

5-2014

Preserving the New England Mill Town: Encouraging Adaptive Re-Use by Identifying Community Factors that Contribute to Success in Mill Revitalization Districts

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PRESERVING THE NEW ENGLAND MILL TOWN:

ENCOURAGING ADAPTIVE RE-USE BY IDENTIFYING COMMUNITY
FACTORS THAT CONTRIBUTE TO SUCCESS IN MILL
REVITALIZATION DISTRICTS

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Spring 2014

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INTRODUCTION

*There is one common thread in thousands of stories that have come out of the Whitin Mill Complex over the last century and a half — **community*** (Collins, *Blackstone Valley Tribune*).

Mill Revitalization Districts have the ability to generate new vitality in some of the nation's oldest communities. When efficacious, these districts promote economic development, community beautification, and environmental health. However, when attempts at redevelopment fail they leave ugly scars in the form of decaying buildings and underutilized resources. Monetary investment and intent to improve a community are two factors that by themselves, will not preserve a mill complex or benefit a city. The first Environmental Protection Agency (EPA) recognized districts in the early 2000s showed signs of varying success; there was a missing catalyst besides monetary investment. In fact, it seems that it is not the developer, but something within the community itself that produces a successful revitalization.

This project was founded on the idea that the human elements of a community promote the realization of a Mill Revitalization District (MRD). The residents and workers of the community are the people who directly interact with the mill. These people are the ones living in a redeveloped mill loft, shopping at a mill complex with commercial offerings, or even working in a revitalized mill that has been returned to economic vitality. However they choose to utilize the MRD; their interest, patronage, and participation is dependent on their understanding of the community, and whether or not the MRD is compatible with it.

It stands to reason that if a developer wants to effectively restore a mill building, they must understand what the community desires in the completed project. Evaluating MRDs in Lawrence, Uxbridge, and Whitinsville, MA, this study considered responses to a community questionnaire to find out the exact desires of each respective community. Using the knowledge that respondents provided, the researcher acquired an understanding of the existing community perception of the mill, the character of the town, and current community needs in each case study. With this conception of each community's values, the researcher was able to assess how each MRD aligned with these principles, and how community values influenced the likelihood of the public to support the new mill.

The most successful MRD case studies not only fulfilled town needs, but also provided a home for community events. Another strong trend, was that a community's desire for historic preservation, rather than just being a historic community, made it more enthusiastic for mill revitalization. These structures were once so vital to everyday life because they provided jobs, commerce, and a sense of community, and it appears that the same elements are fundamental to making them vital once again. A mill slated for adaptive re-use should be seen as a series of open doors for a developer, and the community voice is the key that opens those doors. Mills once served as the heart of New England towns, therefore it is appropriate that the communities that rally to save them expect a similar level of involvement in the new mill.

Mills are a prevalent part of New England history and culture. They were the original economic engine of Massachusetts, and the region as a whole. Many New England cities were constructed around their mills. Sadly, in this day and age, most mill properties are abandoned or underutilized.

This is a result of changes to the nation's business model since the time of the Industrial Revolution. No matter how decrepit; enduring mill complexes generally still serve as historic, cultural, and public icons. Mills also frequently occupy prime real estate within the downtown or city center. As a result a growing number of cities, in and around the Commonwealth, are beginning to embrace smart growth goals and historic preservation practices by creating MRDs. These MRDs contribute to the vitality of their downtowns and recapture the value of these mill properties.

To isolate the characteristics that are common to MRDs is difficult. They are all areas that encompass one or more historic mill buildings and the surrounding structures. Mill districts may be denoted by special zoning, and historic preservation is usually a primary goal of such a designation. The types of mill complex assemblies that are integrated can range from worker housing and service buildings, to canal infrastructure and these assemblies fluctuate among different MRDs. There is no concrete definition for what "revitalization" entails as each MRD generates unique results in their respective community.

One thing that is consistent across MRDs is the potential for economic development. According to the online "Smart Energy Toolkit" available at mass.gov, revitalizing mill districts can provide a fiscal boost to the entire community. Redeveloping mill buildings accomplishes a number of smart growth goals that are financially beneficial to cities. These goals include the re-use of existing structures that may have previously been a drain of public tax dollars, high density development, environmental restoration, increased housing and job opportunities (in particular for local workers), positive fiscal flows through property taxes, flexible space for small firms to grow and prosper, and a heightened proclivity for surrounding properties to reinvest, increase in value, and result in a higher tax revenue.

Further data collected on redeveloped industrial sites in the United States showed a strong correlation between redevelopment and job creation. In a California study, the 315 redeveloped properties considered by the research team generated 21,000 new or relocated permanent jobs and bred \$475 million in tax revenues (Bartsch and Deane 2002). Other research suggests that the run-of-the-mill remediation venture produces an average of ten jobs per acre, and that the median public cost per job created is about \$14,000 (Pepper 1997). This is a remarkable statistic when compared to findings in a 2010 paper which state that the conventional fiscal stimulus is too costly per job created to fill the huge national job gap (Bartik 2010). Bartik estimates that under the fiscal stimulus model there is an average public cost per job created of approximately \$112,000 – the cumulative cost of eight out of the ten resulting jobs created in one acre of an industrial redevelopment.

In addition to these impressive economic development benefits, there is frequently a community attachment to historic buildings and districts. Many citizens in mill villages can trace their ancestry all the way back to their perspective mill. Many families still reside in the mill worker housing or in the mansions designed for the mill owners. My own middle school history teacher in MRD case study Whitinsville, MA, incorporated the role that our hometown played in the Industrial Revolution into his course syllabus each year.

If for nothing more than the impressive presence of the mill yard clock or smokestack in the city skyline, these structures are often tenets in each of their communities. Even if a community member has never set foot in the mill, the physical structure is likely a part of their daily life. The buildings and the history they stand for are romanticized and enjoyed by many residents. Whether attachment to the mill is tangible or emotional, these historic mill districts present a valuable cultural asset. As Kotval and Mullin found in researching New England mill towns, communities will often rally to preserve the buildings because “icons die hard (2009).”

As with any Brownfield redevelopment however, the remediation of mill buildings comes with auxiliary costs and challenges to comparable greenfield developments¹. Mill revitalizations in particular pose unique concerns with regards to scale, as mills are generally larger than most single use buildings. This presents great potential for mixed use designs, but requires creative design solutions. The location of the potential MRD also bears great consequence because they often require extensive retrofitting of local infrastructure to meet modern building and environmental codes. Between old wiring, plumbing, a lack of accessibility according to the Americans with Disabilities Act (ADA), and insufficient parking, building redevelopment can get very expensive. The state of the building itself can also add to the hefty price tag of redevelopment. Any structural shortcomings must be repaired in addition to the infrastructure improvements. This necessitates collaboration and financial support from a number of government and local stakeholders.

For all of these reasons, the process of redevelopment can be more convoluted than greenfield development. Revitalizing any old property (with special emphasis placed on historic industrial areas) generally involves a complete redesign and environmental cleaning of the site. Most mills were constructed in a manner that is not consistent with current zoning, and must be brought up to code for any new uses. It is also common for former industrial properties to have dealt with noxious substances that must be completely removed from the site and the soil per EPA regulations prior to human use of the site.

The development challenges at the inception of a revitalization project can be daunting, but the economic and social returns that cities stand to gain from a successful Brownfield redevelopment can be huge. The aforementioned public savings on jobs created as a result of redevelopment can hardly be rivaled by other avenues of job creation, and ensuing public benefits more than compensate for higher up-front development costs within a few years.

MRDs have been successfully used by some communities (including two of the following case studies: Lawrence and Whitinsville) to address the challenges of redevelopment and to revive dynamic downtowns that maintain their historic New England character. Although there is no set of guidelines for the implementation of a MRD, there are a number of applicable strategies that communities interested in revitalizing a mill district can use to alleviate some of the stresses renewal places on developers. Large scale redevelopments like mills have the capability of incorporating a community vision in their own mission. These uses can be included in the Master Plan, and MRDs are often eligible for special permit granting and other unique permitting

¹ A Brownfield is defined by the EPA as an existing property whose redevelopment may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Greenfield construction is used to mean new development on previously undeveloped land.

processes. These processes include relaxed zoning regulations and building codes that encourage development; flexible zoning bylaws, incentive overlays, and historic tax credits. Most mills are also prime candidates for green technologies and other infrastructure improvements that can be funded through existing state level grant programs.

The existing revitalization literature supports that the effective implementation of a MRD is contingent upon four factors (*Smart Growth* 2012):

1. **The funding.** Whether the source is public or private, or comes from grants or donations, financial capital is the first step to getting a redevelopment off the ground.
2. **The site.** Most potential MRD sites require a large amount of repair and remediation, but a structure that is adaptable to existing community needs and zoning, and that is in a viable location to support development within the community is necessary to revitalization.
3. **The market.** As is true with any real estate project, the demand must be present for implemented uses to have any merit. The market is, of course, largely dependent upon the members of the community.
4. **The community.**
 - a. Place attachment or other emotional ties to the mill structure could bolster local support for MRDs.
 - b. Local culture, character, and community preferences should be considered by developers for the most effective execution of a MRD.
 - c. Public participation is a cornerstone in any planning process. In the MRD development procedure this is an important step for gaining an understanding of the community values that locals want to preserve, and for strategizing to meet existing needs.

This project is based on further exploration of the community aspect. The research design centered on the goal of identifying which community factors contribute to the viability of a MRD. Community values and commitment to revitalization weigh heavily on the success of any redevelopment project; these values are evidenced by the levels of public participation in support of revitalizing the mill. The project hypothesized that the local culture of a community, the sense of place attachment, and the values that local residents associate with the historic building stock of their city would contribute to the backing of the MRD. Other factors that contribute to community involvement in mill revitalization include: existing local leadership, goals of the redevelopment that are consistent with the community's Master Plan and zoning, and an inclination on the part of the developer and the public to engage in public-private partnerships in regard to amending the Master Plan and/or zoning, investing in the project, and securing diverse funding options.

To conduct an analysis of community factors, the researcher considered three existing MRDs in the state of Massachusetts: the Monarch Lofts in Lawrence, the Stanley Woolen Mill (SWM) in Uxbridge, and the Whittin Machine Works (WMW) in Whitinsville. These case studies were selected because they were met with varying degrees of support ranging from indifference to zeal (Figure 1). Three cities or towns that differed in their implementation and realization were studied with the goal of identifying the types of community involvement that influence public support within mill revitalization host communities. Based on survey research conducted in the case study MRDs, the resources, characteristics, and built elements that community members in each case valued

were identified. The researcher was then able to consider how each MRD addressed the needs, preferences, and existing character of its host community, and how this may have influenced the levels of public support that a MRD requires to thrive.

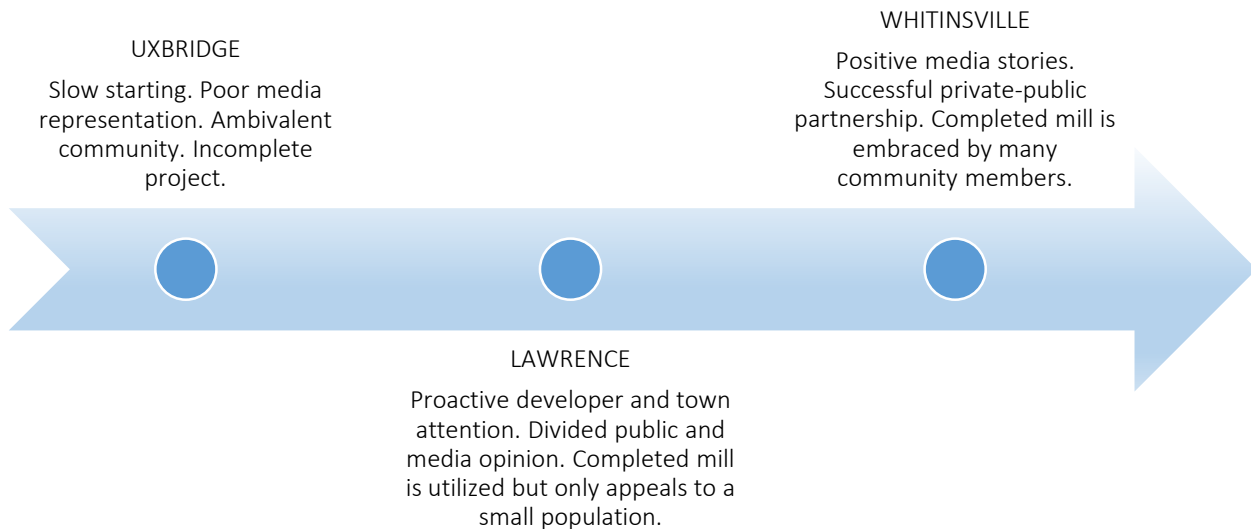


Figure 1. The three MRD case studies considered in this project vary in how effectively they are implemented and in the public perception of the project.

Using a composite of qualitative research techniques including survey collection, documentary research, asset mapping exercises, and an exploration of town meeting minutes and newspaper clippings, *Preserving the New England Mill Town* provides an examination of these MRDs to investigate what features and indicators of community support contribute to their success. The final product is a comparative analysis of the three case studies demonstrating that consideration of community input is essential to a prosperous revitalization project. The ensuing report reveals a great deal about each community by merely asking ten questions about the personal preferences and opinions of respondents, and it is precisely this type of intelligence that could help developers implement new uses that will be met with enthusiasm.

Community support is the theme of this project, and it is demonstrated by existing literature and the results of the analysis that the community can help, as well as hurt, a redevelopment. The investigator embarked upon this research endeavor as a lifelong resident of Whitinsville. Due to an intimate understanding of this town, the project was designed based on observations about how mill culture is woven into society there, and the examination sought to detect where some of these traditions are apparent, or are lacking, in the other case study towns. Something that has always been obvious in Whitinsville is how the mill was placed on a pedestal. It continued to loom over the town even after the iconic smokestack was demolished. “The Shop” was glorified in local history curriculum, in the works of resident authors and artists, and, most of all, in the local media. Bob Ansin, a developer at another case study site (the Wood Mill in Lawrence), experience firsthand how media portrayal can earn praise or shatter plans (Duggan 2007) in his redevelopment endeavors.

Because it was hypothesized that media representation weighs heavily on public support of a redevelopment, it is with media portrayal that the data analysis portion of this report begins. For each of the three case study towns, the researcher found at least ten newspaper articles that were published during the time of the remediation. These articles were from an array of authors and sources, and covered varying aspects of the redevelopment process, the developer, or the mill uses. The analysis of these articles was based on their subject matter and the tone of the author. Further, the analysis was broken down into what types of reports resulted in positive media coverage and what types of reports resulted in negative media coverage. Articles marked by a “positive” tone were those that praised the developer for proposed or implemented uses, alluded to the renovated mill playing a progressive role in future community events, or even just expressed curiosity in a manner that inspired a constructive buzz about the mill. “Negative” articles criticize plans or action on the part of the developer, or represent the mill building itself as something that is not worth preservation.

Preserving the New England Mill Town was founded on the hope that by acknowledging the kind of community input that developers can use to evaluate the viability of a site for their intended course of remediation, some of the risk involved in such projects will be reduced causing developers and other stakeholders to more willingly invest in MRDs.

These mills stand for more than the decrepit structures that are a part of the public’s daily sights. They represent the people who once made their living in these spaces, and the memories of the whir of looms echoing through the downtown. Memory is a very powerful motivating tool, and this project demonstrates that it is this cultural attachment or commitment to local history that sets some MRDs apart from others.

METHODOLOGY

Based upon the literature considered regarding the benefits of mill revitalization, and the role that community support plays in effective implementation, this study was undertaken with the goal of answering the following research questions:

1. Do benefits or potential benefits to property owners produced by the MRD in selected cities weigh on their support of the endeavor? Are respondents who indicate that they felt they would benefit from the MRD more likely to participate in the redevelopment process?
2. Are respondents more likely to participate in the redevelopment process or patronize the new mill if new uses align with community needs they indicated on the questionnaire?
3. What are the community values that the MRD supports (for example: arts, recreation, scenic values)? Do case study MRDs that support community values demonstrate higher levels of public support?
4. How do local residents' value of historical properties play into community support?
 - a. Are there already many historic structures that are protected on the National Register of Historic Places? Are the perceptions of community members consistent with the actual amount of historic building stock?
5. What is the role that the local media opinion plays in community support? Do respondents indicate that their perception of the project was swayed by the media?
6. Who traces their ancestry to the mill? Do these families still live in town? Is a community with many residents who have lineage linked to the mill more likely to rally public support?

There are so many questions that surround the mill revitalization process. By conducting a comprehensive analysis of documents and articles related to the mills in each community, and by using a standard survey questionnaire for all respondents, this project was able to provide insight on many of these issues.

The research methodology started with documentary research of information related to the mill revitalization and the case study towns. Sources considered included: the study of newspaper stories about the revitalization, the National Register of Historic Places database, and Town Meeting minutes.

The main component of the final analysis was the community feedback gathered from the questionnaire distributed in each town. From the answers that respondents provided, the researcher was able to ascertain why community members chose to support the MRD or why they chose not to. By comparing these responses (gathered after the completion of the MRD), to the documentary research about the mill prior to or during redevelopment, the project was able to observe whether these feelings were consistent with the feelings at the outset.

Documentary Research

Considering documents, articles, meeting minutes and databases outside of survey data collection, the project goal was to gain an accurate view of what the feelings about the project were. Another objective was to identify the community's characteristics. The researcher chose to analyze newspaper stories and town meeting minutes to gauge community support at the inception of the project. It was important to the data analysis to understand how stakeholders felt at the

outset, because these opinions were neither colored by the prevailing public opinion of the completed project, nor would they be influenced by the intent of the research. The last facet of the preliminary documentary research was a consideration of the historic building stock in each case study. This was accomplished by referencing the National Register of Historic Places. This provided a basis for the community's commitment to historic preservation, and allowed the community survey to measure whether the community residents surveyed indicated that they shared this commitment.

Most mill revitalizations have lengthy development periods, and during that period, public opinion can change a great deal. For that reason, newspaper articles from the beginning to the end of each development period were analyzed to measure the level of public interest, what types of community members supported or opposed the mill, and to garner an idea as to what the media's overall portrayal of the redevelopment was.

For each town studied the goal was to review ten articles that spanned the length of the redevelopment period. The hope was to see what people were saying about the redevelopment, and whether opinions changed as the project progressed. The review of newspaper articles was also useful for gathering information about the developers. Based on the selection reviewed, it was discovered that none of the developers in the case study MRDs were from that city or had any personal attachment to the mill. It was also concluded that each mill had similar options for funding.

In a similar vein, town meeting minutes from the entire development period were studied to determine what community concerns were, and to evaluate the support that the redevelopment received from community leaders, such as planning board members. Electronic copies of minutes available on the town websites were studied by running a search for the name of the mill.

Lastly, the database from the National Register of Historic Places was studied to see what buildings were currently protected in each city (National Register 2014). This underscored the value that each of the case studies place on preserving their historic building stock. This evaluation also helped to bring attention to the actual level of historic structures so it could be assessed whether questionnaire respondents had an accurate perception of their city's commitment to historic preservation.

Community Questionnaire

For the bulk of the research, a survey was developed for distribution to community stakeholders. Stakeholders were identified as those community members that would be influenced the most by the MRD. These stakeholders included local business owners that were either in close proximity or in direct competition with businesses in the mill, residents living within a five mile radius of the mill, and community leaders/officials. This survey was designed with the intent of answering the eight questions identified later in this section, and was administered to a minimum of ten (10) research subjects in each of the three case studies (See Appendix A).

In these attempts to collect feedback from MRD stakeholders, the researcher reached out to local businesses and community leaders (such as town officials and neighborhood associations) via email correspondence. Surveys were distributed to locals at public places such as recreational

trails, community events, public libraries, and ball fields. Residents who live near the redeveloped mill were also contacted to complete the questionnaire.

Questions answered as part of the community questionnaire procedures served to identify:

1. What each interview subject sees as an asset to the community.
2. What each interview subject feels the community's character is.
3. The community residents' personal definition of community revitalization.
4. Their experiences before and after the revitalization.
5. Their impressions of outside "experts" or developers.
6. The role that the local media plays in public opinion of redevelopment.
7. The value that they place on historic preservation.
8. The effect that they expected the mill to have on local business.
9. Their goals for the town.

The first portion of the survey gathered personal information from respondents to determine if demographics weighed on their views of case study mills. These personal questions also inquired about the length of time that respondents had lived or worked in town, and whether past generations of their family were from the community. Questions regarding length of time associated with the community, reasons for choosing to live or work in town, and lineage in Town were asked with the goal of determining what aspects of the community respondents were attached to, and whether a personal family history is a contributor to place attachment.

The middle of the community questionnaire asked questions about the community. Respondents were asked to describe the community in the hope of painting a picture of the existing character and what residents and workers like and dislike. Respondents were asked questions about favorite buildings, restaurants, green spaces to ascertain what types of structures, businesses, and natural resources are valued in each case study. Participants rated the value that they place on historic preservation and were asked to state whether they feel that their community is historic. These questions about perception of historic status were designed to observe a possible correlation between the value placed on preservation and public support of a redevelopment.

