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Designing Symbiosis for the New Church Community

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**DESIGNING SYMBIOSIS FOR THE NEW CHURCH
COMMUNITY**

Designing in Response to Contemporary Church Cultural and Operational
Dynamics

A Thesis Presented

By

EVAN M. JANES

Submitted to the Graduate School of the
University of Massachusetts Amherst in partial fulfillment

of the requirements for the degree of

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Department of Architecture

DESIGNING SYMBIOSIS FOR THE NEW CHURCH COMMUNITY:
Designing in Response to Contemporary Church Cultural and Operational
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ABSTRACT

DESIGNING SYMBIOSIS FOR THE NEW CHURCH COMMUNITY

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Religious architecture has historically played a primary role in both the study and the development of architectural practices and theories. Undoubtedly, this influence is tied to the position which religious institutions have historically held in shaping cultural values. However, American culture has transitioned into a position where religious organizations are often no longer the primary authority for determining cultural, social, and interpersonal values for many Americans. Additionally many individuals have, for one reason or another, become uncomfortable or feel unwelcome in traditional church structures due to the historical hierarchies associated with them, the innate formality of the spaces, the perceptions of expected behaviors, or discomfort with language and interpretations of spirituality or religion. These changes have had a major impact on the economic and functional dynamics to which religious institutions must now adhere. While churches remain a venue for architectural expression, they no longer hold the position as the primary source for considering architectural culture; which has, for the most part, transitioned to museums, cultural, commercial, or office buildings. It is clear that the manner in which religious organizations operate and conduct themselves must

therefore evolve in order to respond to these new forces, and so must the architecture which houses them. Only by adapting to these new pressures can these religious organizations hope to remain relevant and active in the changing cultural climate where religious institutions and religious individuals are often greeted with skepticism and suspicion.

Many religious institutions have already recognized this need for change. The manner in which they hold their services and reach out to the community has changed in response to new cultural mores and trends. Architecture, as the structure which houses these changing religious organizations, must adapt to these new situations as well. The architecture houses, and therefore must adapt to, the new processes and practices which must function within these institutions. Architecture however, must also take into account other facets of the organization beyond just these functions. It has the ability to achieve many other objectives which can support the ongoing goals of these contemporary religious institutions. Since architecture acts as one of the fundamental outward faces of these organizations, it has a major and fundamental influence upon how the public perceive a religious institution.

It is the intent of this thesis to investigate how church architecture may facilitate community oriented goals. These goals include, but are not limited to: creating an environment where individual exploration of spirituality becomes an accepted part of community activities, promoting localized economic development, instilling within the community a sense of value and ownership to generate community pride and stakeholderhip, increasing community outreach, and the development of other

programs which activate and benefit the local area. With regards to the architectural exploration, the intention is to approach this by addressing questions concerning perception, style, outward appearance, proximity, and operation. This includes consideration of programmatic functions which, while they may not be inherent to churches, may be useful in generating community interaction and intersection. Additionally, architecture has certain psychological capabilities which may be utilized to address personal reservations regarding churches. By considering what architectural elements are symbolic of religious organizations and strategically employing or eliminating them, one can build upon or counter the impressions which may exist about what a church is or should be. The examination of these issues within the context of an abandoned local mill building expands the richness and potential for this type of investigation by exploring its fundamental contributions to the historic development of the community. By introducing a spiritual component to this historically secular building one alters associations and defuses potential misgivings, as well as highlights a more welcoming avenue for promoting spiritual exploration within the community. By promoting adjacency and proximity of everyday activities and beneficial programs to hospitable spiritual activities, the architecture has the potential to meld different uses together. Additionally, the community aspect of this project may have the capacity to expand, specifically when considering how architecture may have the potential to promote a spiritually open community.

Furthermore, by considering these goals in the context of an abandoned mill building, it is hoped that parallels can be made between the historical significance of the

structure, and that of religion; and that by studying the two in tandem one can elevate the status of both. The focus here is not upon elevating religion or history for their own sake but rather in lifting them up as symbols of the communities which they serve and using them to lead development and revitalization in their locations.

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CHAPTER 1

INTRODUCTION

This investigation began as an examination of what might be required for churches to develop a new form for the type of significance and integration within the community which they have historically held both within and beyond their local neighborhoods. As an architectural thesis, this investigation was specifically focused upon the potential for architecture to facilitate or promote a sense of inclusion, openness, and everyday presence of spiritual activities within communities. As the investigation progressed other potentially beneficial courses of investigation became apparent, ultimately altering the course of these inquiries so that the investigation might be more substantial. These other courses of inquiry included: adaptive reuse, community revitalization, potential for the design to act as a catalyst for development, and reactivating a building with historic community importance. These other factors lead to the consideration of an abandoned mill building in a small town.

It is worth noting that the literature under review in the following section is a reflection of the manner in which this thesis has altered its direction. The literature reflects investigation into two major areas: religion, and adaptive reuse. The investigation of Christian belief examines what is important to these individuals, how architecture can exemplify their beliefs, and how a designer might both be sensitive to their beliefs and promote their outreach objectives. The literature regarding adaptive reuse examines different strategies, potential courses of action and examples of other adaptation and renovation projects.

As the scope of the project expanded from simply considering the design of sacred spaces into the consideration of how one designs a community space, efforts were made to consider other items which have historically held significance within a community. These avenues of investigation soon lead to the consideration of the historic New England mill, a common site throughout this region. Since these mills represent a critical time in the development of the area, as well as signify times of economic decline for many communities; they offer a window into the communities in which they reside. It was this mode of thinking which encouraged the intertwining of the different dynamics of activity, community, development, revitalization, and outreach which might allow this project to better investigate the potential of architecture to reinvigorate communities and religious organizations by promoting partnership and integration.

CHAPTER 2

LITERATURE REVIEW

Book-1: Mere Christianity

By C. S. Lewis

This book was chosen because it presents an introductory glance at Christian thinking and represents a useful background source. This book was useful in order to help get into the mindset required to design a building significant to Christian culture. The book begins by presenting evidence for the fundamental Christian beliefs. Interestingly, the circumstances surrounding the creation of this book were quite unique. The book is a collection, and adaptation of, a series of radio broadcasts which he produced during World War II in order to help bolster moral and help people to deal with the hardships of war. The primary significance of this book to the thesis lies in that it presents this evidence in a manner which is intended to be clear, irrefutable, and non-intimidating. The attitude of this book is critical to understanding the type of face which church groups often want to present to the public.

Mere Christianity is divided into four books. The first of these books is titled "Right and Wrong as a Clue to the Meaning of the Universe". As the title suggests this section focuses upon the phenomenon of how human societies and cultures determine what is right and what is wrong when it comes to human behavior and interactions. Lewis promotes the idea that every human has an innate sense of what is right, and what is wrong. He also establishes that this conscience goes beyond human instincts;

providing evidence for this in that this sense of right has the ability to govern instincts and promote one instinct which may be right, over one which may be safer or more pleasurable. He assures the reader that this sense must therefore not be an instinct; because it is able to influence an individual beyond the capacities of instincts, as well as to mediate between instincts. He strengthens this position by pointing out that this sense often seems to side with the instinct which would otherwise be weaker. For example, when one is faced with a situation where they have the choice to either save a stranger, or run to safety; the sense of right stands on the side of the stranger, rather than with the obviously stronger sense of self preservation. As this book progresses he begins to hint that there must be some driving force behind the establishment, and continued acquiescence to this sense. Furthermore he presents for the reader evidence regarding how often human beings go against this sense. He uses this as grounds to establish that human beings should be aware of the rift between themselves and this, hereto unnamed presence; and be wary of continued ignorance and inattention to how their actions distance them from the intentions of this force.

The second book is titled "What Christians Believe." It is in this book where Lewis presents the fundamental Christian beliefs, as he understands them to be. He is upfront that he is a member of the English Church he is careful to explain that he and the English Church may have certain leanings; he has strove to produce this book with as unbiased and plain a tone as he possibly could. He begins this section of the book by examining what he understands about other religious beliefs, including atheism; a category under which he once fell. He does not go into great detail about most other

religions, preferring instead to focus upon the basic structures which are either at odds with, or have certain similar characteristics to Christianity. It is during this book that Lewis introduces the character of Christ, and the beliefs surrounding him. What is perhaps most notable about how Lewis approaches this topic is that he immediately presents the different skeptical views and counter arguments. This tactic is employed by Lewis throughout the books, in nearly every instance where he provides a topic which others may seek to argue against. Lewis presents Christ, first as a man who makes great and unique claims; explaining the severity of these claims, and how they must either be considered seriously, or as the ravings of a lunatic. He then uses evidence of how people both for and against him reacted in his time as a means to show that this individual seems to have been considered serious enough in his time that his claims should not be so easily dismissed.¹ This book then continues to expand upon the Christian belief system, the significance of Christ, his death, and his resurrection; and then moves on to explore the other facets of Christian belief. Most notable about this following section is how it explains and examines repentance and redemption. He presents this in an honest, straightforward, and minimally biased manner.

The third book is titled “Christian Behaviour” and, of course, expands upon the Christian ideals concerning behavior. He begins by discussing how morality is a necessity for human function, and is therefore a primary part of Christian belief and behavior. He presents the definitions and differences between cardinal virtues and theological virtues. He says that cardinal virtues are those which civilized individuals

¹ Lewis, C. S. Mere Christianity. New York: Harper Collins Publishers, 1952; pp. 51-52

recognize. Theological virtues are those which are Christian in origin, and presumably are only known by Christians. Notably, he also asserts that the foundations of social morality for Christians are based upon, and therefore the same as, those of the Jewish religion, found in the Old Testament. Interestingly, another aspect of Christian morality which he touches upon, and which he explains was shared by other societies, was that they thought badly of the practice of lending money and charging interest. He points out that investing is a form of this, and that our entire economic system is therefore at odds with Christian beliefs. It was interesting to see this discussion, given that the moral objection to capitalism is often discussed in a very different manner. This book also establishes the Christian idea that sins and wrongful deeds are equivalent, that despite the apparent severity of the deeds, or the individual's influence they are fundamentally wrong and equivalent when considered in that manner². From here this book moves on to discuss Christian morality with regards to sexuality, marriage, forgiveness, sin, charity, hope, and faith.

The fourth book discusses introductory Christian doctrine. In this book Lewis seeks to present several of the more complex Christian beliefs in a manner which is more readily accessible to those who are not accustomed to thinking in a theological manner. One such the concept which he explains is the holy trinity; essentially the belief that God, Jesus, and the Holy Spirit are three aspects of the same entity³. Another important aspect touched upon in this section is the idea that God stands outside of

² Lewis, Mere Christianity; pp. 92-93

³ Lewis, Mere Christianity; pp. 160-166

time, and therefore views events in an entirely different manner to that which we are accustomed. He also explains that this has significant bearing in interpreting events both in the bible and in one's own life; since God sees and knows the outcome 'before' an event has even been initiated⁴. This particular issue is one which can be both comforting and discomfoting for Christians. He ends the book by discussing the capabilities of man when acting in a manner which is congruent with faith and Christ, referring to them as "New Men"⁵.

This book is a useful resource when considering the design of a space intended to help foster a spiritual community. The book is intended to introduce faith and spirituality, just as many churches seek to do, in a manner which is informative and benign. The effectiveness of this book is evidenced by the prolific manner in which it has been consumed since its production, and learning lessons from it may be quite useful in order to design a church which is responsive and relevant for the future of Christian worship. Reading this book helps to prepare one to be receptive and sensitive to the needs of a Christian society. It helps to spark potential areas of discussion and establish common ground when entering into this type of consideration. The tone and writing style of the book are useful in developing both the topics of study and points of representation in the design process, as well as in developing a written document which is accessible and as fair and non-biased as possible. It also presents many Christian Ideas which may be helpful when deciding upon different potential project directions,

⁴ Lewis, Mere Christianity; pp. 166-174

⁵ Lewis, Mere Christianity; pp. 217-277

scope, and even design details and concepts. While this book may not be as useful a source in generating the evidence and text of the thesis, or the physical characteristics of the design project, as other books or articles which present evidence, precedents, statistics, and other relevant facts; this book may be crucial in developing the tone and formal qualities of the writing; as well as in considering the development and approach towards dialog when conversing with those inside the church.

Book-2: Churchless

By George Barna and David Kinnaman

The book Churchless is based upon survey data and research conducted by the Barna Group. In this book they interpret their data and present both the trends regarding church attendance and perception in contemporary society; as well as many of the drivers which may be responsible for these trends. The opinions, facts, trends, and triggers presented by this book have greatly influenced the direction and content of this thesis investigation by establishing a baseline condition and context in which a contemporary church must operate. Something which one must be aware of when considering this source, is that those who researched and authored it are Christians; and therefore their tone and intentions are in line with their beliefs, and may be considered marginally biased. Furthermore, it is worth mentioning that their tone and intent is more focused upon bringing people into the church, than in examining how churches can outwardly affect the community.

The book begins by defining the term Churchless and providing a brief overview about the factors which they have investigated regarding the topic. The book explains that the term Churchless is used to refer to those who do not have a direct connection to, or regularly attend a church or religious institution⁶. From there it moves on to discuss the cultural context and situation which is affecting churches. The book presents graphical data and statistics which examine and explain the decline which religion is experiencing. Interestingly, the data seems to indicate that this decline is less severe than one might otherwise suspect from everyday discussions on the topic. The data suggests that, while the percentage of people who do not identify with any church does steadily increase, they still represent only about half of the overall population of the United States⁷. Additionally the data explains that the Unchurched are more likely to be male than female⁸.

The book explains many other issues associated with how churches interact with individuals. It explores several demographic types, intersections, and contextual issues and drivers. For example, it breaks those who have broken from the church down into four different types. The book explores the reasons why many individuals or different demographics which fall into these types have come to disassociate themselves with the church; providing examinations of each type and what drivers affect them. It categorizes

⁶ Barna, George; David Kinnaman. Churchless. Austin, TX: Fedd and Company Inc., 2014; pg. 5

⁷ Barna; Kinnaman. Churchless; pp. 34-37

⁸ Barna; Kinnaman. Churchless; pg. 37

these drivers into six main reasons. These examinations include why the group would likely have left their church, as well as what types of characteristics or behavior from a church may bring them back⁹. All of this information is useful in determining the context and background which this thesis exploration will be addressing.

One theme which is presented several times within the book, both directly and indirectly, is that technology has greatly affected the church. This manifests in a few ways. One example of how this topic is brought up is in regards to the media and the stimuli which people are accustomed to in contemporary society. The book explains that the level of stimulus presented by the church may be inadequate to present or hold the attention of the contemporary human being¹⁰. Another is that churches must consider how to use technology to attract individuals. One example presented in the book, which is perhaps the most simple, is that the websites or internet representation of a church is often the most fundamental means by which it can reach people in the digital age. The book even goes so far as to explain that if this presentation is not suitable, the church may not get a second chance to make an impression upon potential patrons¹¹.

The book also explores other issues such as the effects which families have on churches, or vice versa. As well as how having children may either bring people into the church or lead them away from the church¹². Another point discussed is the relationship

⁹ Barna; Kinnaman. Churchless; pp. 91-103

¹⁰ Barna; Kinnaman. Churchless; pp. 98-99

¹¹ Barna; Kinnaman. Churchless; pp. 161-162

¹² Barna; Kinnaman. Churchless; pp. 106-119

between churches and personal or family goals¹³. Additionally, the book discusses the impact which being involved in a church can offer in regards to morals. Interestingly, the book discusses how focusing upon morals can also drive people away from the church, and therefore promotes caution¹⁴.

