

ABSTRACT

Title of Document: SUSTAINABLE CULTURES:
 FUSING LOCAL AND GLOBAL
 TRADITIONS

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Master of Architecture, 2014

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 Architecture, Planning and Preservation

Within the modern world, a conflict arises between the existence of “universal” and “local”. The result of the struggle has been a fading of our local traditions and customs. Acknowledged as a vital component of our being and interpreted as the essence of culture, the “local” is seen as an endangered resource. This proposes the question of how, can, and does architecture sustain a (the local) culture? To explore the question, this thesis uses the architectural program type of the library as the vehicle of study. A programmatic and spatial diagram of the library is applied to three different towns within a similar climate and geographical region. The towns of Alexandria, VA, and Chestertown and Cumberland, MD were chosen because each one possesses a strong sense of place and identity. Using the theories of regionalism, each town is analyzed to investigate the nuances of the culture. The process of design begins with the acknowledgment and understanding of the existing pattern of development. The understanding leads to an interpretative and transformative process to reveal a dialog between “Universal” and “Local”. The architecture of each library reflects the characteristics innate to a library as it embodies the relevance of the local culture.

SUSTAINABLE CULTURES: FUSING LOCAL AND GLOBAL TRADITIONS

By

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Thesis submitted to the Faculty of the Graduate School of the
University of Maryland, College Park, in partial fulfillment
of the requirements for the degree of
Master of Architecture
2014

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Dedication

I would like to dedicate this thesis to my family for their unconditional love and support.

Acknowledgements

Thank you to my committee for their continuous support and guidance throughout the year. Thank you to Ashley Grzywa and David Leestma for their help pulling my final presentation together in the final days.

Table of Contents

Dedication	ii
Acknowledgements	iii
Table of Contents	iv
List of Figures	v
Chapter 1: Introduction	1
Introduction	1
Chapter 2: Globalized World	3
<i>Universal Civilization</i>	3
Local Cultures	4
Universal Civilization vs. Local Culture	5
Chapter 3: Regionalism in a Globalized World	8
Regionalism of Resistance vs. Critical Regionalism	8
Element of Local Culture	12
Design Approach	14
Chapter 4: Program	16
Library History	16
Program Analysis	27
Precedents Analysis	31
Cambridge Public Library	31
Charles Millar Library	33
Dobbs Ferry Public Library	35
Universal Program Diagram	36
Chapter 5: Sites	39
Introduction	39
Alexandria, VA	39
Site history	41
Site Analysis	44
Specific Site Analysis	51
Cumberland, MD	53
Site history	55
Site Analysis	57
Specific Site Analysis	65
Chestertown, MD	68
Site history	70
Site Analysis	72
Specific Site Analysis	80
Conclusions	82
Chapter 6: Process of variations	82
Chapter 7: Architectural Response	86
Alexandria, VA	86
Cumberland, MD	95
Chestertown, MD	104
Chapter 8: Conclusion	113
Bibliography	113

List of Figures

Figure 1: Universal Civilization vs. Local Culture,.....	7
Figure 7: Element of local culture,	13
Figure 8: Design Approach,.....	15
Figure 9: Tianyi Chamber, Ningbo China – 1561,	17
Figure 10: Biblioteca Malatestiana, Cesena Italy – 1452,	18
Figure 11: Duke Humfrey’s Library, Oxford United Kingdom – 1598,	19
Figure 12: Bibliotheque Sainte-Genevieve, Pairs France – 1850,.....	20
Figure 13: Winn library, Woburn Massachusetts – 1879,	22
Figure 14: James Bertram’s, Notes on the Erection of Library Buildings”,.....	23
Figure 15: Schenectady Public Library, New York – 1902, S.....	25
Figure 18: American Library Association Four Dimensions,	29
Figure 19: Cambridge Public Librar, double skinned façade,	32
Figure 20: Cambridge Public Library Section,.....	33
Figure 21: Charles Millar library- entrance,	34
Figure 22: Charles Miller Library & Enoch Pratt Library Section,.....	35
Figure 23: Library Program Precedent Study,	36
Figure 24: Purposed Universal Program,.....	37
Figure 25: Purposed Universal Program,	38
Figure 26: Program Space Sized,.....	38
Figure 27: Potential Site Locations,.....	39
Figure 28: Alexandria, VA - Figure ground,	40
Figure 29: Alexandria, VA – Historic district & Land Use,.....	40
Figure 30: Alexandria, VA – Current Library Locations,	41
Figure 31: Alexandria, VA – Civic Buildings,	43
Figure 32: Alexandria, VA – Residential Buildings,.....	43
Figure 33: Street Frontage and public space,.....	44
Figure 34: Alexandria, VA – Form code,	45
Figure 35: Alexandria, VA – Setback and Massing,	46
Figure 36: Alexandria, VA – Open spaces,	46
Figure 37: Alexandria, VA – Street Wall,	47
Figure 38: Alexandria, VA – Roof types,	48
Figure 39: Bay Rhythm and Openings,.....	49
Figure 40: Alexandria, VA – Types of Windows,.....	50
Figure 41: Alexandria, VA – Materials,	50
Figure 42: Alexandria, VA – Site location,	51
Figure 43: Alexandria, VA – Site photos,.....	52
Figure 44: Cumberland, MD - Figure ground,.....	53
Figure 45: Cumberland, MD – Historic district & Land Use,	54
Figure 46: Cumberland, MD – Current Library Locations,.....	54
Figure 47: Cumberland, MD – Civic Buildings,.....	56
Figure 48: Cumberland, MD – Residential Buildings,	57
Figure 49: Cumberland, MD – Street Configuration and public space,	58