The last section of the survey asked specific questions about the mill redevelopment and respondents opinion of it. The majority of these questions were multiple choice. Participants were asked how they felt about outside development entities making changes to historic mill structures. They were able to select multiple pre-populated options that categorized their concerns (or lack of concerns) about outside entities. These answers served to demonstrate how concerns about developers may sway community support of a revitalization.

Similarly, respondents chose from pre-populated options (as many as applicable) about their level of participation in the redevelopment in their community. They could select how and why they did or did not participate.

Another question asked respondents to rank whether any reports they viewed or read about the mill redevelopment influenced their opinion or level of support. Lastly, the survey asked participants what their personal definition of revitalization was, and how the MRD was consistent or inconsistent with this view. Comparing resident and community stakeholder goals to the

actuality of revitalization provided a depiction of whether congruence between community and developer visions yield higher levels of community support. The final question asked respondents to voice any concerns that they had about the redevelopment affecting the current business climate, residential character, or overall way of life in the community.

Selection of Survey Subjects

Whitinsville, MA

For each case study, a research design was based upon surveying those who stood to be affected the most by the MRD. Since ambivalence is such a prevalent issue in cases of revitalization, it was surmised that those who had little to gain or lose at the inception of the redevelopment plan would not feel strongly about the project in either a positive or a negative manner. Those citizens who live or work close to the mill however, would in some fashion be affected, and therefore might feel that they have a higher stake in the mill redevelopment. Bearing this in mind, the project sought research participants who were the highest stakeholders.

Noticing for-sale and rental housing options, assisted living facilities, and a wide array of business all within sight from the mill yard in Whitinsville, the researcher simply walked up Church Street (the downtown commercial strip) and onto Elm Place (an adjacent residential neighborhood made up largely of single-family homes) distributing surveys. The Whitinsville target population was proximate business and home owners, but surveys were also distributed to employees at nearby businesses, local renters, long-time residents of the town, and business owners from all across town who may be in competition with new mill uses.

A particular interest was invested in the input of town employees and officials about the revitalization. The researcher reached out to the Northbridge Town Planner and to the rest of the Planning Board and was greeted with the zeal of a community who is proud of what these projects have accomplished. Their knowledge of the town's zoning and planning procedures provided strong professional input. Do these community members feel that the revitalization supports the growth of the town? Or that it will contribute to gentrification or not fulfill needs of the community? When the board granted special permits or legislated heritage overlays, did they imagine a final product like the one that was realized? What were their hopes and concerns when compared to stakeholders without planning knowledge? By surveying this combination of the most invested stakeholders and community members valuable input can be gained as to the factors that allowed the WMW renovation to flourish.

Lawrence, MA

Merrimack Street, Lawrence, MA is a veritable cornucopia of commercial offerings and innovative mixed use structures. The area was originally home to an array of mills, and at least three of these structures are still utilized today. One of these is of course the Wood Mill, but the adjacent Riverwalk office complex has had enormous success there and is a point of pride for the community. The former Southwick Mill on nearby Island Street has been redeveloped by nonprofit Lawrence CommunityWorks to form the new Union Crossing; a project that includes sixty

affordable apartment units, and has expansion plans which include the redevelopment of another mill into roughly seventy apartment units and commercial space.

This downtown environment was approached with a plan similar to the one designed for Whitinsville; research subjects were business owners, employees, residents near the mill, and city officials. Since so many of the preexisting businesses in the area are part of past mill revitalization projects, it was interesting to note how they answered survey questions. The researcher was interested to see if they would support the redevelopment because they are a part of the MRD as it exists and/or because they believe in the revitalization process. The questionnaire also inquired if businesses would oppose any development that could result in competition for them, or if they would worry that more mill apartments, storefronts, and restaurants will reduce the novelty and community interest in what they have accomplished.

Since the Wood Mill differs from the WMW and the SWM revitalizations in the real estate products that it offers, it altered who was targeted and approached for research. The Wood Mill is the only of the three case studies that includes for-rent housing. Given this, in addition to businesses and residents already in the area, the feedback of potential loft residents was of interest. It was thought-provoking to see how area young professionals, singles, or empty nesters who may want to live in one of the units in the Monarch Lofts completed surveys.

Uxbridge, MA

Uxbridge is a community that is marked by an indifferent attitude toward the mill. In addition to the evident ambivalence, the town of Uxbridge presented added challenges to the effort of securing survey subjects in that the SWM is not as centrally located as the other two MRDs. This mill is situated in a much more rural suburban environment. Instead of being located amidst other local businesses and restaurants, it is much closer to low density single family neighborhoods, and the nearest commercial uses include nurseries and farm supply stores. While it is close to the downtown, it is not as obviously connected as many MRDs are. This created a research consideration that the geographical location of this mill could have a great deal of influence on how the community feels about its redevelopment. Would they feel differently if it were right in the middle of a bustling downtown? Is the historic Woolen Mill only so easy to forget because of an out of sight, out of mind mentality?

No matter the reason for the community's lack of interest in the project, this issue of location did force the expansion of the normal radius for survey collection. The researcher reached out to residents that live in the residential area surrounding the mill. Met with minimal responses from community leaders and residents in close proximity, tables were set up in public places like parks and trails for the collection of community questionnaires.

LITERATURE REVIEW

The main goal of the MRD is downtown revitalization. Not only does this elicit community investment, but it is also consistent with current trends in planning. In fact, “Downtown Renaissance” has become something of a buzz term in contemporary Master Plans across the country. Downtowns are often the heart of a community, the life force of the economy and a gage of civic history and character. By definition a renaissance is a rebirth, revival or renewal. Many economists and planners believe that the revitalization of healthy and vibrant downtowns is vital to the nation’s future and this is just what successful implementation of a MRD can accomplish; especially since in many Massachusetts communities the mill was the heart, the pulse, and the personality of the city. Existing works suggest that the community element of mill revitalization mobilizes the masses to get behind the project – the downtown structures are a tangible representation of the community and so by appealing to nostalgia surrounding historic structures, developers can reap the benefits of memory as a motivator.

Downtown redevelopment expert Christopher Leinberger claims that the fact that many downtown areas continue to not only survive, but to progress and evolve, is a demonstration of an emotional commitment to urban heritage (Leinberger 2005). He uses twelve steps to describe the process of leveraging this community support to catapult redevelopment forward until it has reached what he calls “critical mass;” meaning that the process is inexorable. A revitalization that has reached critical mass fosters the type of positive public attention that draws people to the redevelopment, resulting in amplified revenue in the form of increased activity and property values (Leinberger 2005). Leinberger’s findings demonstrate that community is the key factor in realizing redevelopment goals, and in overcoming the significant financial, legislative, and cultural obstacles for redevelopers.

The construction budget for downtown improvement is steeper than most suburban projects, and this is true in mill revitalizations involving Brownfield properties. For developers; financial returns are limited early on, and the potential for long-term returns as a result of downtown activity spurring further investment can be difficult to envision when faced with so many upfront costs. A cost comparison study in Portland found the differential between remediating an industrial park and developing a comparable greenfield site is approximately \$1.56 per square foot; a total of \$982,055 for the specific site considered. The same study analyzed public benefits for each site, and the remediated industrial property in question yielded an annual public gain of \$423,000 (Clemmons, Moyle, and Thompson 2004).

On top of the standard construction rates, the cost of the environmental clean-up is a huge stumbling block for Brownfield developers. Site assessment costs in adaptive re-use sites can range from \$20,000 to upwards of \$500,000 depending on many factors such as lot size and pollution level. Additional costs unique to Brownfield redevelopment include environmental remediation, environmental remediation insurance, legal fees, financing premiums, and the costs associated with a longer development period. However, Clemmons et al. show that although the initial price tag of remediation is higher, in this example their project will pay for itself in public benefits within a few years, and the developer will reap the benefits of higher property values and increased rents surrounding his or her project.

There is also a number of regulations and grants in place to attempt to take the strain of environmental remediation off the developing parties. The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) for example, was legislated in 1980 with the intention of recognizing and cleaning contaminated sites. Specifically, CERCLA required the parties responsible for the pollution to pay for the cleanup, therefore taking the burden off of those trying to redevelop the property. This was groundbreaking in that the liability for cleanup under the act to needed be retroactive, and encompassed actions causing pollution prior to CERCLA becoming law. Under this act there are three types of accountable parties that can be charged with paying for clean-up: the creators of the hazardous substances, the property owners of the contaminated site, or the transporters who determine the disposal site for hazardous substances (VanLandingham and Meyer 2002). Supplementary to laws that favor new developers, Federal Funding Programs also displace the weight placed on those remediating Brownfield properties. Federal Funding Programs run through the EPA include but are not limited to, assessment grants, revolving loan fund grants, cleanup grants, job training grants, targeted Brownfields assessments, and the American Recovery and Reinvestment Act. Some of these programs even allocate money specifically for site development such as the Industrial Sites Reuse Program, Infrastructure Development Program, Infrastructure and Facilities Improvement Program, Tax Increment Financing Guarantee. There are other state specific programs, such as State Subsidized Environmental Insurance in Massachusetts which backs redevelopment loans with discounted environmental insurance. Many development institutions also provide funding for projects that suit their agendas, such as the local Department of Community and Economic Development. These programs are great resources for assisting in the revitalization process, but no amount of wealth or funding will make for a successful redevelopment if the host community does not endorse the project. Some, or all of these funding streams, are available to all redevelopment projects which indicates that good funding alone will not produce a prosperous revitalization.

What does vary between mill communities is attachment to the mill structure, and the level of community support for its preservation. Community involvement is an important factor in the successful redevelopment of contaminated land, since it is the community that confronts the results of any environmental success or failure on a daily basis. Past studies support that meaningful community involvement can be achieved when there is a cohesive community, a common vision in the community, and a commitment among the development entity and the public for long-term engagement (Brown, Brown, Graham 2003).

In addition to high levels of community involvement, place attachments have been identified as strong motivators for the support of redevelopment enterprises. In this research, place attachments are understood as positive associations with built structures and communal sites that support identity and afford other emotional benefits. In a 2003 *Journal of Environmental Psychology* article, place attachment was identified as a prospective strength in the revitalization of declining suburban neighborhoods (Brown, Brown, Graham 2003). The study's methodology utilizes categorized linear modeling analyses to survey attachment to the home and to the larger community for over 600 residents within a declining neighborhood. The data gathered shows that place attachment is stronger for those who own their homes, for long-term residents, and for non-white populations. Place attachment is also higher for individuals who perceive a lower crime rate and who have a greater sense of collective efficacy (defined as a combination of social cohesion and social control) in their neighborhood. This study has shown how place attachments influence

community members to invest in their homes and their block. The researchers recognize that more examination must be completed for the most effective utilization of place attachment bonds to arrest the decline of deteriorating neighborhoods, and this is certainly a tool that is applicable toward the revitalization of mill complexes.

Consistent with this assertion that successful remediation requires a collective vision and a sense of attachment to the site, Christopher Leinberger's twelve step system for downtown revitalization outlines what he views as the most effective phases through the often difficult process (Leinberger 2005). Credited with being an expert on downtown renewal, he has branded this system to combat the decline of downtowns across the country by generating community support so that the public catapults the revitalization into realization.

Step 1: Determining if community stakeholders are invested for the long-term

The first step is deciding whether the intention for and commitment to a long-term effort is present in the community. Leinberger identifies memory and its associated emotions as the most powerful motivating tools at this stage. He cites emotion as the place where 50 percent of national real estate value lies. He explains that emotion is why people build great structures like these mills that still stand the test of time and he asserts that emotion is the reason that civilizations choose to spend millions more to renovate these structures than it would cost to tear them down. Mill complexes may have been constructed with the goal of economic development, but they are preserved for years after their economic use expires because the community has some sort of emotional connection to the structure.

While focusing on social stimuli, the twelve step system does not overlook the substantial economic incentives to remediation. The public and economic benefits of redevelopment are becoming more widely recognized, and some communities are starting to believe that they outweigh the hefty price tag of remediation. In a 2005 case study, DeSousa discovered that an increased aggregate property tax base was considered a more important measure of success within private and public sector subjects surveyed, than reducing contamination (DeSousa 2005). A similar study by Lange and McNeil of 228 EPA brownfield pilot-grant stakeholders found that the outcomes that study participants identified the most with the success of the project were an increase in the local tax base (like the DeSousa study), and long term job creation (Lange and McNeil 2004). Additionally, since the early 2000s, economic redevelopment has become a goal of brownfield cleanup at the federal level. This is evidenced by the signing of the Small Business Liability Relief and the Brownfields Act, which expanded both liability protection and funding for these types of projects, and by the EPA provision of \$75 million in brownfield grants in 2003 (Heberle and Wernstedt 2006).

According to a document on Smart Growth in the state of Massachusetts, mill revitalization also has the following economic and public benefits:

- Contributes to smart growth practices by reclaiming underused space and establishing new growth in areas with existing infrastructure.
- Preserves historic, cultural, or social icons important to community identity.

- Can support a variety of businesses, interests, and fulfill needs of the community. Mills are ideal for mixed use developments, which provide high density housing helping to prevent sprawl and conserve natural resources, agricultural land, and forests by concentrating development.
- Often reduce auto dependency by concentrating development to cultivate healthier communities while mitigating greenhouse gas emissions.
- Reuse converts areas that are a drain on taxes and municipal services into financial assets through improved property values, higher property taxes, and new sources of revenue.
- Like the original mill villages that provided work, home, and community amenities within a very small geographic area, MRDs produce employment opportunities for local workers; which can cut commuting behavior and encourage a more walkable downtown.
- Surrounding property owners tend to reinvest, making their properties more valuable and typically resulting in a higher tax yield for the community (“Smart Growth”).

An added environmental justice benefit results from the fact that the most noxious sites are usually located in distressed neighborhoods. One study compares the proximity of Brownfields to the residential location of minority and economically disadvantaged families – these families were very highly concentrated in contaminated areas. In the fifty census tracts in Milwaukee, which is more than 80% African American in population, this group encompassed 12 percent of the total land area but made up 25 percent of the city’s Brownfields. The neighborhoods with high levels of poverty occupied 32 percent of the city land but an alarming 56 percent of the city’s brownfields (McCarthy 2006). If Brownfield remediation were given credence as a viable economic development technique, or if at minimum the financial risks of remediation could be cut, the implications for environmental justice would be enormous. Perhaps these high concentrations of disadvantaged families in contaminated neighborhoods could not only be remedied, but local jobs could spur development to help change their economic status.

So how do developers mobilize communities to support revitalization efforts? It seems obvious that the community stands to benefit from redevelopment, but until their own personal emotional, societal, and fiscal motivators for turning around the downtown are revealed, it is difficult to attain a following. Leinberger suggests that this process of forming a public/private partnership should be professionally managed and funded by the private sector, but emphasizes that it is important that the public’s needs and concerns are considered first and foremost.

Step 2: Plan a project that is consistent with the personality of the town

Building upon the memory and vision outlined in Step 1, the next phase hinges upon developing a sense of urbanity that is consistent with the goals and the personality of the town. This phase contains a number of sub-steps. The first of these is to define the character of the community and the downtown. This includes delineating boundaries, desired densities, architectural styles and connections to adjacent neighborhoods and towns. Delving further into establishing a downtown character; the preferred housing, employment, and retail options must be discussed. Perhaps most important to this step, is to establish new cultural facilities and opportunities for community involvement, and to strengthen the existing cultural resources.

During this phase, gaining an understanding of what is important to the community as it currently exists, and as it wants to exist becomes crucial. Cultural mapping (or cultural asset mapping) is a useful tool for developers at this juncture. It enables researchers to cognize culture, understand history, and to promote appropriately creative development to bridge the gaps in local features. Therefore, in undertaking a large scale redevelopment such as a mill complex, an understanding of the existing culture and the community's current view of local assets is necessary for the mill to perform at its highest level of success. Patrick Geddes cited "Folk-Work-Place" as the key ingredients for surveying the resources in a community. This formula is the basis of cultural mapping. It is also very similar to the factors identified as having the greatest influence on the success of a MRD.

In a Canadian document entitled "Cultural Mapping Toolkit", the process of cultural mapping itself is defined as: gathering, recording, evaluating and blending information in order to describe the existing cultural resources, networks, links and patterns of usage of a given community or group (Creative City Network of Canada 2010). How the mill feeds into these networks and patterns bears great consequence on how locals will use the redeveloped mill. For example: levels of community support will be drastically different in a situation where the mill provides jobs, and is a part of the daily life of the population, in comparison to a mill that is of dangerous structural status or is viewed as a public tax drain.

The most important objectives at this stage include understanding the existing culture and city goals of a host community. This allows developers to work with the public to create a plan that nurtures the culture, fulfills prevailing needs, and promotes future objectives. If the community is heard when they voice their sense of urbanity, then it should be possible to cultivate a structure that is utilized and adored both for its built form and for its internal uses.

Step 3: Let the public sector take the lead

A common gripe among the public, and planners alike, is that citizen concerns are often overlooked. As such, Leinberger suggests the traditional "private/public" partnership be forgone in lieu of a partnership where the public sector takes the lead. In most redevelopment processes, public participation is sought at the outset when it may necessary to appeal to Town Council or Planning Board, but often developers quickly forget that it is the public who will frequent the new mill. The public also provides valuable insight to how the project should be completed. The private entities funding redevelopment also regularly forget that a continued partnership is crucial to keeping interest in the project alive. Public buzz is necessary for creating the critical mass needed to keep the cycle going, and favorable public opinion of the redevelopment is helpful in securing both private and public funding streams.

It can be useful to get the public physically involved in the redevelopment effort. According to Leinberger, the most palpable way to get the largest part of the community involved is to enlist residents in creating zoning and building codes that define what they view as their community character. With a developer who is willing to work with town officials and civilians to better the city or town as a whole, it is more likely that the public will be amenable to any zoning changes or special permits that may need to be applied for. The public can also be recruited to provide input on distributing appropriate tax incentives for new real estate development. Citizens with suitable

skill sets can help in the effort by improving public safety, developing more transit options, wider availability, and even in constructing parts of the facility.

Steps 4 and 5: Enact zoning and provide incentives that help developers help the town

Steps 4 and 5 involve zoning and incentives in place that make it easy to “do the right thing.” As this literature review demonstrates, it is far from simple to preserve historic buildings, and this is not merely an issue of funding. In many cities, the zoning has changed so much from their founding, that it would not be possible under current ordinances to rebuild these celebrated structures in the event of a disaster or a demolition. In order to preserve and maintain the existing architectural character of the town, said town must enact a zoning code that clearly demarcates the boundaries of the downtown, and other important districts. This is to make sure that the character of these areas and adjacent neighborhoods remain intact. For example, if historic preservation is a priority and is vital to the identity of the town, a “Historic Downtown District” overlay may be appropriate. If promoting economic development and small business startups are key, perhaps a “Downtown Commercial District” zone should be ordained.

Once boundaries and districts are in place, endorsing “form-based” code is an effective way to preserve aesthetic and community character, without having to focus too closely on allowed uses. Most zoning codes are based on what functions are permissible or prohibited, but form-based codes focus on how buildings and blocks relate to the entire street. Form-based codes are more lenient on parking ratios and other aspects of the site plan as well. These codes make it easier for developers to do what they feel appropriate for the scope of the project and the market that they intend to reach. The codes offer a win-win for the public and the private development entity because it sets in place some design requirements consistent with the personality of the town, while making it easier for developers to obtain building permits in areas that may otherwise have been difficult to construct in.

At this point, Leinberger suggests the implementation of a Business Improvement District (BID) or another non-profit. A BID is generally subsidized by property owners who voluntarily pay higher property taxes to fund the objectives of the BID. A BID primarily serves to improve the image of the downtown through means like bolstering perceived and tangible safety within its bounds, and creating community events to encourage foot traffic downtown. Additionally, BIDs often have permanent staff for cleaning, events, and marketing jobs.

While most MRDs are not non-profits, it is important to note that a successful mill revitalization can perform many of the same functions as a BID without raising property taxes. Mill revitalizations in fact, generally lower taxes because they restore economic vitality to buildings that previously drained public tax dollars. A MRD with effective residential or commercial uses implemented draws more people into the downtown. More people on the street leads to an increase in perceived safety, and increased property values for other downtown businesses. In the case of a mill revitalization like the WMW, the redeveloped mill becomes a home for community groups and a host to community events. At this stage in a redevelopment involving mill properties, it is my recommendation that a MRD overlay be considered along with other zoning and non-profit planning instruments.

Step 6: Create a catalytic development organization to start the revitalization process

For the sixth step, Leinberger makes another organizational recommendation toward taking the strain off developers. Admittedly, most developers do not have the skills, financial capital, or (most importantly) the desire to undertake downtown redevelopment; for most potential downtown redevelopers, the risk simply is not worth the potential returns. This is where the sixth step, a “catalytic developer,” becomes useful.