One quote from the book, which is especially relevant to the thesis is, “because the unchurched are skeptical about the value that churches have to offer, the reputation of the ministry plays an important role in attracting those who often feel burned, disappointed, or misunderstood by churches”¹⁵. This particular quote is used to discuss one of the three main proven strategies which the book presents for churches to connect with outsiders or the unchurched. While the goal of the book, and of this particular passage, is not the same as the primary goal of this thesis exploration; it is relevant when considering the avenue which this thesis seeks to explore. For example, when considering the potential for a church to impact a community its reputation is critical. Therefore, the perception of the church as a community entity can be vital to this end. If this is true, then in order to design a work of architecture which unites community programmatic elements and church programmatic elements in a cohesive and symbiotic manner to create a religious institution which has a reputation as being unified with the community, one must account for the information contained in this book.

¹³ Barna; Kinnaman. Churchless; pp. 121-124

¹⁴ Barna; Kinnaman. Churchless; pp. 124-126

¹⁵ Barna; Kinnaman. Churchless; pg. 158

This then brings the discussion onto the next section of the book with considerable importance regarding the path which this thesis will explore; the chapter titled, “Why Churches Matter.” The content and subject matter in this chapter, due to the inclinations of those who produced it is largely focused upon the spiritual, or Christian specific, importance of the church. Despite these leanings, this section also presents some issues which are more broadly useful and the remainder of this discourse is a useful stepping off point for this discussion. The points brought up in this section are: Godly relationships, doing good, peace, worship, wisdom, witness, mentoring, unity, discernment, and faith focus¹⁶. Godly relationships, worship, witness, and faith focus are perhaps the most spiritually specific aspects listed here and their benefits may be seen as arguable by many. Other items which are intended to be inherently spiritual by the book, may have other profound potential benefits or parallels which are not necessarily spiritual or religious in nature; such as mentoring, discernment, doing good, and unity. Mentoring, for example, can have many forms, such student and teacher, Big Brother/Sister, or athlete and coach; all of which can be highly beneficial in a community even if not directly employed by or connected to religion or religious organizations. Religious institutions also can promote wisdom beyond spiritual guidance; generating forums or groups where discourse on any number of items can take place. Unity can also be fostered in a community in ways beyond collective spiritual worship, such as community gardens, gatherings, functions, and other activities

¹⁶ Barna; Kinnaman. Churchless; pp. 168-173

which may help to bring individuals within an area together and help them to form a more unified or defined community organization.

Overall, one can clearly see the applicability of this book as resource for the exploration of this thesis and design exploration. The book sets the stage with genuine statistics that define the current cultural climate. It explores the reasons why people may feel at odds with the church and provides some means for considering how to rectify these issues; generating potential points of exploration for the design portion of the thesis. It explores the effects which churches have both internally and externally on culture, and values; as well as how culture and values may affect the church. It alludes to both the potential inward and outward affects of technology in regards to church operation, potency, and culture. It also considers family life, and moral development as it may relate to church influences and, the manner in which families and moral ideals can influence the church. Finally, it presents the foundation for a discussion of what a church can offer to a community. While nearly all of these issues are intangibles, they offer items which may be addressed through design in hopes of finding potential solutions or means of attending to these issues in a physical manner.

Book-3: Old Buildings, New Forms

By Françoise Astorg Bollack

This book examines adaptive reuse and divides this process into five major strategies which the book then defines and examines separately from one another. It presents case studies for each of these strategies to support and exemplify their definitions. It is from this book that the major strategy employed in this thesis was developed. This book seeks to provide individuals with a basis for looking at and understanding old buildings and redevelopment or additions to these structures¹⁷. The author seeks to present the readers with a different way for architecturally considering these older buildings, not as a limiting factor, but rather as an enriching, emboldening medium which provides additional potential and meaning to one's architectural works. The author presents the idea that the challenges associated with these buildings ought to be considered one of the main motivations for architects to work with them because it makes the work that much more rewarding¹⁸. The author makes this key statement "I believe that architects who incorporate existing buildings in a combined work of contemporary architecture find themselves liberated from the obligation to produce 'the new'- with its implied codifications – and that operating at the fringes, as it were, they find themselves free to invent"¹⁹.

¹⁷ Bollack, Françoise Astorg. Old Buildings, New Forms. New York, NY: The Monacelli Press, 2013; pg. 8

¹⁸ Bollack. Old Buildings, New Forms; pg. 9

¹⁹ Bollack. Old Buildings, New Forms; pg. 10

The book presents twenty eight projects which it categorizes into five different types of interventions. It does this not in the formal manner which art or architectural historians do so, but rather in regards to the strategies employed in the works presented. It defines these five strategies as: insertions, parasites, wraps, juxtapositions, and weavings²⁰. Insertions are described by the author essentially as projects where the new is installed within the shell, structure, or volume of the old²¹. The parasites are described as projects where the new structures or volumes are attached to the structures and volumes of the old, such that the old plays host to the new which then subsists upon the systems, structures, and circulatory patterns of the old²². The wraps strategy represents projects where the new is installed around the old; perhaps sheltering or altering the exterior experiences of the older structure²³. Juxtapositions are described as projects where the new structures or volumes are presented adjacent to the older structures and volumes, and an effort is made to make them as materially distinct from one another as possible; often while relating them in some formal manner²⁴. Weavings are explained as projects which employ a strategy that is either more integrated into the existing building or is employed more extensively

²⁰ Bollack. Old Buildings, New Forms; pg. 10

²¹ Bollack. Old Buildings, New Forms; pp. 23-25

²² Bollack. Old Buildings, New Forms; pp. 65-67

²³ Bollack. Old Buildings, New Forms; pp. 113-115

²⁴ Bollack. Old Buildings, New Forms; pp. 141-143

throughout both the building's interior and exterior, such that the new is woven through the old²⁵.

Each strategy is accompanied by a short section which explains the characteristics and principles inherent to that strategy. These descriptive sections are then followed by a few simple case studies which combine a short description of the project and its context, with several large images of the project. For the purposes of this thesis investigation the decision was made that the weaving strategy was the most applicable. This was because this strategy was seen as the most cohesive and integrated strategy. The book defines woven interventions as “complex works where the architect weaves the new work in and out of the original building fabric”²⁶. The author notes that in successful weaving projects the lines between the new and the old are blurred and not immediately apparent. The author uses the post World War II reconstruction of the Alte Pinakothek in Munich by Hans Dollgast as an example to explain the woven strategy. The project involved the replacement and repair of damage caused by the war. The damage was considerable and the book describes the building as being essentially reduced to the walls via fire damage, and even some of the walls and façade were destroyed by bombs²⁷. The project consisted of several updates, including modifications to structure, to the roof, to the lighting strategies, and a replacement to

²⁵ Bollack. Old Buildings, New Forms; pp. 179-183

²⁶ Bollack. Old Buildings, New Forms; pg. 179

²⁷ Bollack. Old Buildings, New Forms; pp. 179-180

the façade²⁸. After describing this project, the author moves on to discuss how the practice of weaving has other historic significance. The author ends this section by suggesting that the projects which she is about to discuss in her case studies are examples where the architects were able to transform the form, language, context, and methods of their projects from normal to extraordinary.

The author then moves on to present the five examples of this strategy. Two of these examples happen to be excellent precedents for this particular thesis. These two projects are the Mill City Museum in Minneapolis, Minnesota and the Massachusetts Museum of Contemporary Art. Each of these projects is examined in the context of this thesis in the precedents section of this document. This book however, seeks to highlight the project within the context of the book. The book discusses the history of the projects, some of the context which influenced the design, and a small amount of the design process.

The Mill City Museum was an old flour mill which became vacant in 1965. According to the book, in 1991 the mill suffered a catastrophic fire. The building endured considerable structural damage due to the fire. The Minneapolis Community Development Agency and the Minnesota Historical Society took over the site in 1994. The book also mentions that for Thomas Meyer this project represented the culmination of years of considering industrial sites²⁹. The text then goes on to discuss the design of the building, the permeability and openness to the community, the juxtaposition of new

²⁸ Bollack. Old Buildings, New Forms; pp. 180-181

²⁹ Bollack. Old Buildings, New Forms; pg. 204

structures and materials against the old. Perhaps most notably, the book discusses that the building highlights incompleteness. The damaged partial structure is emphasized against the clean, sharp lines of the new structure³⁰.



Figure 1: Mill City Museum Courtyard, <http://www.millcitymuseum.org/> (Dec 2016)

The Massachusetts Museum of Contemporary Art, or Mass MoCA, is an adaptation of an industrial Complex in North Adams Massachusetts. According to the book the complex had undergone several uses since its establishment in 1870; operating under Arnolds Print works until 1942, then used by Sprague Electric Company until 1985, when Sprague closed and significantly contributed to a local economic downturn. The text says that in 1999 the MoCA reopened the site as a venue for the arts. The article discusses how the architects were able to keep the original character of the

³⁰ Bollack. Old Buildings, New Forms; pg. 207

spaces while making them “shot through” with new structures and systems³¹. One major characteristic of the development of this project which the book is careful to emphasize was that it promotes the building as an evolutionary entity. It does this both by highlighting the past of the building against new structures which are eye-catching yet non-disruptive; as well as by promoting flexibility of space and allowing or even promoting the ability for the structures to develop over time.



Figure 2: Mass MoCA Exterior, <http://massmoca.org/about/lease-space/> (Dec 2016)

This book has been an invaluable resource for this thesis investigation. The discussion of strategies greatly informed the decision making process for the conceptual design phase of the investigation, and the concepts and tactics which it discussed set the stage for many of the developmental details and decisions made as the design progressed. Additionally, two of the precedents examined in this document, and critical to this thesis investigation, were discovered due to the content of this book.

³¹ Bollack. Old Buildings, New Forms; pg. 190

Book-4: Old Buildings, New Designs

Charles Bloszies

This book presents a great deal of information regarding many different potential benefits of adapting existing structures. It contrasts these benefits against the difficulties associated with these types of projects, essentially presenting the basic groundwork for a cost benefit analysis. It also examines different approaches and looks at several case studies. This book discusses the processes and compares the costs and difficulties of designing with existing structures. The author presents the main course of inquiry as a response to the tendency of architects to create architectural works which blend in with existing architecture. The author impresses upon the readers that the types of work created by this, more typical mode of thinking tend to be “bland” less significant works³². He discusses an instance in Italy when he was able to observe the contrast of an expensive foreign car pulling into an old piazza. He explains that the juxtaposition of the two exemplified everything which was missing in most architectural projects which deal with the renovation of or additions to old buildings.

One of the first issues that the book examines is what the author refers to as “the urge to preserve.” This phrase refers broadly to the desire to protect old buildings either for rational or emotional reasons. The book explains that this desire can stem from many different types of sentiment. The text mentions such reasons for preservation as meaningful architectural qualities, handcrafted features, personal ties,

³² Bloszies, Charles. Old Buildings, New Designs. New York, NY: Princeton Architectural Press, 2012; pg. 11

personal fears, or emotional reactions against modern or contemporary architectural movements/characteristics³³. The book explains that this desire to preserve often works against development projects because it leads people to push back against change even when buildings are not as significant as someone or some group may perceive them to be³⁴. It is also worth noting that the same urge to preserve old buildings that drives individuals to push against certain types of development may be useful in motivating them towards certain other types of development; such as adaptation of a dilapidated or disused building.

The next major relevant issue which is discussed in this text is that “buildings have finite useful lives”³⁵. The text explains that the lifespan of a structure is limited by several factors. It explains that the degradation of internal systems can make a building unsafe or uninhabitable. This is also true for structural members and the building envelope. The article also discusses how most old buildings need to undergo considerable alterations in order to allow for current systems. In the case of extremely old buildings this includes electrical, ventilation, and air conditioning systems. In other cases communication or more up to date conditioning systems may need to be added. The author wants to point out that the costs associated with making these alterations can often be more expensive than building an entirely new structure³⁶. Fire and safety

³³ Bloszies. Old Buildings, New Designs; pg. 18

³⁴ Bloszies. Old Buildings, New Designs; pg. 19

³⁵ Bloszies. Old Buildings, New Designs; pg. 20

³⁶ Bloszies. Old Buildings, New Designs; pg. 20

codes are another major issue which the author discusses. The author explains that fire safety codes have become much more restrictive and extensive and the process of making old buildings adhere to the updated codes is difficult and costly. The text explains that this is not only true for fire exits and fire suppression systems; but can also be true of the architecture itself. The example provided by the author is that of a monumental stair which rises several floors and represents the risks of both filling with smoke and preventing exit, and allowing fire to spread upward to other floors³⁷. The author ends the discussion of this issue by mentioning that old buildings do not meet accessibility requirements, and updating them to the point that they meet ADA requirements is very costly³⁸.

The author also makes a point of explaining to the reader that “not everything old is good”³⁹. This section of the article discusses the manner in which efforts have been made to promote the protection of older buildings which are architecturally significant. The focus of this section is how these efforts are often perceived by architects as or developers as too strict; that buildings which are no longer serving their intended purposes are still being protected by regulations which protect architecturally important buildings⁴⁰. The author explains that the uses of a building can, and often do,

³⁷ Bloszies. Old Buildings, New Designs; pg. 21

³⁸ Bloszies. Old Buildings, New Designs; pg. 22

³⁹ Bloszies. Old Buildings, New Designs; pg. 22

⁴⁰ Bloszies. Old Buildings, New Designs; pp. 22-23

change several times before the structure, envelope, or building fabric become critical or reach the point of failure⁴¹. The author's point regarding this is that structures must be evaluated fairly and rationally; without allowing one to be swayed by emotional connections to the buildings⁴². It is worth noting that this does not necessarily include all historically significant buildings, as a historic building which is converted into a museum may not have the same requirements as an active building.

Another useful topic discussed in this text was the "reuse and repurposing of old buildings"⁴³. This section begins by discussing some of the reasons why a building may become obsolete, such as a change in tenant or lack of maintenance funds. It then moves on to discuss the fact that just because a building is "worn out" it does not necessarily mean that it is no longer useful⁴⁴. The author states that some characteristics of older buildings can be desirable for other uses; he lists such items as: "high ceilings, operable windows, and bountiful natural light"⁴⁵. The author then goes on to discuss economical issues, specifically with regards to real estate values. The point that the author makes is that one of the main draws of repurposing a building is that the real estate value of a disused building is usually fairly low compared to a newer building with the same square footages. Another major issue here is that these

⁴¹ Bloszies. Old Buildings, New Designs; pg. 23

⁴² Bloszies. Old Buildings, New Designs; pg. 23

⁴³ Bloszies. Old Buildings, New Designs; pg. 29

⁴⁴ Bloszies. Old Buildings, New Designs; pg. 29

⁴⁵ Bloszies. Old Buildings, New Designs; pg. 29

buildings may also be located on the more ideal locations since they were often constructed before other buildings were raised in the area⁴⁶.

Another issue the author moves on to address is contrast. Interestingly, this author discusses contrast only very briefly. He mentions three major approaches regarding contrast. The first is “extreme contrast”, such as that of the sports car in the piazza mentioned above. The second type that he refers to as “restrained contrast;” was defined as contrast used to differentiate between similar architectural elements. The third type is called “referential contrast” and is defined as contrast in which the new is formally arranged to respond to the rhythms of the old⁴⁷.

