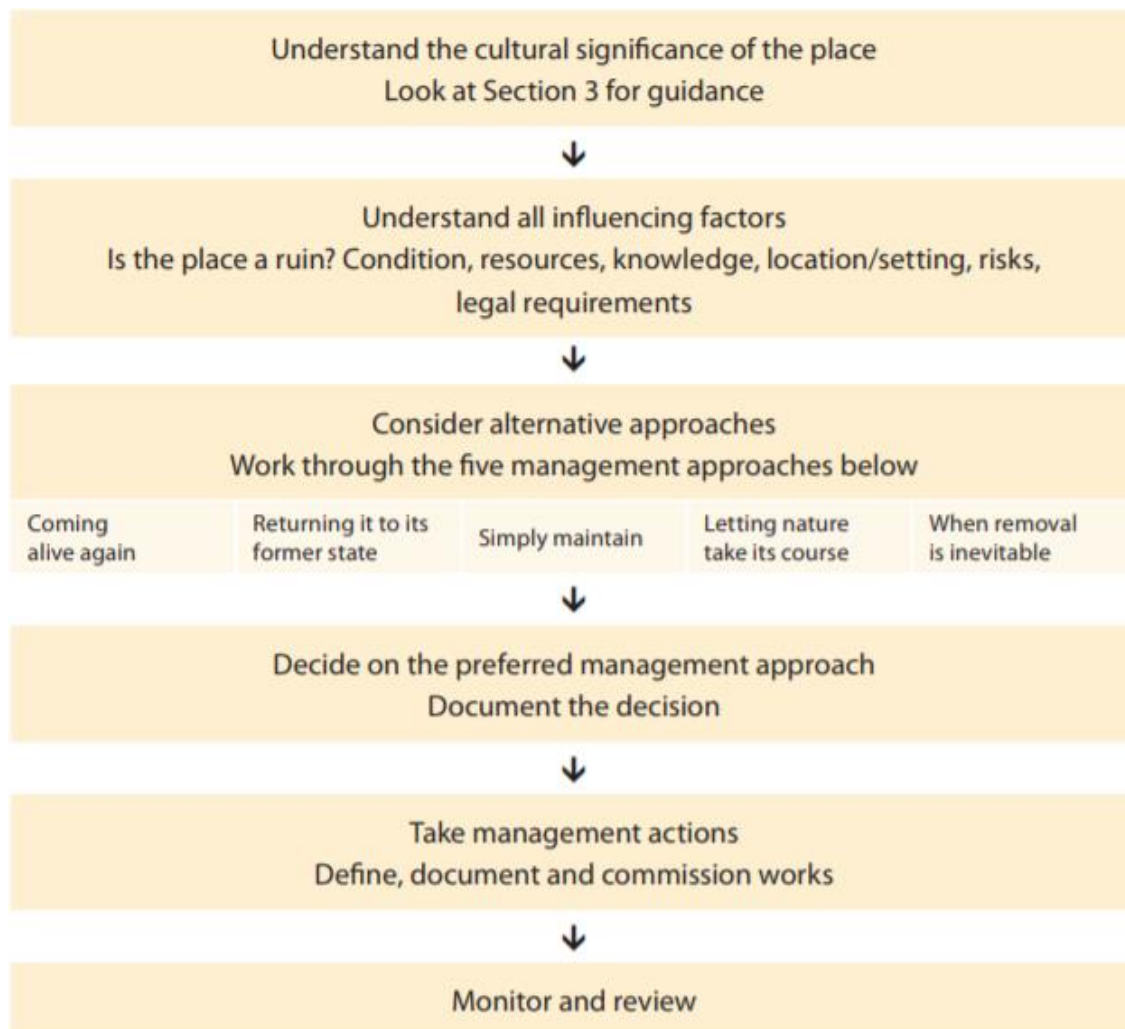


Figure 2.2 Process for Selecting a Management Approach (*Source: Commonwealth of Australia. Department of Environment, Water, and Natural Resources. Australian Heritage Council. Ruins: A Guide to Conservation and Management*)

Ruins: A Guide to Conservation and Management also addresses when reuse, restoration, or reconstruction might be the recommended approach to a ruin. According to the guide, a new use for a ruin is deemed as potentially appropriate when:

1. The significance of the place does not rely on it remaining as a ruin
2. When there is sufficient evidence to reinstate lost elements of the place
3. When a new compatible use is proposed to support ongoing conservation and interpretation of a significant place

4. When adaptive reuse will not impact on the significance of the place
5. When the return of a past use or activity would help retain or recover the heritage values of the place
6. Where there is a strong and enduring association between the place and a community or cultural group that could be reinstated
7. When maintenance as a ruin is not acceptable to the owners or the community⁹¹

While restoration of the ruin might be appropriate when:

1. It would help to reveal the heritage values of the place
2. It would ensure the structural integrity of the place
3. When the place has recently been ruined and there is strong community support for returning it to its former condition
4. Where there is sufficient information or knowledge to enable accurate reinstatement of missing elements⁹²

However, *Ruins* also recognizes that in other instances it may be best to simply maintain the ruin, meaning to maintain the fabric of a place in its existing state holding back deterioration. A maintenance-only approach might be appropriate when:

1. The place's heritage significance would be better revealed by its restoration/ reconstruction but the required resources are not available
2. Where there is insufficient information about its previous state or where a place has previously existed in a number of states and a decision cannot be made as to what to reconstruct
3. Where the aesthetic value of the ruin is a major consideration
4. Where the physical fabric of the place and its location are suited to long term preservation
5. Where the occupational health and safety issues related to the place's ruinous state can be effectively managed
6. Where it has been a ruin for a long time and is accepted as such by the community⁹³

⁹¹ Australian Heritage Council. *Ruins*, 28.

⁹² *Ibid.*, 31.

⁹³ *Ibid.*, 33.

Maintaining the ruin may also involve regular protective care, or maintenance, but should not gradually replace old material with new material.⁹⁴ The fourth option is to allow the ruin or abandoned place to decay naturally without any intervention. This is appropriate when the severe deterioration of a place means that nothing else can be done, or when there is no or very slight heritage value, where the ruin is adversely impacting other heritage values that are of greater importance.

This section addressed the growing body of literature on preservation approaches to heritage ruins, with focus on the guidelines created by the NPS and Australian Heritage Council as they are the most comprehensive and specific existing guidelines. In addition to the general benefit of saving historic resources, developing best practices for conservation and management approaches will better allow them to be utilized for heritage tourism, while hopefully mitigating improper management and treatments. The guidelines discussed in this section directly influenced the proposed framework in Chapter Seven. The various guidelines from this section were used to structure the parts of the framework that include determining when specific types of intervention and preservation are recommended at a site.

Industrial Heritage Tourism and Ruin Tourism

This section discusses existing relevant literature on both ruin tourism and industrial heritage tourism. Tourism specifically geared toward ruins and industrial heritage tourism both exist under the overarching topic of heritage tourism. Ruin tourism has been popular for generations, but in recent years has been used in reference to industrial ruins, as an unofficial form of ruin tourism. In more recent years, since the mid-twentieth century especially, industrial

⁹⁴ Ibid.

heritage tourism has been a popular subset of heritage tourism, both officially and unofficially. The discourse on these overlapping topics was vital to forming the proposed framework in Chapter Seven. The works discussed helped to better define, compare, and contrast varying approaches to heritage tourism at ruinous industrial sites. These works also connect to those discussed in the section on the Picturesque but reframed specifically toward heritage tourism.

The National Trust for Historic Preservation in the United States defines heritage tourism as "traveling to experience the places, artifacts and activities that authentically represent the stories and people of the past," and includes cultural, historic, and natural resources.⁹⁵ Interpretation, authenticity, and sustainability have frequently been a focus of heritage tourism literature. Additionally, heritage tourism has been experiencing a period of growth. As the popularity of industrial heritage and industrial ruins has grown over the twentieth and twenty-first centuries, literature on heritage tourism has been increasingly including information regarding industrial heritage tourism. This portion of the literature review discusses the most relevant texts on industrial heritage tourism in the U.S.

One of the most well-studied industrial heritage sites in the U.S. is Lowell National Historic Park, established in 1978 through public-private partnership. Lowell National Historic Park is located in Lowell, Massachusetts, and it commemorates the history of the Industrial Revolution in the U.S. The park includes textile mills, worker housing, canals, and nineteenth-century commercial buildings.⁹⁶ The park is organized similarly to a historic district, presenting the City of Lowell as a living museum using a variety of rehabilitated historic industrial structures that

⁹⁵ Jamesha Gibson, "Today's Word: Heritage Tourism," *Preservation Glossary*, National Trust for Historic Preservation, June 17, 2015, accessed October 01, 2018, <https://savingplaces.org/stories/preservation-glossary-todays-word-heritage-tourism#.W7JveGhKhPY>.

⁹⁶ "Lowell National Historical Park." National Park Foundation. Webpage. Accessed October 01, 2018. <https://www.nationalparks.org/explore-parks/lowell-national-historical-park>.

serve as museums, often using original machinery and materials. Historic features include the Boott Cotton Mill and Museum, Pawtucket Dam and Gatehouse, the Lowell Canal System, and a canal walkway. While none of these structures was stabilized in a ruinous state, they represent a successful industrial heritage museum utilizing historic industrial architecture and a reclamation of abandoned structures significant to the development of the surrounding community.⁹⁷

In 2000, authors Thomas E. Leary and Elizabeth C. Sholes discuss examples of industrial heritage preservation in America and Europe in an article titled “Authenticity of Place and Voice.” Leary and Sholes, partners in an independent public history firm, delve into issues of both interpretation and authenticity at industrial museums. They suggest that artifacts alone are not sufficient to facilitate public understanding and that their original context alongside proper interpretation creates the most successful industrial museums. In the article, Leary and Sholes discuss the development of Lowell National Historic Park, which they assert is one of the most successful industrial heritage park in the United States.⁹⁸

Leary and Sholes also define two types of ‘authenticity’ in heritage tourism. The first type is authenticity as the subjective quality of visitors’ experiences, which is somewhat equivalent to customer satisfaction. They define the second form of authenticity as “the degree of continuity between heritage presentations and current knowledge about the past,” as determined by expert judgements of content and context.⁹⁹ They argue that successful industrial history museums much reach both forms of authenticity because focusing solely on commercial successful can jeopardize

⁹⁷ "Lowell National Historical Park," U.S. National Parks Service, webpage, accessed April 07, 2019, <https://www.nps.gov/lowe/index.htm>.

⁹⁸ Thomas E. Leary and Elizabeth C. Sholes, "Authenticity of Place and Voice: Examples of Industrial Heritage Preservation and Interpretation in the U.S. and Europe," *The Public Historian* 22, no. 3 (2000): 66 doi:10.2307/3379578.

⁹⁹ Leary and Sholes, “Authenticity of Place and Voice,” 50.

the museum's historic distinctiveness.¹⁰⁰ This dual concept of authenticity was incorporated into the proposed framework, building on existing notions of authenticity from earlier figures such as Pugin and Ruskin discussed in the first section of this chapter.

Leary and Sholes assert that the reason the public does not see museums as a “satisfactory medium for recapturing the past,” is due to the museums’ failure to facilitate an authentic sense of place.¹⁰¹ They continue that providing an education and captivating experience, must include the survival of authentic sites and environments where the historical events actually happened. They refer to the history of a site as a ‘tale’ and historic sites as ‘theaters.’ To enhance these stories, Leary and Sholes suggest changes such as using oral histories as exhibit labels in place of more traditional museum text and showing modern versions of historic items at a site to illustrate change over time.¹⁰² The concept of experiential tourism follows this idea that tourists want a holistic cultural experience that emphasizes local life and creates a connection between the tourist and place of travel. Experiential tourism was not discussed as meaningful market trend until the 2010s but is essentially what Leary and Sholes allude to in their article from 2000.

Scholarship on Lowell National Historic Park has continued during the twenty-first century, and the park is often viewed as a helpful example by planners and preservationists looking to represent working class history and give abandoned buildings purpose in their own locales. In 2000, Carolyn M. Goldstein, who was the curator at the Lowell National Historic Park at the time, wrote an article titled “Many Voices, True Stories, and the Experiences We Are Creating in Industrial History Museums: Reinterpreting Lowell, Massachusetts.” Goldstein raised concerns about how to innovate, specifically in regard to how to “choose subject matter, design exhibitions,

¹⁰⁰ Ibid., 51.

¹⁰¹ Ibid., 50-51.

¹⁰² Ibid., 52.

and develop interpretive programs to attract a broader audience” when altering or creating exhibitions.¹⁰³ Goldstein summarized her concerns, stating: “My work in Lowell has convinced me that industrial history museums need to create experiences that are more memorable, more participatory, and more open-ended than those they currently offer.”¹⁰⁴ She suggested activities that will leave powerful impressions such as “seeing the operating weave room, taking a boat tour of the canal system, and riding trolleys,” as well as the inclusion of real-life stories to create powerful connections.¹⁰⁵ Goldstein also suggested combining ideas from theme parks like Disneyland with the professional skills of curators, historians, and educators. She also emphasized that this needs to be done while keeping industrial history museums affordable and accessible.¹⁰⁶

Although some specific sites of industrial heritage tourism, such as Lowell National Historic Park, have been frequently studied, broad guidelines for industrial heritage tourism are more limited. *Industrial Tourism: Opportunities for City and Enterprise* is one of the few texts that has attempted to directly define and create a framework for industrial tourism. Published as a joint effort between the European Institute for Comparative Urban Research and the Institute for Housing and Urban Development Studies, *Industrial Tourism* is the result of an international comparative study of urban industrial tourism development. The aim of *Industrial Tourism* is to answer the following question: “under what circumstances can industrial tourism make a strategic

¹⁰³ Carolyn M. Goldstein, “Many Voices, True Stories, and the Experiences We Are Creating in Industrial History Museums: Reinterpreting Lowell, Massachusetts,” *The Public Historian* 22, no. 3 (Summer 2000): 129-130. doi:10.2307/3379583.

¹⁰⁴ *Ibid.*, 132.

¹⁰⁵ *Ibid.*, 132-136.

¹⁰⁶ *Ibid.*, 132-133.

contribution to the competitiveness of city and enterprise?”¹⁰⁷ To answer this question, multiple case studies are utilized.¹⁰⁸

In *Industrial Tourism*, authors Alexander H.J. Otgaar, Leon van den Berg, and Rachel Xiang Feng focus on cities with a “considerable industrial base” for their conceptual framework of conditions for industrial tourism development.¹⁰⁹ The authors recognize that their research provides a step towards a framework for industrial tourism development in cities, but does not provide a complete framework on its own. The industrial cities addressed in the text are Wolfsburg (Germany), Cologne (Germany), Pays de la Loire (France), Turin (Italy), Shanghai (China), and Rotterdam (The Netherlands). *Industrial Tourism* also makes an argument for a growing demand in domestic European tourism, and that “well-traveled tourists” seek more exotic and authentic destinations beyond churches, museums, and over-saturated “classic tourist cities.”¹¹⁰

A model, seen in figure 2.3, was proposed by Professor Dietrich Soyez from the University of Cologne. The model was referenced in *Industrial Tourism* to categorize the different industrial tourism products.¹¹¹ On the horizontal axis, “Market” represents operational facilities and “Heritage” refers to non-operational firms. The vertical axis provides a spectrum between “Locations” and “Destinations,” which can be combined with either Markets or Heritage. The difference is between sites that are classified as destinations versus locations is unclear. However, extrapolating from examples listed on the model, Destinations appear to be Locations that lack professional development and interpretation, whereas Locations are museums or sites that at least

¹⁰⁷ Alexander H. J. Otgaar, Rachel Xiang Feng, and Leo Van de Berg. *Industrial Tourism: Opportunities for City and Enterprise* (Ashgate Publishing Group, 2010), 27.

¹⁰⁸ Ibid.

¹⁰⁹ Ibid., 1.

¹¹⁰ Ibid., 5.

¹¹¹ Dietrich Soyez, "Industrial Tourism in Germany: Situation, Weaknesses and Challenges," *Geography, Environment, Sustainability* 7, no. 4 (2014): 32, doi:10.24057/2071-9388-2014-7-4-28-39.

have official interpretation plans. The model and its four categories of industrial tourism products, influenced the creation of the proposed framework in this thesis, specifically in regard to defining how to consider and organize different industrial heritage sites, especially once beginning to discuss what form of preservation and what new uses may be most appropriate.

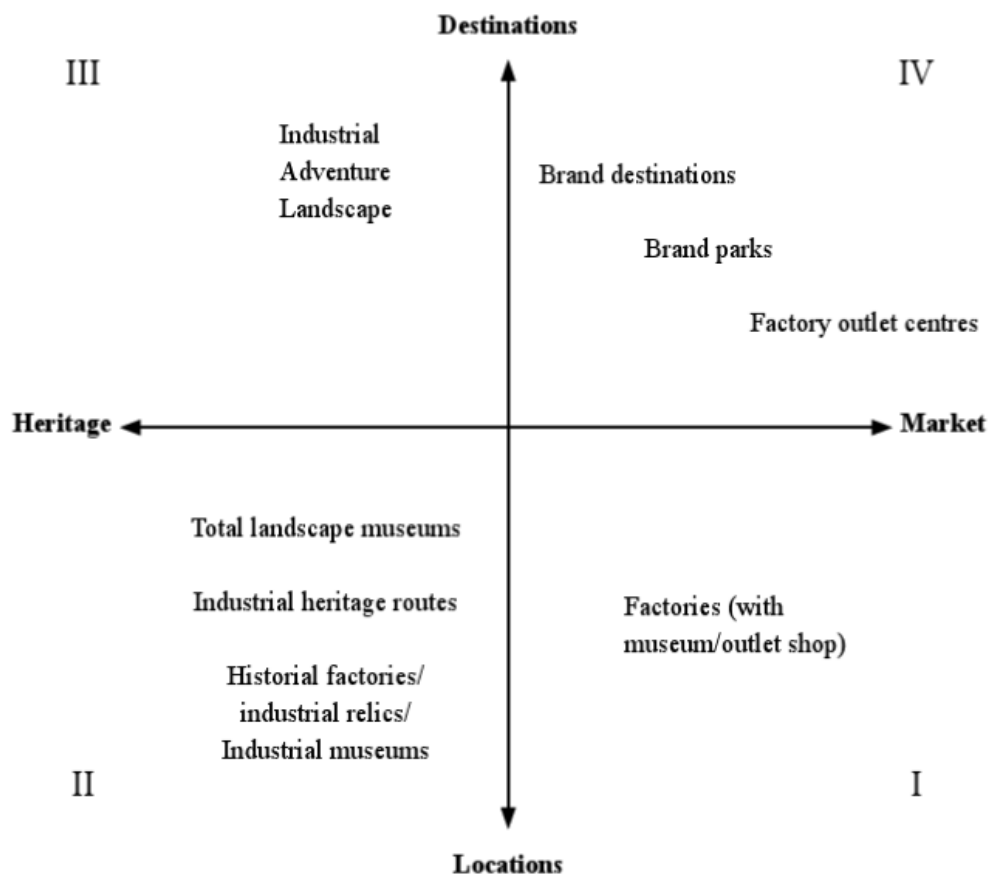


Figure 2.3. A Model for Categorizing Industrial Tourism Products. (Source: Leilei Li and Dietrich Soyez, *Industrial Tourism Destination Management in Germany: A Critical Appraisal of Representation Practices*, 2006)

In addition to the model in figure 2.3, *Industrial Tourism* further specifies industrial sites by the type of items they originally manufactured or sold. These are listed as:

1. Goods with a symbolic character for the region: for example, flour milling or coffee production

2. Branded goods: for example, sports goods, cars, or beer
3. Consumer goods: for example, oranges, beer, chocolate, or furniture
4. Goods of everyday life: for example, clothing, and perfume.
5. Luxury goods: for example, watches, jewelry, furs
6. Technologically demanding goods: for example, computers or mobile phones
7. Special interest goods: for example, energy, water, or movies
8. Demanding handicraft goods: for example, glass, chinaware, and steel.¹¹²

While at first glance, the Soyez Model can seem vague or arbitrary, overall it is an effective way to quickly categorize most industrial heritage sites and begin ruminating on specific qualities that would determine economic, interpretive, and physical preservation approaches. As referenced in the introductory chapter, Jansson introduced a similar model for categorizing ruin sites in general. These categories are named ruins or heritage sites, transitory ruins or regeneration sites, and open-ended ruins or abandoned places. While there is much potential overlap between the two models, they can be helpful for understanding a site better and choosing a project direction.

Dr. Philip Feifan Xie similarly examines the unique interplay between industrial heritage and tourism in relation to both social and economic concerns and benefits. He uses successful and failed case studies from Asia, North American, Australasia, and Europe to analyze the current state of industrial heritage tourism and to advocate for the creation of mixed-used spaces and for the further development of tourism at industrial heritage sites. Xie suggests using “cultural indicators,” to judge appropriateness of industrial tourism on host communities. He also suggests evaluating the experiences of tourists and the benefits received by local communities where industrial tourism is developing or has developed.

¹¹² Otgaar, et al. *Industrial Tourism*, 27

Xie's book, *Industrial Heritage Tourism*, begins with the notification that there is a need for "more comprehensive research into industrial heritage tourism."¹¹³ Even writing as recently as 2015, he calls the existing literature on industrial heritage tourism "inadequate" for several reasons. One of his key critiques asserts that the dynamics of industrial heritage tourism has been misrepresented through urban and regional planning methods.¹¹⁴ Also, unlike the other literature previously referenced, Xie relies more heavily on economics to support his argument. This is likely because economic development is a key goal of tourism. In addition to the lack of economic component, he comments on the narrow scope of U.S. research into industrial heritage.

Regarding Detroit, Xie explains that each demolition of an abandoned or ruinous structure, of which there were 78,000 in 2013 when he was writing *Industrial Heritage Tourism*, costs \$8,000. Additionally, industrial structures often have machinery that is too large to remove. Since Detroit declared bankruptcy in 2013, the cost of demolition is too high and has resulted in a large amount of long-standing abandoned structures. Xie asserts that often it is the local community that is indifferent to or even rejects its own industrial heritage, while outside groups are more likely to find abandoned industrial heritage fascinating and worthy of exploration. This is similar to Mah's idea of proximity. Xie identifies four key motives for adapting industrial heritage sites into tourism sites: conservation, space, community, and image. He also presents key attributes to these conversion projects that relate to those motives: potentials and stakeholders, related to conservation; adaptive reuse, associated with space; economics and authenticity, associated with community; and perceptions, associated with image. He seeks to answer the following question: "How can preservation projects proceed amid widespread attitudes of rejection or indifference"

¹¹³ Philip Feifan Xie, *Industrial Heritage Tourism* (Bristol, England: Channel View Publications, 2015), 11.

¹¹⁴ *Ibid.*, 11.

from local communities?¹¹⁵ He postulates that industrial heritage tourism preservation projects are only viable with interactive elements, mixed-use spaces, and a collaborative stakeholder approach.¹¹⁶ These qualities are both supported by the case studies in Chapters Four and Five and included as important factors in the proposed framework.

This section discussed the existing body of literature on ruin tourism and industrial heritage tourism, including texts on Lowell National Historic Park, one of the best-studied examples of an industrial heritage site transition to museum activities. Ruin tourism has been popular for generations, but in recent years industrial ruins have specifically gained prominence in both official and unofficial tourism capacities. There is an interest in categorizing these sites, attracting visitors, providing authentic yet safe experiences, and preserving the ruins themselves which has spurred the literature discussed within this section. The texts and guides discussed in this section influenced the site categories and approaches referenced in the framework in Chapter Seven.

Synopsis

The variety of challenges in the reuse of urban ruins, ranging from economic to physical to social, makes it difficult to connect the disparate uses of industrial ruins under a common process or framework. In order to propose such a framework, a review of literature was taken to evaluate pre-existing attempts and inform my own study of the Minneapolis Riverfront. The texts within this literature review focused on the topics of aestheticism, ruin preservation, and ruin and industrial heritage tourism. As mentioned in the introduction of this chapter, much of the existing texts focus on industrial ruins in European ruins. While these were discussed in regard to the

¹¹⁵ Ibid., 100.

¹¹⁶ Ibid., xiii.

picturesque and aestheticism, the remaining sections were more specifically focused on the United States.

The texts in the first section of this chapter indicate that authenticity, aesthetic qualities (e.g., “incompleteness” and ephemerality), integration with the landscape, and physical and emotional distance from a site are all significant factors to consider when considering ruin reuse and a potential site. The literature reviewed in the second section, ruin preservation, more closely touches on how industrial ruins might be stabilized and adapted for use in heritage tourism. The section included a variety of guidelines published that focus on project planning. The recommendations from the National Park Service and the Australian Heritage Council were incorporated directly into the proposed framework. The works reviewed in the third section, industrial heritage tourism and ruin tourism, echoed some of the other assertions. Leary and Sholes confirmed the importance of authenticity, while expanding the concept to include not only authenticity in programming but also the subjective visitor experience for a combined holistic experience at a tourism site.

The literature review alone does not sufficiently answer the main research question of how and why industrial ruins may be stabilized and adapted for heritage tourism uses in the Great Lakes Region. However, the reviewed texts do address (1) circumstances and factors that affect the reuse of industrial ruins for heritage tourism and (2) characteristics that might make an industrial ruin site appropriate for heritage tourism reuses.

CHAPTER 3

U.S. MILLING HISTORY

When discussing industrial history in the United States, it would be remiss not to include the Midwest and Great Lakes Region. The Great Lakes make up the world's largest complex fresh surface water, with a total area of 94,250 square miles and a total shoreline of 10,210 miles.¹¹⁷ The Great Lakes Region; defined as all the U.S. states and Canadian provinces bordering the Great Lakes, the upper Mississippi River, and Ohio watersheds; has a unique economic history. This geographic definition includes New York, Pennsylvania, Wisconsin, Indiana, Michigan, Illinois, Ohio, Minnesota, and the southern portions of Ontario and Quebec.¹¹⁸ The portion of the region within the United States is shown in figure 3.1. The Canadian provinces of the Great Lakes Region are outside of the scope of this thesis and will not be discussed. The older major metropolitan areas of the Great Lakes Region make up nearly one-quarter of the top one hundred largest metropolitan areas in the U.S. The major cities of the region are Syracuse, New York; Rochester, New York; Buffalo, New York; Youngstown, Ohio; Pittsburgh, Pennsylvania; Akron, Ohio; Cleveland, Ohio; Toledo, Ohio; Dayton, Ohio; Cincinnati, Ohio; Indianapolis, Indiana; Detroit, Michigan; Grand

¹¹⁷ Michael Chubb, "Tourism Patterns and Determinants in the Great Lakes Region: Populations, Resources, Roads, and Perceptions," *GeoJournal* 19, no. 3 (October 1989): 297, doi:10.1007/bf00454575.