Some cities have had success with using a catalytic development organization to start the process of revitalization. Generally, this facilitator is a private sector, nonprofit that provides financing assistance and related services for residential and commercial developers. Its charge is to fast-track downtown renaissance through directed investments in catalytic redevelopment projects in urban neighborhoods. This organization is formed to develop preliminary projects that have prospective demand above market risk, and is intended to show potential investors that downtown development can be lucrative. Once outside developers and financiers are attracted to the downtown; the catalytic development organization can still aid in the redevelopment process by helping to finance the gap between conventional financing and the amount of money required to make the project happen.

Initially, the catalytic developer may have to construct buildings from start to finish, but the goal is for the organization to slowly be able to phase itself out. The non-profit catalyst then makes way for new developers, who can function in a healthy downtown, without assistance from the non-profit. This type of organization is not necessary in all redevelopment projects (and actually is not utilized in any of the three MRD case studies considered in this project) but it can be a productive stepping stone in cities where attracting developers proves to be troublesome.

Steps 7 through 12: Implement real estate products that meet market demand

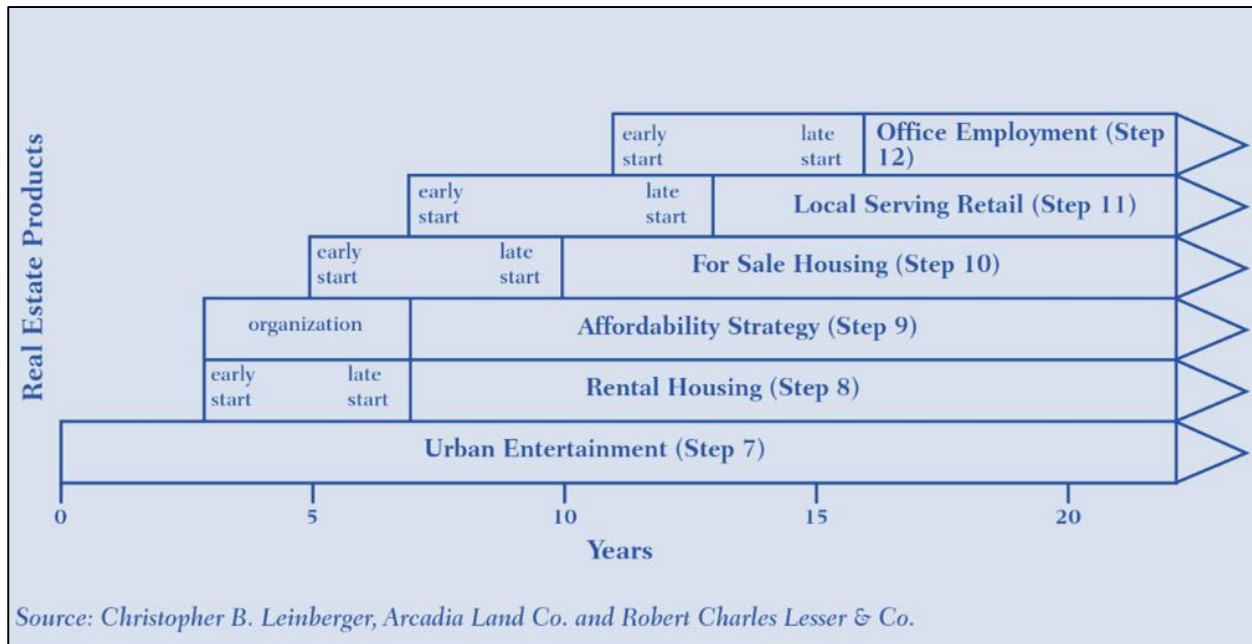


Figure 2. Downtown Real Estate Strategy Time Chart

The local community plays such a huge role in any development because they largely drive market demand. This stands to reason as the existing demand and subsequent success of any development depends almost entirely upon the local community. Consequently, the last six steps for successful downtown redevelopment outline a ladder of city center real estate products that progressively contribute to urban vitality, and require less overt support from locals moving up the ladder (Figure 7). Some of these products can be implemented immediately, and others require that some groundwork be laid in the form of preliminary developments. These developments demonstrate that there is a market for downtown revitalization. The primary rungs on the ladder are the types of products that might be implemented by the aforementioned catalytic developer. Where there is no such organization in place, these products are good starting blocks for incoming developers. Implementing these types of real estate products are often great plans for mill complexes.

The real estate products that have the lowest risk, in most markets, are those involving urban entertainment. The types of products installed at this stage can be theaters, art galleries, or restaurants. Regardless of community values and preferences, these types of uses tend to thrive, and have a good risk-to-potential return ratio. With high ceilings and generally open floor plans, mills are easily converted into galleries or studios, and have great prospective to be retrofitted for theater uses. Moving up on the ladder, the mixed-use nature of MRDs most often combines commercial uses with residential uses in the form of rental housing. The fact that MRD development can easily provide two real estate products, which reveals to more potential developers that the market is good for supplementary economic development, further demonstrates MRD potential for breathing new life into their host city or town.

Before moving on to other types of residential and commercial uses, Leinberger suggests implementing an affordability strategy to address the high costs of construction, and predict anticipated returns for developers. Focusing on commercial and residential uses, the affordability strategy helps to determine if the types of people who work and would like to live downtown can afford the rents and shopping options available there. Among other things, an affordability strategy helps cities to combat gentrification. Perhaps the most familiar example of this double-edged sword in the revival process is that of the creative economy. In this type of development, artists who rehabilitate fallow, but “trendy,” downtown areas are forced out when the downtown real estate is marketed at a rate that the pioneering artists can’t possibly afford. The study demonstrates the the issue of affordability needs to be considered. Many downtown projects, particularly those receiving government funding, have a minimum requirement of affordable housing. The problem with these requirements however is that construction is so expensive, the developers then must raise the cost of the remainder of housing to compensate for those units offered at “affordable” prices. The way to combat this type of toll, on those who want to live in downtown, is to impose these same types of requirements on suburban developments. Until ‘policy and housing market changes make that realistic, the best hope for developers and renters is for redeveloped uses to combine residential with commercial products, or leases, to subsidize these the rents required to make a profit.

What is lacking in current mill revitalization literature is a more focused attention to what elements of community character contribute to a successful redevelopment. This project hopes to bridge a gap in existing literature by investigating the factors that developers should pay attention to in a community, in order for the redevelopment to thrive. The research goal was to answer the questions surrounding what specific community factors can serve as indicators to incoming developers as to the community’s tendency to back the revitalization, and as to what types of uses they will support. Is the local community more concerned with job creation, or better housing options proximate to the downtown? Perhaps it is a commitment to historic preservation or to environmental health that rallies civilian backing of a MRD. Whether it is an emotional attachment to the mill, or implemented uses that fulfill existing community needs that elicit a positive response to a redevelopment process, questions like this should be considered in the planning process. Not surprisingly, the answers to such questions do vary in each case study MRD. What this demonstrates, is that only through gaining an intimate understanding of the community culture, both as it exists and as the city wants it to grow, can a developer hope to create a new use for an old structure that will be useful and treasured.

CASE STUDIES

Wood mill, Lawrence, MA

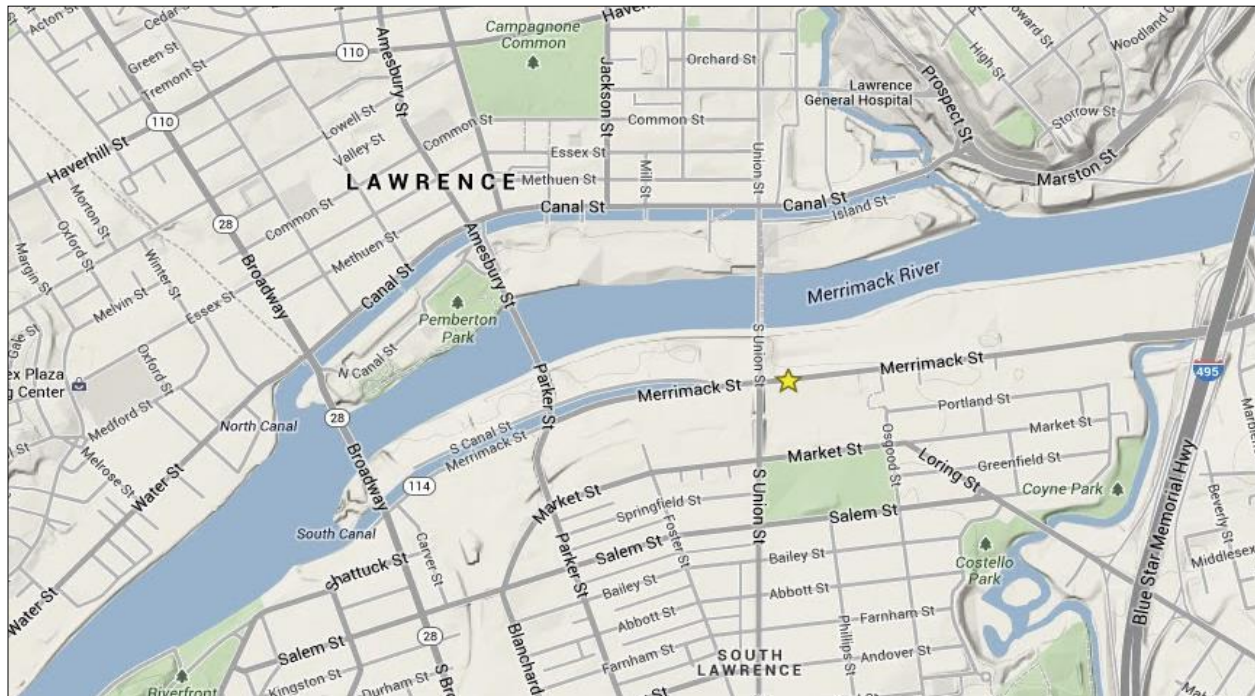


Figure 3. Map showing the area around the Monarch Lofts mill revitalization district in Lawrence (denoted by the yellow star).

Located in Northeastern Massachusetts and in the Merrimack Valley, Lawrence is one of the first planned industrial communities in the country. During its heyday, Lawrence was second only to Boston in terms of their manufacturing yield. Past and present manufacturing products of the City include electronic equipment, textiles, footwear, paper products, computers, and foodstuffs.

The original population of the City was largely comprised of Native people, specifically the Pennacook tribe. History suggests that it is also with these native people that the rich manufacturing culture and identity of Lawrence began; evidence of arrowhead manufacturing has been found on the site that would one day become the Wood Mill, and then, the Monarch Lofts.

The first Lawrence development came in 1655 with the establishment of a blockhouse located in what is now the southern part of the City. The site of Lawrence as it exists today was purchased by a conglomerate of local industrialists connected with the Water Power Association. The Association quickly began to capitalize upon the economic potential of the powerful Merrimack River. Canals were dug on both banks to provide power to the factories that drew thousands of mill workers and owners to the city; many of which were immigrant laborers from Ireland which gave Lawrence the nickname “the immigrant city.” Until the decline of the wool-processing industry, Lawrence was a central player in manufacturing. The deterioration of wool-processing in the 1950s was hugely detrimental to the City, resulting in lost jobs and a rapidly declining population as workers left the City to find employment elsewhere.

In the wake of industrial decline, Lawrence has made many efforts at revitalization with mixed results. For example, half of the Lawrence case study structure, the Wood Mill, was demolished in the 1950s. Then, throughout the 1960s and onwards, eminent domain² was used for a perceived public good to claim or demolish more buildings. Beloved Lawrence landmarks were razed to make way for new suburban malls, parking lots and garages. The historic Theater Row that once entertained mill workers, the city's main post office, and scores of other ornate structures were destroyed. They were replaced with fast food restaurants and chain stores which radically altered the character of Lawrence.

These efforts evidenced nuances of gentrification that highlighted a clash between classes and conflicting opinions of what constituted a desirable community. Early revitalization efforts came under fire for excluding the community who would be most impacted by urban redevelopment, and these are complaints that were echoed through this projects community questionnaire even regarding the newest redevelopment projects.

Into the 1980s, tensions concerning gentrification continued to heighten as the “immigrant city” began to draw a new ethnic group. Migrants from the Dominican Republic and Puerto Rico were attracted to cheap housing and a history of tolerance toward immigrants in Lawrence. However, loss of industrial jobs and demolition of neighborhoods that the City government considered blighted left many of these groups without work or affordable housing.

Further distorting the personality of a once traditional New England industrial City, Lawrence attempted to recruit members of the workforce by indiscriminately attracting industries that were unwanted in other communities, such as waste treatment facilities and incinerators. Although two trash incinerators operated in Lawrence until the late '80s, residents concerned with the preservation of the Merrimack that once powered the City were able to successfully block the construction of a waste treatment center on the banks of the River.

More trouble plagued Lawrence during the recession in the '90s; a wave of arson resulted in the destruction of many abandoned residences and industrial sites. Some of the mill factory buildings lining the banks of the river were among those that were lost.

As a result of lost history and a local desire to iconize a rich industrial past and to save natural resources like the Merrimack, the focus of urban renewal in Lawrence has recently shifted to preservation rather than to combatting sprawl. The revitalization of mill complexes throughout the City is central to saving the character associated with a proud industrial history, and if the past is any indicator, the community needs these projects to create balance; balance both between the past and the future, and among the diverse populations of the City. The Wood Mill case study selected for this project is a redevelopment that has this potential, and the existing character and attachment to mill structures in Lawrence is integral to its revitalization.

The Wood Mill is located in downtown Lawrence on the Merrimack River and was originally constructed in 1906. It is one the largest mill buildings in the world and is often described as a horizontal skyscraper.

² The right of a government or its agent to transfer ownership of private property for public use, with payment of compensation.

At the time of the project's completion in 2011, a total of around \$200 million had been invested into the redevelopment process (Duggan 2007). Dubbed the "Monarch on the Merrimack" the mixed-use revitalization was originally to include 600 luxury residential units, and 90,000 square feet of commercial space. When the plans to turn the mill into luxury condominiums fell through, developer Bob Ansin from green development company MassInnovation switched the plan to develop condos into rental apartments. With previous experience converting other industrial properties to mixed-use designs, Ansin understood the importance of not only an adaptable plan, but the requisite of securing reliable funding streams. He was able to get the Wood Mill listed on the National Register of Historic Places and apply for historic tax credits which helped cover the cost of rehabilitating the building. Now 204 ecofriendly loft units occupy the old Wood Mill; the new "Monarch."

When the accomplished developer acquired the mill building, the question in the minds of many was, "what do you want with a white elephant in a city like Lawrence?" Ansin's response to the naysayers was that the only outdated thing about the Wood Mill was the state of mind that the building was economically useless simply because it can't produce textiles any longer (Gellerman 2007).



Figure 4. Lawrence Wood Mill after the demolition of the smokestack with adjacent Ayer Mill in the background (Flynn). **Figure 5. An interior loft space at the eco-friendly Monarch Lofts (Monarch Lofts).**

Ansin has taken this mindset to heart in creating the trendy green lofts that now occupy the mill. His commitment to restoring the Wood Mill to economic and environmental vitality has earned him praise from internet and newspaper reports about the project. Whether intended or realized, the eco-conscious designs for the Monarch on the Merrimack helped generate a lot of momentum for the redevelopment. Living on Earth, an environmental news group based out of Boston, is one

of many sources to hail Ansin's efforts to go green (Gellerman 2007). Although eventually canned, LoE interviewer Gellerman raved about Ansin's intention to install green roofs in the complex. The rooftop gardens were to have plants and grasses selected for their retention potential to help prevent local sewers from spilling over into the Merrimack River.

Even without the green roofs, the article published that the environmental impacts of the construction will save the equivalent of a six hundred acre forest in terms of global warming gases. The majority of these environmental benefits come from the geothermal exchange system featured in the units. Fossil fuels are only used to run the pumps and compressors in the vent system, and on top of ecological savings, the green energy is expected to save condo owners up to 30 percent on heating and cooling costs.

For all of the positive media attention however, the Wood Mill is a prime example of how the media can hurt the momentum of a redevelopment as well. In 2007 a Lawrence based paper, the *Eagle Tribune*, ran a story that the building was contaminated with asbestos (Harmacinski and Kirk 2007). Although the report turned out to be untrue, it brought construction on the project to a standstill. At the time that the erroneous story was run, Ansin had already invested \$25 million of his own money into the mill, and the project was nearly half completed. Even more noteworthy, about a quarter of the lofts were already under agreement. After the libelous report however, Ansin lost a \$40 million investment from a bank in California and had to devote time and resources to clearing up misconceptions.

What is the most significant about the mistakes printed in the *Eagle Tribune* is not their damning effect on the redevelopment, but how the developer used the media faux pas to generate positive press for the project. In a follow-up printed by the *Valley Patriot* (Duggan 2007), staff writer Duggan notes that Ansin went above and beyond by offering a refund to those tenants who signed contracts prior to the hiccup in development. The article quoted the city's Director of Planning as such; "Bob Ansin didn't have to offer a refund to anyone [but] he showed he is a stand-up guy and he did the right thing." And he was rewarded for being a stand-up guy in that nearly all of the contract holders declined the refund, and that he was eventually able to secure the necessary funding to complete the redevelopment of the Wood Mill.

According to assessor's data (Appraisal Vision Assessor's Database 2014), the Wood Mill stands in a portion of Lawrence that is currently zoned Industrial II. The Zoning Ordinance of the City of Lawrence states that I-2 permits the most intense industrial uses so long as they do not negatively impact other uses in the zone, or in surrounding zones. In Lawrence, only multi-family dwelling units are permitted in this type of zone, and only by a special permit and site plan approved by the Town Zoning Board of Appeals (ZBA). Ansin himself and other representatives of Wood Mill LLC, went before the board numerous times to implement all the uses they envisioned in the complex. From reading meeting minutes, I've been able to discern that most of these consultations between developer and town were amiable, and that the Council members and the public were appreciative of what the redevelopment could bring to Lawrence.

Upon presenting a Tax Increment Financing (TIF) application to the Town Council, Councilors voiced positive opinions of the project and the application was approved unanimously. Similarly, when Wood Mill LLC representative McPartland went before the board to request a variance for

the construction of a storage facility that would aid in green initiatives onsite, a council member voiced his thoughts that the Wood Mill renovation was already having a positive effect on Lawrence businesses. This application was also unanimously approved. As a result of amicable relations between town officials, Wood Mill contractors, and members of the public, it appears that town officials and those members of the community who attended the public meetings and hearings related to the Wood Mill were grateful for the potential gains that the remediation brought to Lawrence.

In 2003, the city changed their zoning to allow for residential construction in mill areas undergoing redevelopment. In a recent *Boston Globe* article (Conti 2012), Maggie Super Church, the project director at Lawrence CommunityWorks (another organization involved in revitalizing Lawrence mills) credited this re-zone with being critical to these projects.

The willingness of community stakeholders to facilitate a smooth redevelopment is not the only sign that Lawrence is receptive to revitalization. Background information on the history of the City presented with documentary material on the Wood Mill redevelopment is suggestive of a community that is proud of its industrial roots. Past class divides and the efforts made to accommodate a diverse and immigrant-friendly City are indicative of a community that is willing to evolve and to strive for social equity. Previous community activism demonstrates an involved resident community that is committed to preserving the things that they value.