Figure 50: Cumberland, MD – Form Code,.....	59
Figure 51: Cumberland, MD – Setback and Massing,.....	60
Figure 52: Cumberland, MD – Open Space,.....	60
Figure 53: Cumberland, MD – Street Walls,.....	61
Figure 54: Cumberland, MD – Roof types,	62
Figure 55: Cumberland, MD – Bay Rhythm and openings,	63
Figure 56: Cumberland, MD – Types of Windows,	64
Figure 57: Cumberland, MD – Materials,.....	64
Figure 58: Cumberland, MD – Site location,.....	65
Figure 59: Cumberland, MD – Site photos,.....	67
Figure 60: Chestertown, MD - Figure ground,	68
Figure 61: Chestertown, MD Historical District & Land Use,.....	69
Figure 62: Chestertown, MD – Current Library Locations,	69
Figure 63: Chestertown, MD – Residential Buildings,.....	71
Figure 64: Chestertown, MD – Civic Buildings,	72
Figure 65: Chestertown, MD – Street Configuration and public spaces,	73
Figure 66: Chestertown, MD - Form Code,.....	74
Figure 67: Chestertown, MD - Setbacks and Massing,	75
Figure 68: Chestertown, MD – Open Space,	75
Figure 69: Chestertown, MD – Street Walls,	76
Figure 70: Chestertown, MD – Roof Types,.....	77
Figure 71: Chestertown, MD – Bay Rhythm and Openings,.....	78
Figure 72: Chestertown, MD - Types of Windows,.....	79
Figure 73: Chestertown, MD - Materials,.....	79
Figure 74: Chestertown, MD - Site location,.....	80
Figure 75: Chestertown, MD – Site Images,.....	81
Figure 76: Chestertown, MD - Variation on public space,.....	83
Figure 77: Chestertown, MD – Elevation Variation,.....	84
Figure 78: Chestertown, MD – Column Variation,	85
Figure 79: Alexandria, VA – Site Location,.....	86
Figure 80: Alexandria, VA – Urban Connection,.....	87
Figure 81: Alexandria, VA – Street wall,	87
Figure 82: Alexandria, VA – Open Space,	88
Figure 83: Alexandria, VA – Circulation,	89
Figure 84: Alexandria, VA – Thresholds,.....	89
Figure 85: Alexanaria, VA – Wall detail, S.....	89
Figure 86: Alexandria, VA – Wilkes St Elevaiton,	90
Figure 87: Alexandria, VA – Library Program,.....	90
Figure 88: Alexandria, VA – Site Plan,	91
Figure 89: Alexandria, VA – First Floor Plan,	91
Figure 90: Alexandria, VA – Second floor plan,	92
Figure 91: Alexandria, VA – Reading Room Perspective,.....	92
Figure 92: Alexandria, VA – Garden Perspective,	93
Figure 93: Alexandria, VA – Section Perspective,.....	94
Figure 94: Cumberland, MD – Site location,.....	95
Figure 95: Cumberland, MD – Urban Connection,	96

Figure 96: Cumberland, MD – Street Walls,	96
Figure 97: Cumberland, MD – Open Space,.....	97
Figure 98: Cumberland, MD – Circulation,.....	97
Figure 99: Cumberland, MD – Thresholds,.....	98
Figure 100: Cumberland, MD – Wall Detail,	98
Figure 101: Cumberland, MD – Library Program,.....	99
Figure 102: Cumberland, MD – Site Plan,	100
Figure 103: Cumberland, MD – First Floor Plan,.....	100
Figure 104: Cumberland, MD – Second Floor Plan,	101
Figure 105: Cumberland, MD – Prospect Square Elevation,.....	101
Figure 106: Cumberland, MD – Reading room,	102
Figure 107: Cumberland, MD – Park View,.....	102
Figure 108: Cumberland, MD – Section Perspective,	103
Figure 109: Chestertown, MD – Site Location,.....	104
Figure 110: Chestertown, MD – Urban Connection,.....	105
Figure 111: Chestertown, MD – Street walls,.....	105
Figure 112: Chestertown, MD – Open Space,.....	106
Figure 113: Chestertown, MD – Circulation,	106
Figure 114: Chestertown, MD – Threshold,	107
Figure 115: Chestertown, MD – Wall Detail,.....	107
Figure 116: Chestertown, MD – Library Program,.....	108
Figure 117: Chestertown, MD – Site Plan,.....	108
Figure 118: Chestertown, MD – First Floor Plan,	109
Figure 119: Chestertown, MD – Second Floor Plan,.....	109
Figure 120: Chestertown, MD – Reading Room,	110
Figure 121: Chestertown, MD – Entry Perspective,.....	110
Figure 122: Chestertown, MD – High Street Elevation,.....	111
Figure 123: Chestertown, MD – Section Perspective,.....	112

Chapter 1: Introduction

Introduction

In the modern world there is a conflict between “universal” and “local”. It is marked with the universal civilization on one end and the local culture on the other in a constant battle for primacy. The universal civilization is described as inspiring progress which is focused on rational aspects of science and technology.

Consequently, the advancements in technology have raised the standard level of comfort in the world. However, the onset of a universal civilization has resulted in the fading of local traditions and customs. Many recognize the traditions and customs as the very essence of the local culture. In response to this observation Paul Brislin poses the question of balance. “If identity is essential to our survival, if spatialisation has an implicit and essential part in the making of identity, and if this sense of identity is being eroded, then what are the qualities of an architecture that can nurture people and provide an equilibrium between rootedness and alienation?”¹

In order to mediate the conflict between universal and local many people have employed theories of Regionalism. Regionalism provides an approach which attempts to establish a sustainable culture. A sustainable culture is the integration of universal and local traditions fused into a culture that is reminiscent of the past and yet still looks forward to the future. The culture becomes immersed with new perspectives from around the globe while maintaining the identity and values of the local culture. The culture’s identity is established by a collection of elements ranging from local materials and climatic response to traditions and rituals. Using inspiration from the

¹ Brislin, Paul. “Identity, place and Human Experience

universal civilization these elements can be transformed while still maintaining the identity of the culture.

This thesis will address the issue of how a building can and does contribute to the sustainability of a culture. The architectural program type as a vehicle of exploration for this thesis is the local or community library. The reason for selecting the library type is that it represents both universal and local identities. The mission of the local or community library is to retain and convey knowledge. As a local institution the library symbolizes and protects the values and beliefs of its culture. It also offers the availability of the knowledge of the “universal” culture to the local patron. The library becomes an anchor or beacon within the community. The design of a library can reflect the local culture’s perspective on learning and accessing information.

The study of local and community libraries within the United States reveals a common programmatic and spatial response that yields a spatial diagram. Employing the spatial diagram of a library to different sites will demonstrate how the architecture adjusts for the cultural context. The sites selected for study span the Mid-Atlantic region to include Alexandria VA, Cumberland MD, and Chestertown MD. The sites were selected for their similarities with respect to geographical region of the United States, strong sense of character, and historical trends. The design of each library will embody the cultural identity for each town.

Chapter 2: Globalized World

Universal Civilization

Within the society of today's world "globalization as a concept refers both to the compression of the world and the intensification of consciousness of the world as a whole..."² This globalization constructs a network that connects all mankind creating a universal civilization. Paul Ricoeur, defines universal civilization as a unification of mankind on an abstract level. Universal civilization is characterized to have three features: scientific spirit, development of tools, and rational politics. The scientific spirit is "what unifies mankind at a very abstract and purely rational level".³ Ricoeur describes mankind's ability to think rationally as the uniting element of mankind. Meaning on an abstract level all of mankind has the ability and wiring to approach a problem with the similar reasoning and realize the same conclusion. The second feature of universal civilization is the application of the scientific spirit in the development of tools. Ricoeur explains how "Mankind ... creates all its relations with nature by mean of tools which are constantly being revolutionized by scientific knowledge".⁴ Our primitive tools, developed over time as a response to our natural environment, remains solidified in our culture. The tools remain constant until an external force or scientific knowledge is applied. Consequently, the tools are further developed into machines and techniques that are assumed to benefit mankind as a whole. The third feature which further shows mankind's universality "is the growth of a State which institutes laws and develops means for their enforcement in the form

² Shields, Rob, "Globalisation – Entangled Places, Interface Buildings, Generic Design" page 20

³ Ricoeur, Paul. "Universal Civilization and National Culture" page 43

⁴ Ricoeur, Paul. "Universal Civilization and National Culture" page 44

of an administration”.⁵ The main objective of the State is to establish and enforce laws. As a result, regardless of the difference in details, all of mankind experiences similar political situations. The ability for all mankind to think rationally is what unifies us into a single humanity. This idea of a single humanity has been tested by globalization which is constantly connecting people of different backgrounds and cultures and theoretically allowing them to unite as a universal civilization.