The last major relevant issue which the author addresses, before then moving onto the case studies are the ‘design difficulties’ associated with these types of project⁴⁸. The author begins this section by discussing the need for these types of projects to have difficult or complex detailing, specifically where the old and the new meet, and that the costs associated with these details are counterintuitive to what clients expect⁴⁹. The author then highlights the need for the design teams to conduct architectural and engineering studies and analyses of the existing structure. This section also highlights the need for the design team to identify code or zoning changes which will affect the project. The author then moves on to mention that these projects often

⁴⁶ Bloszies. Old Buildings, New Designs; pp. 29-30

⁴⁷ Bloszies. Old Buildings, New Designs; pg. 45

⁴⁸ Bloszies. Old Buildings, New Designs; pg. 56

⁴⁹ Bloszies. Old Buildings, New Designs; pg. 56

involve major structural considerations such as foundation reinforcement. Another major issue is addressing the joints or intersections between the different finishes of the old and the new⁵⁰.

The rest of this book is dedicated to the examination of several case studies, which are tactically and strategically relevant for consideration. This section is image heavy and will not be analyzed here. Overall this book provides many different major avenues of consideration when dealing with projects which address old buildings. The book calls attention to many different issues which might easily be overlooked when dealing with renovation projects.

Article 1: “Designing Worship Spaces with Millennials in Mind”

By The Barna Group

This article explored the design aesthetics and characteristics which were considered to be the most appealing to Millennials. For this project the Barna group Researchers partnered with Cornerstone Knowledge Network. The research process was apparently a two part approach. The first, which they refer to as the field groups, consisted of groups of Millennials from different backgrounds which were brought together to tour various architectural works. The tour groups were then asked to provide their opinions about various aspects of each location. The second part of the research method used by the producers of the article was conducted online to achieve a national scale and consisted of two subparts. Part one, which they refer to as visual

⁵⁰ Bloszies. Old Buildings, New Designs; pp. 58-59

polling, consisted of showing a group of four images with varied characteristics to their survey participants and having them select which image presented the most appealing characteristics. The other was the presentation of two contrasting terms which may be applied in opposition to describe a space or experience, where the survey participant was asked to choose one from each pair which they thought was more representative of the ideal church⁵¹.

The visual polling showed that the majority of Millennials preferred churches of moderate size; large enough to blend in without being too large, such as a mega church where one may feel disconnected. This finding was also supported by the data from the field groups. When asked to select the most appealing altar, the trends pointed towards those which were more plainly Christian and traditional in appearance. These findings were less plainly delineated than the overall appearances and were heavily dependent upon demographics. The next series of images shown in the article refer to the presence of nature in the context of the church. In this case the garden and pathway was the clear winner with 62% overall choosing this option over other such options as indoor plantings or artistic depictions of nature. Interestingly, in the next group, the windows which were most traditional and decorative, tied for first with those which were traditional in shape but plain. This was also corroborated with the field groups' results⁵².

⁵¹ Barna Group. "Designing Worship Spaces With Millennials in Mind."
<https://www.barna.com/research/designing-worship-spaces-with-millennials-in-mind/#.V-KMsYWcHtQ>. 5 November 2014. (Sept 2016)

⁵² Barna Group. "Designing Worship Spaces With Millennials in Mind."

The word comparisons were less specific but equally useful. Interestingly, despite having only two choices for each category, all of the percentages for the categories were much more decisively split, with each one having a clear winner; the closest /being the 60/40 split between modern and traditional (respectively). The other results were as follows: 78/22 community over privacy, 67/33 classic over trendy, 64/36 casual over dignified, 77/23 sanctuary over auditorium, and 67/33 quiet over loud. The conclusion which the article drew from this was that there was that “many of them aspire to a more traditional church experience, in a beautiful building steeped in history and religious symbolism, but they are more at ease in a modern space that feels more familiar than mysterious.”⁵³ This of course sets the stage for a very interesting design inquiry as to how a designer might seek to balance or address the intersection of these two ideals.

This article raises some very interesting questions. It is also perhaps the most directly applicable to the design portion of this thesis investigation. However, it is also worth noting that a church group does not consist solely of Millennials. As such, one must not focus solely on Millennials when considering and generating design question. Ultimately the goal here is to create a space for a community rather than a single group or demographic.

⁵³ Barna Group. “Designing Worship Spaces With Millennials in Mind.”

Article 2: “Five Factors Effecting Women’s Relationships with Churches,”

By The Barna Group

This article addresses issues which are particular to women and how they relate to, or fall at odds with churches. The article begins by discussing the trends regarding the church attendance of women. The article explains that 7% of the women polled had never been to church, indicating that 93% had some form of relationship to the church at some time. The other findings were that 36% had attended in the last week, 10% in the last month, 9% in the past six months, and 38% said that they had not gone in the past six months. The article points out that this seems to indicate that rather than not attending due to lack of contact or awareness, most of the women who were not attending had made an active choice that “church was no longer for them.”⁵⁴ It is also worth noting, although the article does not, that the “not in the past six months” category would naturally seem to be the largest because it deals with the largest and most ambiguous length of time. For example, one may have only been to church once to support a friend, or attend a memorial; and would therefore technically fall into this category, and be somewhat misrepresented having never had an actual relationship to a church.

Once the article has established this baseline it moves on to discuss the five trends which they have determined contribute to the perceived shift of women away from churches. The first is competing priorities. In this section they discuss the

⁵⁴ Barna Group. “Five Factors Changing Women’s Relationship with Churches.” <https://www.barna.com/research/five-factors-changing-womens-relationship-with-churches/#.V-KLiWcHtQ>. 25 June 2015. (Sept 2016)

statistics which they have collected regarding how important women might feel church to be. Of the women polled, family relationships came in as most important at 68%, religious activities second at 11%, personal time at 10%, and career at only 5%. The article states that 31% of women did however place their career as their top time commitment, with family relationships becoming the top time commitment for only 44% of women. This then leads into the second factor, busyness. The statistics here are regarding stress, tiredness, and being overbooked; with all three presenting high percentages. This section also explains that many women listed religious activities as one of the items which they wished to improve upon⁵⁵.

The next factor is perhaps the most applicable to this thesis investigation. This factor is the lack of emotional engagement and support in the church felt by women. According to their statistics 43% of women reported that they felt no emotional support from the church⁵⁶. This may be an interesting and difficult issue to address though design, and could be as applicable for the community portion of the design as it may be for the programmatic and church development. The article then moves on to discuss the fourth issue, defined in the article as changing family structures. This section explains that many churches are designed, functionally, with regards to the traditional family structure. Notably the article discusses, rather than the trends regarding the changes regarding non-married or nontraditional families discussed in the book Churchless; trends regarding the age at which women are getting married or

⁵⁵ Barna Group. "Five Factors Changing Women's Relationship with Churches."

⁵⁶ Barna Group. "Five Factors Changing Women's Relationship with Churches."

having children. Explaining that many women are getting married or having children later in life because of other personal goals which they wish to accomplish before having children. Lastly the article defines the fifth factor as changes in belief. Presenting relatively minor percentages which represent those who have changed their views to either atheist or agnostic, a three percent increase in either case.

While this article may not seem to be as directly applicable to the design thesis as some of the other articles, it does provide some grounds for consideration. It helps to paint an, admittedly somewhat general, picture of what an often historically marginalized group may want moving forward from religious institutions. These questions can be useful when developing the programmatic elements, spatial organization, the adjacency of programmatic elements, and other design considerations.

Article 3: "Of Sounds and Silence"

By Steven J. Orfield

As the title of this article suggests, it deals more primarily with the significance of sound and acoustics in church design. A quote from the third paragraph presents the issues at work in this article quite nicely, "religion to many of us-particularly Christians – was this sensory experience of leaving one world to enter another, and it was strongly shaped by the visual, aural, thermal, olfactory, and tactile sensations that we

experienced when we visited.”⁵⁷ As mentioned above, the primary focus of the remainder of the article is upon the acoustics of religious buildings; however this quote calls attention to considerations regarding the entire experiential nature of religious architecture. This experiential nature is something which any designer seeking to create a significant and meaningful structure, as any religious building ought to be, must take into careful consideration.

After establishing this groundwork, the article moves on to discuss some trends influencing church design. The author introduces four main issues here which he expands upon moving forward. He states that the Christian church is now a more social environment, a more intense musical environment, and a marketing environment, and also notes that many modern churches experience few visitors when services are not in session. These issues combined create and inform bright, active, more noisy, more industrial feeling spaces. The author also makes a fair point here that the natural acoustics of a traditional church are no longer perceived as necessary because one can simply employ a more robust sound system to make up for poor acoustics. The author then presents statistics to support his ideas regarding why younger Americans are less religious than older Americans. From here he moves on to discuss the decline in church attendance nationwide⁵⁸.

The next critical section discusses religious environments. The author discusses

⁵⁷ Orfield, Steven J. “Of Sounds and Silence.” *Faith and Form*, volume 39, issue 3; <http://faithandform.com/feature/of-sounds-and-silence/>; 3 October 2016 (October 2016)

⁵⁸ Orfield. “Of Sounds and Silence.” *Faith and Form*, volume 39, issue 3

how traditional and historical buildings generate feelings of substantial emotion. He brings up the term “evocative symbolism,” which he does not define, but the reader can clearly understand to refer to the manner in which certain architectural elements evoke feelings, memories, and intuitive responses. He clearly wants the reader to consider how these characteristics can be employed in a more contemporary context. He explains that a contemporary church made efficiently and responsibly can also be made economically and still feel comparable to older worship spaces. One interesting statement made by the author is that the more traditional nave/aisle design historically used in churches can actually be both more affordable and more acoustically pleasing than contemporary designs which are more theater like. The reduction in cost he explains is due to the shorter spans which are cheaper to create. One acoustic characteristic which he clearly sees as beneficial to the older designs is that they allow for different reverberation rates depending upon how they are utilized, due to the short width and long depth⁵⁹.

The author then goes on to discuss another form of research which they employed in a similar manner to the above article about Millennials. He refers to this a Perceptual Market Research, a method which combines word associations and opinions about images to provide more accurate data. He explains how this method operates and how it can be employed to reach deeper into a project than simply what someone thinks they want from it to what actually affects them on a more fundamental level⁶⁰.

⁵⁹ Orfield. “Of Sounds and Silence.” Faith and Form, volume 39, issue 3

⁶⁰ Orfield. “Of Sounds and Silence.” Faith and Form, volume 39, issue 3

From here the author passes into a discussion of the usefulness of silence as a calming or restorative characteristic. Specifically he discusses how his group has utilized a specially created silent room to do such things as help them to eliminate auditory stressors or persistent sounds. He concludes the article by reiterating the importance of silence, hypothesizing that those who first designed these historic structures had some sense of this importance, and promoting in the reader a desire to lead the younger generations in the importance and experiences which traditional architecture can enhance⁶¹.

Clearly this article is extremely applicable to the design intent of this thesis exploration. The article discusses the value of traditional structures and explores the manner in which they can be reconciled with contemporary wants, needs, desires, and trends. The application and deliberation regarding experiential architecture is difficult to design for without careful independent consideration of characteristics, materials, ergonomics, lighting, sound, and perspectives; yet the value which it can apply to a project is incalculable.

⁶¹ Orfield. "Of Sounds and Silence." Faith and Form, volume 39, issue 3

CHAPTER 3

ARCHITECTURAL PRECEDENTS

PRECEDENT 1: Jubilee Church

Rome, Italy; Richard Meier

The first precedent investigated for this thesis project was the Jubilee Church in Rome, Italy; designed by Richard Meier. This church, also known as the Church of 2000 and Parrocchia Dio Padre Misericordioso, began as a competition entry in 1996, and was completed in 2003. The building stands in a suburban area in Rome, and was designed to add attraction and significance to the area. The design is intended to show the importance and connections between architecture and places of worship. It is based upon the elegant purity of squares and circles, and the instances of the two shapes interacting with one another⁶². The significance of this building in regards to my intended thesis direction lays both in some of its physical design characteristics, and in its importance and role within the area in which it was built.

The building is designed using steel frame construction and prefabricated concrete panels. The panels are painted with a titanium dioxide coating. The coating helps the building to stay a bright white color. The building is painted white on the interior surfaces as well. Nearly the entire structure is white, with wood elements which act as a counterpoint; introducing warmer tones and texture to the building's interior.

⁶² <http://www.archdaily.com/20105/church-of-2000-richard-meier>; 19 April 2009. (Feb 2016)

Besides the wood employed strategically on the interior, the only other color apparent in the structure are the somewhat muted tones of the paving throughout the design. The forms are layers and articulated with glazings between to allow the building to be exceedingly permeable to light, with the additional benefit of presenting the building as transparent and welcoming to the public.



Figure 3: Church of 2000 Exterior

<http://www.archdaily.com/20105/church-of-2000-richard-meier>; 19 April 2009. (Feb 2016)

The church does not exemplify a specific contemporary architectural movement; rather it exemplifies the elements common within the majority of Richard Meier's design work. Meier's design aesthetics often include specific elements which this building well exemplifies. These include the use of white as the dominant color, especially in the façades. The use of panels is also another common element; either in

concrete, as in this project, or in the form of aluminum panels as he uses in many other projects. The juxtaposition of rectilinear and circular elements in his designs is another common theme which is also present in this specific example of his work. Strategic use of glazing and the controlled use of natural light within his buildings is also a common tactic which is once again employed here.

An understanding of the above contextual influences is necessary in order to consider this precedent. Firstly, as both the websites for Richard Meier's firm and the Arch Daily article suggest, the design was driven by social and cultural concerns. The location of the church building was considered because it presented the opportunity for such an architecturally significant design to bring attention and value into an otherwise overlooked, segregated area of Rome. The design competition which sparked the construction of this building was the result of a need, perceived by the Diocese of Rome, for designs which "show and highlight the basic role that architecture plays in holy and religious spaces, and to demonstrate that the connection with contemporary architecture is the key to improve quality of life in suburban areas."⁶³

It is these conditions surrounding the design, those which are too readily and often overlooked, which have perhaps the most significance moving forward with this preliminary thesis investigation. A church is a house of worship. As such there are certain physical characteristics which are manifestations of the concepts associated with worship and spirituality. These include light, openness, transparency, and many other characteristics which are common to this and other church structures. Church design,

⁶³ <http://richardmeier.com/?projects=jubilee-church-2>; (Feb 2016)

as a matter of course, must consider these physical manifestations associated with the act of worship and institutions which house spirituality and worship. However, the social and cultural significance of these houses of worship must not be overlooked as one considers the physical characteristics. A church houses a body of people as well as the act of worship. When healthy and able to function as intended they help to foster the growth and connectivity of a community.

The placement of this church is interesting as one considers these additional church characteristics. The design of the church is intended to be architecturally as well as spiritually significant. The intention here is that it would draw individual attention towards this particular suburban area. Certainly one of the associated issues here which may be either beneficial or detrimental to this community is that, as an internationally known building, it can draw tourism into this area. This may be beneficial as it spurs the potential for economic gains; however, given that the area is residential not commercial, would the inflow of visitors be disruptive. Looking at the success which this building has had in this capacity of its purpose, it provides an interesting example for the revitalization of a community. The placement of the church within a residential area is also telling. Churches located where people live are able to have a potentially more intimate connection to the community⁶⁴.

Another concern, which is more directly connected to the physical characteristics of this building, is the starkness of the white building exterior/interior. While the wood surfaces help to alleviate some of this, it is worth considering that some visitors may feel

⁶⁴ <http://richardmeier.com/?projects=jubilee-church-2>; (Feb 2016)

as though the building is somewhat sterile, and thus inhospitable. The suggestion of this is significant in that it potentially illustrates how the design aesthetics, concerns, and objectives of the architects can influence the outcome of a structure. This influence can certainly be beneficial; but if the designers overlook the needs or impressions of the building's users their own intentions then become imposed and oppressive. In this case the design is sensitive to the requirements and aesthetics of the diocese and the original competition; yet very little mention of the individuals who actually worship there is present in any of the articles.