Whitin Machine Works, Whitinsville, MA

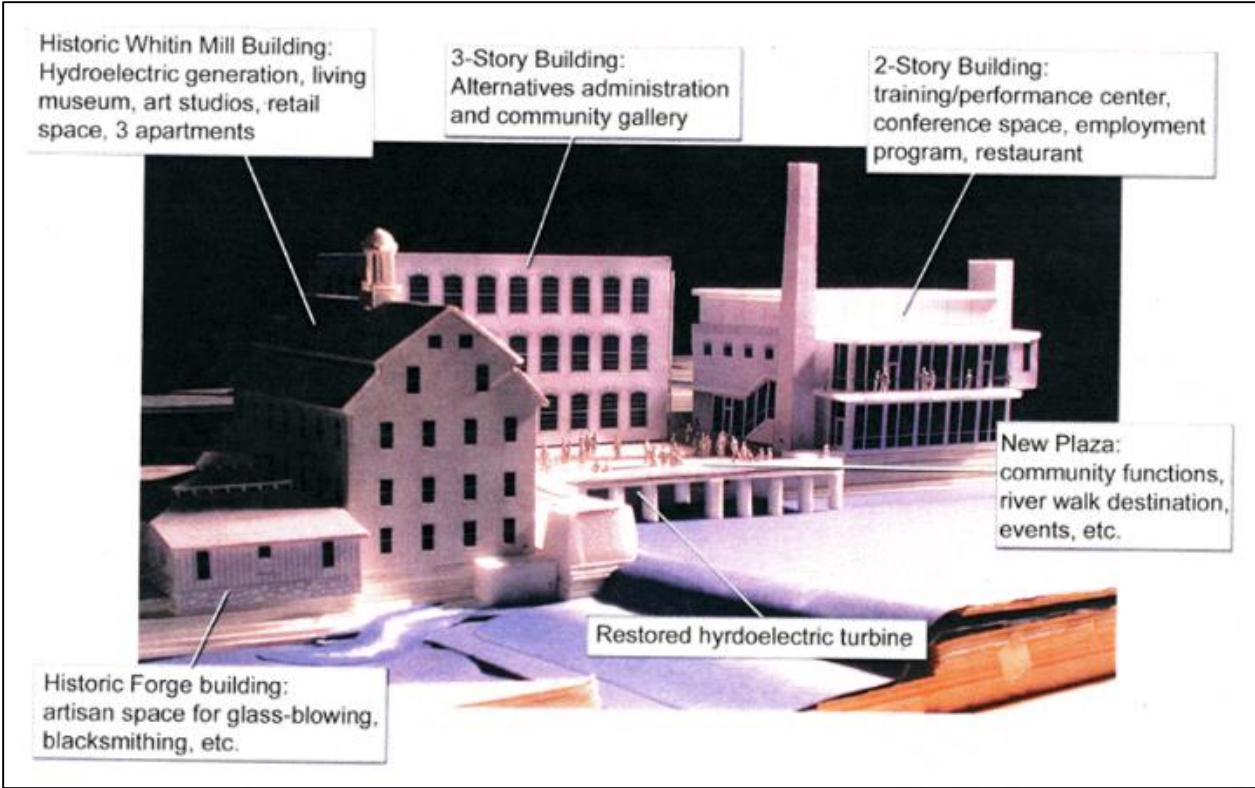


Figure 6. Model representing the design plans for the revitalized Whitin Machine Works (Alternatives, Whitinsville).

The Borough of Whitinsville is located within the Town of Northbridge which is 12 miles southeast of Worcester. Whitinsville is an unincorporated village and census-designated place (CDP) on the Mumford River, a tributary of the Blackstone River.

This village was originally Nipmuc Indian lands, and was first settled as part of Mendon in 1662. In 1772, Northbridge became a separate town. The village's early name was "South Northbridge", but it was later renamed for the Whitin family who built the mill on which it centered.

Whitinsville is an old mill town that centered on the Whitin Machine Works (WMW). WMW was a prominent manufacturer in the fabric industry during the Industrial Revolution. The CDP has been designated by the John H. Chaffee Blackstone River Valley National Historic Corridor Commission (BRVNHCC) as a mill village of national historic significance to America's earliest industrialization, and is one of only four villages selected by the BRVNHCC to receive this designation. Like many villages established around this time, the mill owners provided most of the essential services to the area; the Whitin family basically built the town themselves.

Many of these historic structures that the Whitin family constructed are still integral to the community, and are of historic import to the Nation as a whole. One such structure is the Whitin Community Center (WCC). In 1922, four Whitin daughters donated the funds to build a gym and pool for the local mill workers and citizens in memory of their father, George Marston Whitin.

The WCC was originally operated by a non-profit organization and was then known and is still commonly called "The Gym." This recreation center was one of the finest facilities in the state, and Olympic swimmers who competed in the 1932 and 1936 games even trained there.

The Whitinsville Savings Bank was also constructed by the family, and was involved in a precedent-setting case in the U.S. judicial system involving tort and contract law. Known as "Swinton vs. Whitinsville Savings Bank," the case involved a real estate transaction in which the bank had failed to disclose termites in a building. The court ruled that the plaintiff had ample opportunity to inspect the house, and that the bank did nothing to purposefully hide the condition and thus the plaintiff should bear the loss. Locals joke that this case spurred the phrase "buyer beware."

Today a visitor can see much of the original village, including the housing for workers and their families, churches, as well as the community center and bank. That these structures are not only still standing, but are recognized as a rich part of New England history and retain sentimental value for residents is a testament to the community's openness to revitalization, especially a revitalization that breathes new life into the original economic life source of Whitinsville; the WMW itself.

The site of the WMW mill revitalization is just off the main downtown commercial strip in the town. Favorite restaurants and bakeries, scenic views of the Mumford River, the town common, churches, schools, homes, banks, the public library, post office, hardware store and lumber yard, the Whitin Community Center, dental and law offices and the Town Hall are all easily walkable from the mill. Quaint gift shops, small businesses, pizza parlors, and a dance studio reside in close relation to the Alternatives³ redevelopment. This cluster of economic and social capital proximate to the MRD provided plenty of options for survey subjects.

Still affectionately referred to as "the shop" by some locals, the WMW was redeveloped by the owner, Dennis Rice of Alternatives Unlimited Inc. The redeveloped mill complex has been praised for a commitment to inventive alternative energy technology. The chief sources of revenue and utility savings that funded this project included leases, the hydropower, geothermal wells and solar panels. The renovation has breathed life back into the downtown with more traffic through the mill, and with more small business start-ups along Main Street. The total cost of redevelopment was nearly \$10 million, but Alternatives was able to partially fund the project through state grants and other donations. Public donations and government funding covered approximately \$3.5 million dollars of the remediation.

Today the WMW holds twenty-six businesses and provides jobs for around 2,000 locals, including many adults with developmental disabilities. The main mill building houses a community theater, an array of meeting spaces, art galleries, studios, an outdoor patio, and four affordable apartment units. The Old Forge was restored and is available for local artisans. The Brick Mill contains a restaurant, a conference center, function space and a performance/ training center.

³ Dennis Rice and Alternatives Unlimited are not a developer or a development entity as MassInnovation or Nick Deane are in the other two case studies. Rather, Alternatives is an agency with a mission of improving the lives of people with psychiatric or developmental disabilities.

The Mill Building serves as a space for artists, a museum, office space for Alternatives, and has three apartments for clients of Alternatives Unlimited. There is a public plaza used for concerts, Farmer’s Markets, and other events.

The WMW renovation has been praised not only by locals but also by news outlets in print and online, and has been the recipient of a number of awards. These awards range from being recognized by the *Worcester Telegram and Gazette* in their “Business Leaders of the Year” issue as non-profit of the year (Saia 2013), to being acknowledged by that same paper in receiving the Visions Award for Cultural Enrichment (Russell 2007). These stories certainly served to pique public interest in the mill renovation, and anyone who was getting information solely from reading newspaper or online articles about the renovation would likely share these outlets positive opinions.

The Whittin Mill is located within the Heritage District in the Town of Northbridge. As denoted by the zoomed in representation of the Town of Northbridge Zoning Map (Figure 4) there is a sizable amount of land that resides in this designation. The purpose of this district is to preserve and strengthen the visual and historic character of the area around Memorial Square in the downtown of Northbridge. In this zone, the town controls the type and intensity of uses which may be proposed with the intent of the district providing space for uses which have characteristics similar to those uses in place at time of the districts legislation. This is indicative of a town that values their history as a part of their current heritage. It is also indicative of existing zoning that is supportive of preservation and redeveloping historic structures in a manner that adheres to current zoning.

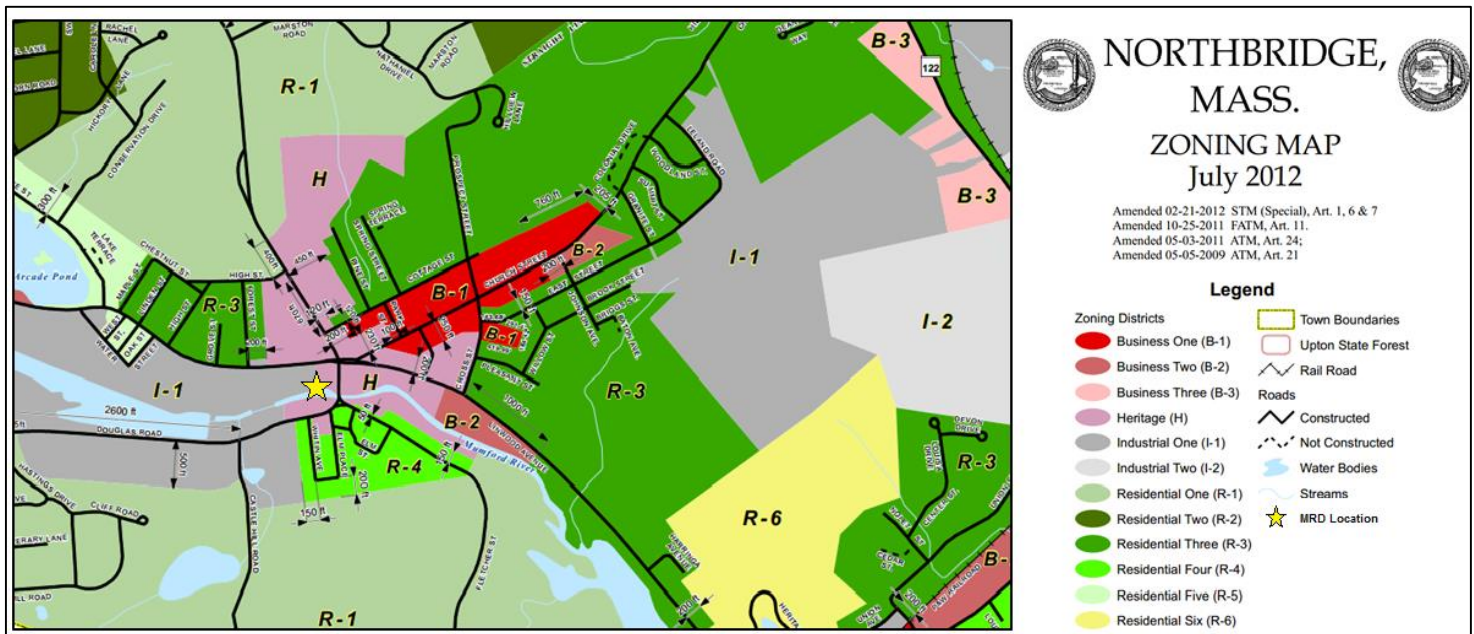


Figure 7. Zoning Map of the Whitinsville CDP within Northbridge, MA (cropped to the area surrounding the MRD). The Whitinsville MRD is shown by the yellow star.

Stanley Woolen Mill, Uxbridge, MA



Figure 8. The sole tenant in the SWM is an antique shop. The remaining commercial space in the complex is still under construction.

Uxbridge as it exists today was initially one of the 14 "Praying Indian" villages established by Puritan missionary John Eliot. At that time, Uxbridge was inhabited by the Nipmuc people. Uxbridge was incorporated as a town in 1727.

Like Whitinsville, Uxbridge is rich in history and in National firsts. The first American hospital for mental illness was established here. Mills like the SWM wove a legacy of manufacturing military uniforms that spanned a century and a half. A female resident posed as a soldier and fought in the American Revolution. Perhaps in keeping with strong female residents such as this woman, Uxbridge is famous for being an early baluster for woman's rights; Uxbridge was the first to grant rights to a female voter, and the Uxbridge Board of Selectmen approved Massachusetts's first women jurors.

At Uxbridge's industrial peak, the Town was home to twenty different industrial mills. The first woolen mill was constructed in 1809. Innovations that helped Uxbridge establish itself as a wool manufacturing power house included power looms, vertical integration of wool to

clothing, cashmere wool-synthetic blends, new yarn spinning techniques, and latch hook kits, many of which were developed in Uxbridge.

The success of such manufacturing enterprises led to the restoration of the surrounding natural resources that fed the mills and that still make the Town a hidden gem of recreational opportunities. This made Uxbridge unique in the fact that these industrial areas that in most towns were gritty and grimy were actually some of the most beautiful areas in Town, a feature not unnoticed by cinematic productions in the 1970s. Scenes from films *The Great Gatsby* and *Oliver's Story* were filmed in the area and each featured scenes shot at case study property the Stanley Woolen Mill.

Uxbridge is home to a wide array a natural resources and recreational facilities that include the Blackstone River and Canal Heritage State Park, the Douglas State Forest, Quinsigamond State Park, and Blissful Meadows Golf Club. There are sites in Town where residents and visitors can cross country ski, mountain bike and canoe. The National Heritage Corridor contains the Blackstone Canal Heritage State Park, nine miles of the Blackstone River Greenway, West Hill Dam, and a wildlife refuge among other things.

Historic housing stock in Town also contributes to more than fifty National, and nearly four-hundred state-listed historic sites. Fires have ravaged a number more historic buildings including another beloved mill, the Bernat property, as recently as 2013. As a result, Uxbridge is currently exploring options for saving these remaining historic structures that contribute to the sense of pride produced by these reminders of the Towns early role in American history. The Uxbridge case study for this project is one of these structures.

The Stanley Woolen Mill (SWM) was the oldest locally owned mill in Uxbridge; residing in the hands of Uxbridge residents from its origins in 1833, until 1989 when the bankruptcy courts claimed the property. SWM was one of the factories that helped make Uxbridge famous for textile production in the past. The present goal for this building is to acquire tenants that could bring the property back to life as a sustainable commercial compound.

A successful Boston area developer, Nick Deane, has undertaken the daunting task of returning the SWM to economic vitality. The town of Uxbridge granted Deane leniency on approximately half a million dollars of back taxes in exchange for his promise to invest a minimum of \$206,000 towards the redevelopment. The original plan designated a section of the mill be marketed to potential tenants including a riverfront restaurant. The mill revitalization has struggled to get off the ground, but according to advertisements on the exterior of the building and updates to the developer's website, the SWM is finally in a position to lease to new business.

Deane first became involved with the project in 1998. With help from the town of Uxbridge and the heritage corridor, he began by funding and conducting a feasibility study. The heritage corridor expressed enthusiasm about the project as they thought it would tie in nicely with adjacent recreation opportunities at nearby River Bend Park.

The immediate work for Deane involved stabilizing the structure. It required a new sprinkler system and substantial work to a decrepit roof and broken or missing windows. In a recent

Blackstone Daily interview he stated that he anticipated that the small office in the front of the main complex would rent immediately and help offset property taxes (Masiello 2013). He envisioned a riverfront restaurant facing the walking trail at River Bend Park. He even expected so much interest from potential tenants that he planned to get a section of the mill ready to serve as a showroom so that they could envision themselves in the mill. Unfortunately, it appears that Deane’s plans were a bit grander than the buildings immediate potential. Visits to the site show that the front office is being used for little more than a storage facility, that interior work on most of the building is nowhere near complete, and that the only business that has moved into the complex thus far is an antique shop.

Consistent with the scope of this research, a 2009 article in *Local Economy* cited the attitude of the community here in Uxbridge as the very reason that Deane has struggled to get the redevelopment off the ground. The authors credit the often “frugal” character of New Englanders with producing ambivalence and reluctance to help fund to a ‘white elephant’. This isn’t the first time the phrase has been mentioned in conjunction with these MRD case studies; Bob Ansin of the Wood Mill also had to defend his thought process for getting involved in such a burdensome project, and it is not unusual for the public to view these once celebrated structures as valueless. In Uxbridge, this detrimental attitude has been apparent for most of Deane’s involvement with the project. In some cases, area legislators were helpful with working out agreements between the developer and the heritage corridor in regards to parking, and eventually in forgiving the back taxes on the site, but even their reluctance to do so at the outset left the structure to rot away for a few more years (Kotval and Mullin 2009).

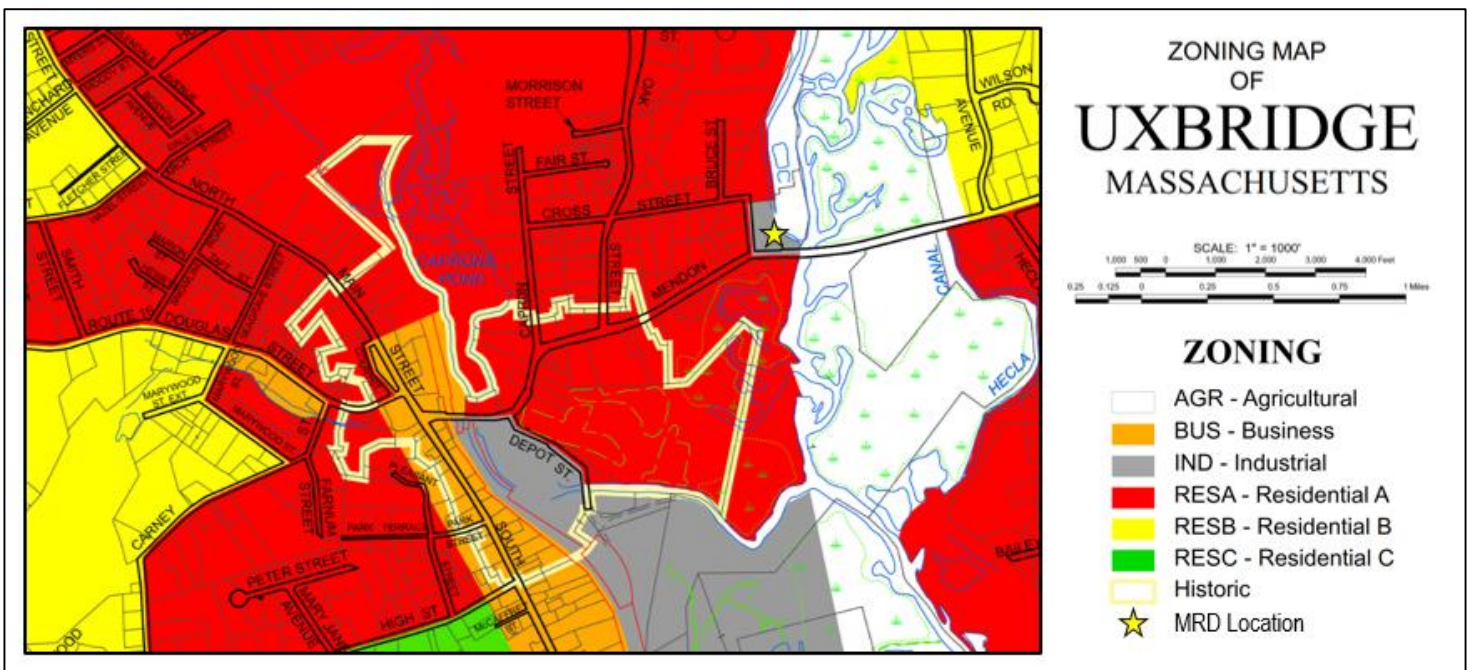


Figure 9. Town of Uxbridge zoning map cropped to the area surrounding the mill revitalization district. The MRD is shown by the yellow star.

Like the Wood Mill in Lawrence, the Stanley Woolen Mill is not located in a Historic District. This is not to say that Uxbridge does not have a Historic District (reference Figure 6), but the area in

which the mill slated for redevelopment is located was not included within its boundaries. Despite not originally being a part of a historic district or overlay, according to 2008 Uxbridge Town Meeting minutes, a petition article was passed to add the Stanley Woolen Mill into a Historic Mill Adaptive Reuse Overlay District that had previously been established in a bylaw related to the Wacantuck Mill. The board acknowledged that the developers of the Stanley Woolen Mill were interested in introducing a residential component to the project as an economic fallback to the retail plan proposed, and that inclusion in this overlay district would aid in achieving residential uses.

DATA COLLECTION, ANALYSIS AND CONCLUSIONS

Introduction

One can learn a great deal about a community by simply talking to its residents. Distributing surveys in the three MRD case study towns, the surveys told the stories of each place; where one could get an incredible steak bomb in Lawrence for example. Everyone in Whitinsville could tell a fun fact about the Whitin family or the history of WMW. In Uxbridge, simple conversation led to learning which intersections had the highest crash rates. Survey responses told what each community loved, and what they hated. They demonstrated what residents thought they needed, and what they wished would change. The answers provided a glimpse at the values of each community and how these preferences have influenced, or have the potential to influence, the mill revitalizations they have experienced.

Asking only ten questions of strangers in their homes, offices, and various public spaces, it was possible to discern what was important to each individual. When considering all of the surveys collected, it became apparent that there were a number of areas where there was some overlap in each town. Favorite restaurants, adjectives frequently used to describe the character of the town, and shared views regarding new development or preserving historic building stock, paint a compelling picture of community principles and personality. These are exactly the types of insight that developers of mill properties should be looking for to assure a well-received project.

Data analysis software NVivo was used to help detect patterns in responses collected from each of the case studies. NVivo was selected for its capacity to utilize coding for qualitative linking, shaping and data modeling. The program's coding allows users to run queries that make it easier to analyze unstructured data. For the purposes of this project, the word frequency query was run to analyze data sets drawn from survey responses (Appendix B) and to generate word clouds that illustrate what locals think about their town.

At the outset of this study, the goal was to compile a list of community characteristics that would serve as an indication to potential redevelopers that a community was suitable for a large scale remediation project like a MRD. Instead, the data demonstrated that while there are undeniably certain inclinations that communities appropriate for redevelopment share, the personality of each city is unique to them. These differences in community features and preferences certainly indicate to developers what types of uses will be met with enthusiasm in each case. Rather than implementing cookie-cutter designs based upon assumptions that what is known of one MRD is transferable to another, it is up to the developer to communicate with the host city to understand who they are and what they want/need. After completion of this research, it is my opinion that the use of a community survey to determine what is valued currently, and what is desired by the community, can be an important asset to MRD developers.