Local Cultures

The definition of a universal civilization as described by Ricoeur reveals the relationship of mankind as a single humanity. The humanity is an assemblage of diverse and distinct cultures. Our definition of culture not only includes the “arts, literature or aesthetic canons of societies but more importantly, the underlying codes of operation on which symbolism ethical priorities behavior patterns and system of knowledge are based.”⁶ These cultures establish traditions and customs which are a reflection of the values and beliefs of the local culture. Theory holds that it is in response to these traditions and customs, and from which local cultures establish a vernacular architecture. The vernacular architecture exhibits the unique physical aspects of the region in accordance with the values and beliefs of the local culture. The regional physical aspects can include the region’s climate, available materials, and topography. The vernacular architecture is determined by the values and beliefs of a local culture establishing a unique cultural identity. Juhani Pallasmaa states a cultural identity is “a sense of rootedness and belonging is an irreplaceable ground of

⁵ Ricoeur, Paul. "Universal Civilization and National Culture" page 44

⁶ Bechhoefer, William. "Teaching with Regionism" page 41

our very humanity”⁷. The cultural identity represents our purpose and connection to a place and guides the culture into the future.

Universal Civilization vs. Local Culture

Using the fundamental definition of universal civilization and local culture a conflict arises between the two concepts. Ricoeur uses his theory of a “creative nucleus” to explain the conflict between a universal civilization and local culture. Ricoeur’s theory describes throughout history mankind’s successes and failures have been accumulated and assembled to become a history of the world. The history includes a collection of every local culture’s history which is then able to be disseminated to other regions and cultures. The process of accumulating and disseminating can be likened to a universal civilization. The universal civilization “fosters a certain sense of time which is composed of accumulation and progress, whereas the way in which a nation develops its culture is based upon a law of fidelity and creation”.⁸ In order to facilitate change, the universal civilization collects the “tools” from cultures around the world. These “tools” represent the values and traditions of the local culture. For example, the cotton gin was an advancement in technology which increased the speed cotton could be harvested. The introduction of the cotton gin had a significant impact on the traditions and customs of the south. As a “tool” the technology was adopted by the universal civilization and improved harvesting technology around the world. This adaption of a local culture’s tool resulted in a change for mankind as a whole.

⁷ Pallasmaa, Juhani. “Newness, Tradition and Identity” page 18

⁸ Ricoeur, Paul. “Universal Civilization and National Culture”

The universal civilization's accumulation of "tools" can be viewed as an advancement or weakness to mankind. The improvements to the standard level of comfort mankind has experienced is a benefit of the universal civilization. The world has witnessed advancements in technology and medicine such as the internet and antibiotics. Beyond the benefits of technological advancements, the "universal civilization has seen a growth in a sense of belonging to a single humanity".⁹ As a single humanity we begin to understand the symbiotic relationship between individual people from different cultures. As a group, we begin to tackle much larger problems such as pollution, climate change, and the prevention of nuclear war.

These advancements while beneficial to humanity as a singular unit have some serious disadvantages. As tourists travel the world, familiar sights of home such as restaurant and hotel chains, crop up miles and miles from their origins. It would appear that "globalization is Japanese cars and Microsoft Windows".¹⁰ The process of establishing a single homogenized world culture is the negative effect of universal civilization. The victim of this trend is the local cultures and traditions. Paul Ricoeur describes the "phenomenon of universalization, while being an advancement of mankind at the same time constitutes a sort of subtle destruction, not only of traditional cultures, which might not be irreparable wrong, but also of what I shall call for the time being the creative nucleus of great civilization and great cultures, that nucleus on the basis of which we interpret life, what I shall call in advance the ethical and mythical nucleus of mankind."¹¹

⁹ Ricoeur, Paul. "Universal Civilization and National Culture" page 56

¹⁰ Shields, Rob, "Globalisation – Entangled Places, Interface Buildings, Generic Design" page 20

¹¹ Ricoeur, Paul. "Universal Civilization and National Culture" page 47

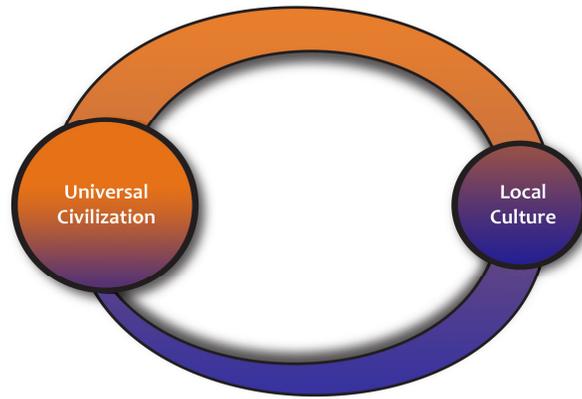


Figure 1: Universal Civilization vs. Local Culture, Source- Author 2014

This creative nucleus can be thought of as the accumulation of “tools” in the universal civilization. Each local culture has unique traditions and environmental conditions which influence their development. Without the creative nucleus the universal civilization will stall or plateau as a mediocre civilization. The paradox becomes “how to become modern and to return to sources”.¹² For the purpose of this thesis exploration, the question will be raised how to engage in the advancements of the universal civilization while maintaining the local identity and character of the place?

¹² Ricoeur, Paul. "Universal Civilization and National Culture" page 47

Chapter 3: Regionalism in a Globalized World

Regionalism of Resistance vs. Critical Regionalism

In order to engage the universal civilization we must take root in our past. However, the question becomes how best to accomplish this goal. It is not simply “to repeat the past, but rather to take root in it in order to ceaselessly invert”.¹³ This describes the theory of regionalism. Regionalism is an approach to design. It is not purely a style. As an approach to design regionalism requires that “architecture reflects its time, place, and culture and that it link the past, the present and perhaps the future”.¹⁴ The architect considers the local aspect of the region’s climate, available materials and topography, plus traditions and customs to design architecture reflecting the theories of regionalism. Regionalism has been categorized into two forms: regionalism of resistance and critical regionalism.