Figure 4: Church of 2000 Interior

<http://www.archdaily.com/20105/church-of-2000-richard-meier>; 19 April 2009. (Feb 2016)

Clearly, the design of the Jubilee Church is exemplary, a beautiful work of architecture that exhibits the principle physical characteristics which people associate

with religious institutions. The forms are graceful, elegant, and clean. The fenestration is well considered and allows for light to infuse the building, exemplifying the permeability of the space to both the spirit and the public. The building is a prime example of Meier's body of work, and promotes his aesthetic admirably. The design shows the principle connections between architecture and worship which the diocese was seeking. The question then becomes whether or not the building form responds to the social considerations of the immediate area as it responds to the agendas of both the diocese and the architects? The building location is one step towards the social considerations which churches have the ability to influence. Church architecture is unique in its societal significance. Looking at examples such as this and considering the ramifications, influences, and results can point church architecture towards a future significance which may elevate the current significance of churches; potentially restoring them to some similar degree of significance to that which they have held in the past.

PRECEDENT 2: Next Level Church

Worcester, Massachusetts Location

Next Level Church's Worcester Location presents a very interesting opportunity for relevant consideration in regards to this particular thesis investigation. The church currently operates out of a movie theater in the Worcester area. Previously known as Fellowship Church, Holden; it moved to this location after they were forced, due to economic concerns, to leave their previous location in Holden, Massachusetts in 2014. The building which had housed this church up until that time was a converted warehouse which had made the transition to church. The building renovation methods had apparently been questionable, and the decision was made in 2014, when the town's change in fire codes required them to perform additional updates, that employing the required updates and the necessary replacement of previous systems would exceed their budget restrictions. The decision was then made, through a careful consideration of different options, to sell the building and the lot attached to it to a real-estate developer. The intention at that stage was to operate out of the movie theater in Worcester until they were able to purchase a new location using the money obtained from selling the church lands



Figure 5: Next Level Worcester Service in Current Location

Image by Author

One must first understand that this church, even in its old building, had a contemporary mode of operation. The sanctuary is intentionally kept darker, and presents more like a stage performance than a traditional catholic or protestant service. The service starts with contemporary Christian worship music; which is often Christian rock of some sort, performed by live instruments plugged into amplifiers and a contemporary sound system. While the music is playing the words, along with some form of video backdrop, are projected onto large screens at the front of the sanctuary so that the congregation can sing along; similar to an oversized karaoke machine. Once the worship music ends the one of the pastors or worship leaders will take up the microphone and give an introduction, often leading the group in a short prayer. The Pastor then steps up to the microphone and gives the main sermon; which is also often referred to as the message. Usually this ends with another prayer, then another

member of the church gets up to say a few words, usually welcoming newcomers and urging them not to donate, but to fill out a card with their contact information if they are interested in finding out more about the group. As this is happening the collection is passed around for regular attendees to donate. Once this person has spoken the musicians, referred to as the worship team, step back up to the stage and perform a couple more songs as the words are projected. Then the service ends and people are thanked for coming and bid a good week.

This new mode of operation in a theater offered many new challenges, but also many potential benefits. First, the logistical considerations associated with functioning out of a building which was neither theirs to operate, nor designed in manner which considered how a church operates presented some major obstacles. One fundamental issue which helped to foster this move was that the movement to a building which was not a church presented the possibility of attracting new members who might have had unpleasant experiences with other church organizations. It is worth noting that in this manner, the architecture, how the space is read, and the associated preconceptions all played a role in these strategies.

The group did in fact make the move to operate out of a movie theater and continued to do so for over a year. Once they had done this many new logistical challenges became manifest. These mainly involved the process of converting one of the theaters into a temporary sanctuary for each service. The church was required by the theater to be out before 11:30 am, which gave them approximately a half an hour after their service ended to be packed up and out of the theater, including time to greet

people and see them off after the service ended. Specifically, the process which they implemented involved packing all of the necessary sound, lighting, display, nursery, and other equipment into a box truck immediately after each service and finding a secure place to park the truck during the week. Finding people to take part in the early morning setup and the tear down of all of this equipment has been another major hurdle for the group. The author took part in the breakdown and storage of this equipment after several services, getting a first-hand look at this process and the many difficulties inherent to it.

This move also affected the manner in which they conducted services themselves. There are some benefits to operating out of a theater, such as access to the projectors and the screen when necessary, but mostly the group seemed to have been confronted with more issues. Theater sound systems are not meant for live instruments or microphones for example, nor are they equipped with stage lighting like the church was accustomed to. The operation of the services was adapted somewhat for these reasons, but mainly the church wanted to avoid making too many drastic changes which might cause their congregation to withdraw. Instead they chose to experiment with portable systems and apparatuses until they were able to find a system which they could adapt to their needs easily. Additionally the need for practice space outside of the sanctuary and limited time for sound-checks also became the norm.

In 2015 the Fellowship Church, Worcester merged with Next Level Church (NLC), becoming one of several locations which operate under this organization. This merger has further changed some of the ways in which the church operates. NLC was a well

organized group which had other campuses which had operated in temporary spaces; as such they had a standard mode of operation both for all campuses and for those in temporary spaces which the Fellowship Church crew had to adapt themselves to. Additionally most of their services at the satellite campuses actually consist of the projection of a service recorded at their main location during a service earlier in the week. This means that the main pastor creates and performs the service and the same service is experienced at all locations. While this has rather obvious material requirements such as the screens and the projectors, it also alters the role that the location pastor in Worcester plays.

Investigating the situation which this church found themselves in directed the beginning of this thesis project and helped to generate the initial questions which drove the investigation. The expenses associated with updating their older building, as well as the fact that it was a converted structure to begin with, called into question the importance of having a space which is officially ordained as sacred versus one which is perceived as or utilized as sacred. It also called into question traditional perceptions of sanctity. Is it really a necessity for a contemporary church culture to inhabit hallowed ground or does the act of worship make that place holy for them?

While understanding the difficulties faced by this organization was critical to the early stages in developing the direction of this thesis investigation; it was perhaps the observation of how these churches operate which informed the project most. The success of Next Level Church, expanding from a single location in Somersworth New Hampshire into an organization with multiple campuses indicates that their model of

operation seems to be overcoming the difficulties that many more traditionally operating churches face and fail. The contemporary services and music, combined with the multimedia approach both to the services and the marketing seem to better reach people in today's culture. The infrastructure which they require must therefore be considered when designing a structure meant to house and promote a successful spiritual organization.

PRECEDENT 3: Church of the Light

Ibaraki, Japan; Tadao Ando

Designed by Tadao Ando and constructed in 1999 in Ibaraki, Osaka, Japan. This project exemplifies the creation of a sacred space with regards to light⁶⁵. Analyzing this building will help to provide an understanding of how one can approach the design of physical characteristics which generate a sense of sacredness within a work of architecture. This project is included as a precedent not because of its context or the design process but rather the manner in which the architect carefully considered the quality of light in the sanctuary. The sanctuary is modern and contains minimal decoration or even overt religious symbolism; with one obvious exception. The wall behind the altar has a cross shaped opening, and the wall itself is oriented so that cross becomes an aperture through which light can enter the room. The orientation of this aperture is such that the light creates intense and dramatic contrast between the

⁶⁵ <http://www.archdaily.com/101260/ad-classics-church-of-the-light-tadao-ando>. (Sep 2016)

sections of the room which these rays of light strike and the sections which are left dark. By doing this, as well as by reducing the ornamentation of other surfaces and furnishings, the architect de-emphasizes everything else in the room and calls complete focus upon the illuminated area. In essence the architect is creating a very dramatic manifestation of the spiritual beliefs that are so important to those who come here to worship.

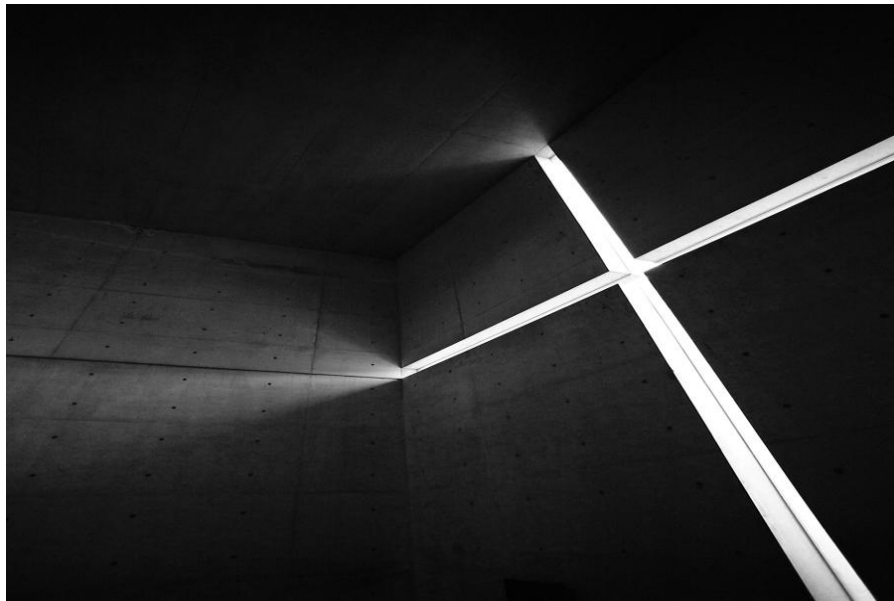


Figure 6: Ando's Cross, Church of Light

Photo: Mith Huang/flickr, <http://faithandform.com/feature/andos-cross/> (Dec 2016)

While the exact strategy used in this sanctuary is perhaps more dramatic and plainly spiritual than the design intent for this thesis project, the strategy used here and the careful planning of the lighting, building orientation, and sun position relative to both the building geometry and the programmatic distribution, are all issues which are

highly relevant to this thesis investigation. Furthermore, understanding the manner in which the architect successfully creates an experience is of the utmost importance this thesis project.

PRECEDENT 4: Redeemer Presbyterian Church

Manhattan, New York; Gertler and Wentz

This church is a LEED certified, adaptive reuse project completed in 2012; whereby a parking garage was renovated into a contemporary community center and worship space. The building was designed by Gertler and Wentz Architects LLP, and is located on West 83rd Street in Manhattan⁶⁶. This project is therefore a highly relevant precedent in many respects. One of the features of this project that made it key was the manner in which the existing structure, and especially the façade, was handled. Another was the “third place”⁶⁷ mentality used in creating the design and its role in the community. The “raw”⁶⁸ attitude toward, and treatment of, the majority of the building’s finishes and spaces is yet one more critical factor when considering this building as a precedent. The architects also made careful consideration of the lighting and the acoustics, as is needed for a more contemporary type of church operation. Lastly, the success of the building and its connection to the community are directly in line with the primary goals of this thesis investigation.

⁶⁶ <http://www.gwarch.com/gallery/adaptive-re-userenovation/>

⁶⁷ <http://faithandform.com/feature/making-new-inner%e2%80%91city-church/>

⁶⁸ <http://faithandform.com/feature/making-new-inner%e2%80%91city-church/>



Figure 7: Redeemer Presbyterian Church

, <http://faithandform.com/feature/making-new-inner%e2%80%91city-church/> (October 2016)

The architects adapted the structure of the existing parking garage so that they were able to maintain several larger, open spaces which included the sanctuary and the classrooms on the upper floors. While the shell and the upper two levels were kept intact, the two lower floors were demolished to allow for the ceiling height desired for the sanctuary⁶⁹. They adapted and modified the façade in such a manner that they were able to blend the structure and form of the existing building with their new façade elements. The lines and rhythms of the façade were kept in-line with the industrial feel

⁶⁹ <http://faithandform.com/feature/making-new-inner%e2%80%91city-church/>

of the original building as well as that of the other buildings in the area around the church. Their major modifications to the façade included the creation of a two story glazed section which welcomes people in off of the street, and the addition of a small tower which helps to signify the space’s new usage. Furthermore, the large windows also the inside of the building to make the most of the natural light available to it⁷⁰.

The concept of a “third place”⁷¹ which was so important to the designers and the church group is a very interesting idea. They are suggesting that the majority of people split their time between two places; home and work. The desire to create another location where people in the community spend a significant amount of their time became one of the goals of this project. This was accomplished by expanding the lobby to include other programmatic elements such as a café, and actually referring to that area as the Third Place⁷². Interestingly this building is intended to function in this manner not just for the congregation but also for those who spend time in the neighborhood around the building⁷³. This is very much in line with the goals of this thesis project to promote a direct connection between the community and the design project.

The sanctuary was intended to house a more contemporary type of service, as well as to allow for performances and other community functions to take place within.

⁷⁰ <http://faithandform.com/feature/making-new-inner%e2%80%91city-church/>

⁷¹ <http://faithandform.com/feature/making-new-inner%e2%80%91city-church/>

⁷² <http://faithandform.com/feature/making-new-inner%e2%80%91city-church/>

⁷³ <http://faithandform.com/feature/making-new-inner%e2%80%91city-church/>

In order to accomplish this, the architects had to take great care regarding the lighting and the acoustics in that space. The large windows on the exterior, combined with the open floor plans, allow a great deal of natural light to enter the other spaces within the building, but the light within the sanctuary needed to be controlled. In order to do this there is limited fenestration in this area, but careful attention to artificial light and finishes allow for the space to have a more naturally lit feeling. The attitude taken towards the treatment of the interior of the building is another highly relevant factor for this precedent. The designers sought to highlight the history of the building and its industrial characteristics. In order to accomplish this, as much of the texture, finishes, and original materials were kept and highlighted as possible. Plaster and other materials which visually work well in combination with the existing materials were employed to also harness and make the most of the available light⁷⁴.

One of the articles about this building, written in Faith and Form, ends by mentioning this quote from the pastor's newsletter regarding the success of the building: "putting down physical roots in a neighborhood is essential to reach rooted New Yorkers and serve the common good. We have seen how incredible the difference has been for the West Side since opening W83. The building is an asset to the neighborhood; used by schools, community board meetings, film crews, support groups, performing arts, and much more. It greatly enhances the creation of community and friendships among members of the congregation. And we have found it makes us visible and able to reach many New Yorkers with the gospel that were previously

⁷⁴ <http://faithandform.com/feature/making-new-inner%e2%80%91city-church/>

inaccessible.”⁷⁵ This statement highlights how the goals of this project were successfully accomplished, but also reinforces the main query of this thesis investigation regarding how architecture can help a religious or spiritual group to create, and maintain strong bonds within a community. Additionally, if this church was so successful in an urban environment and in bringing these other activities and culture into the community; it also begs the question: how can this strategy be employed to benefit a more rural community?

PRECEDENT 5: Massachusetts Museum of Contemporary Art

North Adams, Massachusetts; Bruner Cott Architects

This building is perhaps the most directly applicable precedent for this thesis investigation. The project consisted of the renovation of a mill complex in North Adams, Massachusetts. The mill operated under Arnold Print Works between 1870 and 1942. The mill was then taken over by Sprague Electric Company in 1942, and operated under them until 1985 when Sprague failed and the local economy took a major hit. In 1999 the Museum of Contemporary Art opened the site up as a venue for the arts. The actual renovations of the building itself have happened over time as funds and projects became available. Efforts have been made by the designers to maintain the industrial feel of the buildings. The peeling paint, rough materials, worn and weathered surfaces, and exposed brick were all kept visible to patrons. In some areas one can even see that the traces of the modifications made to the structure were left intentionally visible; such

⁷⁵ <http://faithandform.com/feature/making-new-inner%e2%80%91city-church/>

as the outline of, and the studs which supported a stair stringer remaining on the surface of a brick wall. Specifically the emphasis was designed to highlight the passage of time; to make it as tangible to visitors as possible⁷⁶.