Monarch Lofts; Lawrence, MA

Media Representation

Local Lawrence paper, the *Eagle Tribune*, was not always kind to Wood Mill redeveloper Bob Ansin. Of the ten online, or in-print articles reviewed, half had benevolent words for the developer and the project. The other half of the gathered articles were criticisms that were all published by that very periodical. While the reasons that this one paper ran so many stories that portrayed the mill revitalization in a negative light is unknown; the media swaying citizens, and investors alike in Lawrence, is a teaching moment for other MRD developers. Many locals will only experience the mill through what they read in the paper, and these pieces will be what forms their opinions of the project.

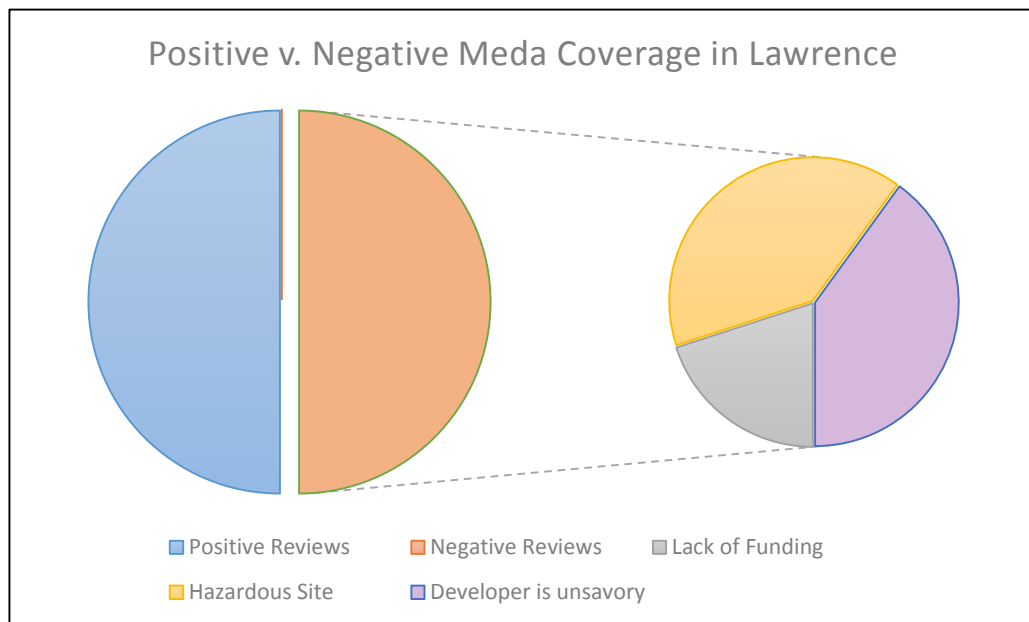


Figure 10. Factors that contribute to negative media portrayal of the Wood Mill redevelopment.

It's already been covered how a bad newspaper headline can put an entire development in jeopardy, but this section takes a closer look at the reasons why mill revitalizations might get bad press. In Lawrence, the top reasons for negative headlines include a hazardous site, insufficient funding options, and a developer that the community doesn't trust. Even after running a retraction to the erroneous story reporting that there was asbestos being removed from the mill, the *Eagle-Tribune* continued to criticize Ansin and the Wood Mill for being underfunded and "troubled." They ran stories about how contractors were underpaid or not paid at all, and cited the loss of funding as the fault of Ansin, despite the fact that the bank in question admitted that they pulled out because of the earlier *Tribune* story. The *Tribune* took the malicious reporting even further by actually representing Ansin as a criminal for providing unsafe conditions and failing to meet codes at the mill (Harmacinski 2007). This is the most harmful type of portrayal because it gives readers the impression that the developer does not care about members of the community. This view breeds an unhealthy public/private partnership because citizens are unlikely to willingly cooperate with the developer, and patronize the redevelopment.

For every reporter that condemned the Wood Mill, there was one who glorified Ansin’s efforts. On par with Gellerman’s piece for LoE, *Valley Patriot* writer Duggan had nothing but commendations for the developer’s commitment to going green. On top of praise for environmental initiatives, the *Patriot* story endorses the economic merits of the redevelopment. He writes, "The Monarch project is the largest eco-friendly development in New England, and has brought positive national attention to a town that many people had overlooked. The project has been featured in CNN/Money as one of the top green developments in the nation, in Forbes as a Home of the Week, in BusinessWeek as Hot Property, and has been profiled on National Public Radio and the Wall Street Journal (Duggan 2011)."

Other aspects of the MRD in Lawrence that earned media accolades include Ansin’s adaptability as a developer, and the potential for the mill to create local jobs. In 2008, *The Eagle Tribune* recognized that the mill revitalization is good for local business, despite publishing a collection of condemnations in previous years. The *Tribune* included it on a list of the top ten economic development projects that were underway in the Merrimack Valley and Southern New Hampshire at the time (Kirk 2008). The same year that the lofts were available to rent, the *Boston Globe* ran a story about how Ansin saved a failing project by adjusting plans, and being tenacious, after it became apparent that there wasn’t a market in Lawrence for luxury condos. They credit his follow-through and his intelligent decision to pursue historic tax credits for the structure with a final product that the city will benefit from. According to the article, when all of the mill revitalizations in Lawrence are combined, they are assessed as bringing over \$800,000 in supplementary tax revenue to the city each year. The success of these revitalizations has been called the “oil change” that brought the original engines of the city roaring back to life (Conti 2012). This type of report demonstrates that the redeveloped mill is advantageous to the city, and piques the curiosity of community members in a positive manner which could encourage benefaction.



Figure 11. Word cloud demonstrating the most common community descriptors used by Lawrence residents to describe the town.

Community Questionnaire

The redeveloped Wood Mill is located adjacent to several other redeveloped mill properties. These include the New Balance warehouse store and the Riverwalk development which features medical offices, restaurants, and commercial offerings. These nearby businesses located in revitalized historic properties were contacted with the goal of determining whether or not those who are a part of other mill redevelopments are more likely to support new projects. Unfortunately, only one of these community stakeholders (a man who worked for Riverwalk Properties) completed the

questionnaire.

In general, Lawrence was the most difficult case study city to collect questionnaires from. Ultimately only ten questionnaires were collected from stakeholders after contacting more than twenty businesses via email and visiting the city six times. The struggle attaining data in this case study was attributed largely to a language barrier; 2010 Census data for Lawrence indicates that nearly 74% of the population is Hispanic and that 75% of the population speaks a language other than English at home (Lawrence QuickFacts 2014). Many people on the street refused to take the survey because they did not speak English, and even approximately half of Lawrence respondents struggled with the questions and needed to ask for clarification because English was not their first language. Should this research be continued, it would be helpful to provide a questionnaire in Spanish and, ideally, have someone who speaks Spanish help collect data.

The majority of the ten surveys from Lawrence community members were collected outside of the public library and at the Town Common. The most interesting thing noted about the data collection in Lawrence was that while it was very difficult to collect surveys, the respondents that took the time to complete the questionnaire provided some of the most insightful feedback regarding community revitalization. One man who is employed in Lawrence defined community revitalization as: “when a community starts to overcome the stigma people have of it. When business and residents start moving back to the community.” That same respondent went on to say that Lawrence is “a community that is defined by a dichotomy. One part of the community represents hope, opportunity and growth. The other part represents stagnation, lack of hope, and negativity.” After months of research and site visits, this definition was apt to describe the palpable stratification observed in the city.

It seems that these feelings are echoed among other Lawrence residents and employees. The word cloud generated based on adjectives used by respondents to describe the city doesn’t have any terms that obviously stand out as being frequent descriptors as was observed in the other case studies (Figure 11). This could be suggestive of a city that does not have a common opinion of who they are. Many of the adjectives are negative, like “dumpy” and “financially depressed,” and many more paint an optimistic picture of a community that is evolving and shedding the negative stigma respondents addressed.

Going into the data collection phase of the project in Lawrence, the researcher was eager to see how respondents would answer the question about media influence. The *Eagle-Tribune* ran many stories that were critical of the redevelopment project that a large number of respondents indicating that they were negatively influenced by news stories were expected. Instead, only 11% of respondents specified being swayed by the local media to an unfavorable view of the mill. Approximately twice that amount reported being positively influenced by media stories, while more than half a respondents said they were not influenced either way by media coverage of the redevelopment.

It appears that there is very little correlation between media coverage and support of the redeveloped mill in Lawrence respondents (Figure 12). While only 11% of respondents said that they did not read any stories about the Monarch Lofts development, 36.4% stated that they did not participate in any aspect of the redevelopment because they did not know about it. An equal amount of respondents opposed the mill to the number that supported it (18.2% each), even though a larger number of respondents indicated a favorable view of the project. One respondent shared with me that the Lawrence media is often very negative, and that many local papers love to print “scandals.” Based on insights like these from community members, it seems that the locals are desensitized to negative news stories.

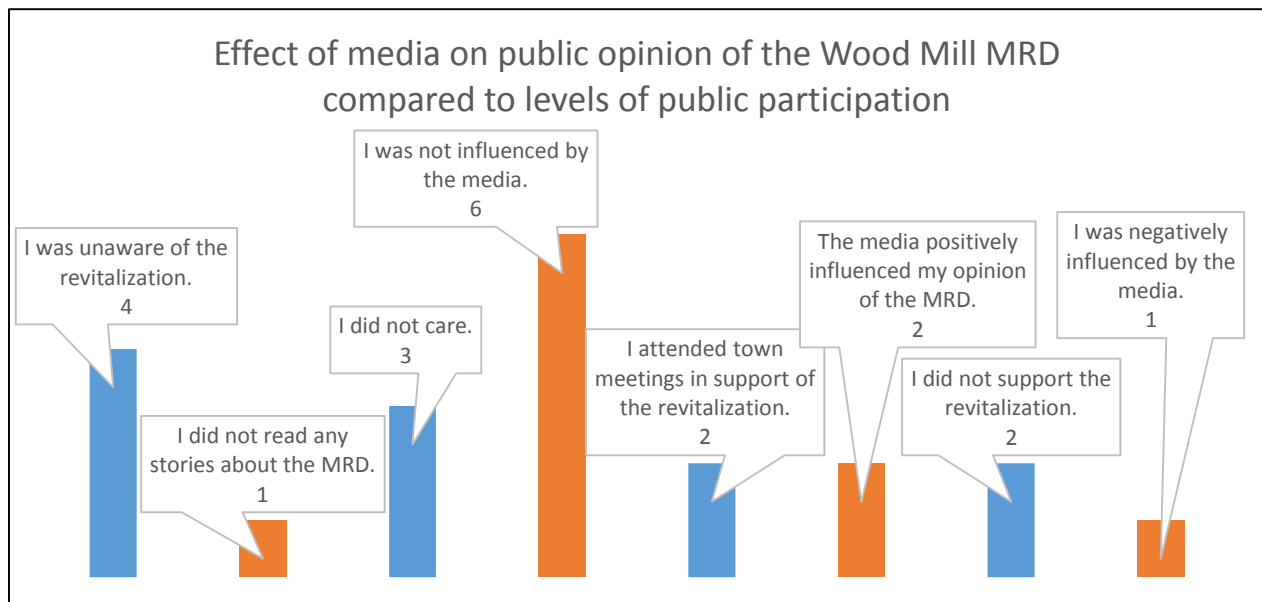


Figure 12. Bar chart demonstrating how the media influenced public opinion of the Wood Mill revitalization, and how those impressions compare to respondents' participation in the project. Media influence is denoted by the orange bars, while level of public participation is shown in blue.

Since many of the news stories printed in Lawrence depicted Monarch Lofts developer Bob Ansin as unsavory; public opinion of outside development entities was another survey question that was of particular interest in this community. The largest percentage of responses to this question demonstrated that community members felt any investment in the community was a good thing (Figure 13). Approximately one fifth of answers showed community concern for preserving character (20%) and fulfilling needs (20%). Based on these answers, it seems that Lawrence community members are concerned with who makes changes to their city, but only to a degree. The most frequently selected response demonstrates that the respondents understand that the community is changing, and that development is beneficial to Lawrence.

Respondents who had a family history in the city were more likely to attend town meetings in support of the mill revitalization. In Lawrence, 33% of respondents who were not first generation residents supported the MRD during the development process, compared to only 16.7% of first generation respondents attended town meetings to voice support for the redevelopment. In Lawrence there was only one survey respondent that had lived in the city for more than five years and he was one of the respondents that attended meetings. This particular residence listed

“disinterest” as a negative quality of the community, and it is possible that this disinterest stems from residents that are not rooted in the community.

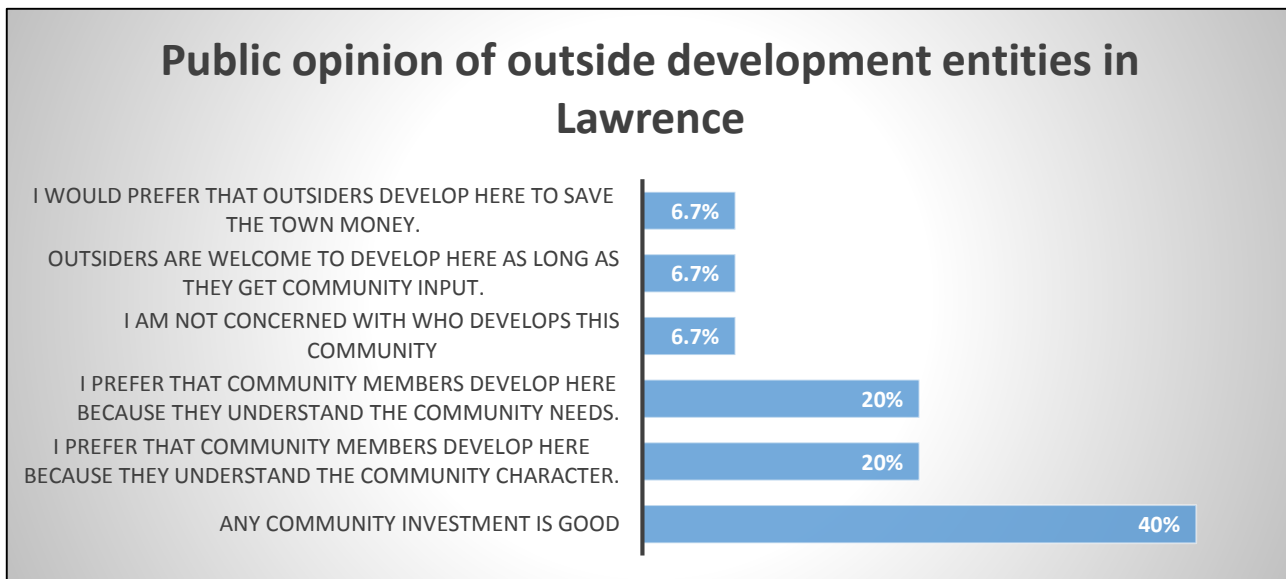


Figure 13. Respondents answers regarding opinion of outside development entities in Lawrence.

Despite accepting that the Monarch Lofts and other mill revitalizations in the city are beneficial to the community, respondents did have concerns and critiques. Most of the community members surveyed indicated that the lofts were marketed as high end properties in a largely low-income community. Between 2008 and 2012 nearly 27% of the population in Lawrence was below the poverty line (Lawrence QuickFacts 2014). The lofts are located proximate to two public transit hubs and community members voiced opinions that affordable housing at this location could allow residents who don't have cars to work out of town. One community member said that preserving these structures “leaves a legacy for future generations,” but that it was a shame that most of the community doesn't get to enjoy them. Other complaints included that a residential development doesn't create jobs that the locals feel are needed.

The main research concern in Lawrence is related to the initial data collection problems. Since Lawrence is a largely Hispanic community and non-English speakers were reluctant to complete the questionnaire, there are concerns that the main demographic in the city was not reached. This is something that is likely problematic in attaining a high level of public participation in this community, and is something that should be considered by MRD developers to create a project that is beneficial to the demographics that actually exist, rather than just those who participate.

Perception of Historic Preservation

For each case study, buildings protected on the National Register of Historic Places (NRHP) were considered to gain an understanding of the existing historic building stock. This served to show what value the case studies placed on historic preservation, and whether survey respondents had an accurate perception of how historic their city or town is.

The City of Lawrence was established in 1858. When considering the database of NRHP, 26 Lawrence properties or districts were listed. Several of these were mill districts (National Register 2014).

When initially reviewing this database, it seemed that Lawrence had far less historic properties than Uxbridge (who lists 50 properties on the Register). However, after calculating the number of recognized historic properties per square mile of land area in the city, it was discovered that Lawrence boasted an impressive 3.75 listed properties per square mile; a much high number than the other two case studies.

What is noteworthy about this, is that it is consistent with the way respondents chose answers when compared to the other two towns. Every Lawrence respondent indicated that they considered Lawrence a historic community. They gave historic preservation an average rating of 8.8 on a 10 point scale. This was the highest rating out of the three case studies although Lawrence was established approximately 70 years later than Whitinsville and more than 100 years later than Uxbridge. This is expressive of a community that is nostalgic and connected to its historic architecture.

Stanley Woolen Mill; Uxbridge, MA

Media Representation

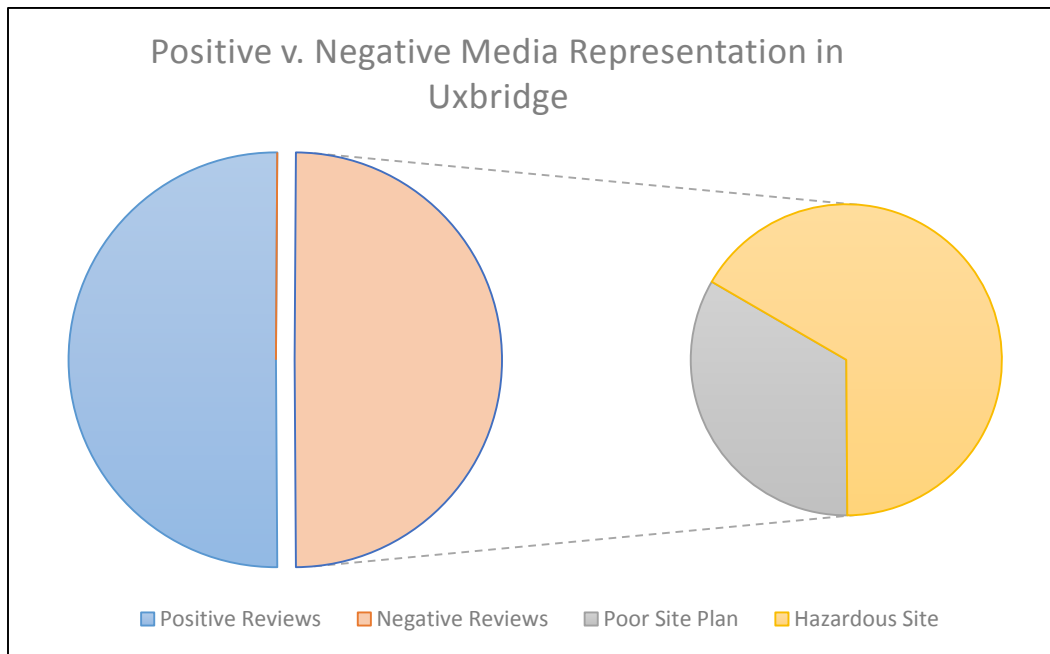


Figure 14. Components of negative media stories about the Stanley Woolen Mill revitalization

Similar to the mixed media reviews endured by the Wood Mill revitalization, the papers in Uxbridge were often dubious of the property's value. This is understandable since the project has been in Deane's ball court for more than a decade now, and very little visible progress has been made. Some of the negative press about the SWM revitalization is to this effect. A much larger percentage however, centers on the fact that locals and reporters do not feel that the site is safe, or that it is too much of a liability to be worth undertaking as a Brownfield remediation.

One 2003 article reported that during a charrette regarding the mill revitalization, town selectman Julie Woods expressed that the danger surrounding the site must be assuaged somehow; even if it meant demolishing the historic structure. Thankfully UMass Amherst Professor, and leading expert in mill revitalization, John Mullin, was present and cautioned the town to make an informed decision before hastily destroying a significant part of community history. In lieu of razing the building, he suggested other options for the improvement of the site, including getting Mass Historical and the Antiquities Association involved to work with the developer (*Blackstone Daily* staff 2003).

Overall, the public is very skeptical about Deane's plans. Even articles that have a positive tone, express concern that the developer has spent nearly \$3 million and has only secured one tenant thus far. The best description of these pieces would be "cautiously optimistic." The strongest review includes a quote from the sole tenant. In 2012 shortly after opening an antique marketplace that she operates as a co-op, Mrs. Jacqueline Norberg said that she estimated the

operation was receiving more than two hundred visitors each weekend. She added, “I haven’t heard anything negative yet (Fortier 2012).”