Regionalism of resistance resists the universal civilization. Harwell Hamilton Harris defines “regionalism of resistance” as priding itself “on its exclusiveness. It cares more for preserving an obscure dialect than for expressing an idea. It is anti-cosmopolitan and anti-progressive.”¹⁵ It resists the advancements of a universal civilization by purposely repeating the forms and ornamentation of the past. A current example is Poundbury, England. Leon Krier created a local village uniting vernacular design with the technologies of the modern world. Krier imposed strict design guidelines to control the character of the homes and buildings within the town. The architecture draws upon the tradition of Dorset by using the local craftsman to

¹³ Ricoeur, Paul. "Universal Civilization and National Culture" page 51

¹⁴ Bechhoefer, William. "Teaching with Regionism" page 47

¹⁵ Harris, Harwell. "Regionalism and Nationalism in Architecture" page 58

construct the building. Along with using local craftsmen the buildings incorporate the use of the local materials of stone and slate.

The architecture expresses the identity of a culture or nation through the use of historical references to instill memories. Alexander Tzonis and Liane Lefaivre describe this type of architecture as a “spatial trigger for activating the group’s collective memory. Architecture becomes a memory machine.” The use of the prevalent elements or historical references creates architecture of familiarization.

In contrast, critical regionalism is defined by Kenneth Frampton as “mediate the impact of universal civilization with elements derived indirectly from the peculiarities of a particular place”.¹⁶ Frampton expresses the importance of relating the architecture to the place but not as an historical reference but as an embodiment of the place’s essence. In these examples the architects take the approach of using traditional methods or traditional materials. This is important because the architecture is a physical embodiment of the local, whether it is a tradition or a physical form. The Kagawa Prefectural Office by Kenzo Tange is located in Japan. Tange’s design used the material of concrete and modern construction methods. However the structural members are configured in a rhythm of layered beams. This structural tradition expresses the identity of the Japanese culture. Ernesto Rogers praises the building on its avoidance of “pitfalls of an inhuman and anonymous technophilia by giving roots to these new ideas”.

In America, Paul Rudolph was designing a house suitable for the tropical region of its site. The Cocoon House in Siesta was a light timber structure which was elevated off the ground and extended over the lagoon. The house responded to the

¹⁶ Kenneth Frampton. "Towards a Critical Regionalism: Six Points for an Architecture of Resistance" page 82

region's climatic traditions by being elevated off the ground. The raised elevation afforded the advantage of breezes and provided appropriate sun shades. However, the roof structure employed an experimental suspended vinyl roof with steel supports. The house responded well to the surrounding site.

The Jean-Marie Tjibaou Cultural Center, located in New Caledonia designed by Renzo Piano was inspired by the traditional huts of Caledonian. The design consisted of ten pavilions. Each pavilion offered a unique function including an exhibit of traditional activities of music and dance. The pavilions were constructed using the traditional building methods and beliefs about incorporating wind, light, and air. Piano uses modern technology such as steel connections to increase the durability of the pavilions. Tzonis and Lefaivre describe the building as “syntheses between local and global”.¹⁷

Alvar Aalto's design for the Saynatsalo Town Hall in Finland was an integration of both regional elements and global ideas. To establish a sense of community Aalto's design incorporates a courtyard element which perhaps was inspired by the Italian Renaissance along with the blurred boundaries between inside and outside.¹⁸ The various buildings are aptly integrated in to the topography and the building used materials which fit in with the regional character.

As these examples show, the architect is cognizant of the regional elements. Critical regionalism, as described by Alexander Tzonis and Liane Lefaivre, further distinguishes itself from regionalism of resistance by being “self-examine and self-questioning “defamiliarization” is at the heart of what distinguishes critical

¹⁷ Tzonis, Alexander and Lefaivre, Liane. *Architecture of Regionalism in the age of Globalization* Page 183

¹⁸ Tzonis, Alexander and Lefaivre, Liane. *Architecture of Regionalism in the age of Globalization*

regionalism ... and its capability to create a renewed versus an atavistic sense of place in our time".¹⁹ It possesses the ability to examine the essence or character of a place and fuse it with the ideas and values of the universal civilization.

This merge is described by Kenneth Frampton as cross fertilization. "World culture will only come into being through a cross fertilization between rooted culture on the one hand and universal civilization on the other. This paradoxical proposition that regional culture must also be a form of world culture is predicated on the notion that developing *in se* will, of necessity, transform the basis of rooted culture."²⁰ By fusing the values and ideas of the universal civilization with the traditions of the locale, Frampton believes the resulting architecture is in a constant state of evolution. The architecture modifies the local culture while maintaining the identity or character of a place. An example of how a local architecture design can influence the universal civilization is Richardsonian Romanesque. Henry Hobson Richardson was a student at the Ecole des Beaux-Art in the late 1800's. While in Europe he was inspired by the French Romanesque churches. Upon his return to the United States to practice in New England, Richardson developed Richardsonian Romanesque. He used the abundance of local stone from the New England area to create a regional style; Richardsonian Romanesque. Development of the style started with the idea to establish a regional style for New England. Richardson looked to the regional elements for inspiration, which was the abundance of local stone. Richardsonian Romanesque became quite popular and spread throughout the country as the primary style for library design. His approach is an occurrence of the fusion of local and

¹⁹ Tzonis, Alexander and Lefaivre, Liane. "Critical Regionalism" page 20

²⁰ Frampton, Kenneth. "Prospects for a critical Regionalism." Page 471

global traditions. Richardson employed the regional qualities of the local stone while integrating the principles of the Ecole des Beaux-Art and French Romanesque churches.

A key distinction between critical regionalism and regionalism of resistance is in Alexander Tzonis and Liane Lefaivre use of the words “renewed versus an atavistic sense of place in our time”. The definition of atavistic states “relating to or characterized by reversion to something ancient or ancestral” while renewed suggests creating an architecture that is representative of time but while still understanding the place. This attitude towards creating an architecture which is rooted in the place while mediating the influences of the ideas of the time is essential to this thesis.

Elements of Local Culture

In order to fuse the philosophies of the universal civilization with the traditions of the “local” we must understand the elements that define the identity of the locale. The local identity consists of “intangibles and virtualities such as the range and quality of the local light or in a tectonic derived from a peculiar structural mode, or in the topography of a given site.”²¹ The local identity can be envisioned as having layers of elements. On the outermost layer resides local materials and topography. The next layer would be local light and climate followed by local traditions and customs. The outermost layers are easy to describe and there are many examples of architecture which are characterized by the local materials and climate.

²¹ Shields, Rob, “Globalisation – Entangled Places, Interface Buildings, Generic Design” page 28



Figure 2: Element of local culture, Source- Author 2014

However, does that architecture capture the identity of the local culture?