The design team was faced with the intriguing task of creating open display areas for large pieces of artwork and art installations. The team came up with a very interesting way of creating these spaces. Their strategy was to create an improvised kingpost truss system which utilizes customized plates and bars that were installed upon the existing structural columns. The columns were then trimmed off just below the lower plate of the truss. This cut column becomes the kingpost of the truss. The removed section helps to open up the interior space; as the bars and plates transfer loads to span the opening.



Figure 8: Mass MoCA, Interior

<http://massmoca.org/>

⁷⁶ Bollack. Old Buildings, New Forms; pp. 190-192

Additionally the cultural and social circumstances of the museum are highly relevant to the thesis project. This museum design is very successful. The architecture and the fabric of the buildings which house the art have essentially become part of the show. The manner in which this precedent made this formerly dilapidated mill building complex, once more a viable and important part of the community perfectly parallels the intent of this thesis project do the same with a building which was once an integral part of the community.

PRECEDENT 6: Mill City Museum

Minneapolis, Minnesota; Meyer, Scherer and Rockcastle

This building is an example of a damaged historical site converted into a museum; preserving as much of the existing shell as possible, while weaving new glass and steel structures through the stone of the existing shell. The building exemplifies the strategy of weaving a new structure through an older structure. In the context of this thesis investigation, the material contrast between the stone, brick, and wood of the older structure and the crisp lines and clean surfaces of the steel, aluminum, and glass of the new structures. Furthermore, the way in which the new structure enlivens a structure which was catastrophically damaged, plays towards the context of the building which is being explored in this thesis.

The mill which houses the museum used to be the Gold Medal Flour mill along the Mississippi River. The original building was constructed in 1874. The mill closed in 1965 when the milling moved away from the river and to the fields. The buildings

suffered a catastrophic fire in 1991, and were left a wreck until 1994, when the Minneapolis Community Development Agency re-evaluated the site as a catalyst for revitalizing that area. The project to redevelop the site was headed by the Minnesota Historical Society⁷⁷. In order to account for the reality of the physical structure existing on the site the design team had to subject that structure to a full three dimensional site analysis.⁷⁸



Figure 9: Mill City Museum Exterior

http://2.bp.blogspot.com/_rUGdluXjOEc/TRofgabmp5I/AAAAAAAAABec/rkpoFKBX4-c/s1600/Minneapolis+Mill+City+Museum+%252813%2529.JPG

The project was able to successfully reclaim a building which was destroyed by fire; and turn it into a historical and cultural symbol. This project also emphasizes the

⁷⁷ Bollack. Old Buildings, New Forms; pg. 204

⁷⁸ Bollack. Old Buildings, New Forms; pg. 206

need in renovation and redevelopment projects for careful analysis and documentation of the existing structure. Additionally, the visibility, permeability, and accessibility created by the interplay of the heavy damaged façade and the fenestration of the new building create a beckoning street presence and highlights the contrast between the events and the ways of the past and those of contemporary society.

CHAPTER 4

SITE AND CONTEXT

Gilbertville Textiles: Downtown Gilbertville, Hardwick, Massachusetts

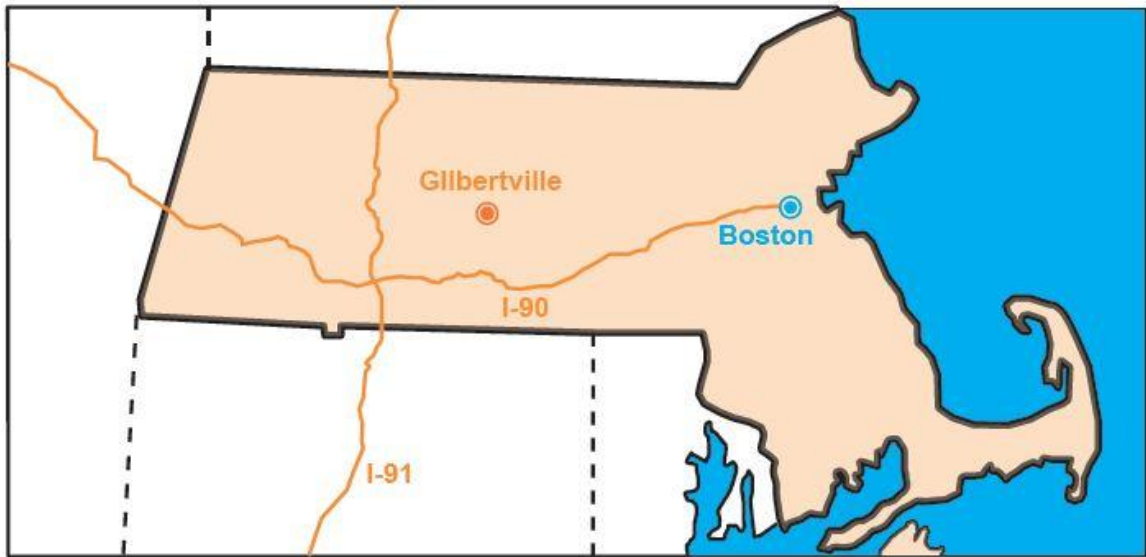


Figure 10: Massachusetts, Gilbertville Locus Plan

Image by Author

Gilbertville at a Glance

The site chosen for this thesis is located in Gilbertville, Massachusetts.

Gilbertville is considered a village of the town of Hardwick. Notably it is also a “right to farm community.” The town is located in a rural area of central Massachusetts, just east of the Quabbin reservoir. The village of Gilbertville is named after the family of George

H. Gilbert, who owned the lands and mills located here along the Ware River⁷⁹. These mills represent the main reason for the establishment of this community and the backbone of its economy during their period of operation. As such they have historically been the primary developmental drivers in this area. Notably this area is surrounded by agricultural areas which represent the foundation of this area's economy both before the industrialization of the area and after the area was de-industrialized. According to the historical section of Hardwick's town website, the textile mills became less economically viable in the early 1930's; and then the entire village was ravaged by a massive flood in 1938.⁸⁰ The vast majority of the housing along Main Street in Gilbertville was built to house the workers in the mills. Due to the density and size of these buildings, as well as the socio-economic conditions regarding their development, the majority of these housing units evolved into rental units. As rental units the conditions in many of these neighborhoods have degraded somewhat over time.⁸¹ One of the goals in choosing this site was to promote economic and developmental growth in this area.

⁷⁹ <http://www.townofhardwick.com/History.html>

⁸⁰ <http://www.townofhardwick.com/History.html>

⁸¹ <http://www.townofhardwick.com/History.html>



Figure 11: Historic Gilbertville Textile Mill Complex

<http://www.townofhardwick.com/History.html>, (Dec, 2015)

Site Specifics

The site selected is located along Main Street in Gilbertville. It lies directly across a secondary street from the small triangular town common where the town's war memorial and flag are located. The Gilbertville post office is located approximately two hundred feet north of the site and the town offices are located just under one half a mile south of the site, also along Main Street. The Ware River flows east to west along the southern border of the site and is bridged near the south eastern corner of the site. The western border of the site is wooded and also harbors a small intermittent wetland area created by the runoff from the hillside along the north western border of the site. The areas north and northeast of the site, adjacent to the Post Office, are residential and consist of a mixture of single and older multi-family units. The neighborhood across the bridge and the river to the south of the site is similarly residential.



Figure 12: Site Location

Image by Author

Currently the site plays host to an abandoned brick textile mill building which is the amalgamation of several different adaptations and construction projects over time. Currently the massing involves two main volumes which run along an east-west axis. The two volumes are aligned along their southern facades, but the western volume recedes deeper into the site. Where the two meet along the south side, a tower with a near-flat roof stands. Additionally, each of the two volumes also has a tower erected along their northwestern corner. The northern-most tower has a hip roof, while the western most historically had a gazebo like overlook erected upon its flat roof. This rooftop structure was removed while this thesis study was in progress. One should also note that the first floor level of each of these two volumes lies at an elevation which is

below that of Main Street. There is a small stone retaining wall facing the eastern façade which creates an access route to one of the smaller additions along this façade.



Figure 13: Aerial Highlighting the Additions to be Subtracted

base image from <https://www.google.com/maps/>

The area around the building consists primarily of a dirt lot along the building's south side and a dirt access road along the building's north side. The additions to the building reach the secondary street along the east side of the lot. The buildings are fairly typical for most mills or industrial buildings in this area. The envelope is brick with large wood framed windows. The structures appear to have both steel and wood structural elements. One of the main building volumes has a nearly flat roof, while the roof of the other main structure is gabled at the eastern and western ends.

There are three main approaches to the site and several supplementary sight lines. These approaches lie along Main Street, North Street, and the dirt road referred to as Old Gilbertville Road. The site itself has three access points: one from the west

along the dirt road, one from the northeast along the other end of the dirt road, and one from the southeast corner, down a sloped section, into the dirt lot. Since Main Street is also Massachusetts Route 32, the highest volume of traffic past the site is along this road. Traffic headed south is introduced to the site via glances between residential buildings as they descend the hill from the intersection of Rte. 32 and Rte. 32A, and then receive a straight on view of the eastern elevation before making a slight left to go over the bridge. Coming from the south, the bridge along Main Street presents an excellent view of the site from an elevated position. Most of the traffic approaching the site from the west is foot traffic since this end of Old Gilbertville Road is not paved, and is often muddy impassable. This road is mainly used by people walking from a nearby neighborhood to their Post Office boxes, or locals walking their pets.

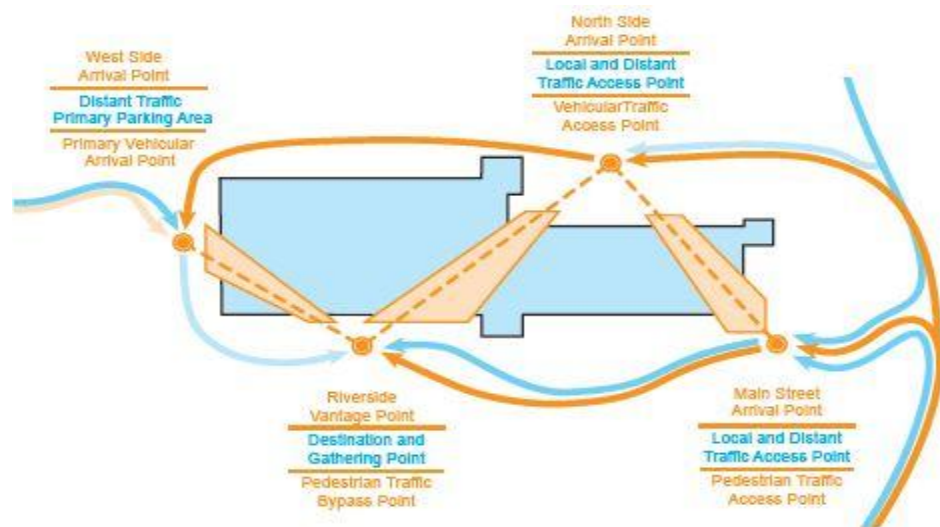


Figure 14: Primary Approaches

Image By author

The remnants of three loading docks still exist on the site. One of the additions has a padded, more recent elevated dock on the northeastern corner, right near the

North Street and Old Gilbertville Road intersection. Another elevated concrete loading dock is located on the south side of the larger volume, tucked against the base of the tower. The third is a downward ramped loading dock, located centrally along the western face of the larger structure. A truck using this loading dock would be lowering itself to the level of the floor. These demonstrate some of the main historical approaches to the building.

Historically this textile mill was part of a mill complex located at this position. These connected buildings are the only structures remaining from this complex. Additionally, the river had been dammed at this location. The dam has since been demolished and the river in this area is now considerably lower than it had been. The river along the site is rocky and contains some rubble, presumably from the dam and other demolished structures. Just west of the site, across Main Street, a gazebo and overlook were erected along the banks where the dam used to be. Slightly up the road from this gazebo is a “bike path” which is cut through the woods. The path is only mildly passable on a bike at this point, but connects several miles down to a path which is more open and is established along one of the old railway lines which was dismantled.

It is unclear what types of pollutants may currently be on the site; but since it is a former industrial site one must assume that the soil in this area is not entirely clean; and thus the site must be treated as a brownfield site. Additionally, the structures on the site have been minimally maintained. The building is plagued with broken windows and fragments of glass, brick, mortar, slate, and other garbage litter the ground immediately adjacent to the building. In several places the mortar has been eroded to the point that

entire bricks have fallen out of the walls. This is at its worst in two main areas. The first is along North Street where the building façade goes right up to the pavement and plowing snow and road salts up against the building has undoubtedly taken its toll. The second is at the base of the southern stair tower, where the building is the most exposed. Furthermore, due to the current arrangement of the buildings, there is an alley which runs west to east between two of the existing building volumes. This alleyway is carpeted in slate which has fallen from the gabled roofs as moss which is growing in this area because several roofs drain into this area, but it receives minimal sun or air circulation to carry away the moisture.

Historically, the connection to the river served obvious importance for this building. It was part of a complex which relied upon the river for power⁸². While the rest of the complex has long since been demolished, it is worth noting that some of the infrastructure associated with operating this mill and connecting it to the water are still there. Mainly, this refers to a vertical shaft, which is poorly capped, that is located near the south eastern corner of one of the main structures. This hole seems to have housed some form of driveshaft which helped to power the building.

⁸² <http://www.townofhardwick.com/History.html>

CHAPTER 5

PROGRAM

Contemporary Sacred Spaces

Initially the program development and exploration were aimed towards understanding what types of spaces a contemporary religious or spiritual organization would need in order to operate. The readings discussed in the literature section of this document establish a baseline context and situational understanding. They explain the beliefs of the Christian faith, as well as the state in which the church finds itself. Interestingly, these resources also provide insight into the different viewpoints and perspectives of other individuals investigating similar concerns. Stepping off from this position, further investigation was conducted by discussing with members of Fellowship Church and Next Level Church about their wants and needs; as well as their complaints and concerns about their current situations. The result of this investigation was the creation of a program for the religious organization which responds to the needs of a contemporary church. This is in regards to both the manner in which the services function, and how their organization. The investigations lead to the generation of the following list of potential spaces: a Sanctuary with space for at least 200 people, vestibule(s), a baptismal, informal gathering spaces where the church groups could conduct fellowship, a kitchen or prep area, a café, dining area(s), a bookstore, offices, meeting space(s), classrooms, a secure nursery space, a lighting and a sound booth, an area for the preparation and storage of sets, a workshop, utility space(s), public

restrooms, administrative restrooms, circulation corridors, storage areas, practice areas, and backstage areas

Considering Community Integration

In order to address these concerns one strategy is to introduce community based programmatic elements into religious institutions. Combining programs allows them to share resources, compound the effects of one another, increase and broaden exposure, and achieve their goals in a more successful manner. Because of the role of religious organizations and their missions regarding caring for others, many churches still provide some services which benefit the communities around them; such as food pantries, meals on wheels, or other outreach programs. Additionally the traditions, the financial models of churches as non-profit organizations, and the historic functions of churches allow religious organizations to align themselves well with this type of work. These programs are unquestionably beneficial and necessary, and certainly ought to continue and the strategy suggested moving forward is intended to be more holistic than other operational models. The architecture and programmatic arrangement would foster this by sharing infrastructure and promoting proximity to create welcome opportunities. The goal of creating these opportunities here would be to intertwine the church operations with community groups in such a way that the church would be considered a fundamental and vital member of the community.