¹¹⁸ *New World Encyclopedia*, "Great Lakes Region (North America)." Paragon House Publishers, accessed September 15, 2018. [http://www.newworldencyclopedia.org/entry/Great_Lakes_region_\(North_America\)](http://www.newworldencyclopedia.org/entry/Great_Lakes_region_(North_America)).

Rapids, Michigan; Chicago, Illinois; St. Louis, Missouri; Louisville, Kentucky; Milwaukee, Wisconsin; Madison, Wisconsin; Des Moines, Iowa; and Minneapolis, Minnesota.¹¹⁹



Figure 3.1: Map of the United States with Great Lakes Region states indicated in red.
(Source: The Great Lakes states of the U.S, New World Encyclopedia Online)

Much of the existing literature on American industrial ruins focuses on the City of Detroit and/or the surrounding region. However, as previously noted in Chapter Two, the existing body of literature on urban industrial ruins in the United States is relatively small when compared to other locations or types of ruins. To build on this body of pre-existing study within the United States, this thesis also focuses on the midwestern region of the U.S. This chapter provides background on the region and details the recent economic history of the region. Additionally, it includes information on the industrial center of Minneapolis on the Mississippi River to contextualize the two case study sites in the subsequent chapters.

¹¹⁹ Jennifer S. Vey, John C. Austin, and Jennifer Bradley, "The Next Economy: Economic Recovery and Transformation in the Great Lakes Region," (*Metropolitan Policy Program*, Brookings Institution, September 2010): 15, accessed August 10, 2018, https://www.brookings.edu/wp-content/uploads/2016/06/0927_great_lakes.pdf.

Early Milling History

The Great Lakes area's cultural identity has been largely influenced by both its industrialization and deindustrialization.¹²⁰ Throughout its history, the Great Lakes Region has been known as a railway and waterway transportation hub, for its architectural innovation, transportation technological development, the coal and iron industries, flour-milling, automobile manufacturing, and even weapons manufacturing. For most of its history, the region's economy has been dependent on a combination of agriculture and industry. Natural resources such as timber, coal and iron ore, fresh water, and fertile soil initially attracted settlers and commerce to the Great Lakes Region.¹²¹ To help contextualize the case studies of Mill City Museum and Mill Ruins Park and better understand their importance to the history of industrialization in Minneapolis, this section details the history of flour milling in the United States as well as specifically in the Great Lakes Region.

By the nineteenth century, the government and private actors were both heavily investing in rail and water transportation in the midwestern United States to give the entire nation access to more resources. By the twentieth century, major urban manufacturing, research, and tradition centers had developed. By 1920, the automobile industry had boomed in the region through the companies of General Motors, Ford, and Chrysler, which by 1955 accounted for 94.5% of nationwide auto sales.¹²² During the second half of the twentieth century, the service industry and tourism grew significantly while manufacturing declined. The decline of manufacturing industries was somewhat offset in the region's larger cities by the growth of tourism and the broader service industry. The smaller cities of the region were more significantly impacted by the manufacturing

¹²⁰ Vey, et al. "The Next Economy," 15.

¹²¹ *New World Encyclopedia*. "Great Lakes Region (North America)."

¹²² Vey, et al. "The Next Economy," 17.

decline and have experienced slower economic recovery.¹²³ In recent decades, the region has become known for its overall economic decline, which caused widespread architectural abandonment and homelessness, factories to close, and later spurred revitalization efforts in some cities and towns.

Before and during the growth of car manufacturing, much of the midwestern economy relied upon agriculture and milling. Grain-grinding has been a substantial part of American manufacturing, dating back to colonial times. Settlers of the Plymouth Colony brought English wheat, rye, oats, and barley. While they experienced early crop failures, wheat became an important food crop in New England. The development of milling and continued advancements in milling technology were also would eventually shift to the midwestern U.S. and was significant to the development of the Great Lakes Region.¹²⁴

As the population grew throughout the nation during seventeenth and eighteenth centuries, more efficient mill technological was developed to meet demand for milled grain.¹²⁵ By the mid-1600s, the New England colonies began to produce a surplus of wheat. However, records from the Massachusetts General Court show that this surplus dissipated by 1662.¹²⁶ The decline was attributed to an influx of immigrants, the failing of wheat due to defect and disease, and competition from other regions that were better adapted to wheat growing. As a result, much of New England shifted to other crops while more westward settlements continued to produced wheat. During the eighteenth century, Massachusetts attempted to revive the flour milling industry, but this was deemed a failure after a few years.¹²⁷

¹²³ Chubb, "Tourism Patterns," 297.

¹²⁴ Charles Byron Kuhlmann, *The Development of the Flour-milling Industry in the United States: with Special Reference to the Industry in Minneapolis* (Boston, MA: Houghton Mifflin, 1929), xiiv-xiv.

¹²⁵ *Ibid.*

¹²⁶ *Ibid.*, 4-6.

¹²⁷ *Ibid.*, 7-8.

The first major regional milling center after the colonial period was located in New York. While the island of Manhattan was considered barren and rocky, neighboring areas were capable of producing grain. Four tide mills in the northeast had been built before 1710. Long Island was especially sought after for building flour mills due to its abundance of shoreline. Dutch settlers also used windmills for power, which were also common on Long Island. The Hudson Valley area used water mills.¹²⁸ During the late 1700s and early 1800s, nearly every state in the Union had flour mills, but milling developed more slowly in the South than in the North.¹²⁹

The settlement of the Midwest fundamentally changed wheat growing and flour milling in the United States. In the Illinois country, at Vincennes, flour mills shipped product to settlements along the Mississippi River. The Ohio region also developed a small milling industry in the mid-1800s, and primarily sold flour in Cincinnati. With the use of steamboats, the Midwestern flour market could extend further. Rather than keeping flour markets local or shipping product down the Mississippi River, the flour from the Midwest began to be shipped to markets in the East and West.¹³⁰

St. Louis became a major midwestern city for flour milling. There were flour mills in St. Louis dating back to Spanish occupation during the 1760s and 1770s. By 1851, the city had nineteen mills and was producing nearly half a million barrels of flour per year, and five years later that number had doubled. From 1865 to 1885, St. Louis and New York shared a majority of the U.S. flour market. The growth of St. Louis as a railway center increased its lead in the flour market of the Midwest region.¹³¹ Milwaukee, another midwestern city, began to produce flour around 1840, as wheat production spread over southern Wisconsin. The market flourished due to

¹²⁸ Kuhlmann, *The Development of the Flour-milling Industry*, 11-13.

¹²⁹ *Ibid.*, 27.

¹³⁰ *Ibid.*, 78-81.

¹³¹ *Ibid.*, 83-85.

Milwaukee's waterpower and lake route to the Eastern markets. Although flour production declined during the Civil War, Milwaukee was producing over one million barrels annually by 1868. For a short amount of time after the Civil War, Milwaukee led the milling industry, but was quickly outpaced by Minneapolis. The struggle for dominance in the flour continued for a decade, but due to its location on the Mississippi River, Minneapolis had more success and Milwaukee's flour industry declined.¹³² Minneapolis' access to the Mississippi River, allowed the city's flour mills to ship product south in addition to east via the Great Lakes.



Figure 3.2: United States Map showing major cities and waterways. Minneapolis is located adjacent to St. Paul, Minnesota. (Source: Institute for Water Resources, U.S. Army Corps of Engineers, 2012)

Other midwestern cities were also involved in the flour industry in the nineteenth century. In Chicago, flour milling grew steadily, reaching three quarters of a million barrels in 1868.

¹³² Ibid., 90.

However, soon after, Chicago's flour milling figures began to decline, and the quantity of flour production continued to decline after 1871. Chicago had many milling advantages including cheap fuel from near-by coal fields, many railroads, and a varied wheat supply. However, manufacturers fell behind in their shipments, and by 1873, shipments were "almost ten times as large as output" of flour from Chicago mills.¹³³ Chicago also suffered from the competition from nearby country mills and the mills of Minneapolis.¹³⁴ By the twentieth century, the bulk of flour production was in Minnesota. Minneapolis held the title of "Flour Milling Capital of the World" for over fifty years and became known as the "Mill City."¹³⁵ Flour milling in Minneapolis led to technological innovations, international business developments, and was ultimately responsible for the growth of the city over nearly the past two centuries and the modern flour milling process of the twentieth and twenty-first centuries.¹³⁶

Milling in Minnesota

Originally, white settlement in Minnesota was only open in the lands between the Mississippi and St. Croix Rivers. These lands were mostly settled by trappers, lumbermen, and miners due to the natural resources available. The Treaties of Traverse-des-Sioux and Mendota in 1851, opened southern Minnesota to white settlement and led to a rapid population increase. The southern region of Minnesota was well suited to growing wheat and drew in settlers from Iowa, Wisconsin, and Illinois. The first few years of major white settlement did not produce a surplus of wheat. Therefore, Minnesota mills were not able to ship to wheat to distant markets. Instead, the

¹³³ Ibid., 91.

¹³⁴ Ibid., 92.

¹³⁵ "Minneapolis Flour Milling Boom," Minnesota Historical Society, webpage (accessed June 2018) <http://www.mnhs.org/millcity/learn/history/flour-milling>.

¹³⁶ Ibid.

Minnesota farmers only fulfilled major home-market demand from Native Americans, soldiers, fur-traders, and lumberman.¹³⁷

White settlement continued and led to the development of lumber and flour mills. The history of flour milling in Minnesota began in 1822 and 1823 at the Falls of St. Anthony on the Mississippi River. In 1680, Catholic priest Father Louis Hennepin observed the falls and made them known to white settlers. Hennepin named the falls after Saint Anthony of Padua.¹³⁸ St. Anthony Falls had been drawing people to settle the surrounding area for centuries. The falls had formed roughly 12,000 years ago from glacial deposits that diverted the Mississippi River. They are the only natural falls along the River.¹³⁹ As water rushed over the falls, limestone slabs would collapse into the river, causing the falls to migrate upriver. The Falls of Saint Anthony reached near to their current location and height about 10,000 years ago (figure 3.3). The development of milling accelerated the migration of the falls and the existence of the falls facilitated the existence and growth of milling in Minneapolis. Without the waterpower and waterway shipping offered by the falls and the Mississippi River, Minneapolis would not likely have developed into the milling capital of the nation and later the world.

¹³⁷ Ibid., 106

¹³⁸ "A History of Minneapolis," Minneapolis Public Library Online. January 4, 2009. (Accessed September 28, 2018 via web.archive.org) <http://www.mpls.lib.mn.us/history/eh1.asp>

¹³⁹ Meyer, Scherer, & Rockcastle, Ltd. *A Program for the St. Anthony Falls Heritage Center*. Prepared for the Minnesota Historical Society. (July 1999): 6.

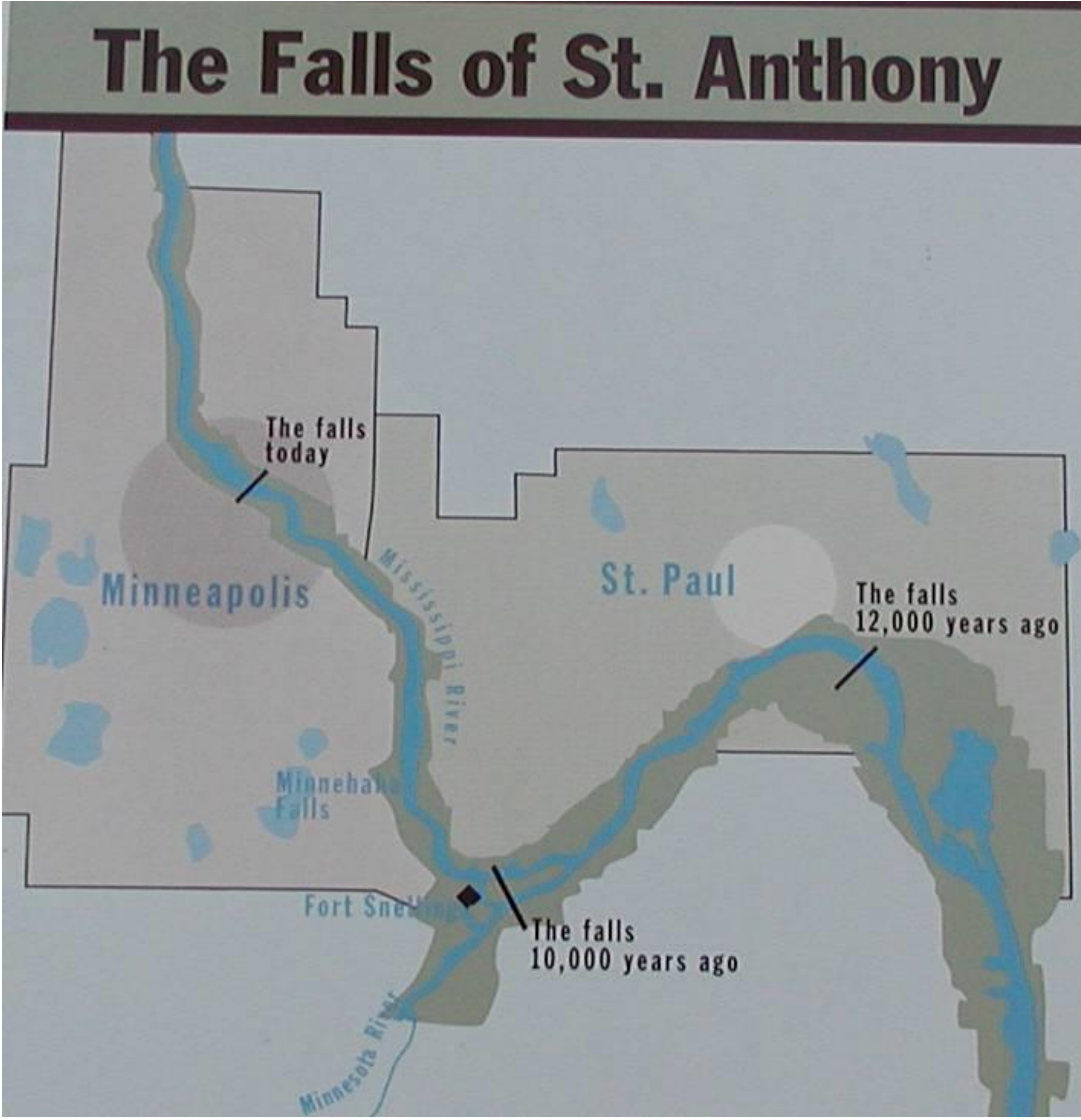


Figure 3.3: The migration of the Falls of St. Anthony. (Source: College of Science and Engineering, University of Minnesota)



Figure 3.4: Labeled photo of the geology at bluffs near St. Anthony Falls. (Source: College of Science and Engineering, University of Minnesota)

The original natural falls were composed of Platteville limestone, shown in figures 3.4 and 3.5. The limestone was weakened by Minneapolis' freeze/thaw cycles. In 1869, a tunnel beneath the falls collapsed, damaging the falls. By 1880, the U.S. Army Corps of Engineers (USACE) built a wall beneath the falls to stabilize them.¹⁴⁰ The concrete apron that is currently visible at the falls (figure 3.6), over the natural limestone, was installed in the mid-twentieth century by the USACE. The site also has a lock and dam system, although it is no longer in commercial operation (figure

¹⁴⁰ Molly Huber, "St. Anthony Falls Tunnel Collapse, October 5, 1869." MNopedia, Minnesota Historical Society (May 10, 2011), accessed September 25, 2018, <http://www.mnopedia.org/event/st-anthony-falls-tunnel-collapse-october-5-1869>

3.7). The National Park Service operates the Upper St. Anthony Falls Lock & Dam Visitor Center near the west end of the bridge and offers tours of the dam.¹⁴¹

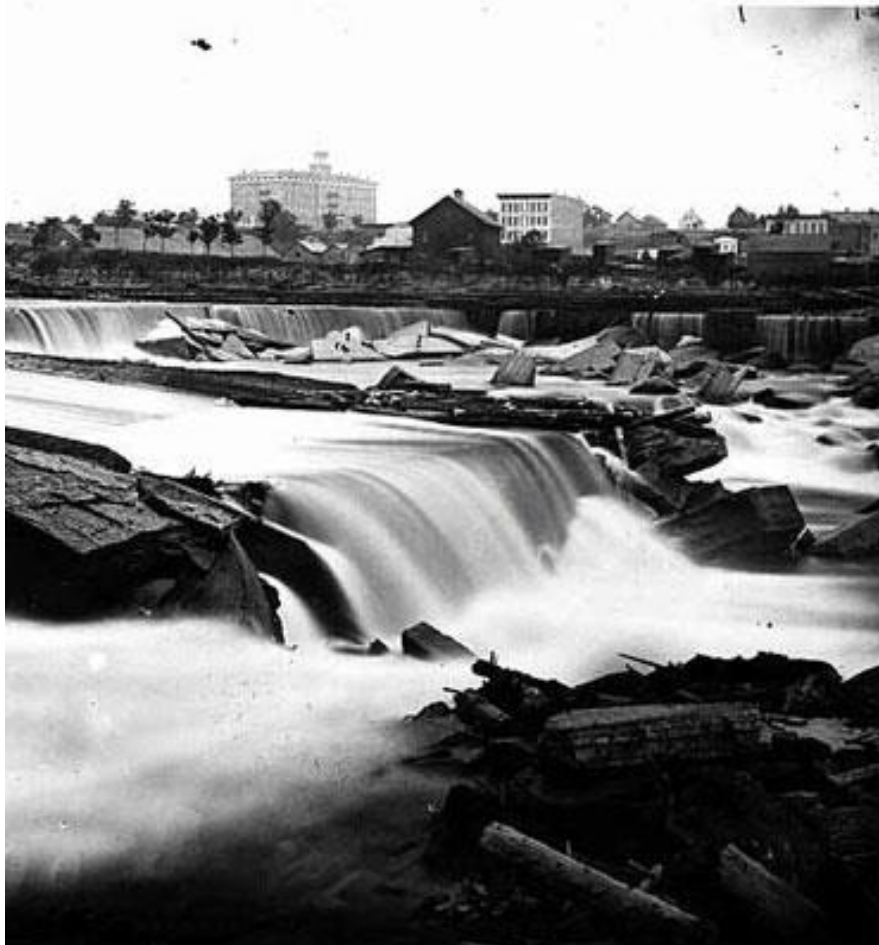


Figure 3.5. St. Anthony Falls, c. 1865 (*Source:* Minnesota Historical Society, Online Visual Resource Database, <http://www.mnhs.org/places/safhb/gallery.php>)

The U.S. Army Corps of Engineers has been instrumental in maintaining the falls, as their geological studies have indicated that the falls would naturally erode into rapids. The limestone bedrock at the falls is also thin, only about fourteen feet thick at its maximum, compared to twenty-

¹⁴¹ "Stone Arch Bridge." Minneapolis Park and Recreation Board. Webpage, accessed October 1, 2018. https://www.minneapolisparcs.org/parks__destinations/historical_sites/stone_arch_bridge/.

five feet thick downstream from the falls.¹⁴² Between 1907 and 1963, the USACE installed a series of structures at the falls to enable travel passed the falls and to protect them from further erosion. Currently, the natural falls are covered by a concrete apron (figure 3.6).¹⁴³



Figure 3.6: Spillway at St. Anthony Falls. (Source: Matt Hickman, Mother Nature Network)

¹⁴² Jane Lamm Carroll, "Engineering the Falls: The Corps of Engineers' Role at St. Anthony Falls." U.S. Army Corps of Engineers, St. Paul District. (October 27, 2015.) Accessed September 03, 2018. <http://www.mvp.usace.army.mil/Media/News-Stories/Article/626089/engineering-the-falls-the-corps-of-engineers-role-at-st-anthony-falls/>

¹⁴³ Ibid.



Figure 3.7: St. Anthony Falls Lock and Dam. (Source: National Park Service, Mississippi National River and Recreation Area, Minneapolis, Minnesota)

The falls were first utilized to provide power to a sawmill (figure 3.8) that cut lumber for Fort Snelling. It is also likely that the mill was used to grind feed for cattle. Due to the difficulties of transporting food supplies, the soldiers attempted flour milling even though the mill was not equipped with all the necessary machinery. Over the next several years, Minnesota saw repeated failures in wheat-raising and flour milling. In 1849, the original gristmill and sawmill at Fort Snelling discontinued grinding flour. Until 1851, very few mills were built in Minnesota, and the 1850 census listed only 1401 bushels of wheat grown in the state that year.¹⁴⁴

¹⁴⁴ Kuhlmann, *Development of the Flour Milling Industry*, 104-106.

However, by 1860, eighty-one mills had been erected in the state of Minnesota. Together they produced over \$1.2 million in flour, mostly from small custom mills scattered throughout the southern region of the state.



Figure 3.8: Sawmills over Saint Anthony Falls, c. 1860. (Source: Minnesota Historical Society, Minneapolis, Minnesota)

During the subsequent ten-year period, the number of mills rose from eighty-one to five hundred and seven. Minnesota milling was still concentrated in the southern counties: “Hennepin County had fourteen mills, Winona [had] thirteen, Rice and Goodhue [had] eight each, Houston, Le Sueur, and Stearns six each.”¹⁴⁵

Minneapolis had major advantages over other midwestern cities where flour mills were developing around the same time—it had its own home market, the water of St. Anthony Falls for

¹⁴⁵ Ibid., 107-108.

power, and the Mississippi River to reach distant markets. It was also this water source that first drew settlers to the city, even before the development of the flour milling industry. In 1838, Franklin Steele had claimed land on the eastern bank of the Mississippi River, opposite St. Anthony Falls. He then laid out the town-site of St. Anthony and sold lots. In 1848, Steele installed the first dam at the falls. On the western side of the river, Robert Smith had claimed the old Government Mill, built at Fort Snelling. In 1856, the Minnesota State Legislature granted charters to the St. Anthony Falls Water-Power Company and the Minneapolis Mill Company to construct mills at the falls. Governor Cadwallader Washburn, the founder of the Washburn-Crosby Milling Company that is now known as General Mills, was also a partial owner of the Minneapolis Mill.¹⁴⁶

In 1857, the Minneapolis Mill Company built a large underground canal and tunnel system at the falls. The canal fed water into the tunnels and into a wheel pit, where water moved a waterwheel and generated power for millstones.¹⁴⁷ Overall, this technology had a pronounced influence on the flour milling industry, allowing for greater flour production. In 1860, four Minneapolis mills produced 30,000 barrels of flour, but in 1869, a total of thirteen mills produced over 250,000 barrels with 70% of their product being shipped to outside markets, whereas previously the majority of Minneapolis flour was sold locally.¹⁴⁸

In Minneapolis in 1881, nearly every mill was using rollers, and C.C. Washburn had the first complete roller-mill. Rollers required less space, oversight, and power to operate, greatly increasing the efficiency of flour milling.¹⁴⁹ In addition to the switch to roller-mills, smaller technological developments also improved milling. The middlings purifier was developed by

¹⁴⁶ Kuhlmann, 108.

¹⁴⁷ Kent Kirkby and Du Anne Heeren, "A History of Saint Anthony Falls," National Center for Earth-surface Dynamics, (University of Minnesota, Minneapolis: 2011), accessed June 2018, https://www.esci.umn.edu/courses/1001/1001_kirkby/SAFL/WEBSITEPAGES/6.html

¹⁴⁸ Kuhlmann, 111-113.

¹⁴⁹ *Ibid.*, 122.

Edmund LaCroix, a French inventor, for Washburn A Mill in 1870, under the direction of Cadwallader C. Washburn.

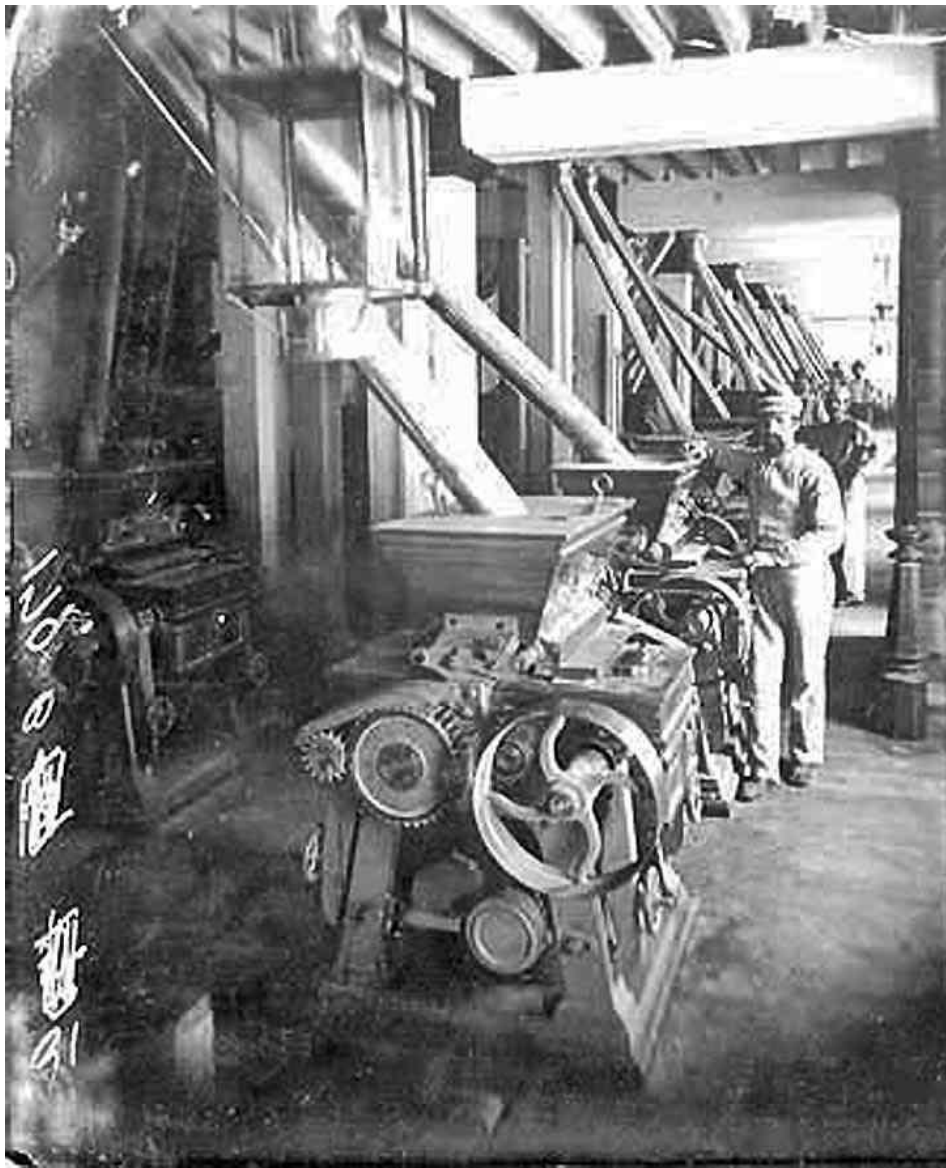


Figure 3.9: Roller mills at Washburn A Mill in Minneapolis Minnesota, c. 1875. (Source: *Old Mill News*, Minnesota Historical Society Archive)

The method was new, but it is unclear if LaCroix was the original creator of this type of purifier in the United States.¹⁵⁰ One milling historian describes how the middlings purifier worked: “The

¹⁵⁰ Ibid., 117.

wheat kernel passed through millstones set just high enough to break it up, cracking the hard center and separating the bran.”¹⁵¹ Then, “This meal was fed into the purifier on a vibrating sieve. Air blasts and suctions removed the light bran; larger and heavier impurities remained on the sieve, and the now-purified, white middlings passed through ... [and were] put back through the millstones and reduced to flour.”¹⁵² While purifiers produced better tasting flour, they filled the air in mills with a fine flour-dust, creating a fire hazard. Although, this hazard was not originally realized.