Grabar describes tradition as “body of habits, beliefs, and behavior which exists, but which is, in a sense, independent of development. Traditions are philosophical and theological systems which affect the minds and souls of men and women... they are vehicles for moral and aesthetic judgment”.²² These traditions represent the underlying pattern of life. They shape the values and tools of the local culture. The local architecture engages with these elements to establish an identity or character that is unique to that place. Amos Rapoport describes the forms of houses. They are “not simply the result of physical forces or any single casual factor, but is the consequence of a whole range of socio-cultural factors seen in their broadest terms. Form is in turn modified by climatic conditions and by methods of construction materials available”.²³ The selection of three sites within the same geographical

²² Bechhoefer, William. "Modernism and Tradition in Architecture Education" page 37

²³ Bechhoefer, William. "Cultural Context" page 28

region will allow exploration of the socio-cultural factors separated from the influences of climatic condition.

Design Approach

The traditions and customs shape the identity and character of a local culture. The traditions represent the underlying pattern of life. Christopher Alexander describes “On the geometric level we see certain physical elements repeating endlessly, combined in an almost endless variety of combination”.²⁴ The elements are a piece of or DNA of a local culture. The elements are then assembled in different relationships and patterns to reflect the beliefs and traditions of the place. Alexander supports this idea by saying “Beyond its elements each building is defined by certain patterns of relationship among the elements.”²⁵ Understanding the relationship of the elements into patterns is a way to for the building to connect and continue the local identity. The approach of this thesis begins with understanding the patterns of development within a specific place. An examination of the spatial sequence of spaces and the relationship of public and private space to include details such as how a window opening is constructed. By starting with the patterns of development the buildings in each place will be recognizable of the place and at the same time integrate universal ideas from around the globe. The concepts can be observed in the detailing of the material connection and how the building is situated. The approach includes inspiration from critical regionalism by being critical of the existing forms and construction methods of the place, however instead of feeling compelled to proposing a new form or process of building that makes references to the identity of the place

²⁴ Alexander, Christopher. *The Timeless way of building* page 82

²⁵ Alexander, Christopher. *The Timeless way of building* page 85

this thesis will celebrate the local culture by expressing the nuanced difference in the relationship of elements.

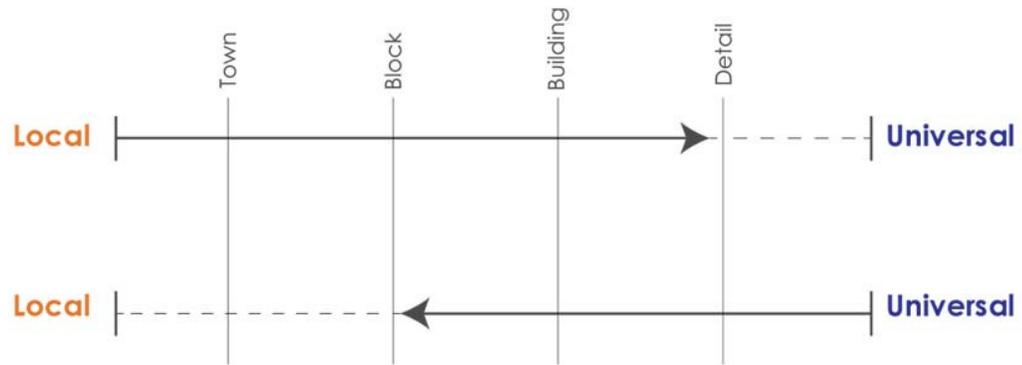


Figure 3: Design Approach, Source- Author 2014

Chapter 4: Program

Library History

Since its beginning the purpose of a library has remained unchanged. It is a place for knowledge to be retained and conveyed. The library has always been more than just a protected box for the storage of scrolls or books. It is a repository for information but also to “celebrate the act of reading and the importance of learning.”²⁶ The concept was a shared value of Benjamin Franklin and the fellow members of his philosophical association, Junto. They believed there was a need to share the knowledge and information found in books. From this belief the public library in the United States emerged and prospered.

In early civilizations the library’s main function was to preserve the history of a culture. Thoughts, memories, and experiences were recorded on perishable materials such as scrolls or tablets.²⁷ The documents were accumulated and stored thereby establishing the archival process. The best example of this in the ancient world would be the Library of Alexandria. This library was thought to house between 200,000 and 700,000 records.²⁸ The vulnerability of the materials used required a protected space to store them. Library design is primarily concerned with two important aspects; providing the appropriate amount of space to store the materials while creating a safe environment from fires, water, direct sunlight and theft.

²⁶ Campbell, James W.P. *The Library: A World History*. page 19

²⁷ Campbell, James W.P. *The Library: A World History*.

²⁸ Campbell, James W.P. *The Library: A World History*. page 46

Small collections are protected in the estates of wealthy people. In China the Tianyi Chamber, Ningbo is a private library for Fan Qin. The library is constructed using traditional methods with layers of walls and gates to create thresholds. The thresholds denoted that the library was private and exclusively for the members of the family. The library proper consists of four bay chambers that are divided into alcoves by cupboards that house the books.²⁹ The chamber is surrounded by a hallway with windows to provide filtered light and ventilation around the cabinets. The structure is also raised off the ground in order to avoid dampness from the environment.

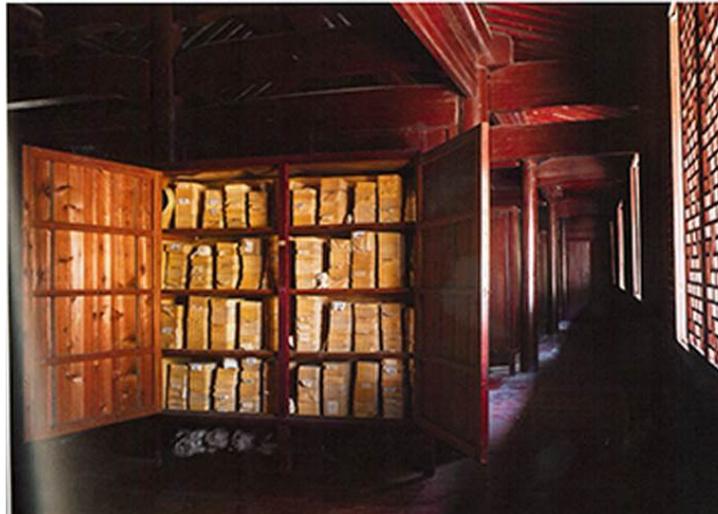


Figure 4: Tianyi Chamber, Ningbo China – 1561, Source - Campbell, James W.P. *The Library: A World History.* page 95

In Europe, the popularity of libraries was increasing. The form of the library was a long hall with a flat or vaulted roof ceiling, allowing natural light into the space. The books were stored inside the space in either cupboards or in lacterns. The lacterns were pew like structures which secured the books through chains.³⁰ This

²⁹ Campbell, James W.P. *The Library: A World History.* page 92

³⁰ Campbell, James W.P. *The Library: A World History.* page 107

allowed the books to be read without fear of damage or theft. Books were valuable and many libraries were fearful books would be stolen.