As the design progressed it became increasingly apparent that the incorporation of a community entity into the program of the church would be the best way for the architecture to support the goals regarding community /church symbiosis. This resulted in the evolution of the design from simply a church or religious institution with community partnership into a church which shared space and programmatic elements with a community center. Once these new design criteria were established the programmatic requirements expanded due to the infrastructure required for a community center. Specifically the needs of the community needed to be evaluated to generate program for the community entities in order to create something which approaches a community center. The author of this thesis has had the opportunity at different times to operate within and be involved with several of the community programs that function in and around this locale. This includes volunteering at the Hardwick Youth Center, completing an Eagle Scout Project at the Hardwick Youth Center, helping family members who work at the Hardwick Senior Center, and acting as an assistant den leader for the Hardwick Cub Scouts. Ultimately, as this is an architectural thesis, the goal of establishing this program then becomes to establish architectural requirements, adjacencies, and spatial relationships which promote the goals of intersection and cross pollination between these two groups.

Shaping Community Spaces

In response to these concerns the programmatic functions were selected to generate a religious community which was included in the surrounding secular community and their everyday activities. The program was also designed to account for several community functions which are required to operate in poor or improvised facilities. This includes such community programs as the Hardwick Youth Center, the Hardwick Senior Center, the local Cub Scout troop, the local Boy Scout troop, and other existing community organizations. Since another major issue that the program was meant to address was the potential for future growth, community development, and economic revitalization; more general community programmatic elements must be considered to allow for flexibility and the potential for additional community programs to develop. The list of fundamental community spaces generated by this evaluation, in order to act as infrastructure and essentially seed community programmatic growth was: vestibule(s), meeting space(s), open gathering space(s), administrative offices, community classrooms, a kitchen or prep area, an eating area(s), secure child care, restricted adult access to the youth center, public restrooms, circulation corridors, and utility spaces.

Since the main goal of the project was to design a building which helps a religious organization to operate symbiotically with the surrounding community, the needs of both the community and the religious organization ultimately needed to be evaluated together. Once this was established, it soon became clear that one of the

ways in which a church could do this was for it to house additional community activities. In this way the church would, at least in part, be fulfilling the role which many community centers take in successful community revitalization projects. Once this came to light, the issues regarding the funding and resource management and allocation come into question because churches and community programs generally have very different modes of funding. In order to evaluate the potential for architecture to aid in incorporating these two different types of operation, certain assumptions needed to be made. The main assumption made was that the community center incorporated with the church in this design project was a separate entity which was able to pool some resources and was able to cooperate with the religious institution with which it shares space.

CHAPTER 6

DESIGN

Responding to the Site

The initial design concept was largely the result of the early site analysis. An early decision was made, in order to refine the scope of work of the project, to subtract the majority of the additions from the design, assuming that these buildings would be demolished. The initial site analysis consisted of the consideration of the different avenues of approach and circulatory patterns through and around the remaining buildings on the site. Once the subtraction of the extra volumes was completed, the circulation on the site was modified considerably. This circulation analysis, when combined with the avenues of approach, the site access points, and the building masses and cardinal orientation; presented itself in the form of four key points. These key points, or design nodes, informed the manner that the building masses were treated, and that the design circulation was developed.

In order to develop these concepts into a formal language; axes were drawn between these arrival nodes, and in response to the natural axis and the existing entry points of the building. These lines were then widened into wedge like incisions where the mass and structure of the building was removed as well. These incisions open up fields of view through the building and across different programmatic spaces. These openings and the, glass walls along them are intended to promote the feelings of welcome-ness and transparency which are so important to bring people into the site.

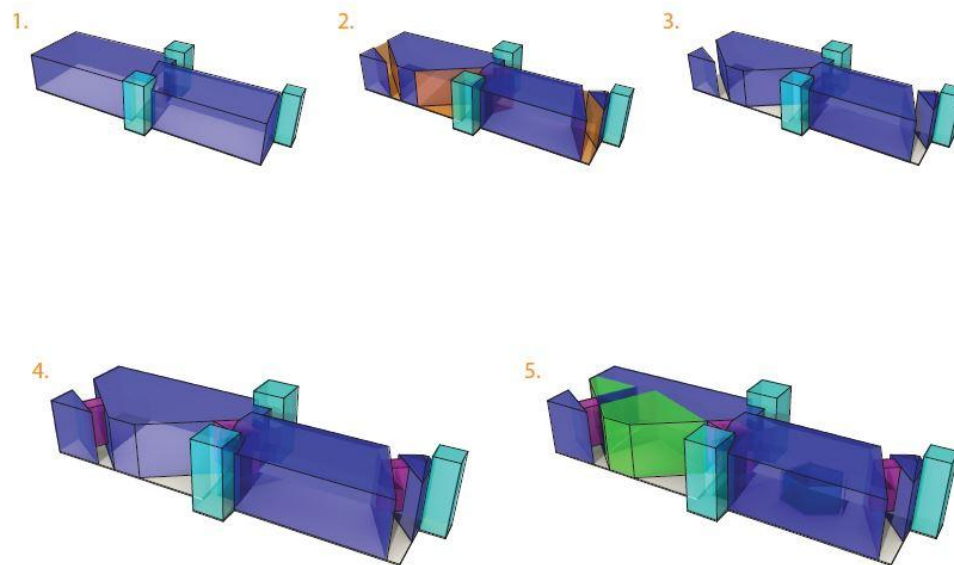


Figure 15: Building Massing Modifications

Image by author

The adaptation strategy selected for the development of this concept was based upon the “weaving” strategy Presented in the book Old Buildings, New Forms. This weaving strategy was selected because it seemed to be the most integrated strategy which the author discussed⁸³. It also seemed to be the most in line with the desired community integration design goals. The weaving concept was seen as exemplary in achieving these goals, since it metaphorically represents the stitching together of the community and the religious institution.

⁸³ Bollack. Old Buildings, New Forms; pp. 179-183

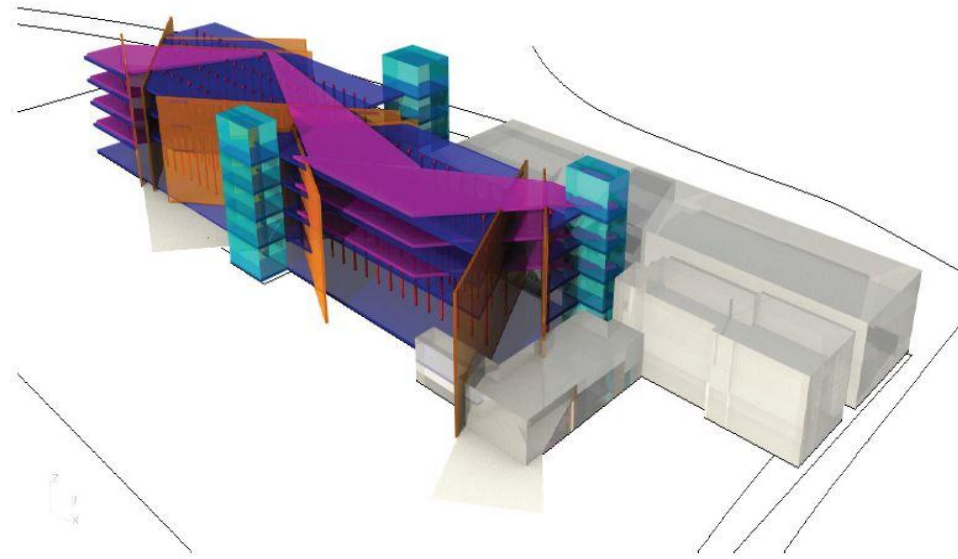


Figure 16: Fundamental Massing and Strategies Model

Image by author

Fostering a Community

By looking at the many other articles and publications which exist within academia regarding the design of religious spaces, one can easily see that there is a dialogue regarding the ability of architectural works of this type to foster community growth beyond that of the church body⁸⁴. Much of the discussion also seems to either focus upon designing churches which are welcoming or appeal to the more recent generations which are less traditional about their beliefs and their spirituality, or towards other aspects which are internal and related to the issues affecting church

⁸⁴ Eckersley, Timothy. "Making A New Inner-city Church." Faith and Form, volume 49, issue 2

operations, survival, accessibility, and modernization⁸⁵. Additionally some articles are focusing upon the functioning of the church as an individual body, with emphasis often on attracting and bringing people together in a way which benefits the church responding to the current cultural tendencies⁸⁶. While this is certainly a part of the discussion which must be had, it often overlooks the potential for these groups to have a more direct, integrated relationship with the surrounding communities; specifically with regards to how this effect benefits the community around the church. While the changing trends in culture have, in many cases, altered religion's partnership with the community as well as how it has historically affected or even governed behavior; these organizations, if functioning responsibly, can still offer many useful or beneficial services.

⁸⁵ Barna Group. "Designing Worship Spaces with Millenials in Mind."

Barna Group. "Five Factors Changing Women's Relationship with Churches."

Orfield. "Of Sounds and Silence." *Faith and Form*, volume 39, issue 3

⁸⁶ Barna, Kinnaman. Churchless

Lewis, C. S. Mere Christianity

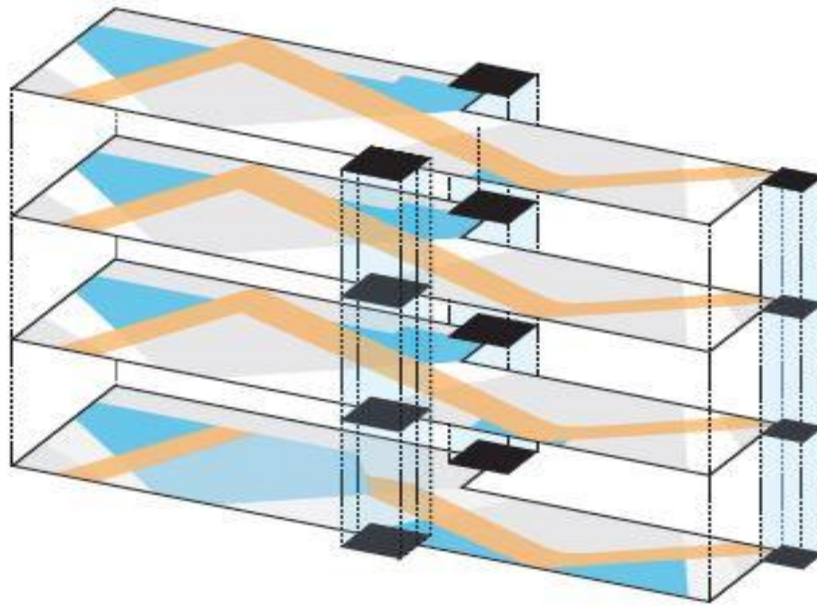


Figure 17: Creating the interior Street Experience

Image by author

In order to respond to these integration and community oriented goals, the image of an active and healthy community was employed. The particular image considered was that of an active street with several community groups and stakeholders interacting visually and directly. One might picture a block party in a suburb, with families and friends milling around one another and creating opportunities for interaction. In order to create this type of experience in the context of a building, the strategy employed was the creation of an interior street scene. The design approach for creating this experience was to create an angular avenue which weaves back and forth across the building volumes, connecting the volumes across the incisions. While this move alone creates a circulation path which both intersects program and creates angles and obstacles to inform and adjust movement, it does not fulfill the intent of creating an

active avenue by itself. In order to accomplish this, positions of pause and activity needed to be created, as well as transparency and views into other programmatic functions. This goal was accomplished by creating spaces and volumes which intersect this avenue, in essence creating the type of interactions which one might experience along an urban street or plaza; where different activities occur within clear lines of sight of one another. Programmatically this was achieved by installing the more public program elements along the avenues. This includes the open gathering spaces, meeting spaces, café spaces, and the open community areas or recreation areas. Additionally, it includes the creation of views out toward the sanctuary and into the auditorium.

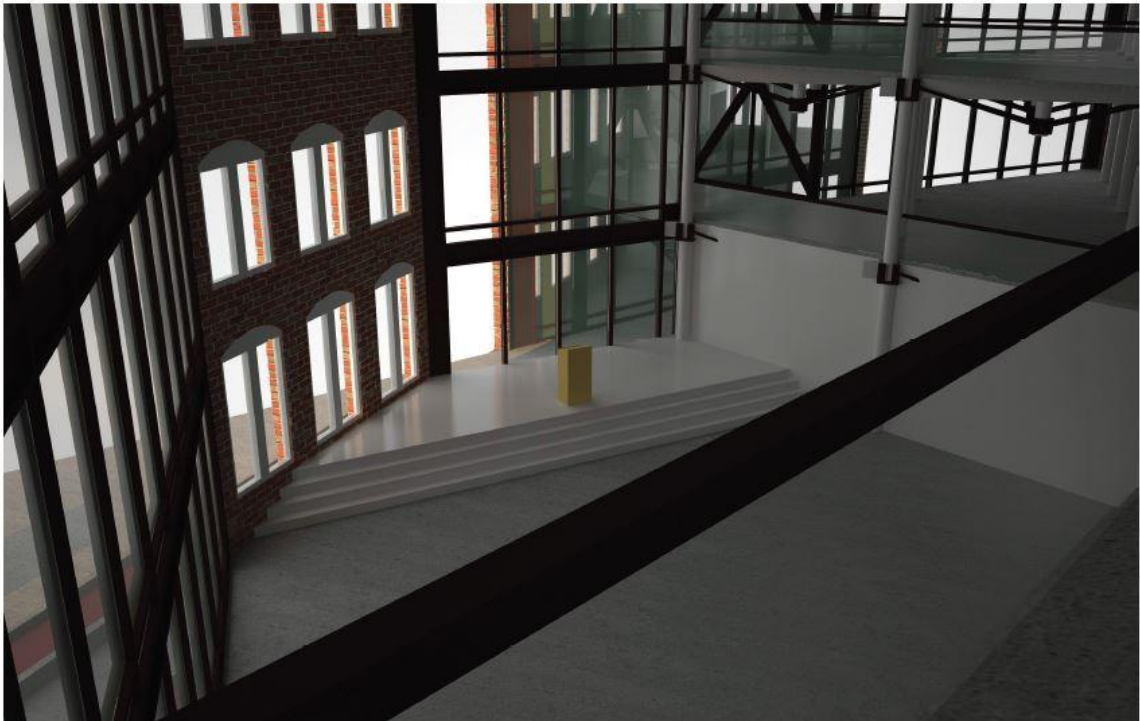


Figure 18: Open View from the Senior Center into the Sanctuary

Image by author

Creating Awe and Intersections

One apparent architectural issue which clearly arises from this strategy will be: how does one go about reconciling everyday mundane life with the awe and spirituality expressed in a church space? The approach made to address this was multi-pronged. Firstly, efforts were made to maximize the visibility and the transparency of the sanctuary from as many other spaces in the building as possible. Creating a dramatic and inspiring experience throughout the building helps to reinforce the sense of awe which leads one to contemplate spirituality in architecture and in their everyday lives. The edges of the incisions are enclosed with glass curtain walls. Some of the structure, that which is necessary to support the slab along the edge of the incision, is hidden within the mullions of the curtain walls.



Figure 19: Rendering of the South Plaza

Image by Author

In order to open the building volumes into grand spaces, a structural approach comparable to that which is employed in the Mass MoCA was executed. This type of structural intervention was employed strategically and in different ways, in different zones of the building. The variation in usage was determined by the programmatic zoning of different spaces. For example, the auditorium employs a two direction structural reduction which alternates structural bays; the lobby at the west end of the building, on the other hand, employs a structural reduction which only runs in one direction, but also skips every other structural column line. The main sanctuary space employs a full truss system which spans perpendicular to the main building axis.