On May 2, 1878, there was a large explosion in the Washburn A Mill, which caused a fire and additional explosions in five other nearby mills. The explosion caused eighteen deaths, a quarter of a million dollars in property damage, and the destruction of half the milling capacity of the city. An investigation determined that the explosion was caused by flour-dust from the purifiers. A result of the fire and investigation was the implementation of dust collectors. The dust collectors were used to suction flour dust from the air into storage within “dust-houses,” where it would settle and be made into a low-grade flour. Due to the national attention given to the explosion, mills throughout the country also implemented dust-collectors, and a similar process is still used in the twenty-first century.¹⁵³

¹⁵¹ Alison Watts, "The Technology that Launched a City: Scientific and Technological Innovations in Flour Milling during the 1870s in Minneapolis," *MN History Magazine*, Minnesota Historical Society Online Collection, (Summer 2000): 89, accessed September 26, 2018, <http://collections.mnhs.org/MNHistoryMagazine/articles/57/v57i02p086-097.pdf>.

¹⁵² Ibid.

¹⁵³ Kuhlmann, *Development of Flour Milling*, 122-125.



Figure 3.10: Photograph of the 1878 explosion at Washburn A Mill, altered by artist for publication in the Minneapolis Tribune. (Source: Minnesota Historical Society, Minneapolis, Minnesota)

Even after the damaging explosion in May 1878, seventeen mills lined St. Anthony Falls by the end of the year, including a new Washburn Mill to replace the one destroyed in the fire. An additional five mills were built near St. Anthony Falls by 1880. By 1880 the total production of flour from the mills at the falls solidified Minneapolis as the largest flour producer in the nation. The milling industry continued to grow in the late nineteenth and early twentieth centuries.

In 1880, Washburn-Crosby owned three of the mills at the falls, and C.A. Pillsbury and Company owned five. C.A. Pillsbury and Company was established by Charles Pillsbury of New Hampshire who followed his uncle to Minneapolis and took an interest in milling. Pillsbury and Washburn-Crosby were both responsible for the successful development of the milling industry in

Minneapolis.¹⁵⁴ Washburn-Crosby marketed its flour under several names, but created the “Gold Medal Flour” label in 1880, in an attempt to build brand loyalty. The now iconic Gold Medal Flour sign, still present at the site in 2018, was added on top of the concrete grain elevators in 1906.¹⁵⁵ By 1921, flour mills in Minnesota produced one fifth of the flour for the entire country, and by 1922, the overall flour output of the U.S. reached 125,000,000 barrels.¹⁵⁶



Figure 3.11: Gold Medal Flour Sign at Washburn A Mill in 1911. (Source: General Mills, Minneapolis Minnesota, <https://blog.generalmills.com/2016/06/the-gold-medal-signs-that-salute-our-hometown/>)

¹⁵⁴ Ibid., 131.

¹⁵⁵ Meyer, Scherer, & Rockcastle, Ltd. *A Program for the St. Anthony Falls Heritage Center*, 10.

¹⁵⁶ Kuhlmann, *Development of Flour Milling*, xiv-xv.

In 1928, General Mills was created and incorporated by combining Washburn-Crosby with twenty-eight other mills throughout the country. Also in 1928, another fire gutted much of the Washburn A Mill, but it was rebuilt quickly.¹⁵⁷

Overall, the 1920s and 1930s saw limited earnings for flour mills compared to the preceding decades. Flour milling profits were not large prior to the Great Depression. The Depression then caused a further decline in flour exports, a “widespread mania” for cheap flour, and slow payments and increases in insolvencies between farmers and mill owners.¹⁵⁸ The decline in flour exports was also at least partially due to an increase in trade barriers for international wheat trade due to rising nationalism.¹⁵⁹ In 1929, the U.S. Congress established the Federal Farm Board, which created a half a billion-dollar revolving fund to stabilize the various farm markets after a recent downward price trend from surplus product. Nevertheless, wheat prices dropped lower than they had in decades, and the revolving fund was left nearly empty. Wheat prices continued to decrease through 1933.¹⁶⁰

Between 1933 and 1936, wheat harvests were extremely small, primarily due to droughts. This led to the importing of wheat from Canada.¹⁶¹ In 1936, a processing tax for flour was declared unconstitutional, this led to demands for reimbursement from customers for the taxed amounts. The demands caused most millers to refund a part of the impounded taxes over a period of five to six years, compounding instability in the wheat market. Furthermore, the mass refunding also made it difficult to record the exact amount of wheat processed and sold during the 1930s.¹⁶² To counteract years of industry struggles, the Millers’ National Federation launched a campaign to

¹⁵⁷ Ibid.

¹⁵⁸ Herman Steen, *Flour Milling in America*, (Minneapolis, MN: Greenwood Press, 1963), 83.

¹⁵⁹ Ibid., 78-79.

¹⁶⁰ Ibid., 78-80.

¹⁶¹ Ibid., 84.

¹⁶² Ibid., 80.

advertise the merits of wheat-based foods. The various industry issues led to mergers and acquisitions between industry leaders, including major acquisitions by Pillsbury and General Mills.¹⁶³

During the 1940s, due to demand caused by World War II, the wheat industry saw recovery in production and earnings. American mills operated at near maximum production until mid-1948, and broke records in flour output to feed “a considerable part of the world.”¹⁶⁴ Due to the extremely high demand, mill maintenance was often overlooked or kept at a minimum. This caused unfavorable conditions in many American mills. The 1940s saw widespread equipment breakdowns and an overall decline in wheat quality. During the 1940s and 1950s, many mills were forced to close while other mills increased production¹⁶⁵ and began bulk shipments of flour by railroad and truck.¹⁶⁶ However, overall flour production in the U.S. continued to grow, reaching 1,295,000,000 bushels in 1959 compared to 600,000,000 bushels in 1942 and 1943.¹⁶⁷

By the second half of the 1950s, both General Mills and Pillsbury had progressed and expanded. General Mills expanded into Canada and expanded its sales to include appliances. Meanwhile, Pillsbury focused on geographic expansion of their flour markets into Africa, Europe, and South America. During the 1960s, General Mills bought thirty-seven companies, most of which did not relate to the food business. Some of these companies produced well-known products such as Play-Doh and the Monopoly board game. During the 1960s, Pillsbury ventured into the restaurant business. Burger King began as a Florida-based chain with 275 locations. Pillsbury purchased Burger King in 1967 and added 214 locations over the next two years.¹⁶⁸

¹⁶³Ibid., 87.

¹⁶⁴ Steen, *Flour Milling in America*, 91.

¹⁶⁵ Ibid., 97.

¹⁶⁶ Ibid., 117-118.

¹⁶⁷ Ibid., 93-97.

¹⁶⁸ General Mills, Inc. "Making Food People Love," *A Look Back on 150 Years*, General Mills Website, accessed August 28, 2018, <https://history.generalmills.com/the-story.html>.

More widespread and pronounced manufacturing decline began in the Great Lakes Region during the 1990s, and it increased even further beginning in 2000. From 2000 to 2010, the region lost 1.6 million manufacturing jobs. A modest amount of jobs (350,000) were recovered between 2010 and 2015, but the region still had 27% fewer manufacturing jobs in 2015 than in 2000. Job losses at this time were part of a nationwide trend, but the region's heavy reliance on manufacturing industries translated into more substantial losses. Compared to the entire United States, median household incomes in the region also dropped significantly, except for in Minnesota. This income decline was most prominent in Michigan, with a 19.6% reduction in median income. Despite economic struggles, the Great Lakes Region's population grew from 46 to 52 million between 1990 and 2015.¹⁶⁹

Over their history, Pillsbury and Washburn-Crosby (later General Mills) were fierce rivals who eliminated or acquired almost every other milling company located at St. Anthony Falls on the Mississippi River.¹⁷⁰ While flour milling production decreased overall between the 1950s and 2000, both General Mills and Pillsbury diversified and expanded.¹⁷¹ Both companies have seen continued success and remain well-known in the twenty-first century. General Mills has been well-known for its breakfast cereals, cake mixes, and grain-based snacks. Pillsbury has been well-known for a variety of refrigerated dough products. General Mills' main mill, Washburn A Mill, closed in 1965, but General Mills purchased its rival, the Pillsbury Company, in 2001. Pillsbury A Mill, the last operating mill at St. Anthony Falls, closed in 2003, signaling the end of nearly 200 years of competition and flour milling on the falls.¹⁷²

¹⁶⁹ Rolf Pendall, et al., "The Future of the Great Lakes Region," Metropolitan Housing and Communities Policy Center, Urban Institute (March 2017), iv-2, accessed September 1, 2018.

https://www.urban.org/sites/default/files/publication/89087/great_lakes_0.pdf

¹⁷⁰ Kuhlmann, 133.

¹⁷¹ General Mills, Inc. "Making Food People Love,"

¹⁷² "A History of St. Anthony Falls." Minnesota Historical Society.

Revitalization and Heritage Area Development

While the Great Lakes Region has undergone decades of economic changes and deindustrialization, it is known as a center for global companies and for education, housing top-ranked universities such as the University of Notre Dame, University of Chicago, Northwestern University, Indiana University, University of Michigan, Case Western University, and the University of Illinois.¹⁷³ Economically, Minneapolis has been doing well since the Great Recession especially compared with other cities in the region. The Great Lakes Region has a \$5 trillion economy and “generates 30 percent of U.S. and Canadian economic activity and is the third largest economy in the world.”¹⁷⁴

The city of Minneapolis totals 57.4 square miles and is about seven percent water and twelve percent parks and open space.¹⁷⁵ Minneapolis and the neighboring state capital of St. Paul both have a healthy job market and household incomes significantly higher than the national average. They also continue to have affordable home costs in comparison to other metropolitan areas in the U.S.¹⁷⁶ The city’s development and land use has been heavily influenced by its natural features, most notably the Mississippi River and St. Anthony Falls, which have been used for waterpower and transportation. The city that developed around the river includes a downtown core with a grid pattern of long rectangular blocks. The grid system is intersected with an interstate highway system. The downtown core remains a center for business and commerce, but also

¹⁷³ Vey, et al. "The Next Economy," 15.

¹⁷⁴ *The Great Lakes: An Economic Engine and Environmental Treasure*. U.S. Great Lakes Commission. (March 2017). Accessed September 15, 2018. <https://www.glc.org/wp-content/uploads/2017/03/2017-GreatLakes-JointAgenda-OnePage-20170307-FINAL.pdf>.

¹⁷⁵ City of Minneapolis. *Minneapolis Geography Detail*. Community Planning & Economic Development. Accessed September 13, 2018.

http://w.minneapolismn.gov/www/groups/public/@cped/documents/webcontent/convert_262711.pdf.

¹⁷⁶ *Metro Economic Outlook: Minneapolis/St. Paul*. Society for Human Resource Management. (Report.) January 1, 2017. Accessed September 28, 2018. <https://www.shrm.org/hr-today/trends-and-forecasting/labor-market-and-economic-data/Documents/minneapolis.pdf>.

includes residential sections (figure 3.12) However, the suburban areas surrounding Minneapolis have experienced more rapid residential development since the mid-twentieth century than the commercial district. The city also has an extensive park system that has been rated the number one park system in the United States by the Trust for Public Land for the past five years. The park system totals 5,070 acres.¹⁷⁷

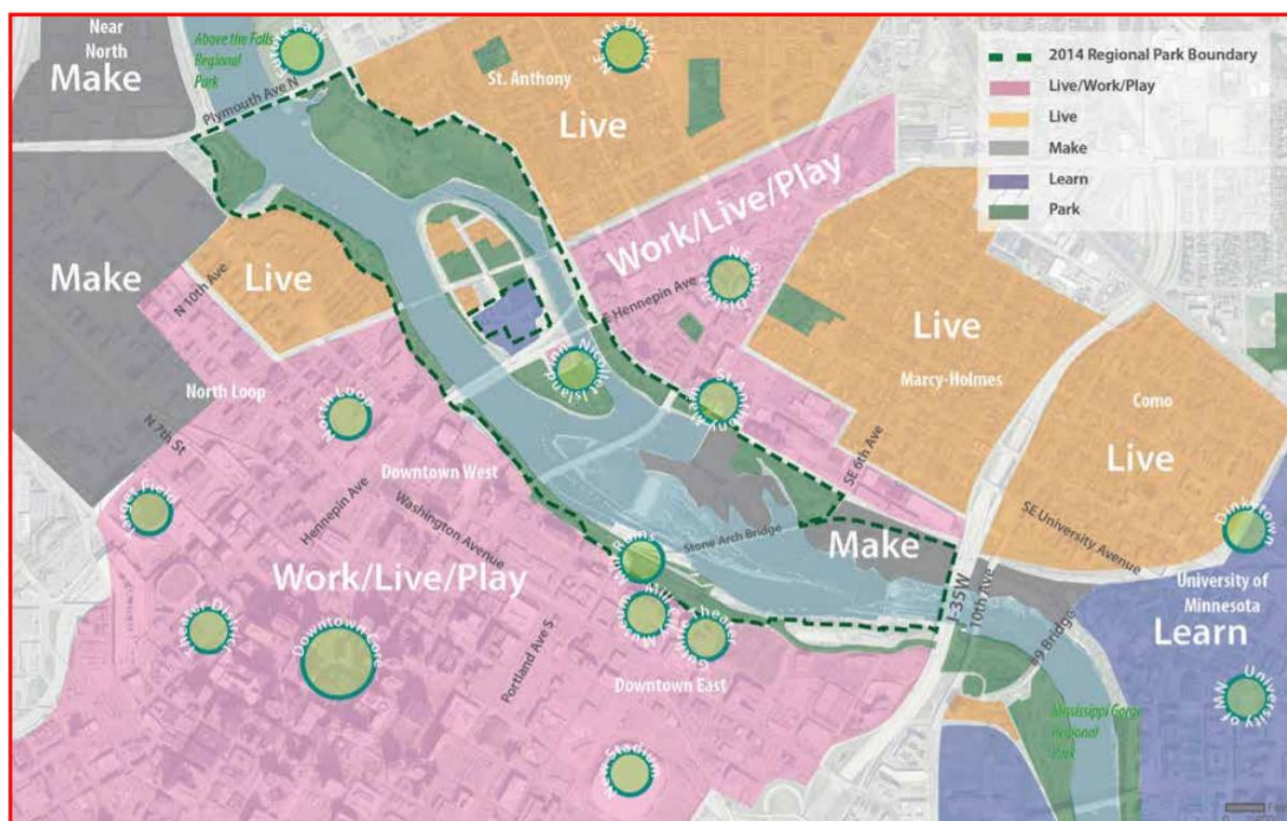


Figure 3.12: Urban Context of the St. Anthony Falls Heritage District. Heritage area is the green overlap area. (Source: Metropolitan Council, Minneapolis Park and Recreation Board, Minneapolis, Minnesota, 2016)

¹⁷⁷ Trust for Public Land, "City Profile: Minneapolis." 2018 ParkScore Ratings. www.TPL.org. (website) Accessed September 13, 2018. <http://parkscore.tpl.org/city.php?city=Minneapolis#sm.00001757tjwvxeer7xyg10n9457y9>.

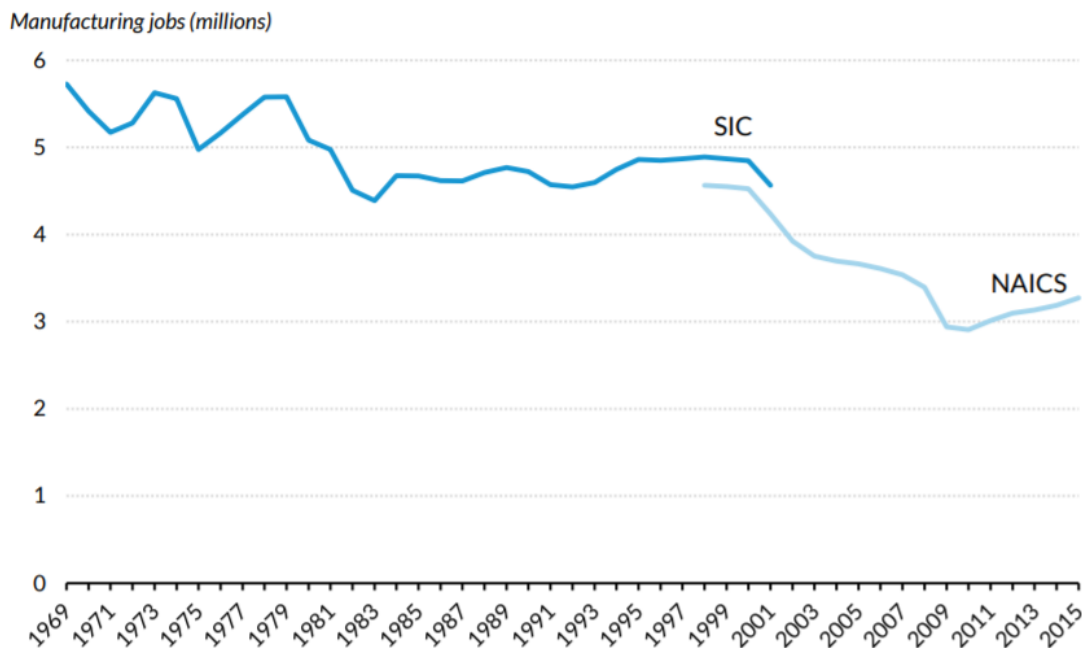


Figure 3.13: Graph of Great Lakes Manufacturing Jobs (*Source:* Rolf Pendall, et al., "The Future of the Great Lakes Region," Metropolitan Housing and Communities Policy Center)

Note: "In the late 1990s, the United States reclassified all its economic activity from the Standard Industrial Classification (SIC) system to the North American Industrial Classification System (NAICS), resulting in the shifting of some manufacturing activities to other sectors. These data show both full- and part-time jobs."¹⁷⁸

The recession of the 2000s, the Great Recession, hit the Great Lakes Region harder than other regions of the U.S. due to the combination of the financial crisis, housing market crash, and decline of the auto industry. The recession also brought about another wave of literature and academic study focused on the economics of the Great Lakes Region and deindustrialization. Since then, much of the literature on the region and deindustrialization has focused on how to mitigate economic struggles of manufacturing-focused regional economies.¹⁷⁹ One frequent area of

¹⁷⁸ Ibid.

¹⁷⁹ Vey, et al. "The Next Economy," 11.

agreement is that the Great Lakes Region's next economy must be "export-oriented, low-carbon, innovation-fueled, and opportunity-rich."¹⁸⁰

While some metropolitan centers in the Great Lakes Region weathered the economic decline of the 2000s, the Great Recession did cause lasting physical events across the region. It left a surplus "of vacant, abandoned, and often contaminated land and buildings" in many cities. By mid-2010, "Chicago, Dayton, Detroit, Grand Rapids, Indianapolis, and Minneapolis had rates of real-estate owned properties," far exceeding the national average.¹⁸¹ Although the number of vacant and boarded properties has decreased overall since the housing collapse, many cities in the Great Lakes Region continue to struggle with vacant properties alongside a housing shortage. The Code of Ordinances of the City of Minneapolis requires vacant buildings to be registered under the Vacant Building Registration Program (VBR).¹⁸² As of August 2018, the City of Minneapolis has 328 vacant and condemned properties.¹⁸³ However, it is notable that there are relatively few vacancies in the riverfront milling district compared to other areas of Minneapolis (figure 3.14).

¹⁸⁰ Real-estate owned properties (REOs) is the name given to foreclosed-upon real estate.

¹⁸¹ Vey, et al, 12.

¹⁸² City of Minneapolis, "Vacant Building Registration." City of Minneapolis. August 15, 2018. Accessed September 24, 2018. <http://www.minneapolismn.gov/inspections/vbr>.

¹⁸³ Ibid.

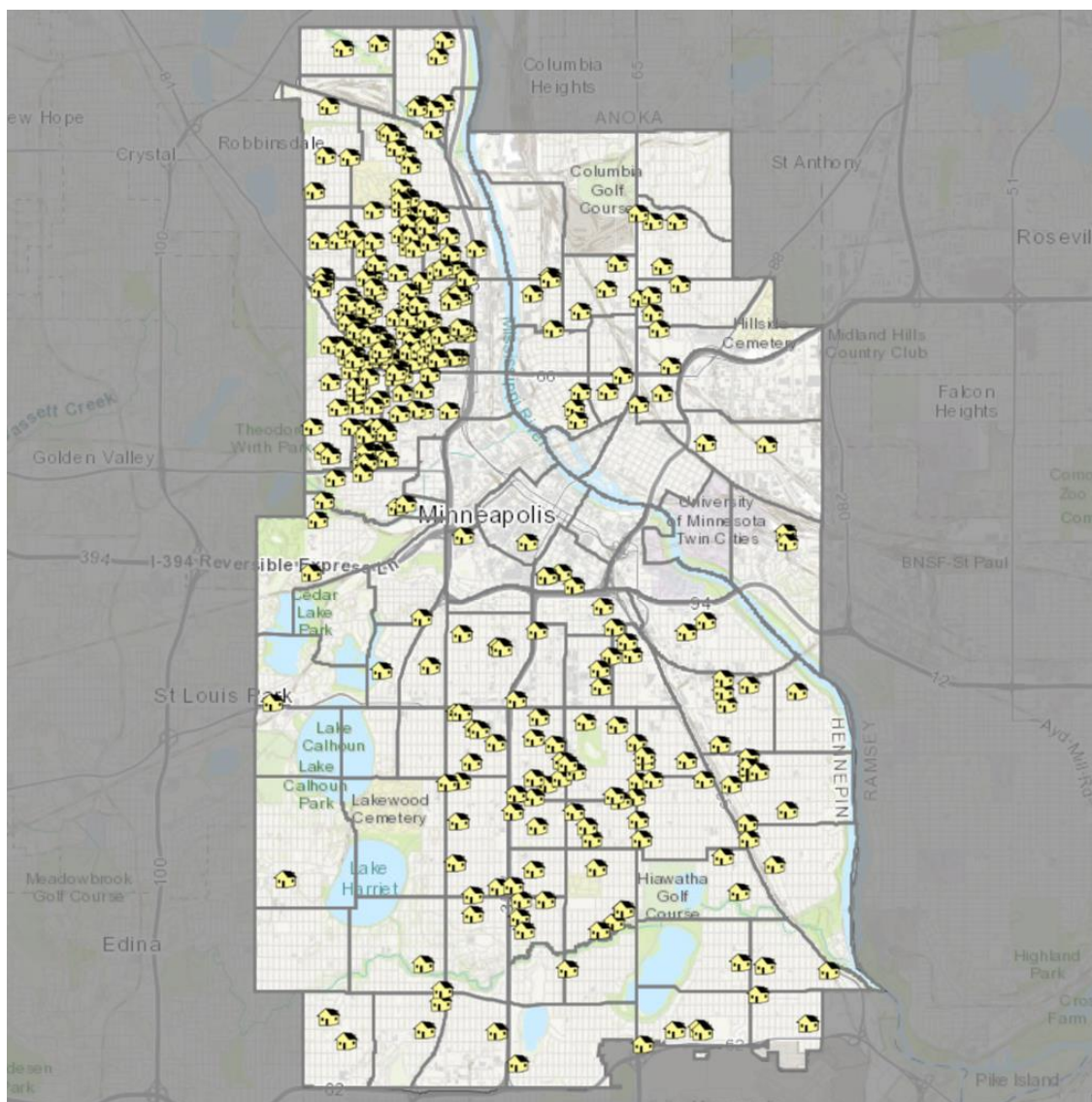


Figure 3.14: Map of Vacancies within Minneapolis as of August 2018. Each icon of a house represents a vacant or condemned property. (Source: ArcGIS, City of Minneapolis, Minnesota, 2018)

The Urban Institute estimates that the Great Lakes Region's population will increase slowly between 2015 and 2040. Additionally, the region's population is expected to further diversify by age, race, and ethnicity during that same time period. While the region is expected to remain mostly white, the institute suspects there will be an increase in black and Latino

populations.¹⁸⁴ The population of seniors also is expected to grow from 8 million to over 13 million by 2040, as baby boomers and members of Generation X continue to age, younger generations continue to migrate out of the region, and birth rates decrease. This demographic change is expected to decrease average income rates due to an increase in dependence on retirement funds. It is also expected to increase recreational and tourism activities.¹⁸⁵

During the 1960s, very few businesses and individuals were investing in the riverfront, and many of the sites there were abandoned and derelict. In 1971, the St. Anthony Falls Historic District was added to the National Register of Historic Places (boundaries shown in figure 3.15). The nomination included fifteen buildings, two bridges, two natural features, and one park.¹⁸⁶ The first study for redevelopment of the riverfront was completed in 1972.¹⁸⁷ Since the 1970s, public and private efforts to revive the riverfront have helped stimulate economic growth in Minneapolis.¹⁸⁸ Since the 1990s, the services and labor industries in Minneapolis and throughout Minnesota, including tourism, have grown. About three-fourths of Minnesotans are employed in the service industry, and the state is known as the birthplace of the Target chain of stores and as the home to the Mall of America.¹⁸⁹

In 1975, a study conducted by the Legislative-Citizen Commission on Minnesota Resources (LCMR) titled *A Historic Interpretation Program for the State of Minnesota* discussed the need for a statewide history perspective located on the riverfront. In 1988, the Minnesota

¹⁸⁴ Vey, et al. "The Next Economy," 23-24.