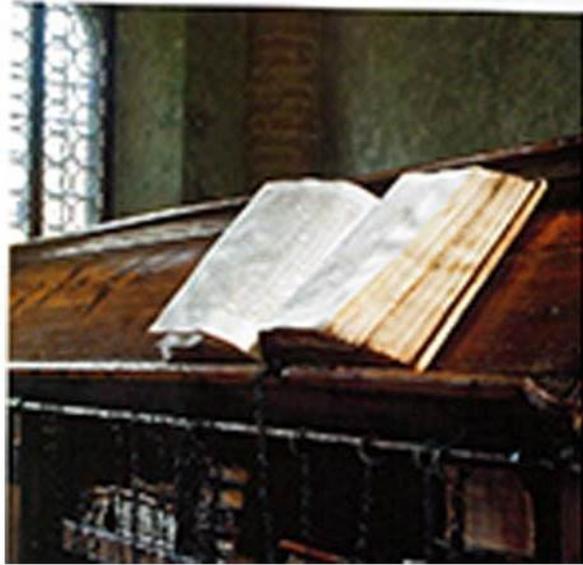


Figure 5: Biblioteca Malatestiana, Cesena Italy – 1452, Source - Campbell, James W.P. *The Library: A World History.* page 107

The invention of the printing press had a dramatic positive impact on the number and availability of books, thus increasing the demand for libraries. Corresponding with the increase in the numbers of libraries was the diversity of storage systems. Stall systems emerged, beginning in English University.³¹ The stalls were large shelves attached to desks. Still concerned with theft, the books were chained to the shelves. The stall divided the library into smaller bays providing privacy for individuals.

³¹ Campbell, James W.P. *The Library: A World History.* page 110

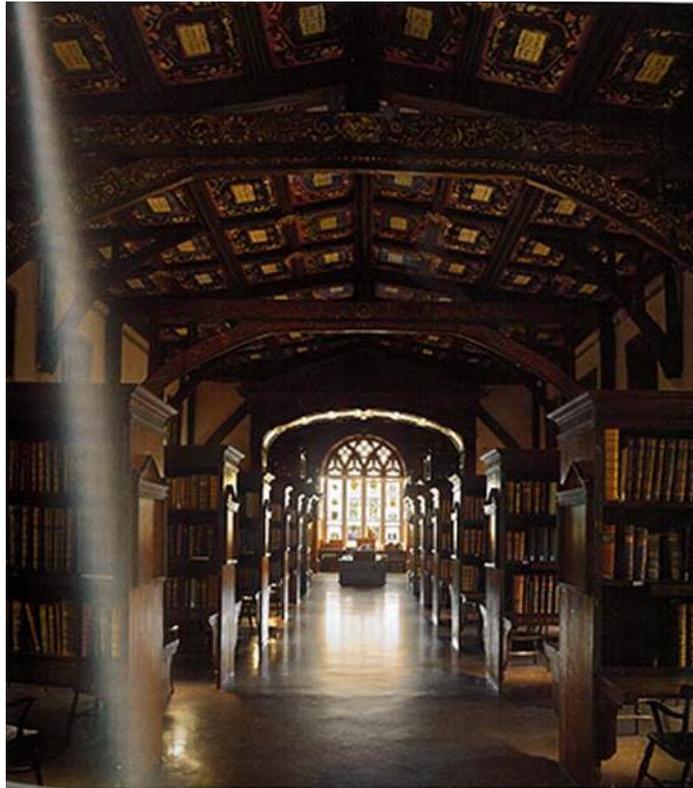


Figure 6: Duke Humfrey's Library, Oxford United Kingdom – 1598, Source - Campbell, James W.P. *The Library: A World History*. page 115

For the next two centuries new storage systems continued to be introduced to libraries. The wall system consisted of shelves attached to the wall.³² The wall system resulted in the books surrounding the perimeter of the room. Having the shelves attached to walls resulted in the use of alcoves which provided more wall space for the attachment of shelves. Soon the walls were merely bookshelves dividing the space. The volume of the space for book storage changed as well. The long rectangular single story rooms became taller spaces. Galleries were added to

³² Campbell, James W.P. *The Library: A World History*. page 112

provide more storage for books. An example of this transformation is the Bibliotheque Sainte-Genevieve. Here a reading room is provided separate from the main storage of books. The stacks of books were stored in a smaller space below the reading room. Access was provided via the stairwells.³³ The reading room consists of a long hall with a gallery of books. Above the books are large windows to provide light. The design of Sainte-Genevieve significantly influenced the design of American libraries such as the Boston Public Library.

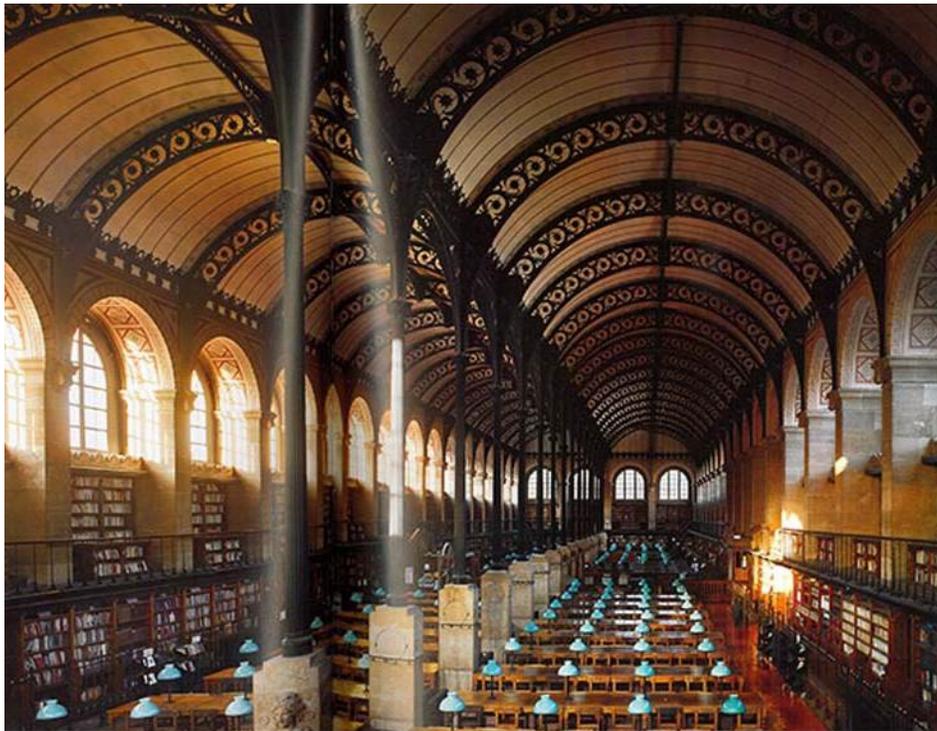


Figure 7: Bibliotheque Sainte-Genevieve, Pairs France – 1850, Source - Campbell, James W.P. *The Library: A World History*. page 225