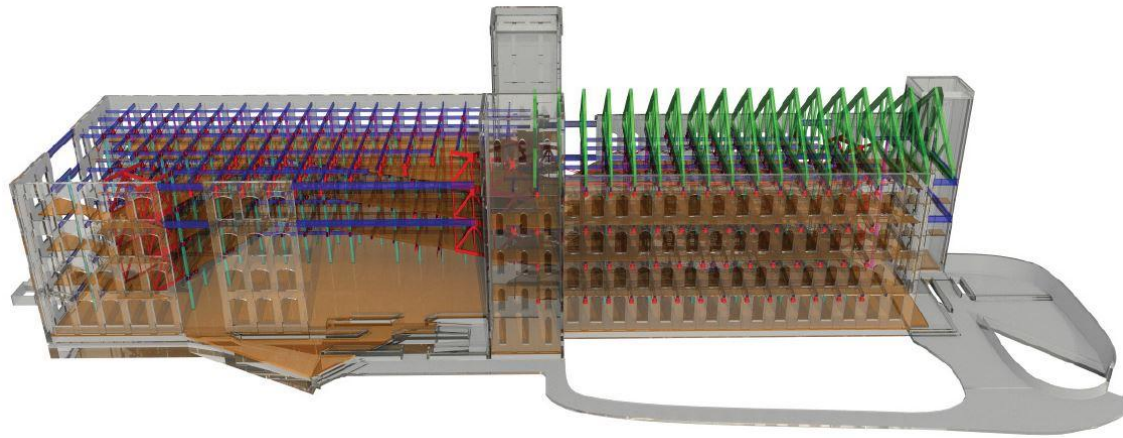


Figure 20: Main Structural Analysis and Modification Model

Image by author

The angles employed to make the incisions extend out into the site to create plazas. These plazas serve two main purposes in addition to dividing building volumes and framing approaches. The circulation through these plazas is directed laterally to help promote interactions. The obstacles which generate this lateral movement are raised planning beds which also serve as rainwater collection apparatuses to allow more of the rainwater from the roofs, plazas, and surroundings to penetrate the ground on the site, rather than promoting runoff into the river. The other major function of these plazas is to casually account for the changes in elevation between the main approaches and the first floor level. The north plaza allows the visitors, via steps or the ramp, to slowly descend the six feet from that road level and auxiliary parking area to the first floor level. The south plaza allows visitors arriving at the southern access to gently ascend the few feet necessary to reach floor level. The east and west plazas operate similarly, but navigate lesser changes in elevation.

Describing the Plan

When considering the building in regards to the floor plan it is quite clear that the incisions essentially divide the building into four volumes; two larger roughly trapezoidal volumes, and two smaller triangular corner volumes. The triangular volumes act primarily as circulation areas, essentially acting like lobbies at each level for the stairs which they house. The larger western volume, on the first floor, houses the main lobby for the religious spaces, as well as the large sanctuary space which extends upward the full height of the building. This section also houses a secondary lobby and the nursery, which boasts restricted access through a first floor office where people would need to check in. The second floor of this volume houses the offices of the church and the community center, as well as the public access computers, along the open area which overlooks the sanctuary. This level also houses the main upper gathering space which is open the remaining two floors to the roof of the structure. The third floor of this volume houses the Hardwick senior center, which can easily be accessed by elevators at either end of the floor; and houses computer access, reading areas, lounge areas and a game room which overlooks the sanctuary. The top floor of this volume is designed to be filled out according to the needs of the community, but is developed tentatively in the floor plans as a potential office space. The goal of all of these developments is to maximize the usage of the building throughout the week, such that the building itself becomes an always active member of the community; and while

this space is being used all of the individuals using it are seeing this open space, one another, and are constantly coming into contact with the sanctuary.

The first floor of the main eastern volume houses an auditorium which is open to the second floor, a meeting room, the café, café seating, and a small library or bookstore which also has a reading area. Both the café and the library lie upon that volume's circulation avenue and the space is as open as possible to promote views across. The second floor of this volume houses the bulk of the program for the community center: classrooms, meeting spaces, and the stacks for the library. The third floor houses the Hardwick Youth Center. The open avenue section highlights the game room area, as well as an open homework and reading area. This floor also houses computer rooms, a storage space, a meeting area, and a presentation area. The top floor plan is once again intended only as a potential space for community growth and demonstrates some basic office program elements.

CHAPTER 7

CONCLUSION

This thesis investigation has sought to highlight many different issues regarding religious institutions and communities which intersect in complicated ways. An investigation which sought to examine how churches could remain viable and important to their communities in a climate where the cultural views on spirituality are changing, ended up dealing with many more issues which lay beneath the surface. It has drawn parallels between the historic roles of churches and community centers. It has highlighted the manner in which critical community elements can influence and enrich one another. It has explored how design can influence the creation of the community spaces. And it has examined how a historically significant symbol can be reinvigorated and can reestablish itself as a community icon. Furthermore, while this particular design represents a more dramatic exploration, which would be structurally difficult and prohibitively costly; the design intent and the successful aspects of the project could easily be adapted to operate rationally within any number of other similar mill buildings in the New England area.

Ultimately, the design explored in this thesis is successful in several ways. Bringing together the program of a community center and a church could allow for many potential community benefits. These include, but are not limited to, the pooling of resources, wider outreach, a higher magnitude of community impact, and a more enriching experience for everyone involved. Furthermore, the patterns and times of

usage created by each of these entities mesh together well. Additionally, the strategies regarding the creation of a community of different types of activity and visual and circulatory interactions is somewhat successful in this design. Creating a building which promotes and reinforces all of these functions would undoubtedly have a beneficial impact on the surrounding community. Additionally an investment of this magnitude in this area would have a considerable effect on the attitudes and lives of those who live nearby; and could greatly improve the local conditions.

There are however several issues which call for further investigation. In regards to the design, while the incisions reinforce the welcoming atmosphere of the envelope and encourage people to approach the building and promote a sense of awe; one could question their success in relation to the interior connections and intersections between program elements and different activities. Furthermore, the reduction in structure opens up the floor plan making it more flexible in certain ways, but also reduces the resiliency of the structure overall, as well as its potential for flexibility if different uses arise in the future. The potential cleanup of the site would require careful analysis of what types of pollutants may be on site, and could also affect the areas viability as a space where children would be spending a considerable amount of time. Furthermore the landscaping plan could use further consideration.

Despite these concerns, this project has been a rewarding investigation into the potential for community development in a local area which is in considerable need of attention. It also offers potential uses and strategies for revitalizing and restoring to glory structures which have the potential to be a community asset, rather than a ruin or

a public safety hazard. Mill buildings like the one explored here are a New England resource and should be viewed as such, rather than a common eyesore, as they are so often addressed. Furthermore the partnership between a community and a religious organization can be another invaluable resource when considering an area which is overlooked by developers who do not see the profit in dealing with a site which is not part of the urban landscape.

APPENDIX A

FINAL REVIEW BOARDS

Designing for Symbiosis

in the New Church Community



Historical Image of Gilbert Textiles Complex



Site and Context



Aerial Highlighting Subtracted Structures



Existing Building from the Bridge



Next Level Church
Worcester, MA Location

This church group operates in a non-traditional contemporary manner which provides insight into how other spiritual organizations may need to operate in order to stay relevant in their communities.



Mass MOCA
North Adams, MA

This building provides an excellent example of how New England mill buildings can be redeveloped into architecturally and culturally relevant structures; as well as exemplifies the structural system used in this project.



Redeemer Presbyterian
Manhattan, NY

This building presents a vastly successful instance where an old parking garage was redeveloped into a new, contemporary church building in an urban setting. It demonstrates one type of strategy which favors the new usages over the previous characteristics.



Mill City Museum
Minneapolis, MN

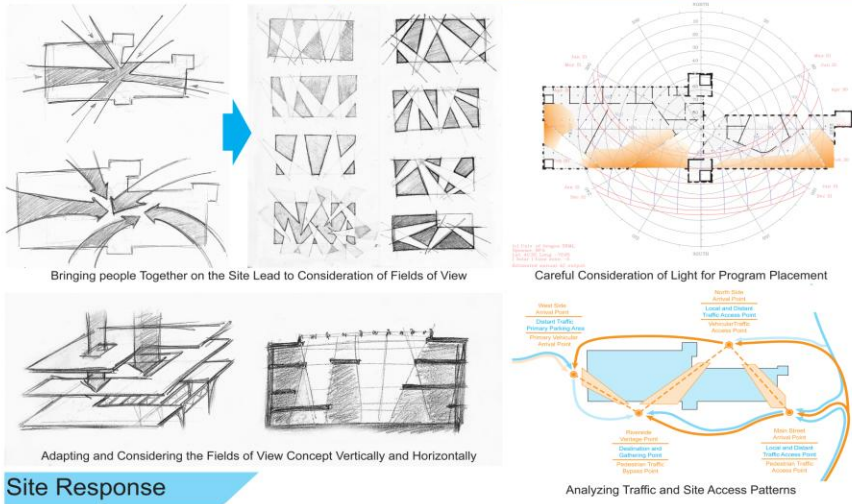
This museum demonstrates how a mill building which was damaged catastrophically could be redeveloped into a culturally significant building. It also demonstrates the contrast of structural systems and intervention strategies which help to highlight the new attitude of the building while keeping in touch with the history of the structure.

Precedents

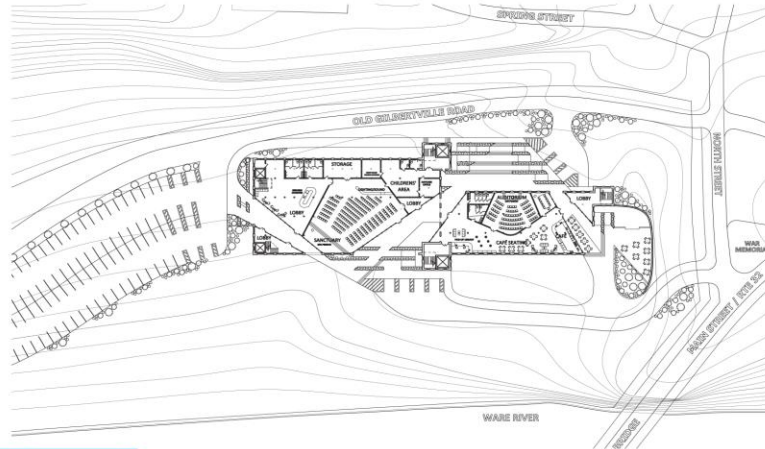
Figure 21: Context and Precedents, Board #1

Site Analysis

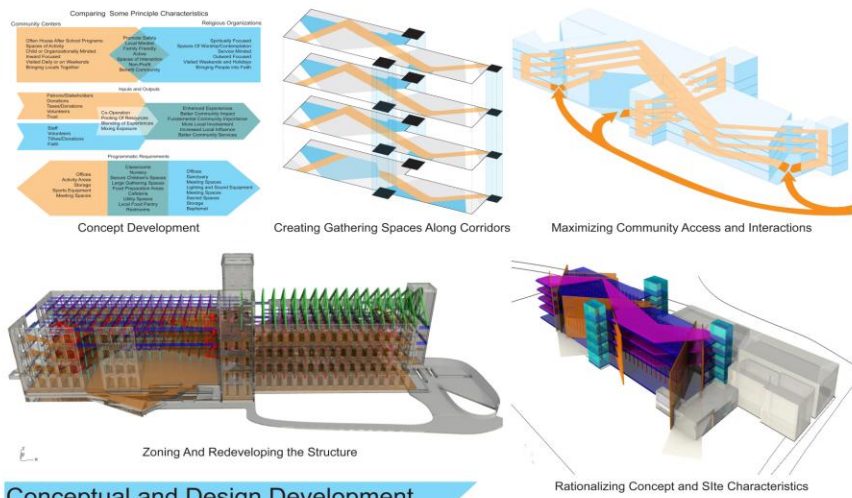
and Concept Development



Site Response



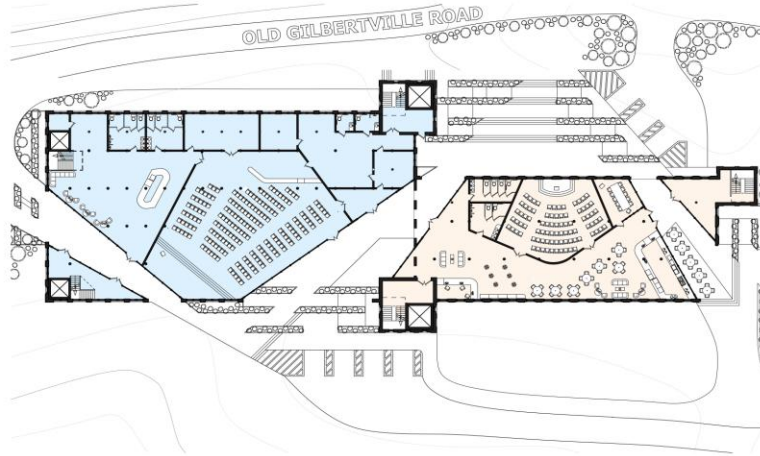
Site Plan



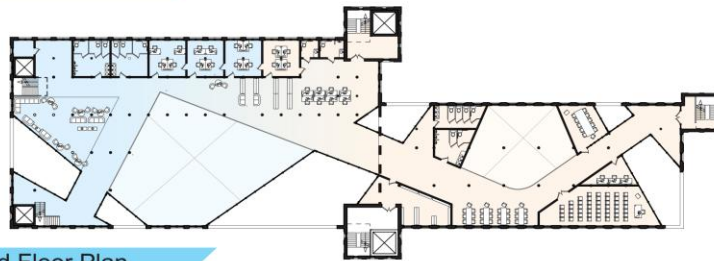
Conceptual and Design Development

Figure 22: Site Analysis, Board #2

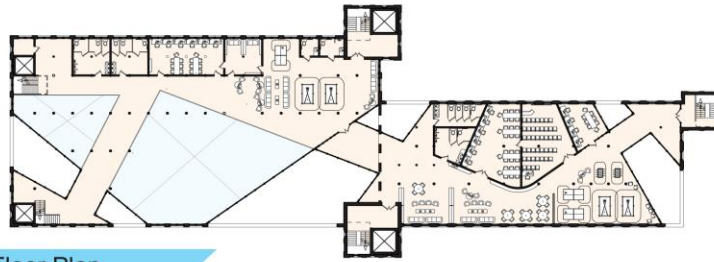
Plans



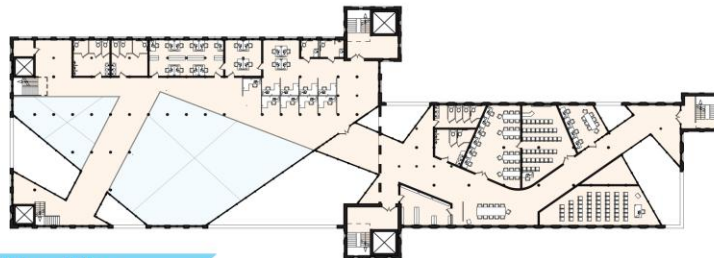
First Floor Plan



Second Floor Plan



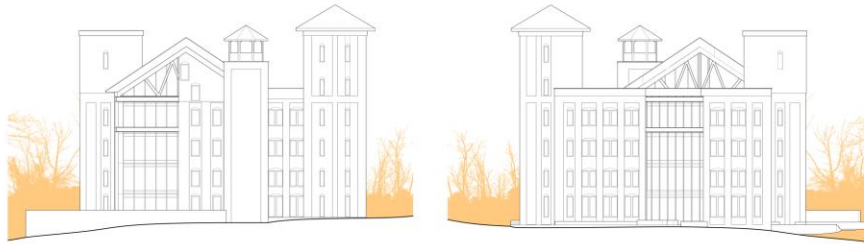
Third Floor Plan



Fourth Floor Plan

Figure 23: Floor Plans, Board #3

Elevations

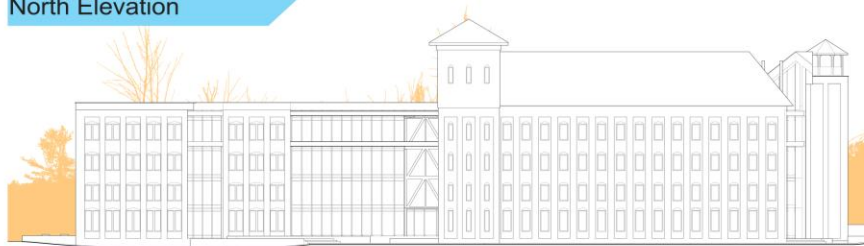


East Elevation

West Elevation



North Elevation



South Elevation



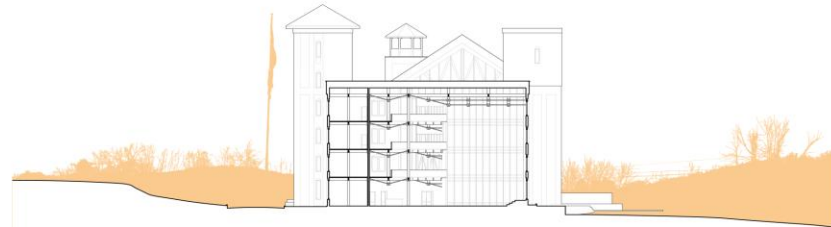
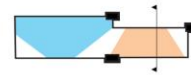
Riverside Plaza Visualization