¹⁸⁵ *Ibid.*, 22.

¹⁸⁶ Scott F. Anfinson, "Unearthing the Invisible: Archaeology at the Riverfront," 321.

¹⁸⁷ St. Anthony Falls Heritage Board. *Changing Relationships to the Power of the Falls: An Interpretive Vision for the West Bank of St. Anthony Falls*, (Minnesota Historical Society: Minneapolis, December 2014): 5, Accessed September 24, 2018. http://www.mnhs.org/places/safhb/pdf/West_Bank_Vision.pdf

¹⁸⁸ "Saint Anthony Falls Heritage Board." Minnesota Historical Society Website. Accessed September 03, 2018. http://www.mnhs.org/places/safhb/history_riverfront.php.

¹⁸⁹ John S. Adams and Neil C. Gustafson, "Minnesota," *Encyclopedia Britannica Online*, April 30, 2018, accessed September 03, 2018, <https://www.britannica.com/place/Minnesota>.

Legislature recognized the St. Anthony Falls Interpretive Zone, also known as the St. Anthony Falls Heritage Zone. The goal of creating the interpretive zone was to facilitate concerned groups working together to develop and preserve the riverfront district. Also in 1988, the St. Anthony Falls Heritage Board was formed. It included members from the City of Minneapolis, Minneapolis Park and Recreation Board, Hennepin County, Minnesota Historical Society, Minneapolis Heritage Preservation Commission, State Historic Preservation Office, Minnesota State Legislature.¹⁹⁰ The most significant dates regarding the development of Mill City Museum and Mill Ruins Park are outlined in table 2.

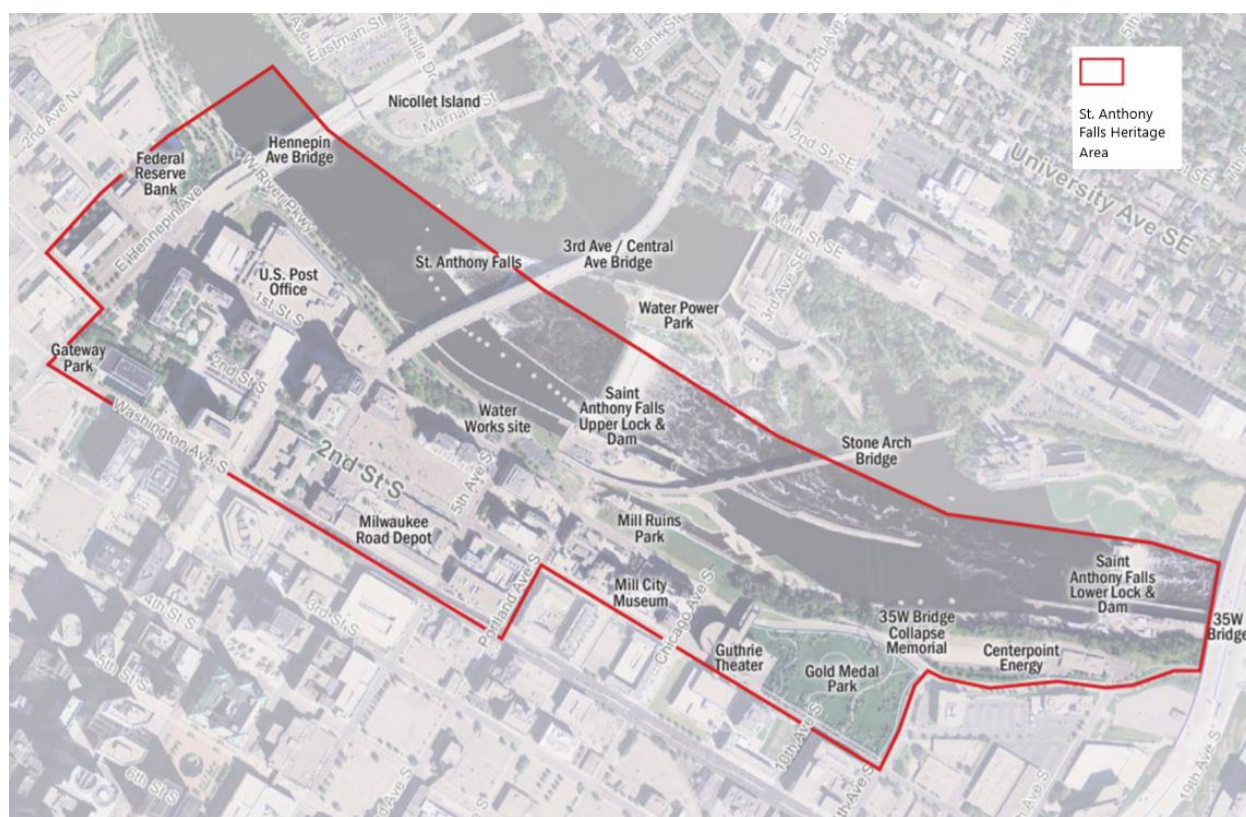


Figure 3.15: Boundary of the Saint Anthony Falls Heritage Area (*Source*: St. Anthony Falls Heritage Board. Map key added by author. Minneapolis, Minnesota)

¹⁹⁰ "Saint Anthony Falls Heritage Board." Minnesota Historical Society Website. Accessed September 01, 2018. http://www.mnhs.org/places/safhb/about_board.php.

Table 2. Plans and Documents that influenced Central Riverfront Development.

St. Anthony Falls Heritage District added to the National Register of Historic Places	1971
A Historic Interpretation Program for the State of Minnesota	1975
Central Riverfront Open Space Master Plan	1977
Mills District Plan	1983
St. Anthony Falls Heritage Zone Interpretive Plan	1990
Historic Mills District Master Plan	1998 2001
Minneapolis Warehouse Preservation Action Plan	2000
Minneapolis Plan for Sustainable Growth	2008
Power of the Falls: Renewing the Vision for the St. Anthony Falls Heritage Zone	2009
St. Anthony Falls Heritage District updated on the National Register of Historic Places	2014

Source of Data: “Minneapolis Riverfront Revitalization: Four Decades of Progress.” City of Minneapolis, Minnesota, U.S. Community Planning & Economic Development.

The St. Anthony Falls Heritage Board described the area as “the heart of the evolving city,” which had “in the last 40 years become a residual island of unfulfilled promise nearly a mile from today’s city center.”¹⁹¹ The St. Anthony Falls Heritage Area was significant to the early white settlement of Minneapolis in the nineteenth century and there were many physical remains of that

¹⁹¹ Ellerbe Becket and St. Anthony Falls Heritage Board. *St. Anthony Falls Interpretive Plan*, (Minnesota Historical Society, Minneapolis: January 1990), 5.

settlement on the riverfront. The Washburn A Mill, the Pillsbury Mill, various mill ruins, Stone Arch Bridge, Northern States Power Company plants, and a multitude of historic main street buildings remained.¹⁹² The St. Anthony Falls Heritage Board wanted to provide visitors with an educational experience only Minneapolis could offer. Specific desired key elements of their interpretive plan included:

1. The story of Minneapolis should be told in many locations
2. Features should be linked by defined interpretive trails to ease movement through the heritage area
3. The story will be told in many ways
4. Features will be participatory, active, and changing wherever possible to attract interest and repeat visitors.
5. The features will appeal to various levels, ranging from simple concepts to scholars.
6. All exhibits, displays, and trails will be accessible, economically feasible, practical in construction and maintenance, and suited to the weather and landscape of Minnesota.¹⁹³

In 1990, the St. Anthony Falls Interpretive Plan was completed with assistance from Ellerbe Becket, Inc., a Minneapolis-based architectural, engineering, interior design and construction firm.¹⁹⁴ The plan defined the target audience as those traveling near or through the riverfront, whether they were tourists or local residents, and history and museum enthusiasts. Additionally, the program intended to create a strong marketing presence in downtown Minneapolis to expand the district's audience. The ten interpretive themes listed in the plan included primary themes, (1) Settlement, Geography, and Indian History; (2) Urban Growth and

¹⁹² Ibid., 1.

¹⁹³ Ibid., 7.

¹⁹⁴ Saint Anthony Falls Heritage Board. *Orientation Center for the Saint Anthony Falls Heritage Zone on the Saint Anthony Falls Heritage Trail*, (Minnesota Historical Society, Minneapolis: 1996), 1.

Change; (3) Waterpower Technology; (4) Civil Engineering; (5) Flour and Lumber; and the following secondary themes (1) Transportation, (2) Regional Economic Significance, (3) Diversity of River Use, (4) Diverse Population, (5) Architectural History.¹⁹⁵

The main physical components of interpretation in the district were listed in the plan as historic resources, a heritage trail system, and an orientation center. The plan referred to the historic resources as the key component and suggested that “extraordinary effort should be undertaken to preserve and/or stabilize existing resources” in accordance to state and local preservation standards and in their original locations.¹⁹⁶ The plan identified twenty-five significant historic elements including the Washburn A Mill Complex, Pillsbury A Mill, and others.¹⁹⁷

In 1994, the restoration of the Stone Arch Bridge, one of the key significant historic elements named by the interpretive plan, was completed along with the development of the West River Parkway to connect the Minneapolis Central Riverfront Park and the Heritage Zone with other major roadways. Also in 1994, a trolley went into operation to increase accessibility to the area. In Spring 1996, the St. Anthony Falls Heritage Trail, which provides the riverfront with kiosks and interpretive signs to aid circulation of foot traffic, was completed. At this time, the Minnesota Historical Society began to offer seasonal guided walking tours. On summer weekends, the Minneapolis Heritage Festival and Stone Arch Festival of the Arts brought in visitors to the area. In 1995, both festivals received awards and endowments.¹⁹⁸

In 2001, the St. Anthony Falls Heritage Board updated the Historic Mills District Master Plan. In 2009, 2013, and 2014 the board completed additional interpretative plans for the heritage

¹⁹⁵ Meyer, Scherer, & Rockcastle Architects, *St. Anthony Falls – Orientation Center: Test Fit at the Washburn Crosby Mill*. Minneapolis, MN: June 4, 1996. 3-5.

¹⁹⁶ *Ibid.*

¹⁹⁷ Saint Anthony Falls Heritage Board, *Orientation Center*, 1.

¹⁹⁸ *Ibid.*, 2.

area. In 2009, the board conducted a visitor survey. Results of the survey indicated that 29% of responders “were very interested in guided tours, and 21% said they were very interested in audio tours.”¹⁹⁹ Additionally, 25% of respondents “asked for more restroom facilities and others cited a range of visitor amenities such as visitor/orientation center, information kiosks, maps and better signage, picnic areas and more/better parking.”²⁰⁰

Riverfront revitalization over the past four decades has been conducted by various public and private actors at the local, regional, state, federal levels. Public investors include the City of Minneapolis Park and Recreation Board, Mississippi Watershed Management Organization, Hennepin County, the regional Metropolitan Council, Minnesota State Historical Society, St. Anthony Falls Heritage Board, the State Department of Natural Resources, Minnesota Pollution Control Agency, U.S. Army Corps of Engineers, and the National Park Service. Also involved were multiple neighborhood organizations, local businesses, local residents, local non-profits, the University of Minnesota, private developers, and the Minneapolis Riverfront Partnership.²⁰¹ Monetary investment totals in the riverfront project along with other projects located near the riverfront such as Mill City Museum, are outlined in figure 3.5 and reached a total of nearly \$2.4 billion as of mid-2012.²⁰²

¹⁹⁹ St. Anthony Falls Heritage Board. "Changing Relationships to the Power of the Falls: An Interpretive Vision for the West Bank of St. Anthony Falls," (Minneapolis, Minnesota: December 2014), 11. Accessed July 1, 2018, http://www.mnhs.org/places/safhb/pdf/West_Bank_Vision.pdf

²⁰⁰ Ibid.

²⁰¹ Ann Calvert and Rachel Ramadhyani, "Minneapolis Riverfront Revitalization: Four Decades of Progress," (City of Minneapolis, Office of Community Planning & Economic Development: March 2009), 12.

²⁰² Ibid., 14.

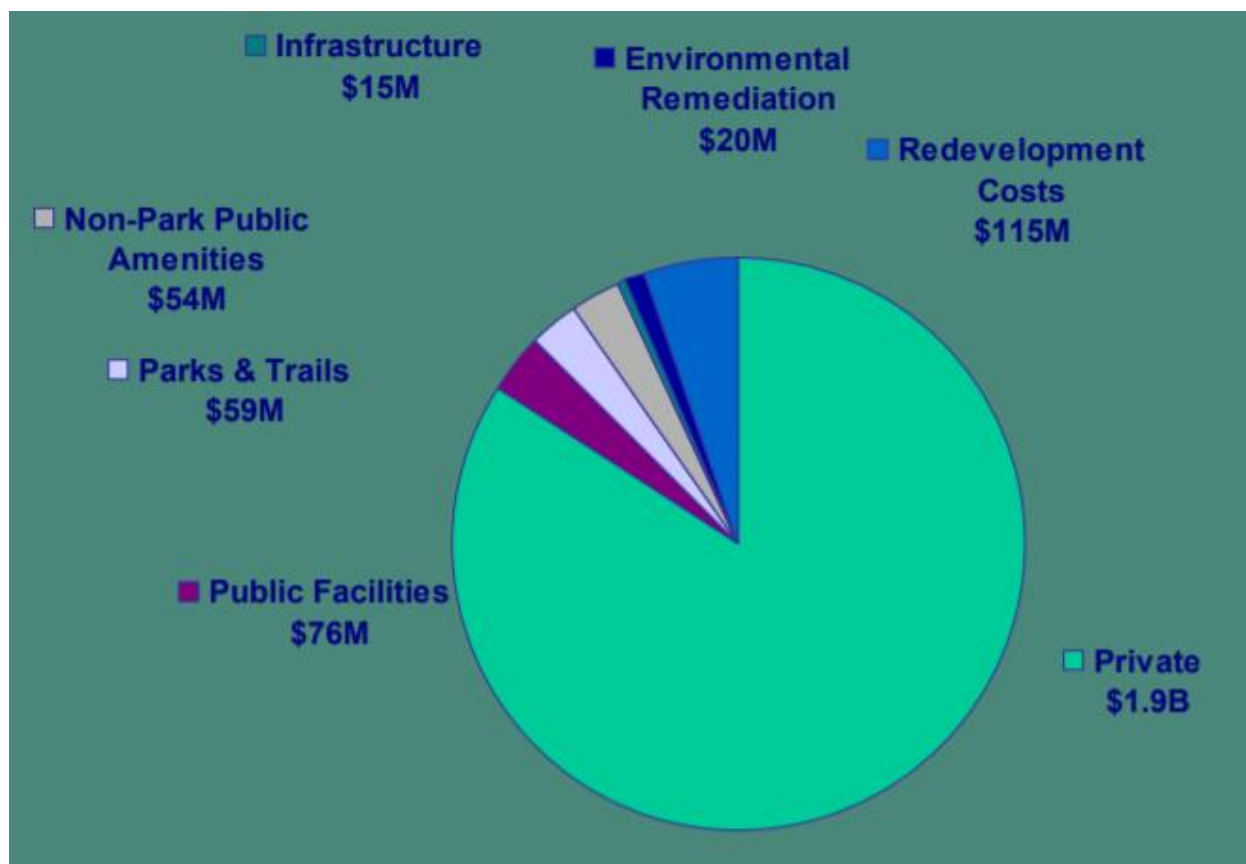


Figure 3.16: Minneapolis Riverfront District Investments as of mid-2012. (“Minneapolis Riverfront Revitalization,” Community Planning & Economic Development, City of Minneapolis, Minnesota, 2012.)

The work of the St. Anthony Falls Heritage Board and other actors within the Minneapolis Central Riverfront has been a “driver of economic development.”²⁰³ As of 2012, the district included 1,250 housing units with additional units in planning stages. For comparison, in 1980, there were only seven housing units in the Mill District. Also as of 2012, the district included 1,000,000 square feet of commercial space, 512 hotel rooms, over 2,000 permanent jobs, and hundreds of construction jobs.²⁰⁴ The Metropolitan Council estimated 1.6 million visitors to the

²⁰³ St. Anthony Falls Heritage Board. “Changing Relationships to the Power of the Falls,” 52.

²⁰⁴ Calvert and Ramadhyani, “Minneapolis Riverfront Revitalization,” 19-20.

St. Anthony Falls Regional Park in 2011, and more than 1.8 million visitors in 2013. On the riverfront, private investments were estimated at \$4 for every \$1 of public investment. This investment indicated that by 2012, the area had become vibrant and a focal point for tourists, “offering a concentration of unique experiences” tied to the area’s history and natural resources.²⁰⁵

The 2014 interpretive plan also suggested adding more interpretive gateways to the district for visitor engagement through trail signs, historic markers, exhibits, interpretive tours, public events, overlooks, landscape installations, digital media, and art installations throughout the district.²⁰⁶ Other recommendations included making indigenous cultures more visible, preserving the industrial ruins while providing appropriate public access to them, meet the needs of a growing number of visitors, and strengthen the visual and experiential cohesiveness of the area.²⁰⁷

Synopsis

Industrialization in the U.S. has been focused on the Midwest, so it has been disproportionately affected by deindustrialization compared to other regions of the nation. The development of flour milling in the U.S. is also intrinsically tied to the region and is most strongly associated with Minneapolis at St. Anthony Falls. The City of Minneapolis benefited from a variety of geographic and geological advantages over other nearby milling cities such as Milwaukee and St. Louis. Minneapolis hosted two of the world’s largest and most well-known flour companies—General Mills and Pillsbury— of which the Washburn-Crosby Company was a predecessor.

²⁰⁵ St. Anthony Falls Heritage Board. "Changing Relationships to the Power of the Falls," 52.

²⁰⁶ Minneapolis Park and Recreation Board, *Central Mississippi Riverfront Regional Park Master Plan*, Metropolitan Council (Minneapolis, Minnesota: August 30, 2016),13. Accessed September 25, 2018. https://www.minneapolisparcs.org/_asset/d6kv9t/central_riverfront_masterplan_approved.pdf.

²⁰⁷ St. Anthony Falls Heritage Board. "Changing Relationships to the Power of the Falls," 56-58.

The decline of industry in the United States caused an increase in vacancies, abandoned buildings, and homelessness throughout the Great Lakes Region. Revitalization efforts across the region have not been consistently successful. Minneapolis was somewhat less affected by this economic decline, but the riverfront industrial buildings were vacant for many years. Unfortunately, during the late twentieth century, decay and accidents caused heavy deterioration of most of the flour mills at St. Anthony Falls. Since the 1970s, various groups have pushed for riverfront revitalization. This historical narrative is vital to fully understanding how revitalization of the area was accomplished, why it has been successful, and why it is considered successful. Furthermore, the reuse industrial urban ruins must be approached with a comprehensive understanding of the surrounding city if a distinct framework process is to be established for implementation throughout the region.

CHAPTER 4

CASE STUDY: MILL CITY MUSEUM

“Where is a market to be found for all this flour?”

The answer is, the world is our market.”

— The Flour Tower Exhibit
Mill City Museum

Along with the literature review in Chapter Two, the case studies of Mill City Museum and Mill Ruins Park seek to answer the research questions posed in the introduction of this thesis. The literature review helped to establish criteria by which to analyze the two sites. Furthermore, the case studies were vital in the finalization of the framework and the preliminary site assessment rubric proposed in Chapter Six. Mill City Museum (MCM) and Mill Ruins Park (MRP) were chosen as two adjacent yet diverse examples of ruin reuse projects in the Great Lakes Region of the United States. The two related sites allowed for the uniform analysis of the region, sites, and specific approaches taken based on the project parameters, with the goal of leading to a stronger and consistent framework.

Choosing case study sites belonging to the region enabled a closer and more reliable study of the key similarities and differences between the two cases. The case study findings include a detailed site description, a narrative history of the sites and surrounding areas, and site and rehabilitation project analysis. The case study research was conducted via three distinct methods: archival research, field studies, and interviews. The methods were used to address, (1) why the

two sites were chosen for rehabilitation, (2) why each site was rehabilitated as either a ruin park or ruin museum, (3) what key factors influenced the projects, and (4) what challenges were discovered during and after development that would be relevant to future similar projects. Lastly, the final section of this chapter is a summary of preliminary findings from the case study of Mill City Museum.

Site Background

Mill City Museum (figure 4.1) is located within the architectural shell of the Washburn A Mill Complex and was created as one facet of an immense mixed-use adaptive reuse project for the complex as a whole. The structure is located on the Mississippi River, opposite St. Anthony Falls, in Hennepin County in Minneapolis, Minnesota, and lies within the U.S. National Park Service Mississippi National River and Recreation Area. It was added to the National Register of Historic Places in 1983 and is a contributing structure to the St. Anthony Falls Historic District, which was designated in 1971. See Table 3 for a summary of basic site information.²⁰⁸ The National Register of Historic Places (NRHP) nomination for the Washburn Mill Complex succinctly summarizes the site's significance:

The Washburn A Mill and its companion structures outstandingly symbolize both the growth and development of General Mills, Inc. and the radical transformations undergone by the entire flour milling industry in the late 19th and early 20th centuries. According to flour milling historian Herman Steen, technological and organizational innovations undertaken by the Washburn Crosby Company, beginning in the 1870s, formed the basis for the emergence of General Mills as the "largest milling company in the world" and at the same time constituted "the most

²⁰⁸ James B. Gardner, "Washburn A Mill Complex." National Register of Historic Places Inventory/Nomination Form. Historic Landmarks Project, American Association for State and Local History, (Nashville, Tennessee, May 3, 1984.) <https://npgallery.nps.gov/GetAsset/63633654-cbdb-4dc3-99e4-b9a5775dff13>.

far-reaching revolution in all the annals of flour milling.” This revolution determined the direction the industry was to take not only in Minnesota but throughout the United States.²⁰⁹

The Washburn A Mill is the only structure remaining from the original Minneapolis milling complex, established by Cadwallader C. Washburn. As such, it is the most significant and tangible link between the Washburn Crosby milling company of the nineteenth century and the vast operations of the present-day General Mills.²¹⁰ The complex, as listed on the national register, is composed of 3.5 acres. Within this area are the A and C mills, a wheat house, mill office, utility building, Humboldt Mill (which was not originally a Washburn structure), two elevators, and five additional structures labeled as ‘other’—a reception room, engine room, pump house, and two metal sheds—of which only the last two structures are considered as contributing to the historic district.²¹¹

Table 3. Basic information regarding the Washburn Mill Complex.

Street Address	704 South Second Street, Minneapolis, Minnesota 55401
Operated by	Minnesota Historical Society
Original Owner	Cadwallader C. Washburn
Rehabilitation Architect	Tom Meyer, AIA MSR Architects
MCM Size	125,000 square feet

Data Sources: MSR Design website, Minnesota Historical Society website, Washburn-Crosby Mill Complex National Register Nomination

²⁰⁹ Ibid.

²¹⁰ Ibid., 3.

²¹¹ Ibid., 3, 4-7.



Figure 4.1: Photograph of The Washburn A Mill from the Mississippi River. The Washburn A Mill Complex includes what is now Mill City Museum as well as the buildings and grain elevators to the left. (Source: Mill City Museum, MSR Design Portfolio, Minneapolis, Minnesota)

Mill City Museum is operated by the Minnesota Historical Society. The museum occupies the first two floors of the structure, which includes the West Engine House, East Engine House, the A Mill ruin courtyard, Millstone Plaza, and the rail corridor.²¹² The rail corridor features a historic railcar and remnants of original tracks (figure 4.2). These sections of the museum are noted on the floorplan in figure 4.3. The 125,000-square-foot museum can be entered from either the first floor on the north side of the building or on second floor on the west side.

²¹² "Washburn A Mill Tour." Minnesota Historical Society Website. Accessed September 12, 2018. <http://www.mnhs.org/millcity/activities/calendar/5887>.