³³ Campbell, James W.P. *The Library: A World History*. page 226

In America public libraries were designed on a much smaller scale. The public library system was inspired by Benjamin Franklin and the Library Company of Philadelphia in 1731. Their goal for the library system was to support the common good by providing access to knowledge. To realize the goal of accessing knowledge the library must circulate the material to the public. During the 1880's the library was influenced heavily by H.H Richardson's design for the Winn Library. The Winn Library was organized along a central axis that connected the book hall with the museum. Patrons entered on the cross axis. To access the books patrons needed to place a request with the librarian at the circulation desk. The librarian would retrieve the books for the patron. The book room was a double heighted space with stacks arranged into alcoves.³⁴ The lavish decorations and the grand display of the books highlighted their importance. In contrast to the scale of the book room was the reading room. It was designed at a domestic scale. It was a single height space with inglenooks and places to sit. The circulation desk separated the two spaces. Again, there was a concern for theft and damage. The librarians ensured the safety of the books. The library was designed in the Richardson's Romanesque style, becoming the standard style of libraries for over two decades.

³⁴ Van Slyck, Abigail. *Free to all: Carnegie Libraries & American Culture*. Page 5

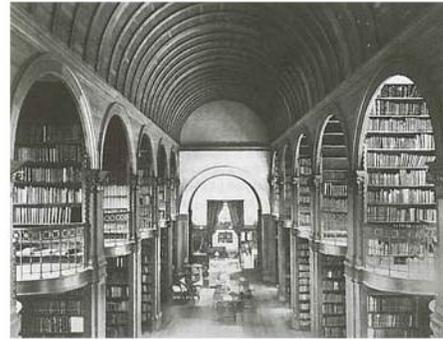
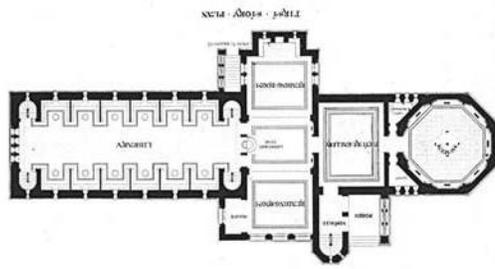


Figure 8: Winn library, Woburn Massachusetts – 1879, Source - Van Slyck, Abigail. *Free to all: Carnegie Libraries & American Culture*. Page 5

During the period of 1886 to 1917 tremendous advancements were made with public libraries, largely due to Andrew Carnegie. Carnegie funded over 2,500 libraries in the United States and England.³⁵ Carnegie believed in “precious treasures of knowledge and imagination through which youth may ascend” and the library was his vehicle to implement his beliefs.³⁶ The program “accelerated the movement toward library standardization by financing the building boom that librarians and architects used as a laboratory in which to experiment, adjust and eventually reconcile their different approaches to library design.”³⁷ As a part of the process of standardization Carnegie’s assistant Bertram prepared guidelines for the local communities to follow to successfully establish a library within the budget. In “Notes on the Erection of Library Buildings”, Bertram describes the ideal Carnegie Library as “a one-story rectangular building with a small vestibule leading directly to a single large room; where necessary this room was subdivided by low bookcases that

³⁵ Van Slyck, Abigail. *Free to all: Carnegie Libraries & American Culture*.

³⁶ Van Slyck, Abigail. *Free to all: Carnegie Libraries & American Culture*. Page 9

³⁷ Van Slyck, Abigail. *Free to all: Carnegie Libraries & American Culture*. Page 55

supplemented the bookshelves placed around its perimeter to hold the library's collection. In addition to book storage, this room provided reading areas for adults and children and facilities for the distribution of books. Allowing a single librarian to oversee the collection."³⁸ The specifics were guidelines to help the community start the design of their library while still "expressing their individuality".³⁹ Each town would choose the location and style of the library to reflect their own values and traditions. For this thesis a single library diagram will be employed to illustrate how the library can express the individuality of a place.



Figure 9: James Bertram's, Notes on the Erection of Library Buildings', source - Van Slyck, Abigail. Free to all: Carnegie Libraries & American Culture. Page 38

At the turn of the 19th century, a tremendous number of libraries had been constructed across the country. However, the design of the time separated the patron

³⁸ Van Slyck, Abigail. *Free to all: Carnegie Libraries & American Culture*.

³⁹ Van Slyck, Abigail. *Free to all: Carnegie Libraries & American Culture*. Page 36

from direct interaction with the books. The inability to browse the stack of books personally prevented a patron from being intrigued by an unexpected book and the lure of an unfamiliar topic. The inability for patrons to pursue their curiosity was a concern for the librarians and architects of the time. New designs incorporated radial stacks which would allow the librarian to monitor every aisle.⁴⁰ An example is the Schenectady County Public Library. The design placed two reading rooms flanking the central hall and circulation desk. One reading room was for children and the other one was for adults. Both reading rooms attached to the stack room located behind the circulation desk which was centrally located to monitor the entire library.⁴¹

Interestingly, the Carnegie libraries choice to use a national style such as the Romanesque and neo-classical was influenced by the 1883 Columbia exhibition in Chicago. The library became a symbol of the community. At the time these styles represented the wealth and knowledge of the community.

⁴⁰ Van Slyck, Abigail. *Free to all: Carnegie Libraries & American Culture*.

⁴¹ Van Slyck, Abigail. *Free to all: Carnegie Libraries & American Culture*. Page 32

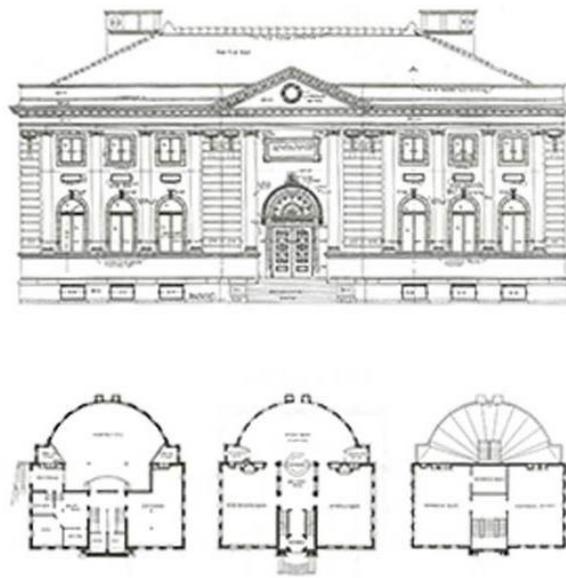


Figure 10: Schenectady Public Library, New York – 1902, Source - Van Slyck, Abigail. *Free to all: Carnegie Libraries & American Culture*. Page 32

Throughout the 20th century libraries were built with much variation. In the post war period modern libraries drew inspiration from the book or real “module” of the library.⁴² The plan became a rectangle with divisions made by freestanding stacks. The designs produced “monotonous, characterless (albeit efficient and relatively flexible) libraries”.⁴³ The libraries with their low ceilings and florescent lights lost the ability to invoke imagination and inspire those who frequented the building.