There are a handful of things that concern me about the media coverage of the SWM revitalization. Not the least of which is that Mrs. Norberg is probably the only person following the development who hasn’t heard anything negative. Also worrisome, is the general lack of attention that the mill receives from the media and the Uxbridge community. Uxbridge was the only case study town for which the researcher was unable to find ten articles about the revitalization project. This is indicative of Mullin’s description of one of the most dangerous things for a revitalization: ambivalence.

Community Questionnaire

In the data collection stages the Town Planner, Planning Board, government officials, and local businesses were contacted. A very low number of responses was yielded from these community leaders; yet another demonstration of the indifferent attitude in the community that has thwarted the progress of the SWM redevelopment. Uxbridge was, in fact, the only case study MRD in which no responses from community leaders were received. Faced with a general disinterest in providing feedback, the researcher moved on to tabling at public places in the Uxbridge community. The locations where there was the most success collecting responses were outdoor recreation areas like ball fields and walking trails. In total, fifteen community questionnaires were collected from Uxbridge.

Ambivalence is not only apparent in the difficulty faced collecting Uxbridge survey responses, but is also obvious in the responses collected from residents and employees in Uxbridge. Even among the respondents who indicated that they place a high value on historic preservation (those who ranked their willingness to make a monetary contribution to preservation in the form of higher taxes or donations above a seven on a ten point scale) seemed largely unaware of the SWM revitalization project. Out of those respondents who ranked historic preservation above a seven, 86% indicated that they were unaware that the Stanley Woolen Mill was being revitalized. Even more noteworthy, was that even those respondents that were employees at the River Bend Farm visitor’s center (which along with the SWM is a member of the Heritage Corridor in Uxbridge and which was a tabling location), were not aware of the mill redevelopment taking place approximately a one mile walk along the river. This is indicative of a heritage corridor that is not as involved with promoting the project as they had claimed they would be at the outset. Newspaper reports in the past stated



Figure 15. Word cloud demonstrating the most common community descriptors used by Uxbridge residents to describe the town.

that the corridor was excited about the project since it would be a perfect fit for the River Bend Park adjacent to the mill and that they have given the project their full support over the years (Masiello 2004). However, upon surveying three River Bend employees the researcher found that they had little to no involvement or awareness of the SWM revitalization.

As part of the questionnaire, community members were asked to indicate how their perception of the mill revitalization was influenced (if at all) by any newspaper articles or news stories they saw about the mill. The majority of respondents stated that they hadn't read any articles or viewed reports of the mill project. Not surprisingly, the bulk of respondents also indicated that they did not take part in any aspect of the mill revitalization because they were unaware of the project. While stronger media coverage certainly can't guarantee that the local community would play a more active role in redevelopment projects, it could encourage greater patronage of the new mill.

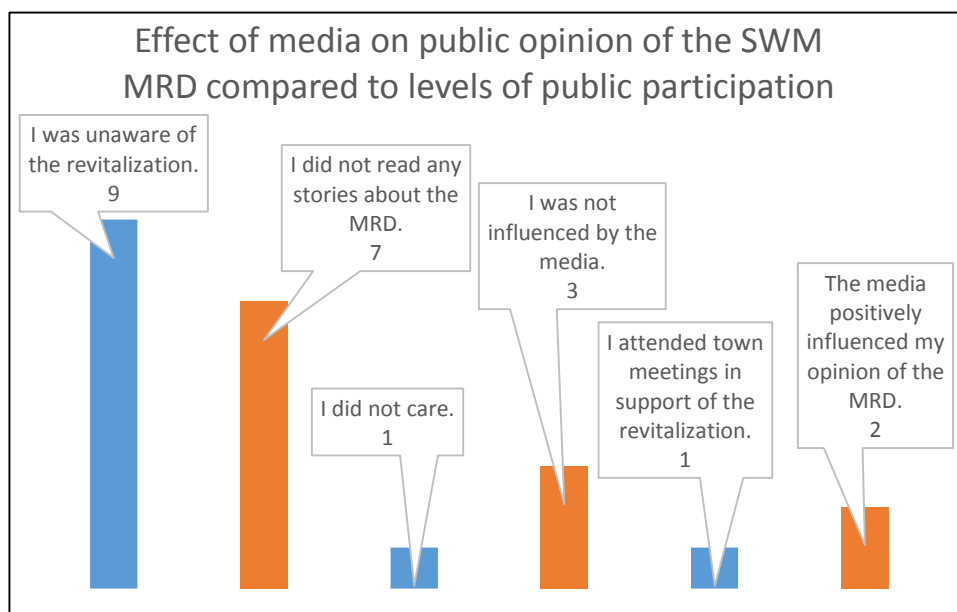


Figure 16. Bar chart demonstrating how the media influenced public opinion of the SWM revitalization, and how those impressions compare to respondents' participation in the project. Media influence is denoted by the orange bars, while level of public participation is shown in blue.

Another component of the survey was for community members to define what they considered community revitalization. In Uxbridge, a large amount of respondents associated community revitalization with restoring historic buildings, or as addressing issues that currently exist in town, but one respondent defined revitalization in a manner that was more consistent with the preferences of the community, saying that it was when “the human elements [of the community] meet the natural/historic elements.”

This was the definition that was most representative of what Uxbridge residents and workers chose as descriptions of the town, and favorite aspects of the community. Figure 17 represents adjectives that respondents used most often to describe Uxbridge. “Friendly” and “historic” were top choices, with “active” and “involved” also being chosen by several residents each. Generally, recreational areas and green space and specifically River Bend Farm were among the most popular choices for favorite community places and resources (Figure 17). In Uxbridge, 8% of

respondents indicated that the historic mill properties were something that they liked in the community; respondents even cited redeveloped mills as favorite buildings.

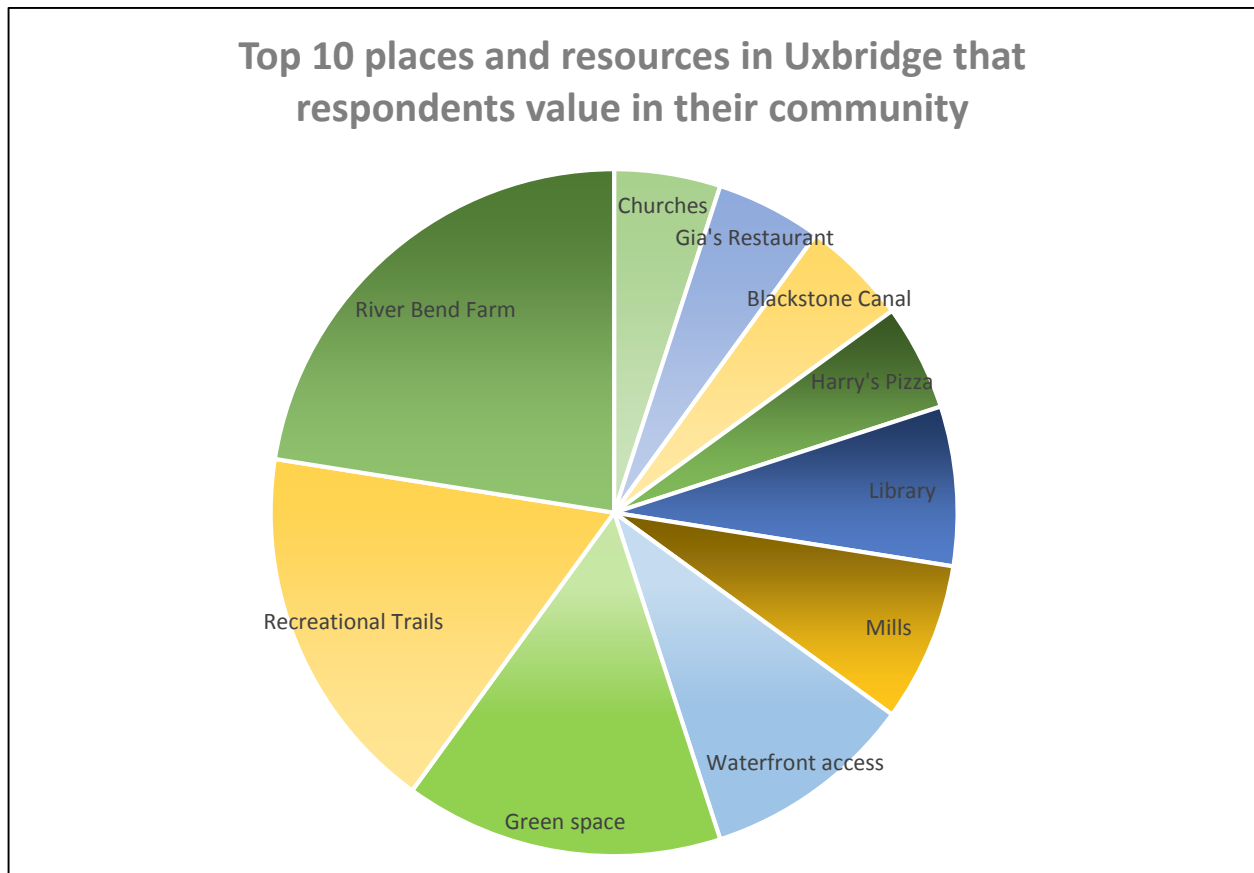


Figure 17. The top ten businesses or resources that Uxbridge residents value in the community

This information could prove to be invaluable to developer Nick Deane. The adjacent recreation trail is frequented and loved by locals. This is foot traffic that he could take advantage of, and a population that he could cater to. When asked what they wished was present in town, Uxbridge residents reminisced about restaurants that they wish were still located there, or lamented that they wished there were more local options. Deane had originally planned on trying to acquire a tenant who planned to install riverfront dining in the mill. Based on the strong connection between the property and the trail, perhaps he should consider searching for tenants who want to provide a pre or post walk snack for hikers. This could persuade active residents to start their stroll at the mill rather than the River Bend Farm visitor’s center, which could encourage business for the antique store or any future tenants.

In Uxbridge, respondents who indicated that previous generations of their family also lived in town were more likely to participate in the revitalization. One-third of respondents who were not first generation residents stated that they either attended town meetings in support of the project, or support the businesses in the mill. No first generation respondents attended meetings or made any indication that they supported the redevelopment. The two respondents who indicated that they had taken actions to support the MRD had each lived or worked in town for

more than 19 years. There were respondents that had lived in Uxbridge longer than these two that had never heard of the SWM project, so it seems that longevity in the town does not correlate to support here. In this case study, the age of respondents did not appear to have any bearing on their feelings about the mill revitalization.

Survey respondents were asked to indicate how they felt about outside development entities coming into Uxbridge and making changes to the town. They were given the option of selecting more than one answer, so the percentages shown in Figure 18 indicate the percentage of times that each answer was chosen, and not the percentage of respondents that chose that answer. The most frequently selected option indicated that Uxbridge community members were comfortable with outside development entities undertaking projects in their town as long as they considered feedback from the public. About a quarter of the responses specified that any community investment was good regardless of who was undertaking the project.

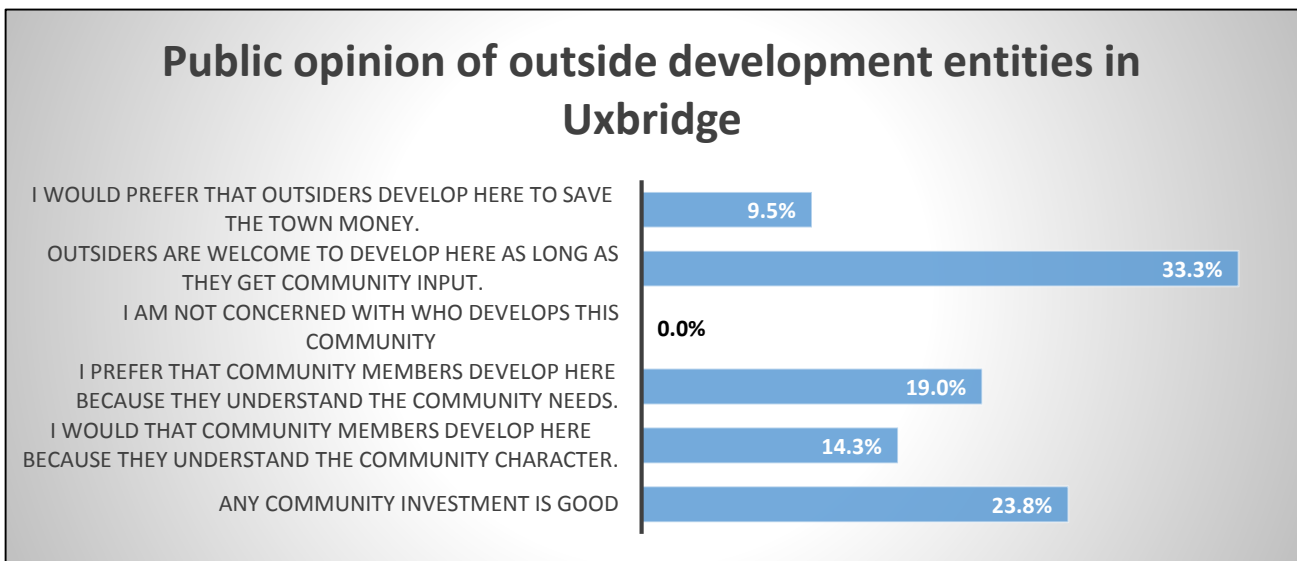


Figure 18. Respondents answers regarding opinion of outside development entities in Uxbridge

Particularly regarding the high tendency of Uxbridge respondents to list recreation areas, waterfront access, green space, and mills among their most valued assets, there were research concerns surrounding the data collection in this town. It is acknowledged that collecting surveys at fields and walking trails introduces some bias into the picture that survey responses paint of the Uxbridge community. Specifically, it is surmised that trails, waterfront access, green space, and adjectives like “active” and “outdoorsy” were likely used more often to describe the community and its positive attributes than they would have been if surveys had been collected at the library or the town hall. Conversely, these are the areas that are proximate and connected to the mill, and this probably led to success gathering survey responses at the River Bend Farm walking trail.

Additionally, as is true for all survey research, volunteers tend to have some degree of interest in the topic in order to take time out of their day to complete the survey. Even those who are not already invested in mill revitalization may feel biased to indicate a favorable view of the mills

since it is what the research is based on. This sort of inclination seems to be present in Uxbridge since respondents were mostly unaware of the SWM redevelopment.

Perception of Historic Preservation

With an average historic preservation rating of 8.3, Uxbridge was close to the other two cases in how respondents valued historic preservation. What differed however, was the fact that Uxbridge had twice as many properties or districts listed on the NRHP as Lawrence did (National Register 2014), and this did not account for a much higher historic preservation rating. Every Uxbridge respondent stated that they thought of the town as a historic community, but it rated lower than Lawrence for historic preservation, and only 0.1 higher than Whitinsville.

Uxbridge is the oldest of the case studies with an incorporation date of 1772, and for all of the buildings and districts that are protected, it appears that Uxbridge residents do not value historic properties any more than any other community. What this means for potential MRD developers is that a large amount of historic building stock is not necessarily indicative of a community that is invested in preservation.

The large amount of buildings and districts listed on the Register start to look less overwhelming when divided by the total land area; in Uxbridge there are only 1.7 listed properties per square mile. This is a smaller ratio than Lawrence but a slightly larger proportion than noted in Whitinsville. These ratios correlate to historic preservation ratings since Lawrence also has the highest rating, and Whitinsville the lowest.

Whitin Machine Works; Whitinsville, MA

Media Representation

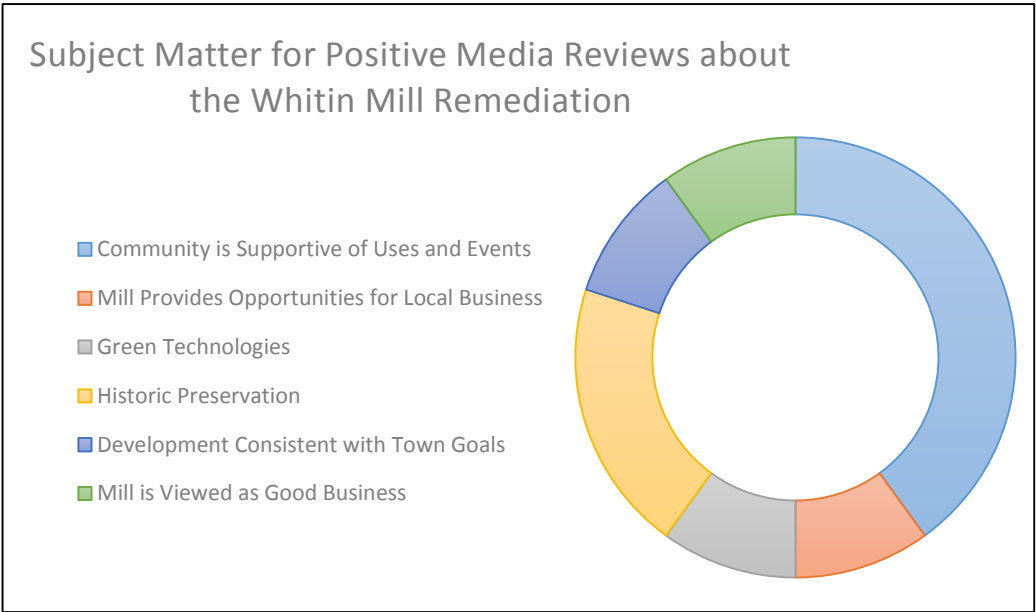


Figure 19. Elements of the Whitin Mill Revitalization that feature the most positive reviews in local media stories. Community favored uses are largely the most popular story.

In Whitinsville, it was difficult to find anyone who had an unfavorable opinion of Dennis Rice and his plans for the WMW. Articles ranged from cautiously optimistic to glowing in their depiction of the MRDs implementation. From patronizing the arts, to a dedication for historical preservation, to uses and events devoted to community outreach in populations ranging from elementary school students to the developmentally disabled, local reporters and residents had a lot of good things to say. Though all encompassing, the media coverage of the MRD in Whitinsville most often centered around six themes: community supported uses, opportunities for local business, green technologies, historic preservation, a site plan that is in compliance with the town’s Master Plan or other development goals, and that the mill itself will attract and produce business and income for the town.

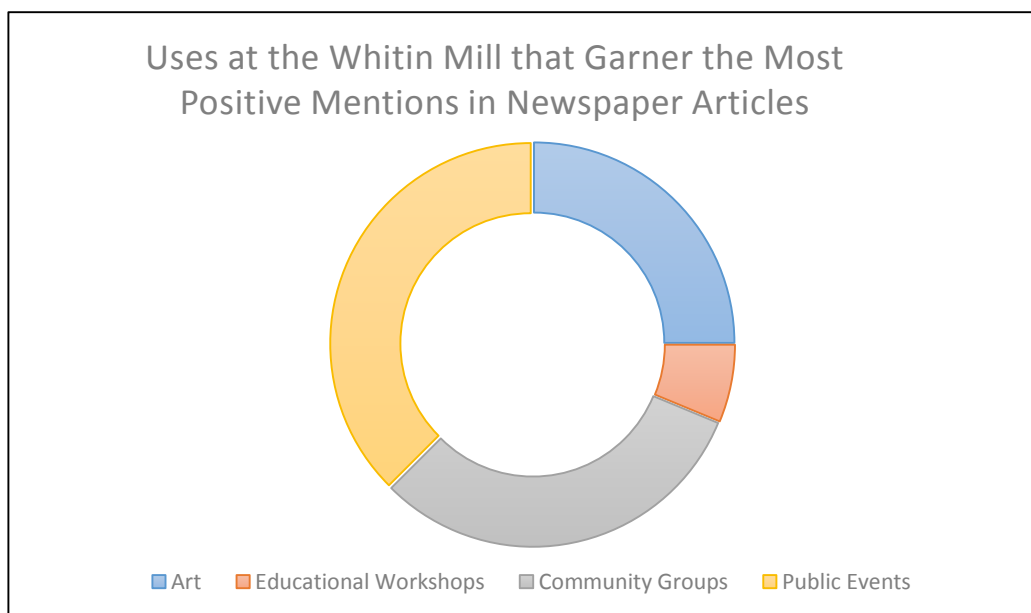


Figure 20. The most popular community supported uses in Whitinsville.

A community that is supportive of the uses in the mill was the most likely to earn the MRD a thumbs up in media sources local to Whitinsville. These positive mentions of community supported uses were further divided into those that earned the most nods in the papers surveyed. In the case of Whitinsville, some of these uses included public access to art, meeting spaces for community groups, and hosting educational workshops and public events. One article in the *Worcester Telegram and Gazette* cited the President of Worcester Art Group as saying, “It’s a small town, but it’s thinking big. To make it in the arts takes creativity. This building is an attraction, and the architecture of the building is equally important as the art on the wall (Spencer 2008).” In a 2014 story published in the *Grafton Daily Voice*, a local elementary school principal had high praise for a fair conducted at the mill complex with the intent of teaching the students about being environmentally conscious (Hella 2014). Even developer Dennis Rice admitted in an interview with the *Blackstone Valley Tribune* that the mill works because the community supports it (Collins 2013). It is important to note however that these are uses that the host community in Whitinsville has rallied behind, but values vary from community to community and will differ among case studies and among other potential MRD sites. The MRD in Whitinsville received such positive media support for incoming uses because the developer was cognizant of what the people, who live and work in Whitinsville, needed in the development.