Figure 4.2: Rail Corridor. (Source: Flickr user anonymist, Mill City Museum, Minneapolis, Minnesota. September 7, 2006. www.flickr.com/photos/53452795@N00/237003566/in/album-72157594274151284/)

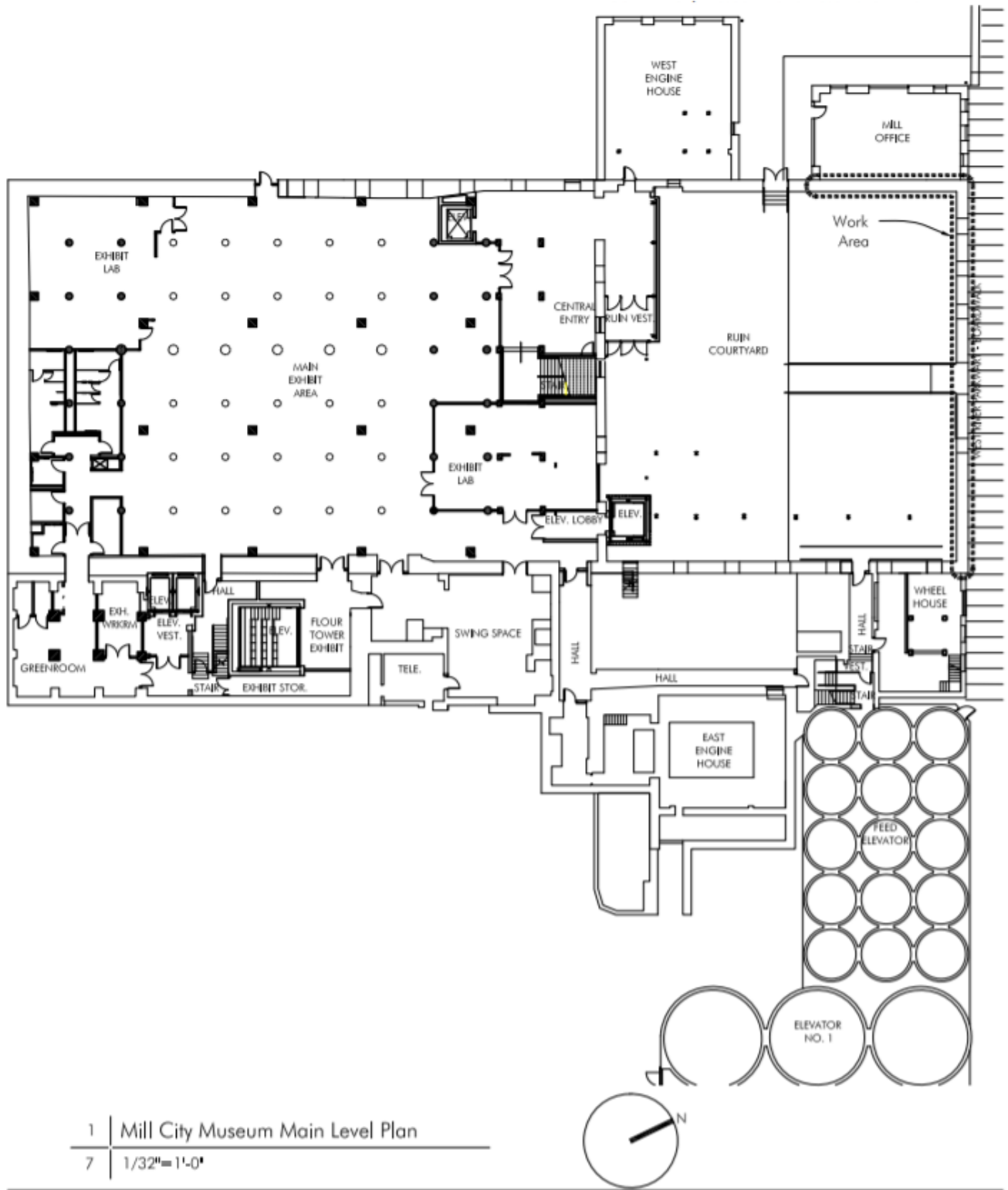


Figure 4.3: Floorplan of Mill City Museum (Source: MacDonald & Mack Architects, Minneapolis, Minnesota)

The upper floors of the complex (floors three through eight) consist of offices, many of which are rented to outside businesses such as MSR Architects, the architectural firm that completed the original rehabilitation of the site into a museum.²¹³ After the museum's opening, MacDonald and Mack Architects have overseen preservation projects at the complex, which are still ongoing (as of fall 2018), and are expected to continue throughout the lifetime of the structure.²¹⁴

Narrative History

The original Washburn A Mill structure was built in 1874, but due to fires at the site, it has been both partially and completely rebuilt during its history (significant dates are summarized in table 4). During the evening of May 2, 1878, the four-year-old mill exploded, resulting in a fire that blazed for nearly a month. Several other adjacent flour mills were also destroyed in the fire. Figure 4.4 shows a photo of the 1874 intact mill, and figure 4.5 shows the 1874 mill after the explosion. In Washburn A Mill, fourteen workers were killed. Four additional workers died in fires in the nearby Diamond and Humboldt mills. The Minneapolis fire department worked throughout the night to contain the fire, but they were unsuccessful. The event was chronicled in newspapers across the country.²¹⁵ At the time, it was reported that the city was “met with a calamity, the suddenness and horror of which it is difficult for the mind to comprehend.”²¹⁶ Paul Gyllstrom, a life-long Minneapolis resident and young boy at the time of the incident, described the explosion in notes written as an adult in 1904. He wrote that the “sky was filled with brands and sparks” and

²¹³ "Mill City Museum," MSR Design Portfolio, accessed September 15, 2018, <https://msrdesign.com/case-study/mill-city-museum/>.

²¹⁴ "Washburn-Crosby 'A' Mill Complex." MacDonald and Mack Architects, online portfolio. Accessed August 21, 2018. <http://www.mmarchltd.com/washburn-crosby-a-mill.html>.

²¹⁵ Robert M. Frame. "MHS Collections: Mills Machines and Millers: Minnesota Sources for Flour-Milling Research." *Minnesota History* 46, no. 4: Winter 1978, (accessed August 28, 2018), 152.

²¹⁶ Eric Nathanson. "Washburn A Mill Explosion, 1878." MNopedia, Minnesota Historical Society. <http://www.mnopedia.org/event/washburn-mill-explosion-1878> (accessed August 29, 2018).

that he never again experienced the “feeling of utter helplessness” as he did on the night of the mill explosion.²¹⁷

Table 4. Important dates regarding the Washburn Mill Complex summarized.

Originally Built	1874
Major Fire	1878
Rebuilt	1879-1880
Fire	1928
Added to NRHP	1983
Fire	1991
MCM Opening	2003

Data Sources: Minnesota Historical Society website, Washburn-Crosby Mill Complex National Register Nomination

²¹⁷ Paul Gyllstrom, “Notes on Early Minneapolis 1923-1924.” Unpublished manuscript. (Minneapolis, MN: 1923-1924) Minnesota Historical Society Archive.



Figure 4.4: First Washburn A Mill, before the explosion of 1878. (Source: Minnesota Historical Society Archive, Minneapolis, Minnesota)

After the explosion, C. C. Washburn, who was the governor of Wisconsin at the time, declared that he would rebuild the mill. By 1880, the new mill was functioning in the same location. It was larger and produced more flour than the original mill.²¹⁸ At the time, the new mill was the largest and most technologically advanced in the world.²¹⁹ The explosion resulted in the adoption of safety upgrades in future mill structures by Washburn and his competitors.²²⁰

²¹⁸ Karel D. Bicha, *C.C. Washburn and the Upper Mississippi Valley* (New York: Garland Publishing, Inc., 1995), 145.

²¹⁹ *Ibid.*

²²⁰ Eric Nathanson. "Washburn A Mill Explosion, 1878."



Figure 4.5: Washburn A Mill following the 1878 explosion. (Source: Minnesota Historical Society, Minneapolis Minnesota)

In 1928, another large fire occurred at the mill, this time due to an equipment malfunction. Like the 1880 fire, the 1928 fire allowed Washburn to incorporate more advanced technology into the mill. Washburn A Mill eventually closed in 1965 due to the decline of the flour milling industry in the Great Lakes Region. The structure remained abandoned for decades, and it became known as a popular site for urban explorers and as unofficial temporary shelter for the homeless. Then in 1991, a third fire occurred, commonly thought to have been started by homeless occupants. This fire left Washburn A Mill in a ruinous state.²²¹

²²¹Jerry V. Haines, "Flour Power at a Minneapolis Mill." *The Washington Post*. September 04, 2005. Accessed September 21, 2018. <http://www.washingtonpost.com/wp-dyn/content/article/2005/09/02/AR2005090200846.html?noredirect=on>.

The 1991 fire, depicted in the photograph in figure 4.6, occurred during February. After the fire, Minneapolis experienced freezing and fluctuating temperatures. The air temperature after the fire ranged from 14° to 23° F during the two weeks after the fire. Additionally, “high and low temperatures over the next two weeks indicate that the walls experienced significant exposure very cold temperatures as well as to freeze/thaw conditions immediately after being saturated with water to fight the fire.” Figure 4.7 shows the ruin courtyard wall profile directly after the fire.



Figure 4.6: Washburn A Mill during the 1991 fire. (Source: Minnesota Historical Society website, Minneapolis, Minnesota, <http://www.mnhs.org/millcity/learn/history/building>)

The rapid change in thermal exposure during and after the fire along with the exposure to rapid freeze/thaw conditions while saturated was an unhealthy combination.²²² The weather conditions caused “extensive thermal shock which caused the stone to crack perpendicular/vertical to the face of the stone as well as parallel/vertical to the face of the stone.”²²³



Figure 4.7: Washburn A Mill, view of northeast interior wall and debris from the 1991 fire, facing the Mississippi River and Stone Arch Bridge. (Source: Historic American Engineering Record, Minneapolis, Minnesota)

²²² MacDonald & Mack Architects. *Mill City Museum Ruin Walls-Masonry Preservation*, Prepared for Historic Preservation Commission, Department of Community Planning and Economic Development, (Minneapolis, MN, 2017), 42.

²²³ *Ibid.*, 43

Project Development

The project development of Mill City Museum was intrinsically tied to the establishment and preservation of the larger St. Anthony Falls Interpretive Zone. These plans are well-documented in reports and meeting transcripts from the 1970s through the 1990s. The concept of a museum and interpretive center on the Minneapolis Riverfront began during the 1970s and came to fruition during the late 1990s. During the earliest stages, the 1970s and the 1980s, the area's east bank buildings were transformed into a retail complex known as St. Anthony Main. Restaurants also began to be built in the area and nearby house restorations began.²²⁴

The plans for the St. Anthony Falls Interpretive Zone always included an orientation center for tourists to visit first before going through the other heritage sites throughout the area. In 1996, Meyer, Scherer, & Rockcastle Architects completed a study to determine whether the Washburn Crosby Mill could serve as the location for the orientation center. This study was titled *St. Anthony Falls Orientation Center: Test Fit at the Washburn Crosby Mills*.²²⁵ The study detailed the evolving plans for the mill and eventually helped develop the structure into Mill City Museum in the early 2000s. The test fit plan suggested stabilization of the ruin walls, and development of the space into a public gathering space and a rentable event space. The ruin courtyard would also connect to the nearby Mill Ruins Park.

The board felt that the stabilization approach was “economically, aesthetically, and historically superior” to demolition or restoration.²²⁶ This sentiment was echoed by Tom Meyer, lead architect for the museum project, when interviewed in February 2018.²²⁷ The board believed that demolition would “deepen the tragedy of the fire” by erasing the remaining history of the

²²⁴ MacDonald & Mack Architects., *Mill City Museum Ruin Walls*.

²²⁵ Meyer, Scherer, & Rockcastle Architects, *St. Anthony Falls – Orientation Center*, 1.

²²⁶ *Ibid.*, 4.

²²⁷ Tom Meyer, FAIA (MSR Architects). Interview with the author, February 1, 2018.

structure, and it would waste the city's investment into the area, which had already begun during the 1970s.²²⁸ At the time, a completed restoration was argued to be too expensive, impractical, and inauthentic.²²⁹ Stabilization of the ruinous portion was considered authentic by MSR Design because many flour mills along the riverfront, including Washburn A Mill on multiple occasions, had exploded. However, the 1991 fire was not caused by flour milling operations since Washburn A Mill was no longer a functioning mill at the time. Later studies by MacDonald & Mack Architects and of the ongoing maintenance issues for the ruin walls revealed that maintaining the walls was maintenance intensive, expensive, and not sustainable indefinitely.

The decision for the mill to act as an interpretive ruin led to the implementation of an urban design framework by MSR Design, which proposed the following conceptual principles:

1. The Complex should form visual, physical and conceptual public connections in all directions: to parking, future LRT and downtown on the southwest; to the river and Mill Ruins Park to the northeast; to the bridgehead of the Stone Arch Bridge to the north; to reopened Chicago Avenue to the southeast; and to adjacent mills and development to the northwest.
2. The historic organization of the Mill Complex is centered on a central railroad corridor. It should continue to organize the redevelopment by preserving the rail corridor as a public or semi-public circulation space extending from Chicago Avenue to the North Star Mill.
3. The part of the Complex on the river side of the rail corridor could generally be publicly controlled or available for public access; the Mill Ruin Garden as an historic exterior public space; the grain silos as historic structures unsuitable for reuse, but essential to the historic fabric; and the head house as the best historic district viewing place, either as public space or as a restaurant or other tourist-orientated business.

²²⁸ Meyer, Scherer, & Rockcastle Architects, *St. Anthony Falls – Orientation Center*, 2.

²²⁹ *Ibid.*

4. The Mill Ruin Garden should be the center of public interface with the Complex on the river side, including future vertical transportation to the head house, connection to the rail corridor central spine, and the interconnection with appropriate redeveloped spaces, such as a theater, restaurant, or lobby.²³⁰

With these guiding concepts, MSR proposed project phases and created preliminary plans.

Phase 1 of the rehabilitation project for the ruinous portion of Washburn A Mill included stabilization of the walls of the north A Mill, excavation of artifacts and debris (made possible from state bond funds), stabilization of large-scale artifacts kept in the mill, and the creation of the ruin garden, or ruin courtyard.²³¹ Phase 2 featured new construction and renovation aspects, including renovation of the mill offices, connecting and integrating the rail corridor lobby with the larger mill and providing access to the area from Second Street, and renovation of areas for orientation spaces such as the baking lab.²³² The floorplan of the mill after the rehabilitation project is shown in figure 4.3. During the early 2000s, both phases of the rehabilitation project were completed, and the museum exhibits were developed and installed. The museum opened to the public in 2003.²³³

Between the museum's 2003 opening and 2016, there was not much continued maintenance planning or studies of conditions. This was because the original project did not create a plan or suggest timelines for ongoing site evaluation, maintenance, and preservation at the site. However, in 2016, MacDonald & Mack Architects completed a study and historic structure report on Mill City Museum to assess the existing conditions of the structure. The HSR led to a better

²³⁰ Ibid.

²³¹ Meyer, Scherer, & Rockcastle, Architects, *A Program for the St. Anthony Falls Heritage Center*, 8.

²³² Meyer, Scherer, & Rockcastle Architects, *St. Anthony Falls – Orientation Center*. 8.

²³³ "Building History," Mill City Museum, accessed August 01, 2018, <http://www.mnhs.org/millcity/learn/history/building>.

understanding of the physical properties of the stone ruins and uncovered critical conditions. The report found that the walls of the ruin were in poor condition and that brick, stone, and mortar were separating from the walls and falling into the courtyard on a regular basis. The deterioration was traced back to the composition of the walls and weathering the stone. The ruin walls are Platteville limestone, “a highly varied (non-homogenous) type of stone,” which includes dolomite, quartz, pyrite, and shale.²³⁴ The weak layers of the stone were discovered to be eroding and leaving deep horizontal crevices. Additionally, the stone has been experiencing fracturing due to past fire exposure.²³⁵ Another issue that caused deterioration to the ruin walls was the weathering of pyrite in the limestone. Pyrite reacts with water and oxygen, creating sulfuric acid. The sulfuric acid then reacts with dolomite, also in the limestone, to create magnesium and calcite sulfates, which together cause efflorescence that pushes on the stone and causing pieces to break off and fall.²³⁶

²³⁴ MacDonald & Mack Architects, *Mill City Museum Ruin Walls*, 39.

²³⁵ *Ibid.*

²³⁶ *Ibid.*, 40-41.



Figure 4.8: Photograph showing the combination of Platteville limestone and brick used on the ruin courtyard walls. (Source: MacDonald & Mack Architects, Minneapolis, Minnesota, 2016)

The HSR also discovered that previous restoration treatments during the early 2000s were inadequate and potentially damaging. After cleaning and repointing work was completed, Sure Klean Weather Seal H40 was applied to the ruin walls as a wet-on-wet application to the walls.²³⁷ Sure Klean Weather Seal H40 is a water repellent and consolidant for small voids that penetrates stone, brick, and mortar. Due to the wet-on-wet application, MacDonald and Mack reported a fear that the outer layer of H40 would develop into a dense crust, and that in combination with the extensive gaps and cracks in the walls, this crust would cause water to become trapped in the stone and beneath the H40 layers, likely causing more damage to the stone.²³⁸ In 2016, the discoveries

²³⁷ Ibid., 44.

²³⁸ Ibid.

from the HSR led to preservation maintenance work, which included the erection of scaffolding on the north wall to create access to the upper reaches of the north wall and northwest corner. A structural engineer was also brought in for the study.²³⁹ The conditions assessed in the HSR by MacDonald & Mack Architects led to their proposal of the Mill City Museum Ruins Wall Preservation Project. The project sought “to mitigate issues that were identified in 2016 as well as continuing the basic masonry preservation work in the courtyard.”²⁴⁰ The goal of the project was to allow for continued use of the ruin courtyard as a public space and event venue.²⁴¹

Despite continued preservation efforts, MacDonald & Mack concluded that “without some sort of physical barrier between the ruin walls and water – the degradation and spalling of the walls will continue.”²⁴² Although, the firm also recognized that the situation was difficult because the ruins had become a major draw for visitors to the museum and part of the recent history of the site.²⁴³ Lastly, while the analysis brought up concerns and suggested a heightened level of future monitoring, the walls were summarized as “stable and not at risk of collapse.”²⁴⁴ Maintenance of the ruins along with frequent evaluation will need to be ongoing, but the work completed by MacDonald & Mack from 2016-2018 addressed the immediate critical concerns.

The preservation efforts for the ruin courtyard portion of Mill City Museum have highlighted some of the issues than arise during the preservation of ruins, especially in Minneapolis, Minnesota, where the winter temperatures are frequently below freezing between December and February. The history and preservation of Washburn A Mill also shows how major events or inappropriate treatments can cause continuing damage to buildings materials and the

²³⁹ MacDonald & Mack Architects, *Mill City Museum Ruin Walls*, 5.

²⁴⁰ *Ibid.*, 2.

²⁴¹ *Ibid.*, 7.

²⁴² *Ibid.*, 49.

²⁴³ *Ibid.*

²⁴⁴ *Ibid.*, 59.

entire structure. Understanding the history of the structure itself, from its construction through the present, was also useful for preparation to the site visit.

Interviews

After the completion of archival research, it was clear that interviews with key figures at both MSR Architects and Mill City Museum could be highly beneficial to a more holistic understanding of the site. Specifically, interviews were undertaken to provide clearer insight into the decision-making process for financial, political, and aesthetic considerations of the project. The interview study, as STUDY00005664, was submitted to and evaluated by the Institutional Review Board (IRB) through the University of Georgia. IRB determined that the information gathering interviews did not constitute human subjects research and IRB protocol was not required.

The first interview was conducted in-person with David Stevens, Mill City Museum Site Director. The interview was conducted January 12, 2018, at the offices of Mill City Museum. At the time, Stevens was served as the Interim Director of Public Programs. He described Mill City Museum's funding sources and visitor traffic. The museum is operated by the Minnesota Historical Society, and a large portion of MNHS funding is state provided and is subsidized. However, according to Stevens, Mill City Museum has less need for MNHS funds than most, if not all, of their other sites because it is able to produce a large portion of its own revenue. The original rehabilitation project was funded through a mix of state and private funds. Most of the funding was divided approximately equally between five groups: the Minnesota Historical Society, the City of Minneapolis, the Hennepin County Government, and the Minneapolis Parks and Recreation Board.²⁴⁵

²⁴⁵ David Stevens (Site Manager, Mill City Museum). Interview with author, January 12, 2018.

The interview also revealed that much of MCM's revenue comes from facility rentals, which are most frequently weddings and corporate events. Outdoor events such as Mill City Live, a series of summer concerts hosted annually for the past four to five years, also generate revenue and frequently sell out of tickets. Other popular events over the past few years have been the Mill City Opera (figure 4.9) and seasonal farmer's market. Stevens also noted that about 35,000 local students visit the museum per year, adding to the total revenue. MCM also is in the process of planning a more diverse set of tours, including ones that venture from the mill itself such as pub crawls and bus tours throughout the whole surrounding district.²⁴⁶



Figure 4.9: Mill City Opera, dress rehearsal July 2013. (Source: Classical Minnesota Public Radio. Photograph by Michael Yeshion. <https://www.classicalmpr.org/story/2013/07/12/mill-city-barber>)

²⁴⁶ Ibid.

The second interview was conducted with Tom Meyer of MSR Architects, the lead architect on the original Mill City Museum project. The interview occurred on February 1, 2018, via telephone. Meyer was able directly explain why the decision was made to stabilize the ruin rather than remove or rebuild that portion of the structure. The main motivation for preserving the mill in its ruined state was that parties involved in the project believed it to be the most authentic approach. Removing the ruined portion or rebuilding it was seen as “unsatisfactory in terms of history and public engagement with a place.”²⁴⁷ Additionally, the ruined state connected to the core concept of tapping into “people’s natural instinct to explore and move through the building as a landscape” rather than a typical museum.²⁴⁸ Meyer further explained this concept of the building as a landscape, describing the various ways visitors can move through the space. For example, if a visitor walks into the building from downtown, he or she can descend a few floors to the courtyard, and then out to the riverfront. With different parts of the museum and different connections to the city accessible on multiple floors, movement through the space is fragmented. According to Meyer, this was in part an attempt to emulate the experience that urban explorers have.²⁴⁹

During the interview, Meyer mentioned that most of the maintenance work has been handled by a different firm, MacDonald and Mack Architects, which focuses in preservation architecture. He also indicated that the original work was not clear about ongoing recommendations and inspections protocol, so much of the early work after the opening of the museum was reactionary.²⁵⁰ The lead architect on the ongoing work at Mill City Museum is Angela Wolf Scott, who was interviewed on September 10th, 2018, via telephone. Wolf Scott detailed

²⁴⁷ Tom Meyer, FAIA (MSR Architects), interview with the author, February 1, 2018.

²⁴⁸ Ibid.

²⁴⁹ Ibid.

²⁵⁰ Ibid.

much of the ongoing testing and maintenance at the site that was discussed earlier in this chapter. She also stated that while the mill is a “dramatic, beautiful, [and] romantic” destination, it is a very challenging project because the ruins are in constant deterioration and urban ruins are not very familiar to preservationists. Because the ruin space is used as occupiable space, MacDonald and Mack has had to make tough decisions that directly affect visitor safety and the historic fabric of the ruin. Another major concern is the overall lifespan of the ruin courtyard. Wolf Scott noted that the estimated lifespan without covering or enclosing the courtyard in some way from the harsh climate is about ten years.²⁵¹

Wolf Scott, Stevens, and Meyer all mentioned the wide public support of the original project and continued popularity of the museum. The three interviews provided insight into the original project decisions, challenges, and funding of the museum. These factors were then included in the proposed framework as part of considerations for the exploration, planning, and monitoring of industrial ruin sites.

Site Survey

The site visit to Mill City Museum occurred during January 2018, after undertaking background and historical context research. Due to extreme weather conditions in Minneapolis during winter, the scope of this visit was limited. Throughout the visit, the outside temperature was continuously in the single digits and below zero degrees Fahrenheit. The visit allowed for cataloguing the uses of interior spaces, recognition of the methods of interpretation, documentation of viewsheds and key features, and an assessment of historic character and integrity. The characteristics discussed in this section focus on the Washburn Crosby Complex site itself only.

²⁵¹ Angela Wolf Scott, AIA (MacDonald & Mack Architects), interview with author, September 10, 2018.

The objective of the site visit was to document conditions and qualities for further analysis. The analysis of the survey was centered on the research question of how and why industrial ruins might be used for heritage tourism, as well as what properties make a site predisposed to ruin museum adaptive reuse.

The main entrance to Mill City Museum is on 2nd Street on the south façade, the side of the structure that faces downtown Minneapolis rather than the Mississippi River. This entryway opens into a lobby space (figure 4.10), which was historically the packing floor of the mill, where flour was packed into sacks.²⁵² The space also houses temporary special exhibits. A gift shop and a small café named Bushel & Peck are also located in this area and accessible from the lobby.

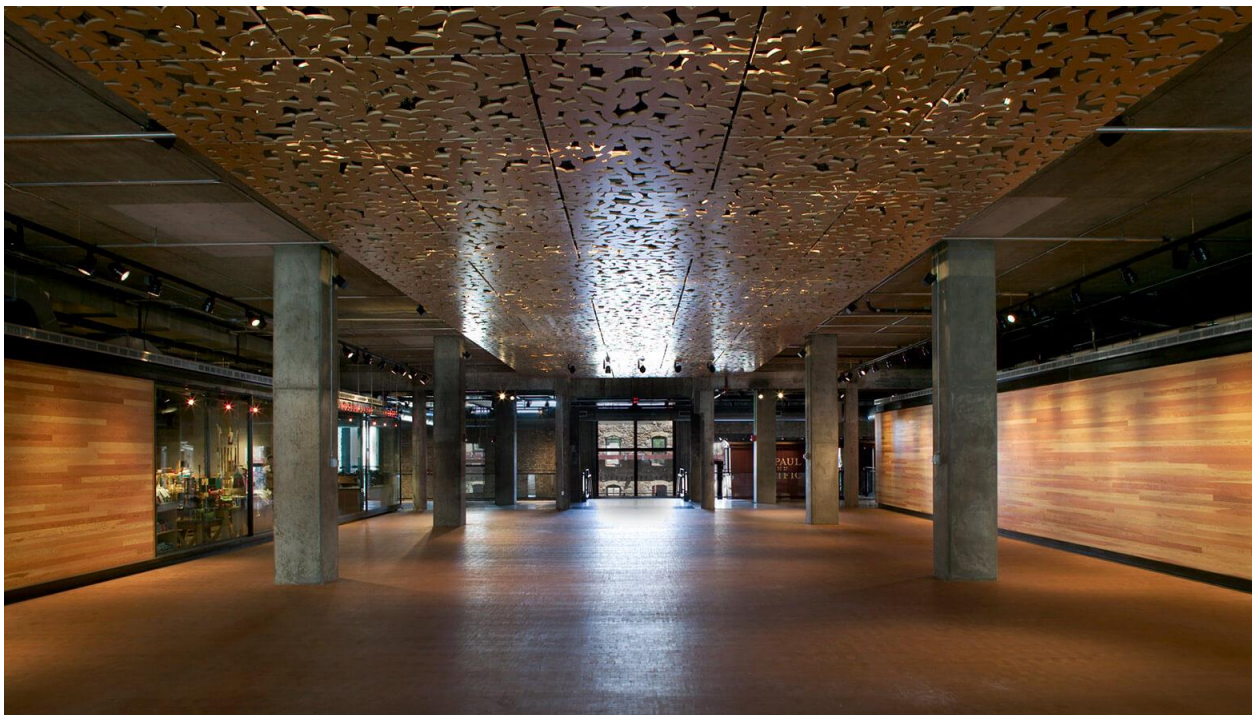


Figure 4.10: View of the lobby from the 2nd Street entrance. (*Source:* MSR Design Portfolio, Minneapolis, Minnesota)

²⁵² "Mill City Museum - Special Exhibits." Minnesota Historical Society Website. Accessed August 20, 2018. <http://www.mnhs.org/millcity/activities/exhibits>.

When each visitor purchases a ticket, they are given a specific time for the guided portion of the museum tour, which includes the Flour Tower attraction, exhibit rooms with original artifacts still in place, and the observation deck that overlooks the ruin courtyard. The Flour Tower is an attraction within an original service elevator that takes visitors vertically through all eight stories of the building, passing an exhibit on each floor that highlights different rooms and activities that would have occurred while the building was operating as a flour mill (see figure 4.12 for example). The Flour Tower, pictured as an illustration in figure 4.11, also includes audio from mill workers who provide their own perspectives of working in the mill. The exhibit and eighth floor tour stand out as a fully immersive environment. The exhibits, or sets, use both authentic physical materials, archival images, film clips, audio oral histories (figure 4.13).