Figure 24: Building Elevations, Board #4

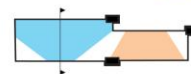
Interactions



Community Center Section



Spirituality Center Section



Community Center Section



Figure 25: Building Sections, Board #5

APPENDIX B

MODELS

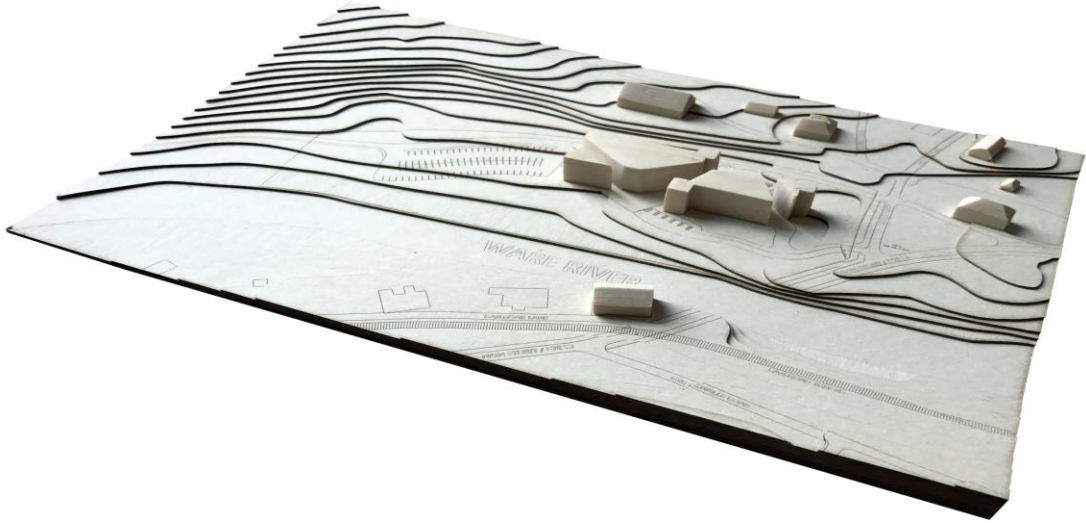


Figure 26: Site Contours, Context, and Conceptual Model
Scale: 1/100" = 1' - 0," Produced by Author

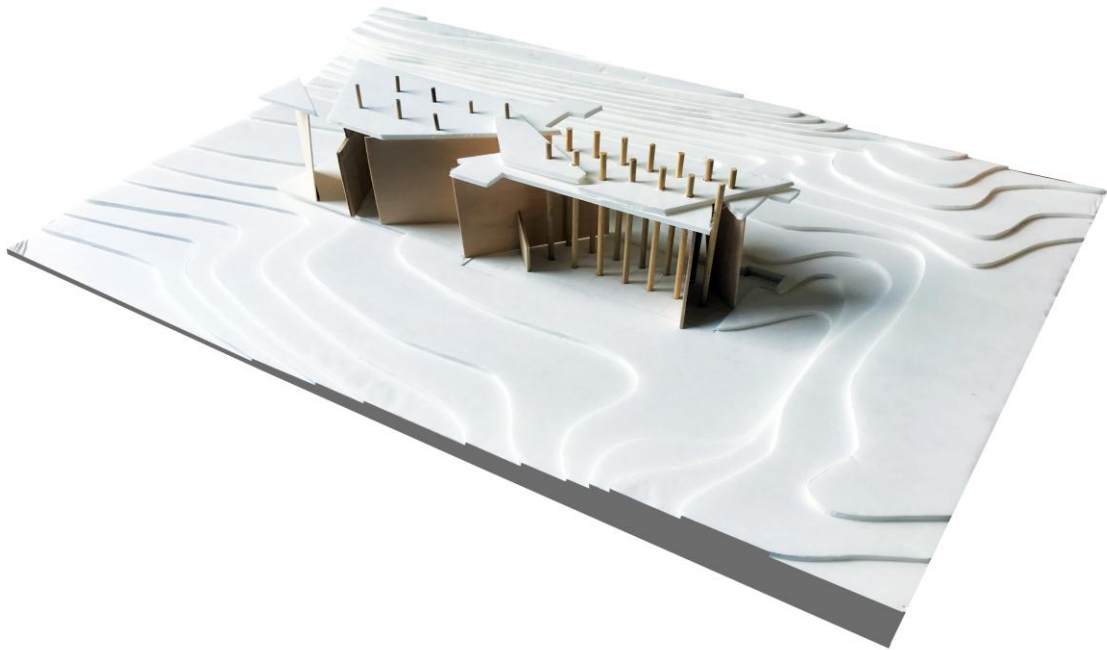


Figure 27: Initial Concept Model with Site Contours
Scale: 1/16" = 1' - 0," Produced by Author

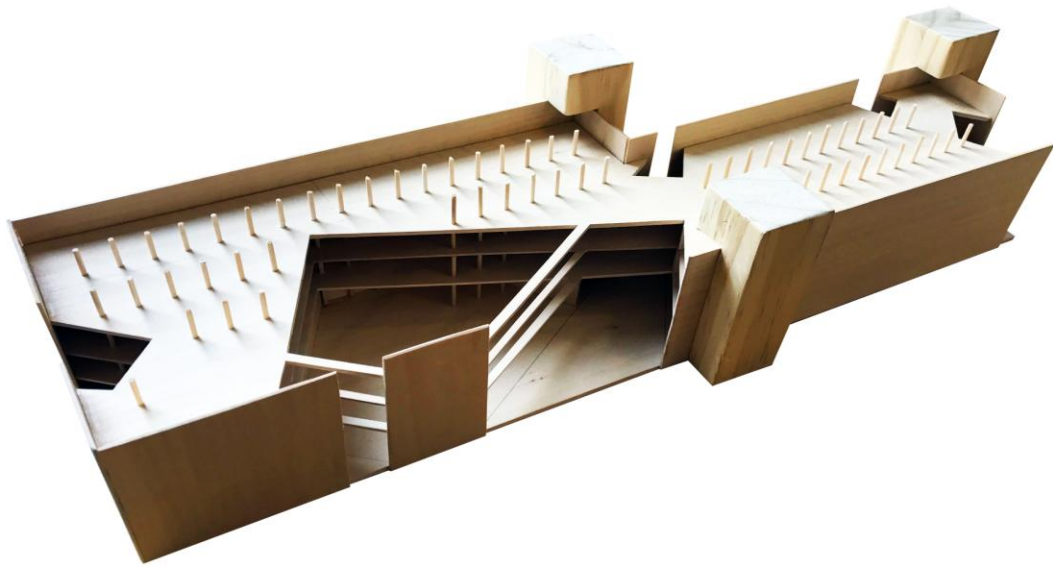


Figure 28: Structural Concept Model, "Southwest Corner"
Scale: 1/16" = 1' - 0," Produced by Author

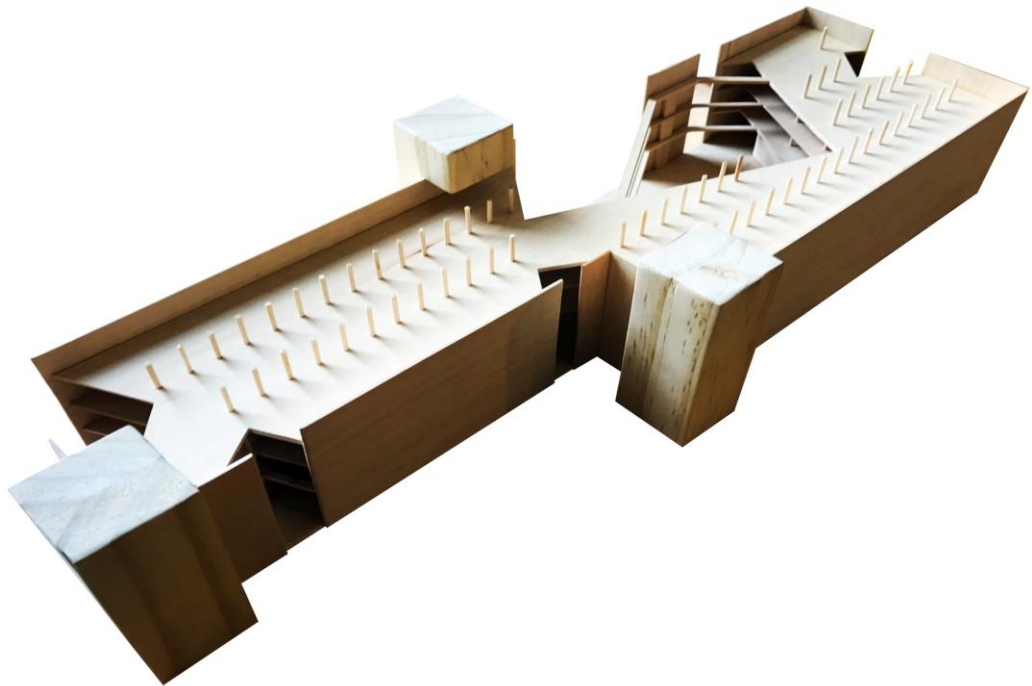


Figure 29: Structural Concept Model "Northeastern Corner"
Scale: 1/16" = 1' - 0," Produced by Author

BIBLIOGRAPHY

- The American Institute of Architects; Dennis J. Hall. Architectural Graphic Standards, Twelfth Ed. Hoboken, NJ: John Wiley & Sons, Inc., 2016
- Barna, George; David Kinnaman. Churchless. Austin, TX: Fedd and Company Inc., 2014
- Barna Group. "Five Factors Changing Women's Relationship with Churches." <https://www.barna.com/research/five-factors-changing-womens-relationship-with-churches/#.V-KLiWcHtQ>. 25 June 2015. (Sept 2016)
- Barna Group. "Designing Worship Spaces with Millennials in Mind." <https://www.barna.com/research/designing-worship-spaces-with-millennials-in-mind/#.V-KMsYWcHtQ>. 5 November 2014. (Sept 2016)
- Bloszies, Charles. Old Buildings, New Designs: Architectural Transformations. New York, NY: Princeton Architectural Press, 2012
- Berger, Markus; Heinrich Hermann; Liliane Wong. Interventions: Adaptive Reuse, Vol. 02. Rhode Island School of Design, 2011
- Bollack, Françoise Astorg. Old Buildings, New Forms: New Directions in Architectural Transfromations. New York, NY: The Monacelli Press, 2013
- Bruce, Curt; Jill Grossman. Revelations of New England Architecture: People and Their Buildings. New York, NY: Grossman Publishers, 1975
- Ching, Fracis D. K. Architecture: Form Space and Order, Third Ed. Hoboken, NJ: John Wiley & Sons, Inc., 2007
- Ching, Francis D. K.; Barry S. Onouye; Douglas Zuberbuhler. Building Structures Illustrated: Patterns, Systems, and Design, Second Ed. Hoboken, NJ: John Wiley & Sons, Inc., 2014
- Eckersley, Timothy. "Making A New Inner-city Church." Faith and Form, volume 49, issue 2; <http://faithandform.com/feature/making-new-inner%e2%80%91city-church/>; 1 June 2016 (October 2016)
- Fazio, Michael; Marian Moffett; Lawrence Wodehouse. Buildings Across Time, Third Ed. London: Lawrence King Publishing Ltd., 2009
- Frampton, Kenneth. Modern Architecture: A Critical History, Fourth Ed. London: Thames & Hudson Ltd, 2007

Kleiner, Fred S. Gardner's Art Through the Ages: a Global History, Enhanced Thirteenth Ed. Boston, MA: Wadsworth, 2011

Lewis, C. S. Mere Christianity. New York, NY: Harper Collins Publishers, 1952

Mehta, Madan; Walter Scarborough, Diane Armpriest. Building Construction: Principles, Materials, and Systems, Second Ed. Upper Saddle River, NJ: Pearson Education Inc., 2013

McMorrough, Julia. The Architecture Reference + Specification Book. Beverly, MA: Rockport Publishers, 2013

Onouye, Barry; Kevin Kane. Statics and Strength of Materials for Architecture and Building Construction. Fourth Ed. Upper Saddle River, NJ: Pearson Education Inc., 2012

Orfield, Steven J. "Of Sounds and Silence." *Faith and Form*, volume 39, issue 3; <http://faithandform.com/feature/of-sounds-and-silence/>; 3 October 2016 (October 2016)

Robert, Philippe. Adaptations: New Uses for Old Buildings. New York, NY: Princeton Architectural Press, 1989

van Uffelen, Chris. Re-Use Architecture. Germany: Braun Publishing, 2011

Vitruvius; Trans. Morris Hickey Morgan. The Ten Books On Architecture. New York: Dover Publications Inc., 1960

<http://www.archdaily.com/20105/church-of-2000-richard-meier>; 19 April 2009. (Feb 2016)

<http://www.archdaily.com/101260/ad-classics-church-of-the-light-tadao-ando>. (Sep 2016)

<http://www.archdaily.com/tag/titanium-dioxide>; 1 August 2014. (Feb 2016)

http://2.bp.blogspot.com/_rUGdluXjOEc/TRofgabmp5I/AAAAAAAAABec/rkpoFKBX4-c/s1600/Minneapolis+Mill+City+Museum+%252813%2529.JPG (Dec 2016)

<https://www.google.com/maps/place/Parrocchia+Dio+Padre+Misericordioso/@41.8823936,12.5831358,17z/data=!3m1!4b1!4m2!3m1!1s0x132f62f18c137e09:0xcb53ae302258be88>; (Mar 2016)

<http://massmoca.org/about/> (Dec 2016)

http://maps.massgis.state.ma.us/map_ol/oliver.php (Sep 2016)

<http://www.millcitymuseum.org/> (Dec 2016)

<http://richardmeier.com/?projects=jubilee-church-2;> (Feb 2016)

[http://www.townofhardwick.com/History.html,](http://www.townofhardwick.com/History.html) (Dec, 2015)

[https://ucrtoday.ucr.edu/22621;](https://ucrtoday.ucr.edu/22621) 4 June 2014. (Feb 2016)