Outside of community supported uses, another element of the Whitinsville mill revitalization that was well received and represented by media was the potential for historic preservation. Stories in the *Blackstone Valley Tribune* and in the *Worcester Telegram and Gazette* both hail the efforts that Rice made to maintain the historic integrity of the complex. He has made efforts to reclaim artifacts that once belonged to the mill and it hasn’t gone unnoticed. Both former shop employees and relatives of the Whitin family have expressed gratitude for what he is trying to accomplish. Harry Whitin, the great-great-great-great-grandson of mill founder Paul Whitin, conveyed what a great day it was for the community when Rice got the original bell back for the

renovated mill yard (Handel 2010). A group that calls themselves the Whitin R.O.S.E., an acronym that stands for “Reunion of Shop Employees” was ecstatic to be able to visit an onsite museum featuring original looms (Russell 2007).

While historic preservation is becoming a hot button topic in planning for its smart growth potential, it is important to note that it won't rally this amount of positive media buzz in every community. Like mill uses, the amount of support surrounding historic preservation is contingent entirely on community values. In a town like Whitinsville, many of the original buildings remain, and mill culture is embraced and iconized, so seeing these buildings preserved was important to the public.



Figure 21. Northbridge town historian (right) dresses as Paul Whitin for the return of the WMW mill yards iconic bell.

Also noteworthy in the case study town of Whitinsville, is that many relatives of the original Whitin family are still established members of the community. Most relevant to this research, the above-mentioned Harry Whitin was the editor in chief of the *Worcester Telegram and Gazette* for a majority of the redevelopment process. It is plausible that not many staff writers are willing to pen a story that belittles the preservation of a building with a great amount of personal meaning to their boss. It could even be that all the recognition that the WMW revitalization received from the *Gazette* was largely at the request of the editor.

Community Questionnaire

Whitinsville is a demonstration of a community that is very much invested in its revitalized mills. Respondents cited community beautification, historic preservation, and community involvement as areas where the Alternatives WMW renovation met their definition of community revitalization. They said things like it has “preserved a cultural mecca,” and “transformed abandoned buildings into destinations”. Additionally, at least half of the sixteen respondents in Whitinsville had attended an event at the mill or had supported that project in the development stages.

Whitinsville was the only case study MRD in which any community leaders provided feedback, and residents near the mill were eager to help with the questionnaire. Surveys were collected from the town planner and a former Town Historian, as well as six residents that lived within a

mile of the redeveloped mill. The remainder of the surveys were collected at the public library, and at an after school event at the local high school.

Although a large percentage of these respondents indicated that they were unaware of the revitalization at the time that it was occurring, an even larger percentage had since given the new mill their business and nearly every one could share some anecdote about the mill.

“Historic” was easily the most frequently used community descriptor in Whitinsville. Consistent with this word choice, all respondents also indicated that they felt Whitinsville was a historic community. “Quiet,” “stagnated,” “church-oriented,” and “friendly” rounded out the top five adjectives for this case study. Of all the words selected, “stagnated” was the only one with a negative connotation. Understood in this case to mean “stuck,” this word was selected by approximately 20% of respondents.

Whitinsville community members shared many preferences with Uxbridge respondents in the types of restaurants, resources, and structures that they listed as favorite areas of town. They favored walking trails, parks, and waterfront access (just as Uxbridge respondents did), without being at a recreational area at the time of survey completion. Restaurants listed as favorites in both communities were locally owned, not national chains. What was markedly different was the depicted value that responses suggested locals had for mill structures. In Uxbridge, 8% of respondents listed mills as favorite buildings, either generally or by name. None of these respondents specifically named the SWM. In Whitinsville, one third of respondents specifically cited the renovated WMW as their favorite building. More still listed other redeveloped mills such as the adjacent Cotton Mill Apartments as favorite structures. Other community member preferences included the Town Hall, the public library, historic church buildings, and the town common. Every one of these structures or public places is located within a mile of the WMW renovation. This suggests that this is a district of town that is valued by residents and other community members.

Whitinsville was the only host community for which no negative news articles about the mill revitalization could be found. Because of this, it was expected that a large percentage of



Figure 22. Word cloud demonstrating the most common community descriptors used by Whitinsville community members to describe the town.

respondents would relay that they had been positively influenced in their view of the project by local media sources. Instead, one third of respondents reported being positively influenced, while 40% were not influenced at all, and nearly 27% indicated that they did not read any stories about the mill. In this instance, there could be a slight correlation between media coverage and public participation (Figure 23). An equal percentage of respondents were unaware of the revitalization, to the number that reported attending meetings or making a donation to support the mill. Approximately 7% of respondents stated that they were unsupportive of the project while no one reported being negatively influenced by the media.

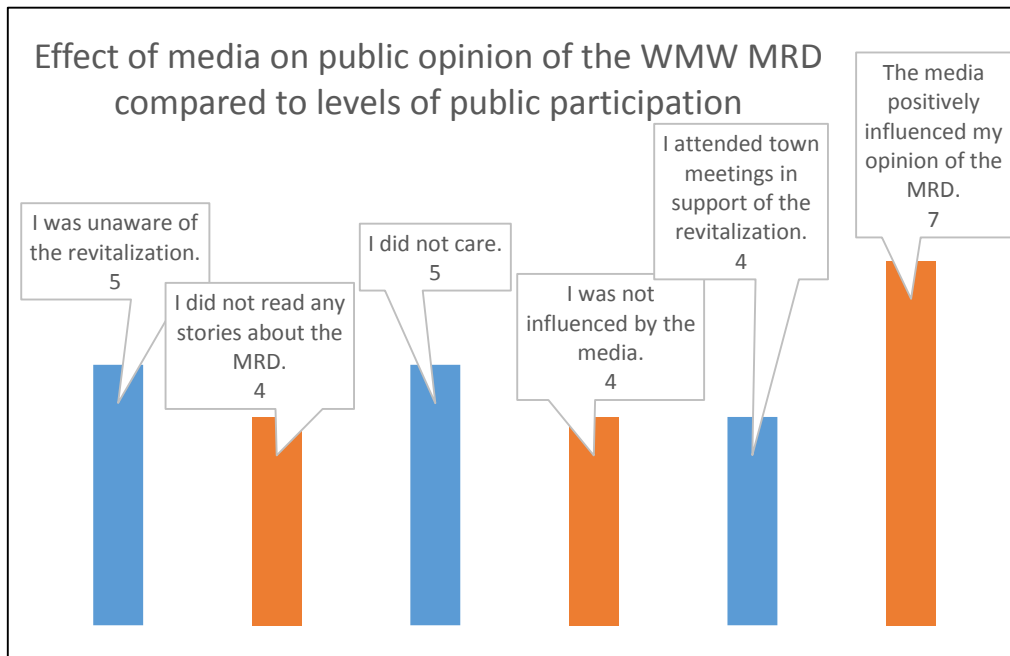


Figure 23. Bar chart demonstrating how the media influenced public opinion of the WMW revitalization, and how those impressions compare to respondents' participation in the project. Media influence is denoted by the orange bars, while level of public participation is shown in blue.

In Whitinsville, there proved to be a higher likelihood for first generation residents to attend town meetings supporting the mill, or to make a donation to the construction. Not one respondent who had older generations of their family living in town participated in the redevelopment during the early stages of the project. It was hypothesized that an enduring connection to the community would predispose residents to be involved with preserving historic architecture, and in the other two case studies, a correlation was evident. In Whitinsville however, the opposite proved true. Those who supported the redevelopment were not even more likely to live in town longer than other respondents. In this town, all of the residents who supported the redevelopment in it's implementation phases had lived in town for at least 16 years, but they were still among the respondents that were the newest to town.

Opinions of outside development entities in Whitinsville were similar to the other two case studies in that they valued any community investment, but they also wanted their community voice to be considered (Figure 23). Each of these options garnered nearly 26% of responses. There was also a large concern for fulfilling community needs and preserving community

character in Whitinsville (respectively 22.2% and 18.5% of responses). Only 7.4% of responses reported that community members would prefer outside developers solely to save the town money.

Community input seems more important to Whitinsville respondents than the roughly 26% of responses to this effect suggest. The main critique of the mill revitalization was that it should be more community minded. This is an interesting complaint, since the MRD in Whitinsville hosts more community events, and is open to a much greater diversity of community members than either of the other two case studies. This demonstrates that Whitinsville values community events and community involvement very highly.

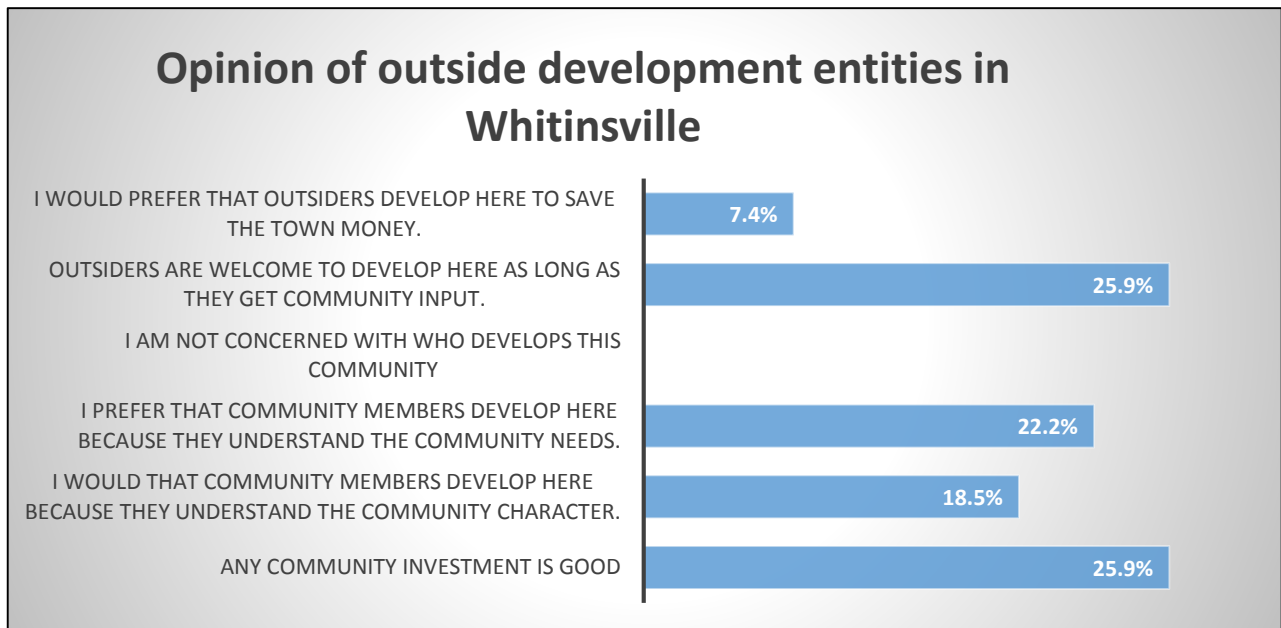


Figure 24. Respondents answers regarding opinion of outside development entities in Whitinsville

The other main complaint about the renovation funded by Alternatives, was that there were not enough residential uses. The only apartments that were constructed as part of the project were available only to developmentally handicapped adults that take part in Alternatives programs. If developer Dennis Rice has any intentions of tackling other industrial properties along the Mumford River, these are concerns to consider. The old Cotton Mill located diagonally from the WMW renovation houses rental apartment units, and it appears that there is a desire for more projects like these apartments.

Perception of Historic Preservation

Whitinsville was established in 1772 and was originally a part of Uxbridge The town has only five properties or districts listed on the Register (National Register 2014), one of which is the district that contains the WMW MRD. This contributes to a ratio of 1.37 listed properties per square mile

of land area. This gives Whitinsville the smallest proportion of registered historic properties of the three case study MRDs.

Out of all the case studies, and consistent with a low number of historic structures recognized by the NRHP, Whitinsville also noted the lowest historic preservation rating with an average score of 8.2 (Figure 25).

Despite this fact, every respondent in Whitinsville indicated that they felt they were a part of a historic community. Each case study is a community that could objectively be labeled “historic” based on architecture and incorporation dates, and respondents seemed to echo this opinion (every respondent in every case study answered “yes” or “some parts” when asked if their community was historic). Since Massachusetts was one of the original U.S. colonies and MA residents tend to be proud of area history, it is probable that many communities in the Commonwealth would note that 100% of people surveyed consider themselves a part of a historic town.

Since the MRD in Whitinsville met the greatest amount of success and praise from community members, their low historic preservation rating score and NRHP listed properties per square mile of land area could suggest that a desire for historic preservation is not the driving force behind an effective mill redevelopment.

CONCLUSIONS

At the outset of this project, the goal was to answer a series of questions regarding the role of community support on the success of Mill Revitalization Districts. The community questionnaire designed for this research succeeded in answering some of the original research questions posed, but ultimately, it demonstrated that greater community outreach is necessary to pinpoint what makes some redevelopments a triumph.

One of the original questions asked whether perceived benefits to property owners spurred support for and/or participation in the redevelopment process. No respondents in any of the case study towns indicated that they felt they would personally benefit from the MRD in their city or town, so it was not possible to draw any conclusions about how benefits like job creation, or increased property values might influence levels of participation and public support.

A similar question inquired whether community members were more likely to show support for a MRD if the new uses aligned with existing needs in the community. The highest level of public support indicated by community questionnaires was observed in Whitinsville (28%). Positive media attention in this case study also revealed that the largest percentage of positive media mentions (40%) in Whitinsville mentioned new uses of the mill complex that the community was excited about. This data supports that (at least in Whitinsville) participation is more likely in instances where the community is excited about what it will bring to the town.

In the same vein, data from Whitinsville demonstrated that a MRD that supports values of the community, such as arts and recreation, meets greater levels of support. The Monarch Lofts supported no community values, providing high end lofts that serve only a small part of the population, and 18% of respondents supported the project. The SWM has been mired in developmental delays and has only one highly specialized commercial tenant. This development was supported by only 9% of survey participants. The WMW renovation provided a space for community churches, art galleries, and theater programs and it was met with enthusiasm by the respondents who hoped to attend services and events there.

Each of these communities had a high historic preservation rating. The lowest rating noted out of the three was an 8.2 on a 10 point scale. This was the average for Whitinsville; the MRD case study that noted the highest level of support and success. This suggests that while a desire for historic preservation is important, it is not the most crucial element for assembling local support. It does appear however, that a high density of properties registered on the NRHP positively correlates to respondents' willingness to make contributions to historic preservation in their community. This suggests that towns may be able to encourage an interest in historic preservation by taking action and listing local historic landmarks on the Register.

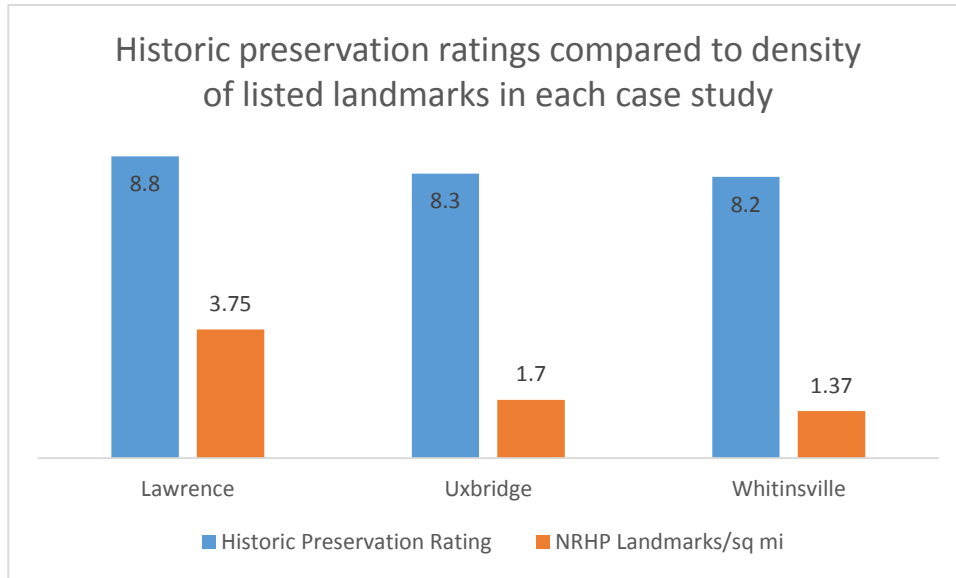


Figure 25. Based on this sample there is a positive correlation between number of protected historic landmarks per square foot and willingness to contribute to historic preservation.

Media representation proved to be a more enigmatic component than historic preservation. In Whitinsville, there was not one negative media story printed about the mill redevelopment. Even if residents were not influenced by these positive representations to support the project in its development phases, these were the types of reports that influenced people to stop by the mill and engage with its events (such as art exhibits). Yet, despite the fact that 56% of Whitinsville respondents indicated that they were positively influenced by media reports, 36% said they were unaware of the redevelopment and 36% claimed that they didn't care about the redevelopment.

In Lawrence and Uxbridge, the opposite was true. Half of the newspaper stories surveyed in each of these case studies were negative. The difference between Lawrence and Uxbridge is that the Monarch Lofts proved to be a real estate product that community members wanted; the same could not be said about SWM. Despite poor media representation and community critiques that lofts should be more affordable, only 10% of respondents indicated an unfavorable view of the lofts after reading these stories and the developer easily rented the units constructed in the old Wood Mill. The SWM also struggles with a media portrayal that is about 50% negative; despite this, no respondents stated that the media negatively influenced their view of the project. Unlike the Monarch Lofts however, the SWM has not managed to secure reliable tenants that can demonstrate to the Uxbridge community that the property is more than a liability.

While the sample sizes from each case study in this project are too small to make generalizations that apply to the greater community, or to mill revitalizations in general, the community members surveyed did provide a great deal of insight about their community and what they desire in new developments. Overall, this project has demonstrated that a community questionnaire can be a valuable tool for developers who wish to undertake the arduous task of redeveloping historic mill properties. Brownfield remediation is far more risky and expensive than comparable greenfield development. Thus, Brownfield redevelopers are under even more pressure than most to create a project that produces monetary gain. The best way to guarantee

an effective project is to find what the host city is passionate about, and the only way to accomplish such a feat is to ask them. This is where a tool like the community survey developed for this project becomes useful.

The revitalization projects covered in this project may be completed or well underway, but this research could prove very helpful to future MRD developers, and potentially to the planning community. Further exploration of a community questionnaire as a tool for facilitating successful redevelopment is an opportunity for community members, developers, and planners to consider the values and preferences, of the community in pursuing suitable uses for the mill.

If this project has demonstrated anything, it is that there are many characteristics that are unique to the personality and the aspirations of each community. There are of course also certain qualities that are similar among MRD case studies that have produced success. According to community surveys distributed in Lawrence, Uxbridge, and Whitinsville, among those qualities that seem to mark a community as receptive to a redevelopment like a MRD are a desire for historic preservation, a positive media representation, and an acceptance that any investment in the community is valuable.

LAWRENCE	UXBRIDGE	WHITINSVILLE
8.8 preservation rating	8.3 preservation rating	8.2 preservation rating
3.75 landmarks /square mi	1.7 landmarks /square mile	1.37 landmarks /square mile
50% negative publicity → 60% were not influenced by the media, 20% were positively influenced by the media, only 10% were negatively influenced	50% negative publicity → 58% did not read any stories, 25% were not influenced by the media, 17% were positively influenced	100% positive publicity → 40% of positive mentions were about community supported uses, 56% were positively influenced
36% were unaware of revitalization and 18% supported the revitalization.	82% were unaware of the revitalization and 9% supported the revitalization	36% were unaware of the revitalization, 36% didn't care, and 28% indicated that they supported the redevelopment.
40% felt any investment was good for the community.	33% felt that outsiders were welcome to develop with community input, 24% thought any investment was good.	26% felt any investment is good, 26% felt that outsiders were welcome to develop with community input.

Figure 26. Each of the case studies was varied in the answers provided by survey respondents.

The WMW revitalization was met with enthusiasm from the outset to the present. In Lawrence, the Wood Mill revitalization was slow starting and was met with much aversion from local media. The SWM renovation has still not noted much success after more than a decade in the development phases, and has suffered at the hand of local media as well.

For this purpose, the community survey becomes apparent as a planning tool. An intention for historic preservation, positive media coverage, and a desire for new development are great

starting points for MRD projects, but the personal preferences of community members are what tell the story of what will be embraced.

As mentioned at the beginning of this section, the Wood Mill is embarking on Phase 2 of its redevelopment as Ansin initiates development on another portion of the historic mill structure. Since surveyed community members indicated that they wished there was a higher level of affordable housing, this would be a great direction for this developer to traverse.