Figure 4.11: Illustration of the Flour Tower during a holiday themed play. (Source: Rod Hunt, *AAA Living Magazine* 38, no. 6: November 2016)

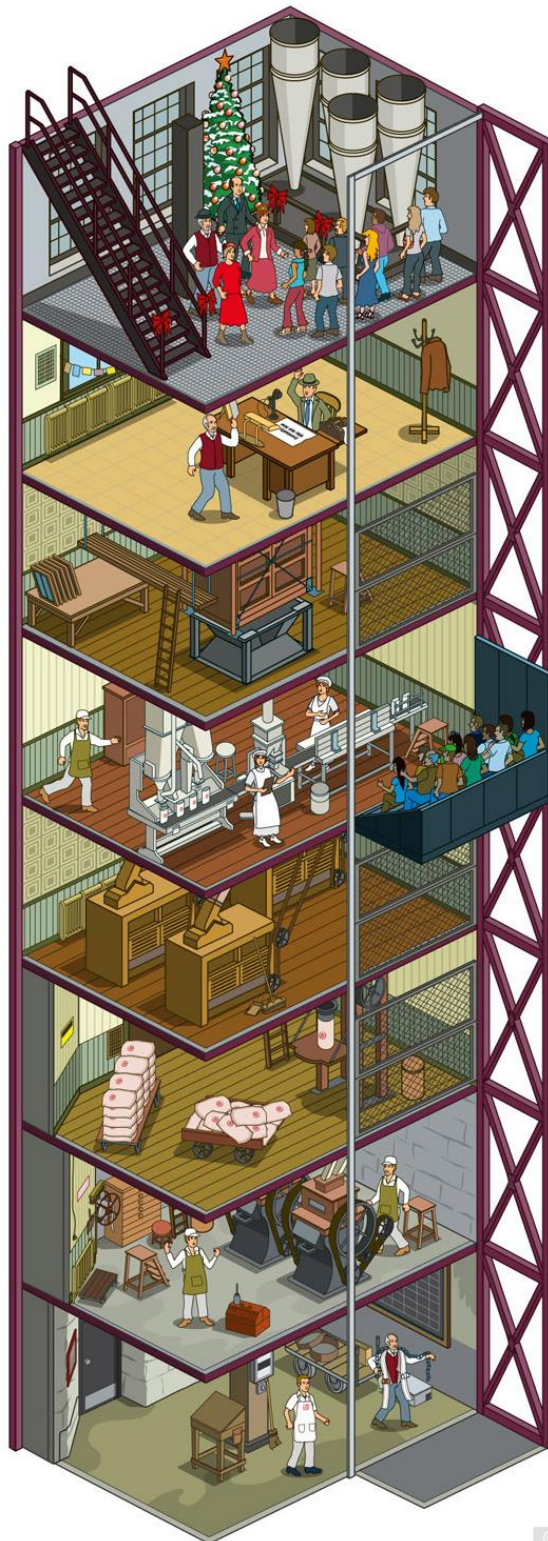




Figure 4.12: An exhibit of the Flour Tower with video overlay. (Source: Installation International)

In addition to the Flour Tower and guided eighth story tour, a video titled “Minneapolis in 19 Minutes Flat Video,” is shown to each visitor. The “Minneapolis in 19 Minutes Flat” video is very lighthearted and fun. Throughout the main exhibit space (figure 4.13) are areas to watch videos or listen to audio from former mill workers. These immersive forms of interpretation are interwoven with historic machinery, replicas, in-character actors (on weekends only), hands-on activities, and interpretive panels. The shorter videos shown throughout the exhibit gallery are more serious in nature than the “Minneapolis in 19 minutes Flat” video, but overall, the main exhibit gallery experience is primarily targeted toward fun family education. The interior walls of the main exhibition space are rough stone, the floor is covered in carpeting, and the large machinery artifacts are enclosed with half glass walls for protection. The displayed artifacts include a millstone, middlings purifier, roller mill, dust collector, historic flour advertisements,

and a packing machine. Visitors can also touch different types of wheat and flour, design their own cereal box, and operate replica machinery.



Figure 4.13: Main Exhibition Space at Mill City Museum. (Source: Screen capture from Google Street View by author)

Also accessible from the main exhibition space are the interactive Baking Lab (Figure 4.14) and Water Lab. In the Baking Lab, visitors can watch demonstrations, sample baked goods, look up recipes, and conduct food-based science experiments. The Water Lab allows visitors to learn how the Mississippi River supplied power to the mill and logging industries through hands-on interaction with a miniature version of St. Anthony Falls and water piping replicas. My first visit to the site occurred on Friday, January 12, 2018, and a large school group of roughly 60 children was present throughout the exhibit space and labs.



Figure 4.14: The baking lab at Mill City Museum, Minneapolis, Minnesota. (Source: Terra General Contractors)

During the winter, the 10,000 square foot Ruin Courtyard is closed to the public for safety reasons.²⁵³ Therefore, the courtyard could not be entered and inspected during the site visit. Due to the glass north façade and observation decks on the eighth floor, I was able to fully view the ruin courtyard, shown in figures 4.15 and 4.16. The photographs of the courtyard in figures 4.15 and 4.16 were not taken during the January 2018 site visit, as the courtyard was covered in snow at that time.

²⁵³ D'Amico Catering. "Mill City Museum: Original, Eclectic, Spectacular." Accessed September 21, 2018. http://www.damicocatering.com/cateringvenues/mill_city_museum.aspx.



Figure 4.15: View from an observation deck, looking down into the Ruin Courtyard. (Source: Unknown photographer, Architizer Magazine website, <https://architizer.com/projects/mill-city-museum/>)

When the weather permits, the ruin courtyard is accessible to the public, even without a purchased museum ticket. It can be entered on foot from River Parkway via a ramp (figure 4.17) or from within Mill City Museum's lower floor, the first floor of the Washburn Mill. When it is open to the public, the courtyard has a few benches and interpretive signs (figure 4.16).



Figure 4.16: Mill City Museum Ruin Courtyard Features. (*Source:* Screen capture from Google Street View by author)



Figure 4.17: River Parkway entrance to the ruin courtyard. (*Source:* Screen capture from Google Street View by author)

The courtyard is also used for events hosted by MCM, and it can also be rented to the public for other events. MCM hosts events throughout the year such as Mill City Oktoberfest, a summer opera series, and a live concert series.²⁵⁴ The ruin courtyard is a popular rental venue, especially for weddings.²⁵⁵ The courtyard can house up to 1,000 guests, but interior dining rooms are limited to 250 guests.²⁵⁶

²⁵⁴ "Events." Minnesota Historical Society Website. Accessed August 21, 2018. <http://www.mnhs.org/millcity/activities/events>.

²⁵⁵ "Mill City Museum." The Knot. Accessed September 20, 2018. <https://www.theknot.com/marketplace/mill-city-museum-minneapolis-mn-850012>.

²⁵⁶ "Catering Venues: Mill City Museum," Mill City Museum | Minneapolis Wedding & Event Venues.

Summary of Findings

The case study of MCM provided insight beyond that discussed in the literature review in Chapter Two, such as region-specific concerns due to weather and economic climate. From the completion of archival research and site surveys of both Mill City Museum and Mill Ruins Park, a general rubric was developed for quickly recognizing and summarizing the important physical and developmental qualities of each case study site. The original rubric was revised during the process of incorporating it into the framework. The rubric was used to assess the following qualities, which were discerned as important to ruin reuse projects through the archival research and site visits: accessibility, size/massing, economic factors, public opinion, integrity, and Romantic features. The rubric was then incorporated into the framework and will be discussed in-depth in Chapter Six.

Accessibility

As discussed in the literature review, Tim Edensor highlighted the importance of accessibility in improving public perspectives regarding industrial ruin sites. Additionally, any heritage tourism project must allow tourists to visit the site without extreme barriers to access. As a rehabilitated ruin structure, Mill City Museum, was explicitly altered while most of the ruins Edensor discussed had not been physically altered through organized preservation efforts. As the structure was rehabilitated for public use in both the exterior and interior of the intact and ruinous portions, accessibility was inherent to the project. Additionally, the building is in an urban environment, accessible via multiple modes of transportation. The only limitation on accessibility appears to be for the courtyard due to the frequent extreme weather conditions of the City of Minneapolis. In the case of ruins and abandoned buildings, safety also effects accessibility. The

possibility of materials spalling off the walls and potentially injuring visitors is a key ongoing safety concern in the ruin courtyard.

Economics

Research into the original rehabilitation project and ongoing maintenance at the site, indicated economic factors were also a top concern for the Minneapolis Historical Society. The Washburn A Mill is a very large structure, meaning that any project would likely be more expensive than at a smaller site. Additionally, the decision to maintain the courtyard as a ruin with the dramatic wall profile was recognized as an expensive endeavor. Original funding sources came from mostly public sources but spurred a lot of private economic development in the area. Additionally, the museum has been able to provide nearly half of its own funding through revenue from events, facility rental, and museum entrance tickets. The original project was also undertaken at a time of good national economic climate. However, the regional economic climate was trending down over the past few decades of deindustrialization. The area of Downtown Minneapolis had also seen disinvestment in the preceding decades.

Authenticity

As discussed in the literature review, a key reason why people enjoy abandoned buildings and ruins is largely due to the perception that they are authentic, in some ways even more so than an intact structure due to the idea of nature reclaiming the built environment. It is for this reason, that the Secretary of Interior Standard's for Integrity are included in the analysis of of Mill City Museum and in the subsequent framework. The survey and archival research allowed for the documentation of both extant and non-extant essential features of the Washburn A Mill,

summarized in table 5. These features relate to the integrity of the mill through materials, feeling and association, and workmanship. The majority of the original features of the structure remain intact. In addition to these original features, the profile of the ruin walls has also been retained.

Table 5: Essential Physical Features of Washburn A Mill

Original Feature	Interior/Exterior	Extant? (Jan. 2018)
Size/Massing	Exterior	YES
Location	Exterior	YES
Pattern of Fenestration	Both	YES
Historic Materials	Both	YES
Grain Silos	Exterior	YES
Gold Medal Flour Sign	Exterior	YES
Jack Arches	Exterior	YES
Topography	Exterior	YES
Railroad Features	Exterior	NO
Railroad Features	Interior	YES
Plan	Interior	NO
Mill Equipment	Interior	YES

Overall, Washburn A Mill retains integrity of materials, design, workmanship, and location, and therefore, feeling and association.

The Washburn Crosby Mill was chosen for rehabilitation and to house an industrial history museum as part of a larger revitalization of the former milling district. Major factors that indicated

the site's potential as a mixed-use site with a large museum were the building's size, beauty, central location, public familiarity, and significance to the city and its development. The project was approached with the guiding principle of maintaining a large portion as a ruin because it was seen as the most authentic option for a structure that had experienced explosions and states of ruin throughout its lifetime. However, maintenance issues have been an ongoing challenge, economically as well as physically, due to the preservation approach, weathering, and ruin wall heights.

CHAPTER 5

CASE STUDY: MILL RUINS PARK

Along with the literature review in Chapter Two and the case study of Mill City Museum in the previous chapter, the case study of Mill Ruins Park seeks to answer the research questions posed in the introduction of this thesis. As previously noted, the literature review in Chapter Two heavily influenced the methods and criteria by which to analyze the two sites. Like the vast majority of the studies discussed in the literature review, the case studies both include detailed site descriptions, narrative history of the sites and surroundings area, and site and rehabilitation project analysis. This research was conducted through archival research, field studies, and the review of previously conducted relevant interviews with key personnel involved in the development of the ruin park. The methods were used to address the following questions, presented in the previous chapter: (1) why the two sites were chosen for rehabilitation, (2) why each site was rehabilitated as either a ruin park or ruin museum, (3) what key factors influenced the projects, and (4) what challenges were discovered during and after development that would be relevant to future similar projects. This chapter is divided into five sections: Site Background, Narrative History, Project Development, Site Survey, and Summary of Findings.

Site Background

Mill Ruins Park (figure 5.1) is located within the Saint Anthony Falls Historic District at 103 Portland Avenue S, Minneapolis, Minnesota. The park is a total of five acres and includes walls, foundations, a canal, and tailrace ruins of several mills with modern trails and observation

decks. The park is one of the most visited places in Minnesota’s highly rated park system.²⁵⁷ The Minneapolis Parks and Recreation Board (MPRB) manages the park, which is considered the premiere visitor destination on the western bank of the Mississippi River in Minneapolis. It is located at the foot of the Stone Arch Bridge. Like Mill City Museum, it lies within the National Park Service Mississippi National River and Recreation Area. It is also a contributing site to the Saint Anthony Falls Historic District. The park is known for its mill remains, mostly excavated during the late 1990s and early 2000s. The ruins that contribute to the park are the remains of flour mills originally built in the nineteenth century. The park first opened in 2001.²⁵⁸

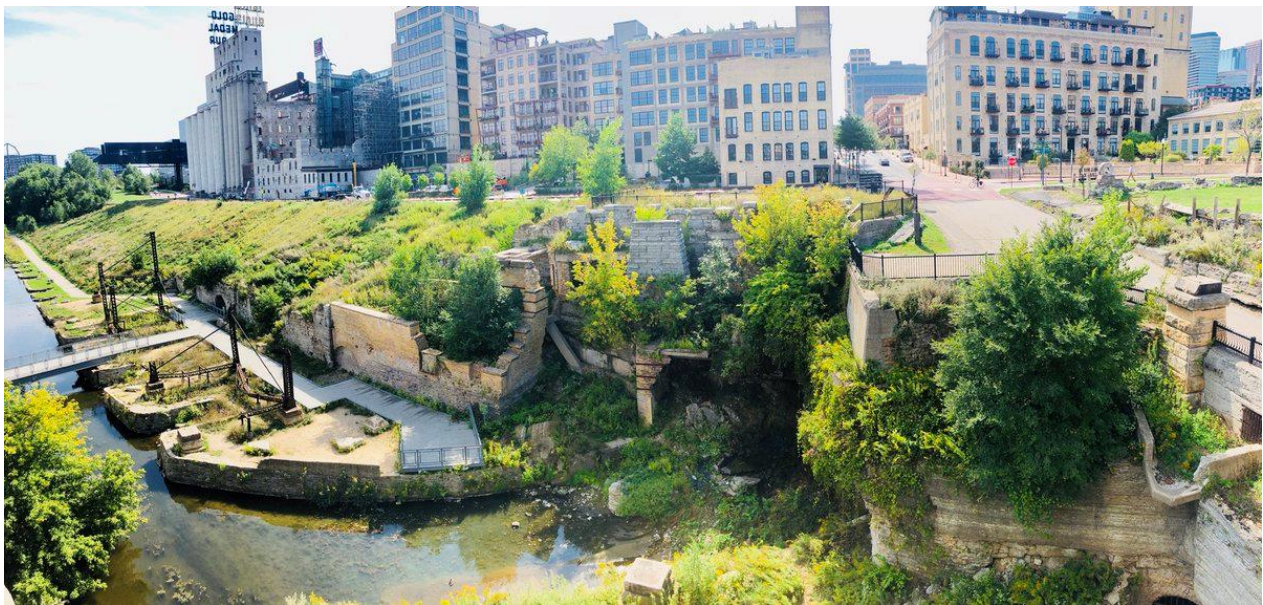


Figure 5.1. MRP from the Stone Arch Bridge. (Source: Matt Marrone, ESPN. September 2018.)

²⁵⁷ Minneapolis Park and Recreation Board Planning Staff, *Central Mississippi Riverfront Regional Park Master Plan*. (August 30, 2016), 2.10, Accessed October 1, 2018.

https://www.minneapolisparcs.org/_asset/d6kv9t/central_riverfront_masterplan_approved.pdf.

²⁵⁸ “Mill Ruins Park,” St. Anthony Falls Heritage Board. 2011. http://www.mnhs.org/places/safhb/things_millRuins.php

Narrative History

The Saint Anthony Falls were once the most important natural source for hydropower in the United States. When the power of the falls was first harnessed, hydroelectric power had not yet been invented. Waterpower at the falls was created by diverting water from the Mississippi River through a series of canals, tunnels, and gates to the mills along the riverfront. Once the water went through the mills, it was collected in a channel called a tailrace, which transported the water back to the river.²⁵⁹

During the 1880s, there was an increasing demand for waterpower due to the increasing number of mills in Minneapolis. Additionally, the height and flow of the Mississippi fluctuated from season to season and could limit access to waterpower. In 1883, the Minneapolis Mill Company hired William de la Barre as an engineer and agent for the waterpower works. According to historian Lucile Kane, “De la Barre undertook to deepen the canal and lower the tailraces under his jurisdiction, while the millers promised to lower their wheel pits, tailraces, and headraces.”²⁶⁰ At the height of water power in the late 1800s, there were miles of tunnels on the western side of the river to power the mills, but once hydroelectric power was invented, much of this system was abandoned.²⁶¹ Mill Ruins Park includes the remains of various limestone mills dating from the nineteenth and twentieth centuries, including the Cataract Flour Mill, Artic Flour Mill/St. Anthony Mill, Union Flour Mill, Holly Flour Mill, and the Clapp Woolen Mill/Empire Mill. In 1857, the Minneapolis Milling Company built a large underground tunnel to serve the mills and leased water to other nearby mills.²⁶²

²⁵⁹ Kent Kirkby and Du Anne Heeren, *A History of St. Anthony Falls* (Minneapolis, MN: National Center for Earth-surface Dynamics, University of Minnesota: 2011), 34. accessed June 2018, https://www.esci.umn.edu/courses/1001/1001_kirkby/SAFL/WEBSITEPAGES/VT.html

²⁶⁰ Lucile M. Kane, *The Falls of St. Anthony: The Waterfall That Built Minneapolis* (Saint Paul: Minnesota Historical Society Press, 1966; reprint 1987), 119.

²⁶¹ Kirkby and Heeren, *A History of St. Anthony Falls*, 21.

²⁶² *Ibid.*, 5.

Constructed in 1867, the two-story Minneapolis Mill operated until the Pillsbury Company bought the building during the early 1890s.²⁶³ Pillsbury demolished the original structure and replaced it with a five-story warehouse, which also housed the Northern States Power Company in its basement. The Pillsbury structure was demolished in 1931, but the turbines of the mill produced electricity until 1960. The ruins of Minneapolis Cotton Mill, Excelsior Mill, and Minneapolis Flour Manufacturing Company G Mill became a cotton mill in 1870, then the Excelsior Flour Mill a few years later. It was torn down during the 1960s.²⁶⁴

The five-story limestone Alaska Mill was built in 1866. It was the first mill owned by the future Pillsbury Flour Mill Company. After it burned down in 1881, Pillsbury replaced it with the six-story Pillsbury B Mill, which was torn down in 1931. The Minneapolis Mill/Washburn Crosby D Mill was built in 1865 and operated until 1931, when it was torn down. The site of the Clapp Woolen Mill/Empire Mill and Pillsbury B Elevator/King Midas Elevator was original a woolen mill that became a flour mill in 1878. In 1881, the site burned down, and it remained vacant until 1888 when the Pillsbury Company built its B Elevator there. The elevator remained in business until 1962 and burned down in 1969.²⁶⁵

²⁶³ "A Minnesota Sampler: National Register of Historic Places." Minnesota Historical Society Website. 2009. Accessed September 26, 2018. <http://www.mnhs.org/preserve/nrhp/DistrictProperties.cfm-NPSNum=71000438.html>.

²⁶⁴ Kirkby and Heeren, 4.

²⁶⁵ *Ibid.*, 4.



Figure 5.2: Working on the West Side canal at St. Anthony Falls, c. 1885. (*Source:* Minnesota Historical Society, Online Collection)

Project Development

The now-exposed historic ruins and waterpower features of Mill Ruins Park (Figure 5.3) that were long buried beneath sand and gravel tell the story flour mills on the western bank of the Mississippi River and the use of St. Anthony Falls. During the 1970s and 1980s, Minnesota Historical Society began archeological investigations in the St. Anthony Falls Historic District that uncovered some mill ruins, railroad shops, and thousands of nineteenth-century artifacts such as

shoes and china.²⁶⁶ For the 1983 excavations, Minnesota Historical Society archaeologists divided River Parkway into five segments to uncover what mill structures remained. The surveys suggested that extensive remains of both mill foundations and waterpower systems remained. In 1985, another major archaeological survey was completed, which discovered tower bases for an 1854 bridge and iron anchors and bridge cables from an 1876 suspension bridge that both spanned the Mississippi River at St. Anthony Falls.²⁶⁷

In 1983, Minnesota Historical Society officials and Minneapolis Park Board planners first discussed possible approaches to develop a riverfront park while keeping the area's historic resources available to the public. Bob Mattson, a park board planner remarked, "I'm sure they were expecting us to put in trees and grass. . . [but] I said I think what we're talking about is more like a mill ruins park."²⁶⁸ For a long time the park "was only a plan." It was not until the 1990s that the park was coming closer to reality, around the same time as stabilization work was begun on the remains of the Washburn A Mill.²⁶⁹ In 1994, the Stone Arch Bridge was converted into a pedestrian and bike trail, which later was a key connection to the ruins park.²⁷⁰

The early development of Mill Ruins Park was part of a larger master plan study undertaken by Urban Design Associates (UDA) June 1997 for the Minneapolis Community Development Agency (MCDA). The master plan was developed by a team comprised of staff from the MCDA, Minneapolis City Planning Department, Hennepin County, Park and Recreation Board, and St. Anthony Falls Heritage Board. The planning process was conducted in three phases: data and

²⁶⁶ Anfinson, "Unearthing the Invisible," 326.

²⁶⁷ Ibid., 324-326

²⁶⁸ Penny A. Peterson and Marjorie Pearson, *Architecture and Historic Preservation on the Minneapolis Riverfront*. Prepared for The Saint Anthony Falls Heritage Board, (March 2007): 79, accessed June 20, 2019, http://www.mnhs.org/places/safhb/final_report.pdf.

²⁶⁹ Peterson and Pearson, *Architecture and Historic Preservation on the Minneapolis Riverfront*, 79.

²⁷⁰ "Mill Ruins Park." U.S. Department of the Interior. National Park Service. Accessed September 24, 2018. <https://www.nps.gov/miss/planyourvisit/millruin.htm>.

analysis, alternatives, and the final plan.²⁷¹ Citizen involvement was integral to the project planning process, which included a three-day design charrette, interviews, focus group meetings with downtown and neighborhood associations, and two open public meetings. The data collected included information on land use, zoning, market data, transportation, and the history and conditions of the historic sites. At this time, base drawings and a housing market conditions study were also completed. The next phase began with the design charrette. Urban design alternatives from the charrette were then refined and represented at public meetings. The subsequent master plan became a framework for evaluating proposed projects along the riverfront.²⁷²

In 1998, excavation to specifically develop Mill Ruins Park began, with MSR Design as the lead architectural firm for the project's design and URS Corporation as engineering consultants.²⁷³ Mill Ruins Park, complete with interpretive plaques, guided tours, and an on-going archaeological program, officially opened to the public on October 1, 2000. In 2004, the park won a preservation award from the Preservation Alliance of Minnesota.²⁷⁴ Landscape Research, a cultural resource management firm, was the consultant to develop the interpretative plan.²⁷⁵ In addition to the mill remains, the park features "remnants of a railroad bridge, and an excavated tailrace canal, as well as biking and walking paths."²⁷⁶ The site offers seasonal programs, including archaeological digs that are open to the public.²⁷⁷ The first public participant digs occurred in 2006 on each Saturday during the summer months. The program was called *Dig in! at Mill Ruins Park*.

²⁷¹ Urban Design Associates, *Historic Mills District Master Plan*. Prepared for Minneapolis Community Development Agency (June 1998), 7-9, www.minneapolismn.gov/www/groups/public/@cped/documents/webcontent/convert_267857.pdf

²⁷² Ibid.

²⁷³ "2003 Minnesota Preservation Awards." Preservation Alliance of Minnesota. Accessed October 02, 2018. <http://archive.mnpreservation.org/programs/minnesota-preservation-awards/2003-minnesota-preservation-awards/>.

²⁷⁴ Ibid.

²⁷⁵ Landscape Research, LLC, "Mill Ruins Park," www.landscaperesearch.net (St. Paul, Minnesota: April 2003). Accessed July 01, 2019. <http://www.landscaperesearch.net/interpretation.html#millruins>.

²⁷⁶ "Mill Ruins Park," St. Anthony Falls Heritage Board.

²⁷⁷ Ibid.

The program was possible due to funding from the St. Anthony Falls Heritage Board, Save our History: The History Channel, and the Mississippi River Fund. The program was free, and educated participants in archaeological methods.²⁷⁸



Figure 5.3: Photograph of Mill Ruins Park from the Stone Arch Bridge. (Source: Wikimedia user Bobak Ha-Eri, Minneapolis, Minnesota, May 18, 2007. www.Wikipedia.org/wiki/Mill_Ruins_Park)

In a 2003 article titled “Archaeology at the Riverfront,” state archaeologist Scott Anfinson reported that the original archaeological work at the site was part of a roadwork project and was not intended to excavate the ruins on the riverfront. Instead, the project involved uncovering ruins,

²⁷⁸ "Mill Ruins Public Archaeology." 10,000 Lakes Archaeology, Inc. Accessed October 01, 2018. <http://www.10000lakesarchaeology.com/mill-ruins-public-archaeology.html>.

documenting them, and then reburying them. However, according to Anfinson, the project needed to overcome a variety of challenges:

At St. Anthony Falls, shovels and trowels were displaced by the backhoe as the principal tool, making the non-archaeologist backhoe operator the chief excavator. Test units had to be gerrymandered between power poles, streets, and buildings. Underground utility lines had to be carefully marked and avoided. OSHA (Occupational Safety and Health Administration) and MPCA (Minnesota Pollution Control Agency) rules had to be considered. Analysis and curatorial decisions had to address thousands of small artifacts and individual pieces that might weigh more than a ton. We learned rapidly that our research plan had to be flexible enough to account for each day's revelations.²⁷⁹

The project uncovered low wall ruins of early flour mills between Fifth and Portland Avenues along First Street, two trestle supports for a railroad were easy to spot on near the Stone Arch Bridge, and the back of the basement ruins of the Empire Mill. During the initial archaeological work, "gravel piles covered the rest of the major mill ruins east of First Street to the south of Portland Avenue."²⁸⁰

The city acquired the land for the park in 1985. The U.S. Army Corps of Engineers filled the area to construct the river lock in 1962. The USACE leased the land to a company that used it for storage until the Minneapolis Park Board purchased the land and lease for \$8 million. These funds were primarily provided through the state legislature as part of funding to redevelop the riverfront. During the 1990s more archaeology on the Minneapolis riverfront was completed. Ruins began to be exposed for their interpretive value and to become assets for "commercial

²⁷⁹ Anfinson, "Unearthing the Invisible," 323.