Based upon feedback of the community members surveyed, the SWM redevelopment would be wise to consider the connection that the property has to nearby recreation trails. The walking trail from the River Bend Farm visitor's center is connected to other trails in neighboring towns that locals run, walk, and mountain bike. Uxbridge respondents were passionate about these trails and other resources within town that afford waterfront access and recreation activities. They also frequently expressed a desire for more local dining options. Considering feedback from this community questionnaire could help Deane to develop the mill in a manner that will meet the same kind of enthusiasm that the community-minded uses in Whitinsville enjoyed. Perhaps a riverfront lunch stop, or a bike up ice-cream window would draw hikers into the redeveloped mill, and encourage them to visit the existing antique shop and any future commercial uses.

In conclusion, communities are dynamic and must be experienced to be understood. Most developers are not from the host community in which they attempt to build or rebuild, and so they must enlist current residents, employees, and leaders to gain a better understanding of the culture they serve; the aforementioned dynamics of a community hosting a potential mill. The New England Mill is considered by many a relic of an earlier, simpler time. Developers must not necessarily share this mindset in order to bring economic and cultural cohesion; the way to do that is to use the mill as a host of the desires, needs, and values of a town. In brief, creating a microcosm of the community itself, within the mill, is the most effective way to revitalize a mill.

Limitations and Recommendations for Future Research

The primary objective of this Masters Project was to identify factors that elicit community support in the revitalization of mill structures and districts. Where it fell short in this regard, the resulting report does expose the potential for the use of community questionnaires as a planning tool. This type of survey can be used to empower planners and developers to cultivate meaningful strategies for economic, environmental, and equitable revitalization by providing them with the data they need to produce a successful revitalization in any community. Although this examination highlighted many relevant indicators and recommendations for establishing community support in a redevelopment project, many limitations presented themselves in the course of the research. These limitations prevented meaningful conclusions about community factors that influence public support from being drawn. Restrictions like small sample sizes also make generalizations to whole communities and larger scale planning concerns impossible.

Community Questionnaire

At the inception of this project, a great amount of time was spent collecting contact information and establishing a connection with community stakeholders. This involved explaining the project

to business owners, local government officials, and community members and distributing surveys via email and in person. Multiple visits per week to the case studies during the span of the project did not allow for an opportunity to meet every business, official, or nearby resident. Additionally, few attempts resulted in the completion of the community questionnaire.

After disappointing response yields to questionnaires distributed online, frequent trips were made to each case study to administer printed copies of surveys. This enhanced turnout and was how the majority of surveys were collected, but without a perceived incentive for many community members, most people that were approached declined to answer the questions. Should further exploration of community surveys in mill revitalizations be completed, greater efforts must be made to incentivize participation for the greatest amount of data to be collected. A large scale community survey in the planning phase of a redevelopment offers greater motivation for community members to participate since their input may help shape a new use that meets their needs. Thus, it is the recommendation of this work that such a survey should be implemented at the launch of revitalization through the Town government or the developer as an effort to elicit public participation.

The challenges faced in motivating community members to complete the survey could also be indicative of a population that doesn't value or understand the potential benefits of redevelopment. A community that wishes to use a community questionnaire to establish a local identity and to recognize existing needs should consider public education materials to enlighten participants as to the possible benefits of revitalization and as to the role that they can play in planning a redevelopment. The data that was collected was also skewed because the population of commercial stakeholders who filled out the questionnaire are committed to their role in the in redevelopment, and there were no contrasting views collected.

Another concern is that the paper surveys allowed participants to only partially answer or vaguely complete the questionnaire. This affected the results and analysis and incomplete surveys were hugely detrimental as there were such small sample sizes for each case study. Some respondents failed to complete the survey because of language barrier issues (as in the high Hispanic population in Lawrence), while others were simply unwilling to spend more than a few minutes answering questions. Possible solutions for some of these issues include providing an English-Spanish translation of the questionnaire in a population such as Lawrence, and streamlining the survey so that it can be completed quickly and is not a large time commitment on the part of participants.

Based on this incomplete, incomprehensible, and often illegible questionnaires, it became apparent during the process that better data may have been collected in personal interviews in which the survey was filled out completely by the researcher. This method would have been very time consuming, but it could have improved the response rate and data would have been more reliable.

The collection of surveys from residents and businesses at sites nearest the mill was a deliberate decision that was made in an effort to get a sample of community members that were the most likely to be impacted by the results of a the mill redevelopment. However, this decision may

actually have skewed the data by producing results that are not a representative sample of the town, but only of those that live proximate to and frequent the areas nearest the mill.

In addition, several limitations in the survey itself became clear during the process. For instance, a more attention grabbing design and intriguing questions could have sparked greater interest. Open response format on many questions made analysis difficult as the researcher had to interpret responses, and then classify them in regards to other responses. While limiting in its own way, poll style questions would have made a more accurate analysis possible. Further, the questions designed to help the researcher gain an understanding of local culture and community character were not as successful as anticipated. In future attempts, it is recommended that more pointed questions be asked about what aspects of the community are important to local identity and existing character.

Recommendations

The data collected in this report, while lacking at some points, demonstrates that a community questionnaire such as the one designed for this project could prove to be a valuable tool for the completion of successful mill revitalizations. The following recommendations however, propose avenues for future research that could help develop a more successful survey for analysis of potential redevelopment sites, and as a tool for collecting public input to produce a successful new mill.

Implement a Community Questionnaire for use through the entire duration of a mill redevelopment process.

As identified in the limitations, it was difficult to motivate stakeholders to participate in the survey as an unfamiliar student with little power to affect change in each community, or to offer any encouragement for participation outside of academic research. It is possible that with persuading from trusted town leaders or from the developer that wants to construct in their community, locals would be more inclined to participate.

What would also be interesting should this tool be accepted by the planning community as a way to facilitate economically viable mill redevelopments, is the implementation of the community questionnaire throughout the entire planning process. Studying mill revitalizations that had used a community questionnaire to aid in project design and in rallying public support compared to those that lacked public participation could shed a great deal of insight upon why some redevelopments succeed. The use of a community survey by a developer at the inception of a redevelopment would likely produce the most successful and suitable results. This theory however is based only on the research already conducted as a part of this report; it is entirely possible that exploration of mill revitalizations that implement a survey will fare no better than those who don't attempt to gain public participation or who make no effort to adhere to an existing cultural identity.

Whether the use of a questionnaire for a better understanding of a host community fosters an economically restored mill or not, it cannot be argued that the environmental, economic, and sprawl combatting potential of mill revitalizations should not be ignored by the planning field.

Closer examination of MRDs and tools that could potentially be used to facilitate their successful implementation could highlight any trends that predict and expedite success.

Implications for Planning

A community questionnaire like the one used to examine the three case studies selected for this Masters Project can help local leaders, business owners, developers, and community members better understand their current views of the City or Town, and their aspirations for its future. Such a survey can indicate community perceptions that may have implications for planning issues; perceptions such as access to community resources and satisfaction with community conditions (like opportunities for employment). MRDs are an incredible tool for completing Smart Growth and economic development initiatives, and any research that makes it easier for developers to undertake these large scale redevelopment could have huge consequences for many communities.

Many opportunities exist across New England and the country at large for hearty revitalization, and local governments should take advantage of any research opportunity, or planning tool that could help them to affect the kind of change they want to see in their downtown, local business climate or historic building stock. Better documentation of mill revitalizations lays the groundwork for planners and other local government to learn from other successes and failures. The introduction of a community questionnaire as standard operating procedure during any redevelopment could help developer minimize financial risks, and could ultimately help communities produce the most fitting new use for their needs and character. The community questionnaire presents an opportunity to give proper social and economic justice to the once great mills of American culture; one that prided itself on sustainability and success.

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FIGURES AND IMAGES

Figure 2. *Christopher B. Leinberger, Arcadia Land Co. and Robert Charles Lesser & Co.*

Figure 4. Flynn, K. (n.d.). [Photograph found in Wood Mill Powerhouse Images, Lawrence History Center]. Retrieved from <http://www.lawrence-history.org/node/351>

Figure 5. *Monarch Lofts*. (n.d.). Retrieved from <http://www.monarchlofts.com/>

Figure 6. *THE WHITIN MILL RENOVATION PROJECT in Whitinsville, MA* [Photograph found in Alternatives, Whitinsville]. (n.d.). In *THE WHITIN MILL RENOVATION PROJECT*. Retrieved from <http://www.blackstonedaily.com/whitin32.htm> (Originally photographed 2007)

APPENDIX

Appendix A

Survey Questions for Community Members and Leaders

1. Tell me a little about yourself.

What is your age? What is your gender? What is your occupation?

2. Do you live in town?

If yes; how long have you lived here? Are you the first generation in your family?

If no; how long have you worked here? Why did you choose to work in this community?

3. What is your impression of this community? Choose 5 words that you think describe its character.

4. What is your vision for this community?

What do you like currently and want to see preserved?

What would you like to see change?

5. Now tell me a little more about the community and your preferences.

What is your favorite activity to participate in here?

Are you a part of any community groups, teams, or organizations?

Your favorite building or area of town?

Your favorite restaurant here?

The restaurant or business that you wish was here?

Are there any parks, green spaces, or natural resources here that you enjoy?

Do you consider this a historic community?

How important is preserving historic building stock to you? Rate on a scale of 1-10; 1 being "I do not care about preserving historic buildings" and 10 being "I would be willing to make a substantial monetary donation or pay higher taxes annually to save our historic buildings"

6. What are your impressions and expectations of outside entities coming in and making changes to the community? Choose all that apply.

- I would prefer that community members are the ones who continue development because they understand the existing community character
- I would prefer that community members are the ones who continue development because they understand the needs of the community
- Any investment in the community is a good investment
- Outside entities are welcome as long as they get community input on projects
- I would prefer that outside private developers make improvements so that it does not cost the community members or the town government money
- I am really not concerned with who makes changes to the community

7. What is your definition of community revitalization?

How did the mill revitalization meet this definition?

Where did it fail to do so?

8. Did you participate in any aspect of the mill revitalization? Choose all that apply.

- Yes, I attended town meetings in support of the revitalization.
- Yes, I attended town meetings in opposition of the revitalization.
- Yes, I made a donation to help fund the revitalization.
- No. I did not participate because I did not support the revitalization
- No. I did not participate because I did not care.
- No. I did not participate because I did not know about the revitalization project.
- Other. (Please comment)

9. Did the local media's portrayal of the mill revitalization impact the way you felt about it?

- Yes. The media's portrayal positively influenced the way I viewed the revitalization.
- Yes. The media's portrayal negatively influenced the way I viewed the revitalization.
- I was not influenced by the media's portrayal of the revitalization.
- I did not read or view any stories about the project in local papers or on local news stations.

10. As a business owner, nearby resident, or community leader, did you have any concerns about the mill revitalization? (i.e. increased competition or traffic, insufficient parking, activities inconsistent with community needs)

Appendix B

Survey Response Data Table

Age	How long have you lived or worked in town?	First generation?	Community Descriptors	Positives	Negatives	Historic Preservation Rating	Expectation of Outside Entities	Did you participate?	Did the media influence you?	Where did the mill do this?	Where did it fail?
82	19 yrs	yes	Small. Clean.	Everything. Cotton Mill Apartments. Harry's Pizza. Green space.	None.	10	Any investment is good.	Attended meetings in support.	Positive.	NA	NA
76	35 yrs	yes	ChurchOriented. FamilyOriented. Active. Philanthropic.	Churches. Girl Scouts. Schools. Public library. Brian's. Whitin Park.	Lack of sports fields.	8	Outsiders welcome as long as they get input.	Did not participate.	Positive.	town was involved	Met expectations.
51	yes	yes	Great.	Town Hall. The Corner. Recreational trails.	Insufficient police force.	10	Prefer community members. Any investment is good. Outsiders welcome as long as they get input. Outsiders to save money.	did not support the revitalization	Not influenced.	use all old mills	NA
69	46 yrs	yes	Friendly. Historic.	Churches. Brian"s. WMW. Historic Society. Town Common. Plummers Landing.	Not enough local business.	10	Any investment is good. Outsiders welcome as long as they get input.	Did not participate.	Not influenced.	historic preservation	Met expectations.
53	20 yrs	yes	Friendly. Historic. Quiet.	Churches. Recreational trails. Waterfront access.	Litter.	8	Community members understand the needs. Any investment is good.	Did not participate.	Did not read any stories.	NA	NA
67	20 yrs	no	Friendly. Quiet. Charming. Stagnated.	Cotton Mill Apartments. WMW. Town Common	None.	6	Outsiders welcome as long as they get input.	I was unaware of the revitalization.	Did not read any stories.	NA	NA
53	53 yrs	no	Stagnated.	Whitin Park. Downtown. Thai restaurant.	None.	7.5	Any investment is good. Outsiders welcome as long as they get input. Community members understand the needs. Community members understand the character.	I was unaware of the revitalization.	Not influenced.	NA	NA

60	17 yrs	yes	Quiet, stable, church-oriented	Churches. Harry's. West End Creamery. Purgatory. Town Common.	taxes are too high, healthier food options	5	Community members understand the needs. Community members understand the character.	I was unaware of the revitalization.	did not read any stories.	NA	NA
60	17 yrs	yes	Family oriented, historic	Churches. Corner Pizza. Purgatory. WCC.	taxes are too high	5	Community members understand the needs. Community members understand the character.	I was unaware of the revitalization.	did not read any stories.	reuse old buildings	NA
53	20 yrs	no	historic, family-oriented, active	fields, WCC, rivers	should connect to surrounding bike trails	9	Community members understand the character. Outsiders are welcome if they get input.	I did not participate	positive.	reuse old buildings	Met expectations.
54	16 yrs	yes	historic. Family oriented. Quiet.	WCC. WMM.	wish taxes were higher to address community needs	10	any investment is good.	I made a donation	Positive.	provides a place for community events	Met expectations.
51	16 yrs	yes	historic. Green. Active	WMM. Canal trail.	wish taxes were higher to address community needs	10	any investment is good	I made a donation	Positive.	provides a place for community events	Met expectations.
66	66 yrs	no	historic. Traditional. Charming	harry's. WCC. School system.	more projects like the mill.	9	Community members understand the needs. Community members understand the character. Any investment is good	I attended town meetings	Positive.	preserved a great asset	NA
55	23 yrs	yes	quiet. Progressive. Beautiful. Church-oriented. Historic.	Annual Turkey Trot. King Jade. Library. Corner Pizza. Recreational trails. Waterfront access.	More fine dining options.	10	Community members understand the character. Outsiders welcome as long as they get input.	I was unaware of the revitalization.	Positive.	historic preservation. Community beautification.	Met expectations.

67	34	no	Friendly. Historic. Quaint. Church-oriented	Brian's. WMW. Vacation Bible School. Walking trails	more stores. Bike trail connectivity	7	Any investment is good. Outsiders welcome as long as they get input.	Did not participate.	Not influenced.	historic preservation	Met expectations.
62	44 yrs	No	Involved.	Town parades and celebrations. Churches. Gia's Restaurant. Green space.	Not enough local business.	7	Outsiders welcome as long as they get input.	Did not participate.	NA	NA	NA
59	4 yrs	Yes	Blue Collar. Conservative. Patriotic. Friendly. Outdoorsy. Active.	Green space. Recreational trails. Historic. Active. Town government. Library. Gia's Restaurant. River Bend Farm.	High taxes.	5	Outsiders welcome as long as they get input. Community members understand the needs. Community members understand the character.	I was unaware of the revitalization.	Did not read any stories.	NA	NA
27	1 yr	Yes	Involved. Historic.	Waterfront access. Lookout Rock. Upton State Forest.	Underutilized buildings.	8	Community members understand the character.	I was unaware of the revitalization.	Did not read any stories.	Restored existing buildings.	NA
46	25 yrs	No	Family-oriented. Great. Friendly. Historic.	Mills. Recreational trails. Blackstone Canal. Waterfront access.	Not enough local business.	10	Outsiders welcome as long as they get input. Community members understand the needs. Community members understand the character. Any investment is good. Prefer private to save town money.	Attended town meetings in support.	Positive.	Restored existing buildings.	NA
18	12 yrs	No	Peaceful. Friendly.	Blackstone Canal. River Bend Farm. Waterfront access. Jumbo Donuts.	Lack of community activities.	8	Community members understand the character.	I was unaware of the revitalization.	Not influenced.	NA	NA

18	15 yrs	No	Friendly. Historic. Active.	Mills. Recreational trails. River Bend Farm. Waterfront access.	Insufficient tourism opportunities. Underutilized buildings.	10	Community members understand the character.	I was unaware of the revitalization.	Not influenced.	NA	Revitalizations do not preserve integrity of the buildings to the extent that they should.
47	5 yrs	Yes	BlueCollar. Shortsighted. Historic.	Green space. Library. Harry's Pizza. River Bend Farm.	Town Government.	7	Outsiders welcome as long as they get input.	I was unaware of the revitalization.	Did not read any stories.	Restored existing buildings.	too many commercial uses in revitalized mills. More residential uses.
30	3 yrs	Yes	Great.	Green space. Recreational trails. Community service.	None.	5	Community members understand the character. Community members understand the needs. Outsiders welcome as long as they get input.	I did not care.	Did not read any stories.	NA	NA
62	3 yrs	Yes	Rural. Quiet. Green. Charming.	River Bend Farm. Recreational Trails.	Underutilized buildings.	10	Any investment is good.	I was unaware of the revitalization.	Did not read any stories.	Restored existing buildings.	More residential uses.
48	20 yrs	Yes	Small. Friendly. FamilyOriented.	River Bend Farm. Recreational Trails. West Hill Dam. Harry's Pizza. Active.	Not enough restaurants and entertainment.	7	Outsiders welcome as long as they get input.	I was unaware of the revitalization.	Did not read any stories.	Restored existing buildings.	Not fully renovated.
45	9 yrs	yes	Friendly. Historic.	Blackstone Canal. River Bend Farm. Waterfront access. Library.		10	Any investment is good.	I was unaware of the revitalization.	Not influenced.	NA	Mostly empty space.
51	27 yrs	no	Insular. Caring. Rooted. Distrusting. Agrarian. Historic.	Youth sports. Active. Churches. Farms. Alicante. Green space. River Bend Farm.	SelfInvolved. Conservative. Judgemental.	10	Any investment is good. Outsiders welcome as long as they get input.	I was unaware of the revitalization.	Did not read any stories.	Restored existing buildings. Draws people to the site.	Signage should be more celebratory of the town's rich history.

62	8 yrs	yes	Involved. Beautiful. Educated. Historic. Active.	Capron Park. Mills. Brian's. River Bend Farm. Recreational trails. Greenspace.	Not enough restaurants and entertainment.	7	community members understand the needs. Any investment is good. Prefer private to save town money.	NA	Positive.	It is a step in the right direction.	Very little has been accomplished.
47	NA	yes	Green. Transportation. Recreation.	PublicTransportation. Recreation. Parks. TownHall. ElTipico.	none	10	any investment is good.	I did not participate.	I was not influenced by the media.	NA	NA
22	2 yrs	no	historic.		more hispanic food	5	any investment is good.	I did not participate.	I was not influenced by the media.	NA	NA
60	4 yrs	yes	financially depressed. Community.	Lawrence Heritage Museum. Churches. Waterfront access.	drug use	10	any investment is good. Community members understand the needs. Community members understand the character. Outsiders to save the town money.	I did not know about the revitalization. I did not care about the revitalizations. I did not support the revitalization.	I was not influenced by the media.	urban renewal	affordable housing and job creation. Overbudget.
31	1 yr	yes	service driven. Active.	community service. Salvatores. Recovery Center. North Common.	drug use. High homeless population.	5	any investment is good.	I did not know about the revitalization.	I did not read any stories.	lofts are nice	too expensive
27	2 yrs	no		library. Towncommon. Recovery center. Churches. Pikolos.	cleaner parks	10	any investment is good. Community members understand the needs. Community members understand the character. Outsiders as long as they get input	I did not know	I was not influenced by the media.	brought business space, jobs and homes	high class lofts in a low class community

28	1 yr	yes	dumpy.	sports. Library. Burger king.	violence.	10	any investment is good. Community members understand the character. Not concerned.	I did not know	positive	NA	NA
35	5 yrs	yes	diverse.	downtown. Waterfront access. McDonalds	poverty.	10	community members understand the needs.	I did not support the revitalization	positive	NA	NA
63	life	no	unsure	historic. Ambivalent. Waterfront access	ambivalence	10	outsiders get input	attended meetings in support.	negatively	NA	NA
45	2 yrs	yes	possibilities. Stigmatized. Changing. Hopeful. Journey	merrimack st. salvatores		10	any investment is good.	attended meetings in support.	I was not influenced by the media.		
62	12 yrs	yes	poor.	salvatores	lots of urban problems	9	any investment is good	I did not participate.	I was not influenced by the media.	community beautification	helps very small amount of people