²⁸⁰ *Ibid.*, 322.

development, education, and tourism.”²⁸¹ They were acquired by the city in 1985.²⁸² In 1998, excavation began for the creation of Mill Ruins Park. MHS archaeologists, led by Anfinson removed fill and exposed tailraces and structures. Excavation continued until the park first opened in fall of 2001.²⁸³

Anfinson also reported the benefits and challenges brought on by the excavation of the ruins. He explains that the ruins “bring Minneapolis history to life by making the past real,” because visitors can see the remains rather than only being told about them. However, he also states that the project has brought problems, explaining that “once exposed to the elements, especially Minnesota’s freeze-thaw cycle, ruins can rapidly degrade if they are not carefully treated.” Additionally, treatments can end up heavily altering their appearance, and ruins are often targets for vandalism. Overall, Anfinson describes the effect to the riverfront as “stunning,” writing that “What was a skid row has become a gold coast.”²⁸⁴

Maintenance work at the park has continued since its original stabilization and development. In 2010, the oak plank section of West River Parkway was replaced by concrete due to deterioration and the noise caused by vehicles traversing the parkway. Additionally, a bike rental kiosk was added in 2012.²⁸⁵ Most recently, Mill Ruins Park’s preservation and management has been influenced by the Central Mississippi Riverfront Region Park Master Plan, which included developments for Water Works Park, and was submitted to the Minneapolis Metropolitan Council in August 2016. The regional park system (figure 5.4) included a total of fifty-three parks and park reserves. The intent of the plan was to provide guidance on redevelopment, to enhance existing

²⁸¹ Ibid., 326.

²⁸² Schoof, "Preservation Without Restoration," 46.

²⁸³ Anfinson, 321.

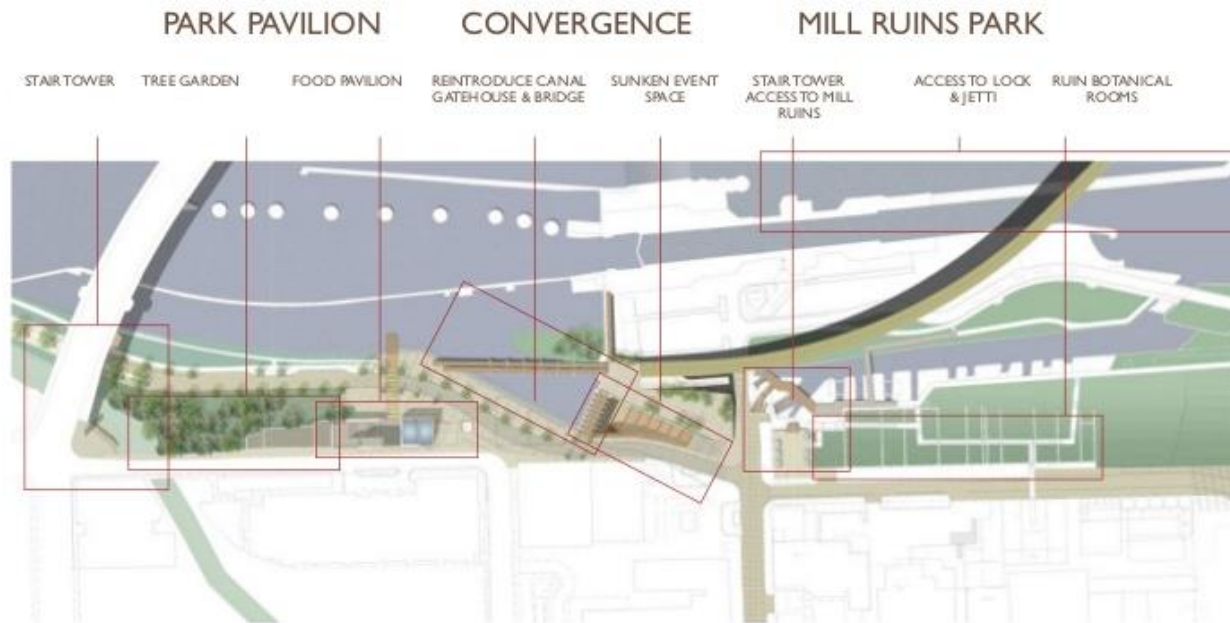
²⁸⁴ Ibid., 237.

²⁸⁵ "Mill Ruins Park." Minneapolis Park and Recreation Board. Accessed October 01, 2018.

https://www.minneapolisparcs.org/parks__destinations/parks__lakes/mill_ruins_park/#group_3_16241.

facilities, change the name of the area, and expand the boundaries of the park. The new name proposed for the regional park was Saint Anthony Falls Regional Park.²⁸⁶

A major overhaul of the park has been proposed as part of a project known as Water Works. The original Mill Ruins Park was designed by MSR Design, and the Water Work project is also being designed by MSR. Damon Farber Landscape Architects and HGA Architects are also working on the project. Water Works will be a six-acre project. The conceptual design for Water Works began in 2012. The Water Works concept design was approved by the Minneapolis Parks and Recreation Board (MPRB) in September 2015. Like for the original development of Mill Ruins Park, MPRB is holding open houses, presentations to stakeholder groups, and focus group meetings with community members. An online survey, with a section for open comments, for community members was also hosted during 2017.²⁸⁷



²⁸⁶ Minneapolis Park and Recreation Board Planning Staff. *Central Mississippi Riverfront Regional Park Master Plan*.

²⁸⁷ "Water Works Mezzanine Phase - Survey #1," Minneapolis Parks Foundation and Minneapolis Parks and Recreation Board (2017), https://www.minneapolisparcs.org/_asset/ns7ntl/2017-05-21_WaterWorksOnlineSurvey.pdf.

Figure 5.4: Proposed Site Plan for Water Works (*Source: MSR Design, Minneapolis Parks Foundation*)

The goal of the Water Works Project is to make the area more useful and appealing for the growing number of visitors to the historic mill district. Additionally, Water Works is intended to serve as a gathering place and a venue for storytelling. It would be the first major redesign of the area since Mill Ruins Park opened in 2001. The project proposal for Phase One includes adding an outdoor amphitheater, rooftop terrace, pavilion that incorporates the remains of Bassett Sawmill and Columbia Flour Mill, more bike and pedestrian paths, interactive areas for families, a large lawn, and food vendors. Work on the Water Works project began in 2017, based on the proposed site plan in figure 6.4. The first phase is expected to be completed by the end of 2019, and Phase Two is planned to finish sometime in 2023. The second phase of Water Works would “focus on creating connections to the water,” such as adding a kayak launch area.²⁸⁸ Other accepted and planned changes include creating outdoor open rooms to allow visitors to interact directly with the ruins along 1st Street South, exposing more engineering and architectural ruins in the park area, enhancing bike and pedestrian paths. Additionally, the 2018 Riverfront Master Plan suggests directly connecting the park to Mill City Museum through a pedestrian tunnel reminiscent of milling tunnels, and possibly create a visitor’s center at the lock and dam structure.²⁸⁹

Interview

After the completion of initial research, it was clear that interviews with a key figure involved in the development of Mill Ruins Park could be highly beneficial to a more holistic

²⁸⁸ Minneapolis Parks Foundation. "Water Works Public Meeting II, 27 Feb 2012." LinkedIn SlideShare. February 27, 2012. Accessed September 24, 2018. <https://www.slideshare.net/MplsParksFoundation/water-works-public-meeting-ii-27-feb-2012>.

²⁸⁹ Parks and Recreation Board, *Central Mississippi Riverfront Regional Park Master Plan*.

understanding of the site. Specifically, they could provide clearer insight into the decision-making process for financial, and political considerations of the project. However, existing interviews were uncovered as part of the Minneapolis Riverfront Redevelopment Oral History Project. The interviews were conducted by journalist Linda Mack. The project included 26 interviews with 29 people and were conducted in 2008 and 2009. One interview specifically focused on Mill Ruins Park. Due to the existence and nature of the 2008-2009 interviews, new interviews were not conducted as part of the research for this thesis.

The interview with Robert Mattson occurred on August 1, 2008 with Linda Mack. Mattson was a landscape architect and superintendent for planning for the Minneapolis Park and Recreation Board during much of the development of the park. Mattson was also involved in the 1978 master plan that determined three key concepts for the central riverfront: continuous parkways on both sides of the river, development and interpretation of historic resources, and recreational opportunities. Inspired by the redevelopment of Boston's Quincy Market area and the historic industrial park at Lowell, Massachusetts, Mattson envisioned an archaeological park showcasing the ruins of the abandoned mills along West River Parkway and the river's edge. He was inspired by the redevelopment of Boston's Quincy Market area and the historic industrial park at Lowell, Massachusetts.²⁹⁰

Mattson explained that once his vision was described, the various organizations involved approved of the concept. They moved forward to talk about how to expose some of the canals and the mill ruins. He specified that the support of politicians was extremely important because ultimately "they make the decisions" for the project. He also noted that communication overall

²⁹⁰ Interview with Robert Mattson, interview by Linda Mack, *Minneapolis Riverfront Redevelopment Oral History Project* (August 1, 2008). Minnesota Historical Society. <http://www2.mnhs.org/library/findaids/oh117.xml>

was critical to the project, and that communication would be vital in any similar projects. Mattson also noted inspiration for other involved parties, including the mayor at the time:

I can remember Mayor Sharon Sayles-Belton coming back from a convention that was down in San Antonio, Texas, and she had been along the River Walk. Of course, it is totally a different scale and thing, but the concept is still how water and creek or riverfronts can be such dramatic and dynamic areas. I think that made it a lot easier.

In the interview with Mack, Mattson also reported that the project cost about \$16 million and he explained that Metropolitan Open Space Commission decided to lend the money, without interest, to complete the project. Their goal was to stimulate redevelopment on the riverfront. The Park Board was to use future grants to reimburse them for the cost of development. Mattson also stated that “By that time, everybody was seeing the tremendous potential of the open space, coming in and developing it,” noting that even the Federal Reserve Bank of Minneapolis decided to develop on the riverfront.²⁹¹

Mattson also emphasized that the development of Mill Ruins Park took a lot of time, even mentioning that parts of the project were ongoing at the time of the interview. However, he commented that he was proud of the work done on the park, especially of various people such as himself, Ann Calvert, and Betsy Doermann “selling it not only to our own park commissioners but to city council and to the funding agencies and to state legislators who often provided direct grants to get things done.”²⁹²

Overall, Mattson emphasize the riverfront’s importance to Minneapolis and specifically to “the amount of development, the amount of taxes, the amount of jobs, the amount of impact it has

²⁹¹ Ibid.

²⁹² Ibid.

[had] on the city in terms of its aesthetics.” He describes Minneapolis as a city with a riverfront and river that is “its heart and soul.”²⁹³

Site Survey

The survey of Mill Ruins Park was conducted on January 14, 2018. However, due to snow coverage at the location author photos were not used. Existing photos from a variety of sources were used to most clearly show the site features without snow coverage (figures 5.5, 5.8, 5.10, and 5.11). The evaluation assesses the current site after undertaking background and historical context research. The visit allowed for cataloguing the circulation of the park, recognition of the methods of interpretation, documentation of viewsheds and key features, and an assessment of historic character and integrity. The objective of the case study was to document conditions and qualities for further analysis and to inform a framework for approaching industrial ruin reuse projects. The analysis of the survey was centered on the research question of how and why industrial ruins might be used for heritage tourism, as well as what properties make a site predisposed to ruin park adaptive reuse. While the surveys of Mill City Museum and Mill Ruins Park are equal in depth and scope, as a much smaller site without interior spaces, the survey of MRP resulted in a briefer survey summary.

The park includes excavated mill foundations, tailraces and other structures that have been stabilized since the late 1990s. The method of stabilization is primarily metal bracing (figure 5.5).

²⁹³ Ibid.

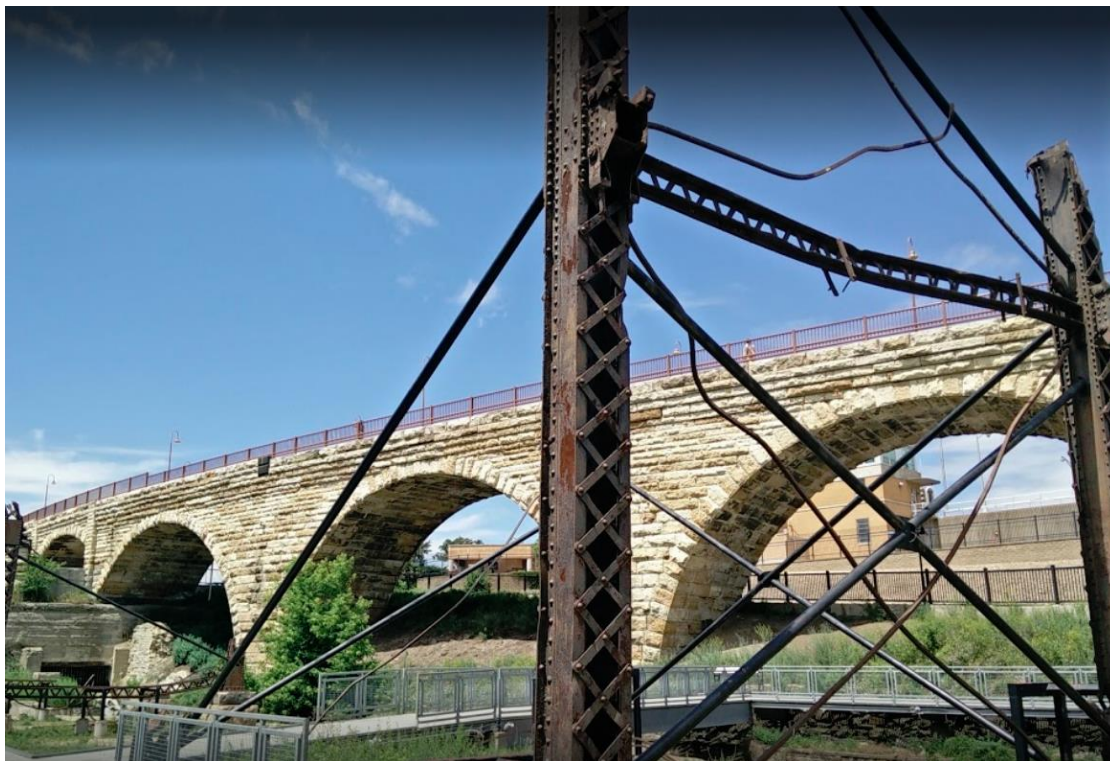


Figure 5.5: Stabilized metal remains at Mill Ruins Park (*Source: Google Listing for Mill Ruins Park*)

The 106 Group, a cultural resource management firm, conducted evaluation of the site in anticipation of the Water Works project to further develop the western bank of the river for recreation activity. The Finding of Effect report noted that “Many of the exposed ruins and tailraces are within an area significantly below the South First Street grade, on that street’s eastern side. Important views towards that location relate the ruins to the standing mills between Portland Avenue and Eighth Avenue, and to the Stone Arch Bridge. Excavations of a group of mills upriver from Portland Ave. are on the same grade as South First Street; many views of this area include views of the ruins on the proposed project site.”²⁹⁴

²⁹⁴ 106 Group, *Finding of Fact and Record of Decision of Environmental Assessment for the Wave Project*, (St. Paul, Minnesota: November 2006), 34, www.ci.minneapolis.mn.us/www/groups/public/@cped/documents/webcontent/convert_274817.pdf

Each of the original mill structures in Mill Ruins Park was constructed of limestone. In addition to limestone ruins, some mechanical industrial artifacts remain and are featured in the park. At the entrance of Mill Ruins Park (near the intersection of Portland Avenue and West River Parkway, pictured in figure 5.6) are the remains of the Cataract Flour Mill (1859-1928), Artic Flour Mill/St. Anthony Mill (1866-1919), Union Flour Mill (1863-1929), and Holly Flour Mill (1867-1919).²⁹⁵



Figure 5.6: Sign at the entrance to Mill Ruins Park. (Source: Mill City Times, website, www.millcitytimes.com/mill-city-business-directory/mill-ruins-park.html)

Facing the ruins of the Cataract Mill, on the other side of the intersection of Portland Avenue and West River Parkway, are the remains of Clapp Woolen Mill/Empire Mill and Pillsbury B Elevator/King Midas Elevator (1865-1881). The tailraces and wheel pits at the site were once part

²⁹⁵ Kirkby and Heeren, *A History of St. Anthony Falls*, 29.

of a consolidated hydroelectric plant that persisted even after the demolition of the mills themselves. Following their demolition during the 1960s, the ruins were filled with gravel and sand.²⁹⁶

The park itself is small and follows the natural edge of the Mississippi River's west bank. The river can also be heard from the park. There are great vantage points throughout the park from which photos can be taken of the Stone Arch Bridge, Mississippi River, and historic buildings along the river such as the Guthrie Theater and Mill City Museum. Both the vegetation and hardscaping in the park are very minimal. Additionally, the only visible modern additions are the pedestrian walkways (Figure 5.8). Mills Ruins Park includes biking and walking paths, a bicycle rental kiosk, landscaping, and interpretive signage regarding the history of the site.²⁹⁷ Interpretive signs (example in figure 5.7) describe topics such as the history of railroads in Minneapolis, flour milling, and the Stone Arch Bridge.

²⁹⁶ Ibid., 29.

²⁹⁷ "Mill Ruins Park." Minneapolis Park and Recreation Board. Accessed September 26, 2018. https://www.minneapolisparcs.org/parks__destinations/parks__lakes/mill_ruins_park/#group_3_16241.



Figure 5.7: An interpretive panel at Mill Ruins Park. (Source: Minneapolis Parks and Recreation Board, Mill Ruins Park, Minneapolis, Minnesota)

Walking tours are also available through Mill City Museum and free online through the Minneapolis Historical Society website. Tours of the lock and dam on the river are also available May through September. The park can also be reserved for events, including weddings.²⁹⁸

²⁹⁸ "Mill Ruins Park." Minneapolis Park and Recreation Board.



Figure 5.8: Photograph of walking paths and stabilization bracing at Mill Ruins Park. (Source: Landscape Voice, October 11, 2012. <http://landscapevoice.com/mill-ruins-park/>)

The park can be accessed at multiple points. These access points are indicated on the map in figure 5.9. One entrance is located at Portland Avenue beyond its intersection with W River Parkway. This entry point can be reached from Portland Avenue directly, the parking lot, or via a park walkway and concrete ramp system. The ramp passes underneath the Stone Arch Bridge and through the Central Mississippi Riverfront Regional Park parking lot and to a set of stairs (figure 5.10). Passed the stairs, the pathway continues in a downward slope and forks to either lead down to Mill Ruins Park (figure 5.11) or continue eastward and adjacent to West River Parkway to Gold Medal Park. The park can also be accessed from the East via the West River Parkway walkways, which terminates downriver passed Gold Medal Park at 22nd Avenue South, or from a pedestrian

walkway and stairs from Chicago Avenue between the Guthrie Theatre and Mill City Museum. However, accessibility to the park is not clear at the upper street level (Portland Ave) or the lower street level (W. River Parkway).

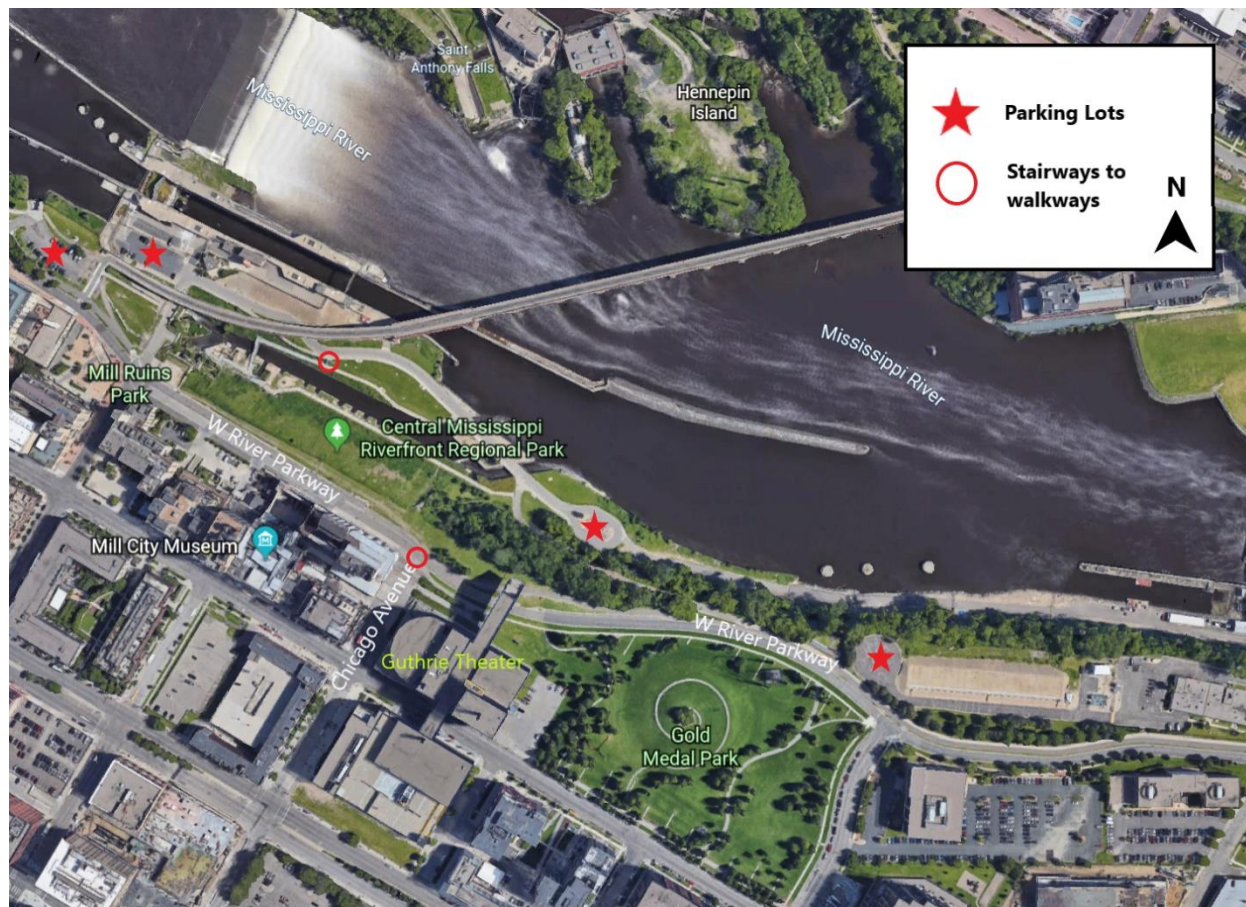


Figure 5.9: Map of the visitor access points to Mill Ruins Park (Source: Screen grab via Google Earth, edited by author.)



Figure 5.10: Facing west toward the western-most parking lot near Mill Ruins Park. (*Source:* Screen grab via Google Earth)



Figure 5.11: Facing southwest toward Mill Ruins Park and Mill City Museum from W River Rd. (*Source:* Screen grab via Google Earth)

Summary of Findings

Between the combination of archival research and the site surveys, a general rubric was developed for easily recognizing significant physical and developmental qualities of each case study site. A blank revised version of this assessment rubric is incorporated into the framework and is located in Chapter Six. The rubric was used to assess the following qualities, which through archival research were discerned as important to the development of Mill Ruins Park: accessibility, size/massing, funding sources, public opinion, location, and setting. The site survey also allowed for the determination of both extant and non-extant essential features of the ruins, summarized in table 5.

Accessibility

Although the park is viewable and accessible from the Stone Arch Bridge, it is not very clear how to enter the park from the bridge. The 2016 master plan suggests ways to combat this issue, but they have not yet been implemented (figure 5.12). However, overall the park is accessible via walkways and supports nearby parking lots for those traveling by car. While some improvements could be made, the site is fairly accessible to the average visitor.



Figure 5.12: Rendering of proposed changes to Mill Ruins Park (*Source: MSR Design, Minneapolis, Minnesota*)

Economics

Support of politicians was revealed to be extremely important to the project and had a direct positive effect on its development as demonstrated by the Metropolitan Open Space Commission's decision to risk lending the money to the Park Board complete the project. Without the mayor's support and the support of high-ranking government employees, funding could have been a major barrier to the completion of the project.

Authenticity

Since the ruins of MRP have existed in their current state since at least the 1970s, they were evaluated for their integrity as persisting ruins, rather than in their original individual intact states as mill structures. The site has gained significance specifically as ruins within the past 50

years. The evaluation of integrity seeks to determine whether the reuse and framing of the ruins within the park setting as an exhibit affects their ability to convey their significance and their connection to milling history along the riverfront. This analysis has revealed that the reuse of ruins at Mill Ruins Park has not damaged the integrity of the ruins themselves. The key tangible and intangible features remain, as summarized in table 6.

Table 6: Essential Features of Mill Ruins Park

Feature	Preserved
Location	YES
Mill Ruins	YES
Historic Materials	YES
Other Materials	NO
Topography	YES
Site Plan and Pattern	YES
Vegetation	NO

Ruins no longer possess their original design or structural integrity. Other than having been excavated and having sections stabilized with steel rods (figure 6.13), the ruins of Mill Ruins Park have not been significantly altered since they were first uncovered during the 1970s. The National Register has similar guidelines for evaluating the significance of archaeological properties as for evaluating historic buildings and properties, outlined in Bulletin 36. The bulletin states that

archaeological properties must have “well-preserved features, artifacts, and intra-site patterning in order to illustrate a specific event or pattern of events in history.”²⁹⁹

The ruins of Mill Ruins Park retain their original materials, location, and setting. While they do not retain their design or workmanship of their original form, the configuration and profile of the ruins has been consistent since their excavation. This transformation to their ruinous state has affected their feeling, but not their association with the development of the City of Minneapolis nor their connection to the neighboring mills and St. Anthony Falls.

Mill Ruins Park was created as part of a broader trend of revitalization of the former milling district of Minneapolis because of the area’s deep connections to flour milling and the historical development of the City of Minneapolis. Major factors that indicated the site’s potential as a ruin park were its aesthetic and romantic qualities, location along the bank of the Mississippi River, existing examples of similar projects to emulate, and political support.

As outlined in the methodology section in the introductory chapter of this thesis, each case study was evaluated based on certain criteria. As part of the site evaluation, the site interpretation, current conditions and maintenance, and integrity are directly discussed within this section. Through analyzing the effect of the site’s ruin reuse, the site evaluation of Mill Ruins Park contributed to the framework proposed in Chapter Six. The evaluation was created using the current site conditions from recent reports and the site visit. Authenticity, integrity, and physical state were chosen to evaluate the approach to ruin reuse toward inclusion in the framework and feasibility for future use in other projects.

²⁹⁹ National Register of Historic Places, *Bulletin 36: Guidelines for Evaluating and Registering Archeological Properties*, (U.S. Department of the Interior, National Park Service, 2000).
<https://www.nps.gov/nr/publications/bulletins/pdfs/nrb36.pdf>

CHAPTER 6

INDUSTRIAL RUIN TOURISM FRAMEWORK

Both case studies, and the history of the development of the Historic Mill District as a whole, revealed the importance of the pre-reuse processes necessary for the implementation of successful adaptive reuse. Both projects included interdisciplinary study, funding partnerships, public support, a significant historical connection to the development of the City of Minneapolis, and the protection of site integrity through the preservation of ruins and ongoing maintenance. The approaches and principles resulted in favorable public opinion of the projects, continued revitalization efforts, and an increase in real estate values in the surrounding area. The case studies were informed by the literature review, and both the case studies and literature review were used to create the framework, as outlined in this chapter.

The framework represents the synthesis of the literature review and case studies, and maps out the actions and analysis required to understand the factors that might affect the reuse of industrial ruins. It also helps facilitate understanding toward what factors were vital to the projects and why a site is or may not be ideal for ruin reuse. The case studies also solidified what criteria to use to determine specific approaches to ruin reuse. Through this representation, the framework answers the research question and sub-questions proposed in the first chapter, and it is intended to guide the pre-planning project phase for any potential industrial ruin rehabilitation project within the Great Lakes Region.

Use of the framework is intended for preservation professionals, and primarily local government or non-profit employees considering undertaking a ruin reuse heritage industrial tourism project. Due to the economic realities of ruin reuse, stabilization, and continued maintenance, it is unlikely for a business or organization without a preservation purpose to undertake this sort of development project. The intent of the framework is to direct the pre-reuse planning process.

Developing the Framework

Developing the final framework first involved returning to the literature review. The literature from Chapter Two identified how ruins have been perceived from the nineteenth century through the present, what processes have been established by preservation organizations for the preservation of ruins, and key concepts of industrial heritage tourism. The literature prompted the earliest ideas toward the framework and raised initial considerations of specific challenges to industrial heritage tourism development such as regional complexity.

The works discussed in the first section, aestheticism, were key to understanding and drafting the sections of the framework involving the more difficult to define and assess qualities such as aesthetics and authenticity. Tim Edensor, Christopher Woodward, and Alice Mah identified what draws people to industrial ruins, what site elements trigger nostalgia, and what architectural elements are often viewed as aesthetically pleasing or Romantic. Assertions that were integrated into the framework included: (1) the concept of distance and proximity, (2) integration with nature and landscape, and (3) aesthetics of disorder, fragmentation, and sensuality. The specific information adapted from the section one of the literature review and into the framework is summarized in table 7.

Table 7. Qualitative values and their indicators.

<i>Values</i>	<i>Positive indicators</i>	<i>Negative indicators</i>
<i>Authenticity</i>	Original location, materials	Recreated or artificial ruin
	Conveys feeling and/or association of temporality	Relocated
		Incompatible alterations
<i>Cultural</i>	Education	
	Historic Preservation	
<i>Aesthetic</i>	Integration with landscape	No or very minimal signs of decay
	Convey connection to nature	
	Decaying state of materiality	
	Workmanship and Materials	
<i>Nostalgic</i>	Connection to significant local/regional history	No clear connection to community

The existing guiding documents on ruin preservation from the second section further provided direction for developing the framework. Many of the suggestions were highly applicable to not just traditional ruins, but modern industrial ruins as well. Here, the differences between development and management of ruins verses traditional heritage sites were most clear. The NPS *Preservation and Management Guidelines for Vanishing Treasures Resources* guidelines formed the general outline of this framework, including the following steps: (1) Archival Research and Planning, (2) Documenting and Analyzing the Resource, (3) Developing Alternatives for Resource Preservation, (4) Reviewing and Selecting the Preferred Alternative(s) for Resource Preservation, (5) Designing the Selected Preservation Treatment, (6) Implementing the Selected Preservation

Treatment, and (7) Conducting Post-Treatment Maintenance and Management.³⁰⁰ Also partially adopted into the framework were the Australian Heritage Council guidelines for when it is potentially appropriate to provide a ruin with a new use:

1. The significance of the place does not rely on its status as a ruin
2. When a new compatible use is proposed to support ongoing conservation and interpretation of a significant place
3. When adaptive reuse will not impact the significance of the place³⁰¹

The documents referenced in the third section of the literature review proved extremely relevant, especially as the case study research progressed. The park at Lowell, Massachusetts, was the primary example referred to prior to the discovery that preservation professionals specifically studied the site and were inspired by it for the development of Mill Ruins Park. The Soyez Model, along with the theories of Alexander Otgaar, et al. and Philip Xie, also influenced the framework. Specifically, the texts in section two of the literature review, provided guidance to how to package an industrial ruin tourism concept and develop it as a product worthy of public support. One effective method of packaging, or representing the concept of Mill Ruins Park as a product, involved visiting and referring to previous similar projects. The use of similar example projects successfully illustrated the concept of the park and argued its value to the public, politicians, and other parties involved in the development of the project.

While the literature was vital to the case studies themselves and the framework development, the framework was also closely derived from the case studies. The case study

³⁰⁰ John M. Barrow, *Preservation and Management Guidelines for Vanishing Treasures Resources*. U.S. Department of the Interior, National Park Service. (2009), i-ii, accessed September 12, 2018. https://www.nps.gov/parkhistory/online_books/rmr/treasure_resource.pdf.

³⁰¹ Australian Heritage Council, Department of Environment, Water, and Natural Resources. *Ruins: A Guide to Conservation and Management*, (Commonwealth of Australia): 19-21. Accessed September 1, 2018. <https://www.environment.gov.au/system/files/resources/e4e0fb1f-2553-4a3c-b454-2f7d630cdd6a/files/ruins.pdf>.

process considered the site history, project development, and current conditions of both Mill City Museum and Mill Ruins Park. During this study, questions were naturally proposed to reveal information about the sites and address specific effects on the rehabilitation projects, such as:

1. What were the significant historical aspects that were considered?
2. What economic and political factors affected the projects?
3. What key challenges or roadblocks occurred?

The interviews revealed the most important factors, or values (listed in table 8), to the completion of and success of the projects. From the interviews and review of archival documents, it was clear that funding, political support, authenticity, and aesthetic qualities were vital to move both projects forward. Most of these principles align with many adaptive reuse projects. However, certain items that have an extended meaning, extra importance, or are more difficult than usual in the context of heritage tourism ruin reuse. The largest roadblocks to completion of the projects were funding and public opinion.

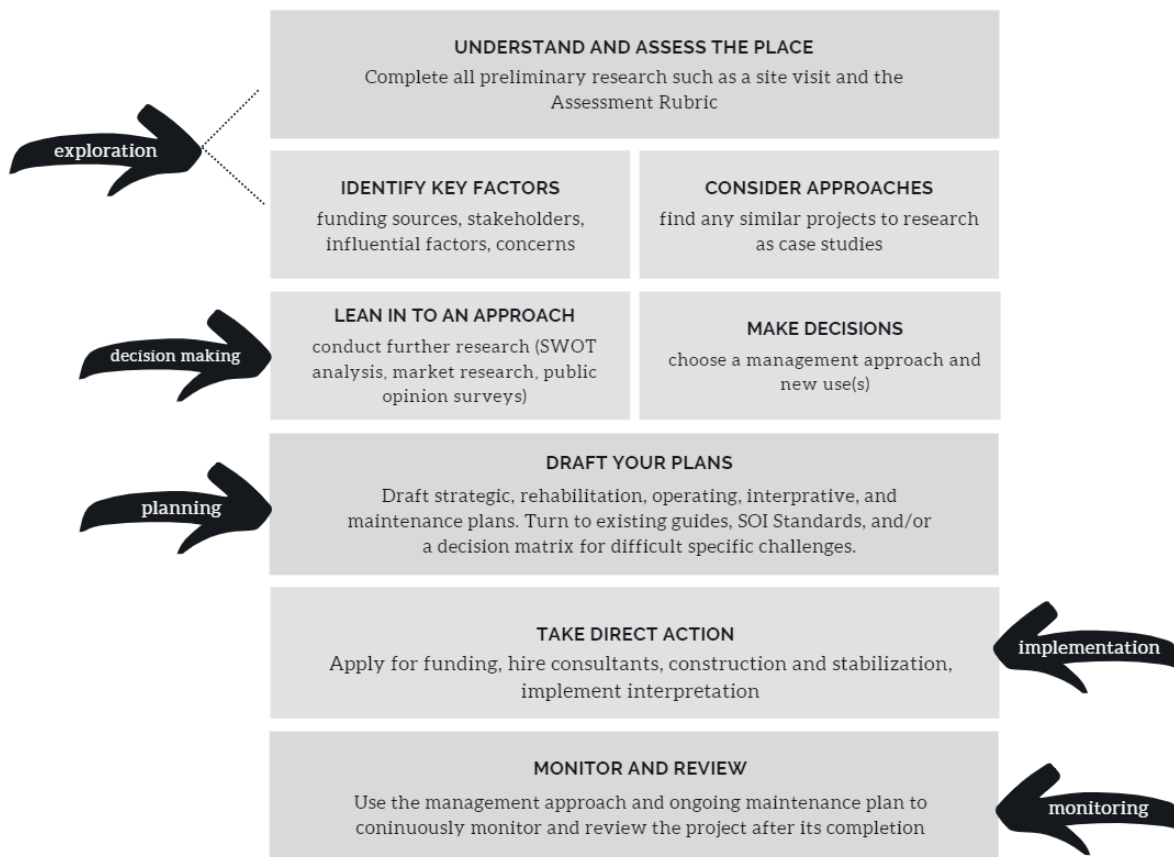
Table 8. Core values and positive indicators, developed from case studies.

<i>Values</i>	<i>Indicators</i>	<i>Values</i>	<i>Indicators</i>
<i>Geologic/ Environmental</i>	Protection of resources	<i>Social</i>	Perception of value
	Part of greater cultural landscape		Perception of identity
	Brownfield redevelopment		Potential community enhancement
<i>Economic</i>	Role in tourism	<i>Institutional/ Political</i>	Involvement of historic preservation groups
	Potential for diverse uses/areas of income		Collaboration: public-private
	Creates jobs, housing, or other local economic benefit		Collaboration: public-public
	Perception of value		
		<i>Spatial/Location</i>	Compatible with contemporary uses
			Reduction of wasted space

The Framework

The proposed conceptual framework is broadly shown in table 9 and is outlined and explained in detail within this section. Although table 9 maps the processes of the framework, each section includes a diverse set of steps with recommendations. Each step in the framework will be expounded upon individually. The five broad phases are *exploration*, *decision-making*, *planning*, *implementation*, and *monitoring*.

Table 9. The General Framework



Exploration

The exploration phase is primarily for gathering information on a potential projects and sites. To understand and assess the site, first conduct historical research and a reconnaissance survey to identify essential historic characteristics and site features. During this phase, you may be considering a variety of preservation approaches or potential sites. Specific questions should also be considered, although final answers and decisions do not need to be established. However, that does not meaningfully alter the process. Questions to consider during exploration are:

1. Who has a stake in the success of the district? What is the best way to involve them in the planning process?
2. Who will be the customers? How will they be drawn to the site? Where will most of them come from?

Also consider why the site was abandoned, neglected, or destroyed. Make sure to keep the values from tables 7 and 8 in mind during your investigation. It may provide further clarity to score these qualities in a rubric (table 10), which can be done to better understand a single site or compare multiple sites.

Table 10. Site assessment rubric

	Aesthetics	State of Materiality	Significance	Authenticity/Integrity	Public Perception
Level 1	The structure or site is not aesthetically pleasing to most.	The site is primarily intact without much sign of patina and/or decay AND / OR The structure is enclosed and better defined as an abandoned structure than a ruin.	The site is not significant to local, regional, or state history. It is typical of its type, does not have outstanding workmanship, etc. OR The site is potentially related to local, regional, or state history but it is one of many similar, interchangeable sites.	Previous interventions and restoration at the site are obvious and may detract from the original structure or its ruinous state. AND The structure or site has not been reconstructed, nor does it have any incompatible materials or designs that detract from its ruinous state.	There has been public outcry against use of the site. It is believed to pose a danger, blight, etc. to the public and/or environment. OR There is concern regarding the site due to blight and/or hazard. There may be some evidence of public dissent against rehabilitating the site.
Level 2	The site can be considered aesthetically pleasing to some but may not be considered overwhelmingly Romantic or Picturesque. It may or may not feature a focal feature such as a spire or sign that makes it clearly recognizable and different from other similar sites.	The site retains much of its original form but is significantly deteriorated. AND / OR The structure is in fair condition. OR The structure is in poor condition overall	The site is potentially significant to local, regional, or state history but is likely one of many similar sites. OR The site is related to local, regional, or state history but may not be considered significant.	Previous interventions and restoration at the site, if any, have been minimal but the profile, materials, landscape or other significant feature has been directly altered. It may not authentically represent its original or ruinous form. AND The structure or site has not been reconstructed, nor does it have any incompatible materials or designs that detract from its ruinous state.	There is concern regarding the site due to blight and/or hazard and negative reactions to use of the site appear to be in the minority. OR There is concern regarding the site due to blight and/or hazard but there is no evidence of public dissent against rehabilitating the site.
Level 3	The site features a variety of Picturesque qualities such as being situated on a rolling landscape, having substantial patina, a clear connection to nature, etc. It features at least one clear focal feature that differentiates it from otherwise similar sites.	The structure has clearly deteriorated beyond the definition of an abandoned building. It is no longer enclosed. It has significant decay and weathering. The structure is in poor condition overall	The site is significant to local, regional, or state history. It has the potential to address and be representative of this history.	Previous interventions and restoration at the site, if any, have been very minimal. AND The structure or site has not been reconstructed, nor does it have any incompatible materials or designs that detract from its original or ruinous state.	There is concern regarding the site due to blight and/or hazard but the potential of rehabilitating the site has received positive feedback and/or press. AND / OR Local preservation groups are supportive of a potential project.
	/25	/15	/20	/20	/20

The assessment rubric was developed from the literature review and refined through the interviews and site surveys. These avenues of research revealed the importance of the five assessment categories: aesthetics, state of materiality, significance, authenticity/integrity, and

public perception. These qualities were codified in tables 7 and 8 with identifiable indicators, to easily access a potential project or site. The categories of aesthetics and authenticity/integrity” are represented in table 7, but the other categories (cultural and nostalgia) are encompassed within the criteria of significance and public perception within the assessment rubric. The core values listed in table 8 also factor into the rubric. Each value is encompassed within public perception and authenticity/integrity. In table 10, the vital qualities are also further divided into three levels (levels 1, 2, and 3). Each indicator is given a possible maximum score, with qualitative descriptions for each level to help self-score a potential project or site.

The rubric is intended to provide better understanding of a potential project site. Rather than list the indicators that a mill site may be well-suited to ruin reuse for heritage tourism, the indicators are weighted. They are also given fuller descriptions so they can be easily scored. Three categories are weighted equally: significance, authenticity/integrity, and public perception. These were all established as vital to the completion of both case study projects. Additionally, the interviews specified that both the perceived authenticity of the ruin preservation approach, as well as the sites’ significance to the development of the City of Minneapolis, were heavily considered and valued by key decision-makers on the projects. However, aesthetics and state of materiality were given slightly different scoring weights.

Throughout both the literature review and interviews, aesthetics were described as key to ruin preservation and public support. From traditional heritage tourists to urban explorers, the aesthetics of decay were considered the major draw for visitors, while the overall state of materiality was viewed as less important. Whether a site is mostly intact (abandoned) or ruinous and barely intact, was a weak factor in considering a project. While it is likely to affect the type of approach on a project, for example a ruin park versus a ruin museum, state of materiality was not

considered as strongly as the other indicators. The literature review also showed that whether a site is very aesthetically pleasing was the chief concern for potential visitors and key project decision-makers. In some instances, like at Mill City Museum, continued preservation appears to be driven almost entirely by the fascination with the aesthetics of the ruin rather than more practical considerations like state of materiality or economics.

Although the rubric allows for a site to be numerically scored based on set criteria, the scores are not intended to provide a specific numerical value for project viability but are to be used to explore a potential project and weight the qualitative indicators against each other while minimizing subjectively. For example, ruin sites that can be marked at level 3 in the categories of aesthetics, significance, authenticity, and public perception would generally be much better suited to being rehabilitated for new uses. They would be easier to package and market to the public and stakeholders. However, a mix of scores across the three levels would not necessarily indicate that a project is not at all viable. The assessment rubric is a tool for exploration and consideration rather than decision-making.

Decision-making

The decision-making phase is for assessing the viability of the project before moving forward with a full project plan. This process will help to answer specific questions, such as: Is this site ideal for ruin preservation and heritage tourism? How viable is my intended project approach? These avenues of research will provide concrete quantitative analysis to allow for well-informed decision-making. The decision-making phase is also when project plans first begin to take shape, as ideas and considerations are narrowed and better defined. This process involves undertaking further research to determine what approach(es) and/or specific concepts are best

suited to your site or project. You will want to more definitively answer the questions posed during the exploration phase. Suggested research approaches are a SWOT Analysis, market research, and public opinion surveys. SWOT is an acronym for strengths, weaknesses, opportunities and threats.³⁰² A blank SWOT analysis exercise form is included as Appendix A.³⁰³

Overall, the methods of analysis should focus on the characteristics of the site and surrounding neighborhood rather than the organization or company leading the rehabilitation. For example, a strength of a project site could be that it is already located within a local historic district, providing it with a number of legal protections. Meanwhile, a threat could be extreme climate causing rapid deterioration to the materials. Market research should look at local, regional, and national revitalization and economic trends. As indicated through the case studies as well as the literature review, public opinion is also an extremely important factor in the success of ruin reuse. Therefore, this thesis argues that any rehabilitation of ruins should undergo a process of public opinion survey to receive and measure (1) perceptions of the site, (2) reactions to the project proposal, (3) concerns and suggestions. To receive the optimal amount of responses, a questionnaire should be available and distributed in a variety of ways, such as online, mail, telephone, and at local establishments. Although many non-local heritage tourists may visit a site, it is local public opinion that is most important and should be the focus of any undertaken survey.³⁰⁴

Consumer surveys can be an extremely useful tool for determining a variety of information. As such, more than one survey may be undertaken to address a variety of data gaps and should be

³⁰² Raymond A. Rosenfield, "Cultural and Heritage Tourism," *Municipal Economic Development Tool Kit*, (Eastern Michigan University, ResearchGate: January 2008), 1. Accessed July 9, 2019, https://www.researchgate.net/publication/237461371_CULTURAL_AND_HERITAGE_TOURISM

³⁰³ Rick Jacobus and Maureen Hickey, *Commercial Revitalization Planning Guide: A Toolkit for Community Based Organizations*, (. New York: Local Initiatives Support Corporation, Center for Commercial Revitalization, 2006): 30. Accessed July 20, 2019. www.minneapolismn.gov/www/groups/public/@cped/documents/webcontent/wcmssp-189236.pdf.

³⁰⁴ *Ibid.*, 48-49.

designed specific to a project. Surveys can be used to determine current demographics (age, gender, ethnicity, household income, presence of children, education level, occupation, primary language, housing tenure), consumption preferences, preferred access to site or neighborhood (drive, walk, bike, public transit), the need for parking, interest in certain types special events, and overall perceptions of the site and neighborhood (safety, cleanliness, availability/quality of goods and services).³⁰⁵

Planning

Once key decisions and approaches have been determined, the full strategic planning process can begin. This should be a concrete master plan that includes a financial plan (ideally using a diverse set of resources), preservation plan, and interpretive plan with a focus on authenticity and human connections. You will likely want to circle back to some earlier areas of research to refine your project vision, meaning conducting more survey and revisiting earlier questions. Your plan should also involve a list of set goals so you can track project outcomes. These goals are individual to each project and may span different fields, such as financial or political goals. However, the planning phase should produce the following final general deliverables:

1. A vision statement
2. A set of short and long-term goals and strategies for the future of the project.
3. A financial and fundraising plan, including a budget
4. An organizational structure to outline collaborators and stakeholders
5. A preservation plan

³⁰⁵ Ibid.

Once these deliverables are established, they can be streamlined into a work plan for easily tracking during the implementation phase (see Appendix B for a sample blank work plan).³⁰⁶

Implementation and Monitoring

From the planning phase, the project can move into implementation, or the period of enacting the planning documents and work plan. A number of challenges may arise during this phase where previous decisions may need to be reevaluated. Lastly, due to the ephemeral nature of ruins and the constantly evolving field of tourism, it is suggested that continued monitoring and research is undertaken at the site. The monitoring phase should include: identify set of indicators to track such as state of materiality and visitor figures, collecting baseline data, and adopting a system for tracking data overtime. This system should include an ongoing maintenance and management plan. The indicators for monitoring should be directly related to the primary goals and challenges of your project.

Conclusion

Overall, the proposed framework, and conceptual frameworks in general, are flexible models and open to be reconceptualized and modified depending on new research and insights. Additionally, the framework, like most frameworks, can be modified for significant deviations from its original intended use. The intent of the framework is to help preservation professionals understand phenomena and make informed decisions through a guided overall process. The framework is not intended to transform the qualitative assessment of nostalgia, authenticity, or public support into strictly quantitative data.

³⁰⁶ Ibid., 88.

CHAPTER 7

CONCLUSION

The vast quantity of abandoned or ruinous industrial heritage sites within Great Lakes Region can be rehabilitated in a variety of ways. Mill Ruins Park is an example of a *ruins park*, a more common approach to ruin reuse in the U.S., while Mill City Museum is an example of a mixed-use rehabilitation that includes a stabilized ruin as well as rehabilitation for other new uses throughout much of the structure. *Ruin museums*, especially enclosed rather than open-air types, are much less common throughout the world.

As every industrial site cannot be reused in the same way, it is ideal to explore a variety of potential new uses, especially due to the high prevalence of decommissioned industrial architecture throughout the Great Lakes Region and United States. This thesis proposed a framework for approaching the rehabilitation of industrial ruin sites for use in heritage tourism. The framework was developed primarily through a review of related literature in Chapter Two and adjusted through the study of two cases from the Minneapolis riverfront in Chapters Four and Five.

In the United States, the effects of deindustrialization have largely remained concentrated in specific regions such as the Rust Belt and in small to mid-sized cities. Evaluating cities throughout the Midwest through the lens of the criteria for case study selection introduced in Chapter One, revealed that Minneapolis, Minnesota fit the criteria most closely. The Saint Anthony Falls Heritage District includes a variety of industrial heritage sites that have used different approaches to tourism and reuse, making thee area ideal for selecting case studies toward developing a

framework. The sites chosen for study were Mill City Museum and Mill Ruins Park. The two sites were developed for museum related uses but were developed with different approaches and methods.

This thesis sought an answer to following main research question: How and why might industrial ruins be adapted for heritage tourism uses in the Great Lakes Region? In seeking an answer to this question, the following sub-questions were also explored:

5. What circumstances and factors affect the reuse of industrial ruins in heritage museums?
6. What characteristics make an industrial ruin site appropriate for heritage tourism reuses?
7. How physically and financially feasible is this form of reuse in the Great Lakes Region?
8. What benefits, disadvantages, and challenges should be considered when adapting an industrial ruin for use as a heritage tourism site?

The research revealed that undertaking ruin reuse projects is a complex process, which involves weighing many factors that are difficult to define and assess. As such, the interviews discussed in Chapters Four and Five were vital to developing and finalizing the framework, as the considerations and indicators involved were difficult to fully understand from other sources. The case studies confirmed assertions discussed in the literature review that aesthetics and public perception were two chief concerns regarding the valuing and preservation of ruins. Economic factors, while vital to real estate and community development as well as the sustainability of historic preservation, were not a very strong factors in considering mill ruin reuse for industrial heritage tourism. Much more feasible financial options were not heavily considered in the project development of either case study site. Furthermore, the state of materiality was also determined to be a surprisingly less important factor compared to others such as integrity/authenticity, public perception, and project collaboration.

Recommendations

The options discussed in this thesis are not exhaustive when considering the ubiquity of industrial heritage sites in the Great Lakes Region. The recommendations are provided based on the findings of the case studies of Mill City Museum and Mill Ruins Park, and the overall review of literature. The framework is left open to further exploration through the study of additional ruin rehabilitation projects. The case studies were limited to a specific heritage area for the purpose of making accurate comparisons and did not include every possible category of industrial site or sites with historic purposes beyond flour milling. To further support the argument that the framework is a useful tool, it should be tested and used, which was not possible in the scope of this thesis. Ideally, more sites would be studied to further specify the framework and test its validity as a decision-making and planning tool. Possible ruin reuse projects for further study in Great Lakes Region include the Pullman Historic District, Armour Meatpacking Plant, and Damen Silos in Illinois; the Bunge Grain Elevator in Minneapolis, Minnesota; and the Warner Swasey Observatory in Cleveland, Ohio.

Final Thoughts

In the United States, the study of the conversion of abandoned or ruinous industrial sites into heritage tourism destinations has been left largely unexplored. Some sites such as Gas Works Park in Seattle, Washington, and the High Line in New York City have gained notoriety for their use of industrial remains and have undergone deeper study. However, the rehabilitation of ruin sites within the Midwest have not received the same notoriety. The study of varied types of reuse of industrial ruins is extremely important, especially as the factories, mills, and other structures left abandoned from the decline of the labor-intensive manufacturing industries continue to decay.

Without diversification in adaptive reuse and consistent approaches to the adaptive reuse of ruins, the potential for demolition may increase for many of these sites nationwide.

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APPENDIX A

SWOT Analysis Blank Form

STRENGTHS	WEAKNESSES

OPPORTUNITIES	THREATS

ADDITIONAL INFORMATION NEEDED:

APPENDIX B

Sample Blank Work Plan

	YEAR 1	YEAR 2	YEAR 3	FUTURE	FUNDING SOURCE	LEAD AGENCY/CMTE	SUPPORT AGENCY/CMTE
Goal #1							
Strategy A:							
Action							
Action							
Strategy B:							
Action							
Action							
Goal #2							
Strategy C:							
Action							
Action							
Strategy D:							
Action							
Action							
Goal #3							
Strategy E:							
Action							
Action							