As a result the American Library Association released a mission statement for public libraries to recognize cultural differences and celebrate different cultural heritages.⁴⁴ The new vision for libraries as a cultural center for the community was amplified by the onslaught of technology. Technological advancements have eased the accessibility of information and critics have challenged the need for public

⁴² Mattern, Shannon. *The New Downtown Library*. page 4

⁴³ Mattern, Shannon. *The New Downtown Library*. page 4

⁴⁴ Mattern, Shannon. *The New Downtown Library*. page 5

libraries. The technological advancements have prompted the question of a virtual library which could store the increasing amount of information in cyber space. From 1986 to 1992, Carnegie Mellon University established the first prototype of an electronic library. Their libraries developed a computer database system which provided online access to full text journals and technical manuals along with a bibliographic database.

In response to the mission of the American Library Association libraries began to incorporate new technology and offer activities. For example, the Seattle public library houses many resources for patrons to not only read a book but also socialize and collaborate on projects. The expanded use has signaled a shift in the library towards a cultural center which conforms to the needs of its individual community.

Although libraries have evolved over the centuries, and will continue to evolve, the center or heart of the library remains the same. It was established as a place where everyone was invited to explore, learn, share, and grow. Whether the information is in a book or computer the library provides the space for everyone to be free to “read, to think, to dream, and to celebrate knowledge.”⁴⁵ By definition the physical structure of a library serves a local community yet it possesses the unique ability to connect local communities to other local communities thereby uniting mankind. The library reflects the familiar culture providing comfort and confidence for entry yet once inside it becomes an infinite space. As a universal civilization we value self-learning and knowledge and thus the universal value of libraries to reflect on the past and imagine the future.

⁴⁵ Campbell, James W.P. *The Library: A World History*. page 307

Program Analysis

As evidenced by history, the library has transformed over the centuries. The physical form of the library's material has changed from scrolls to books and now to digital devices. Similarly, the types of spaces accommodating the different forms of materials have also changed. Despite the number of changes there has been one constant and that is the mission of the library to retain and convey knowledge.

Recent criticism suggests there is no longer a need for a physical library. They argue that the technology advancements have made the physical library obsolete.

Information can be readily stored in the virtual world and accessed through technology. On the other side of the argument there are those who support the library as a place of communal learning. Geoffrey Freeman, states "The library is the only centralized location where new and emerging information technologies can be combined with traditional knowledge resources in a user-focused, service-rich environment that supports today's social and educational patterns of learning, teaching, and research".⁴⁶ The integration of information technology into the traditional library design has established a library of the future.

The American Library Association describes the four dimensions of a library: first from physical to virtual, second from individual to community, third from collection to creation, and fourth from archive to portal libraries.⁴⁷ In order to best fulfill the needs of the community the library of the future must strategically choose between two extremes in each of the four dimensions.

⁴⁶ Levien, Roger. "Confronting the future: Strategic vision for the 21st century public library."

⁴⁷ Levien, Roger. "Confronting the future: Strategic vision for the 21st century public library."

1. From physical to virtual libraries: The traditional model of a library as a physical building with a physical and finite collection is presented as one extreme. As the amount of information to be stored increases so does the physical space requirements resulting in this extreme becoming obsolete and a migration toward the other extreme, a virtual library: the use of digital information technology to help provide information to patrons regardless of location and with no achieved storage space required. This form eliminates the need for a central physical collection of information and physical place.
2. From individual to community libraries: The service focus of a library spans from an individual focus or a community focus. With an individual focus the library attends to a single or small group of individuals at a time. The librarian will serve as a guide to access their desired information. At the opposite end of the spectrum a library can provide services for the community at large. The services are a wide range of community activities such as meeting spaces, cultural spaces, and access to media and display technology.
3. From collection to creation libraries: A collection library is a place to accumulate knowledge, information, and art. The community would have free access to the collection. Using the collections of the library it would provide the opportunity to become a place of creation. This could contain a range of specialized equipment and facilities to help the community to create new works.
4. From archive to portal libraries: The library continues its purpose as a storehouse or repository for the knowledge and history of the community.

The material stored in the library could be unique to the community providing a beacon or destination for the surrounding communities. In contrast to the library being a physical storehouse there is an extreme of the library as a portal. The library provides a place to access a network of information both in physical and virtual forms.

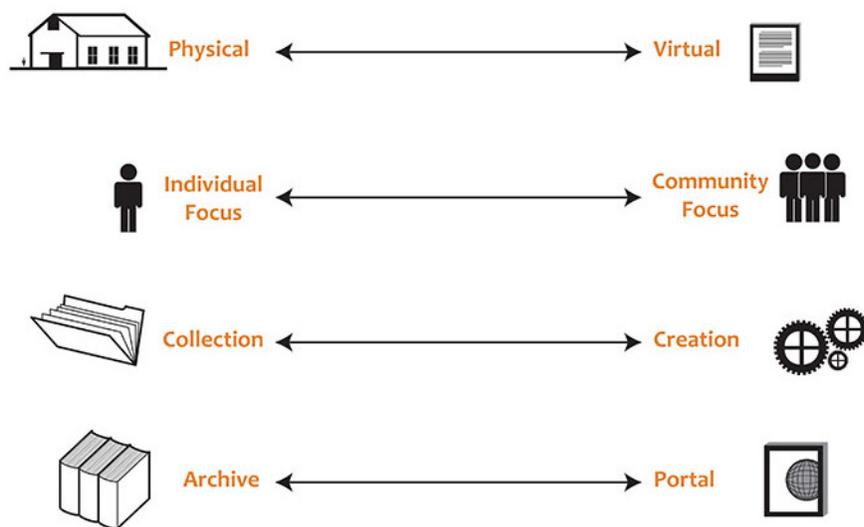


Figure 11: American Library Association Four Dimensions, Source- Author 2014

The four dimensions provide a framework for the design of the library that falls between a set of extremes of each dimension. The framework in this thesis is essential to understand and evaluate the design response to the community.

The mission of a library is to provide a place for knowledge to be retained and conveyed. To accomplish this mission the library is a place to interact with the knowledge and fellow members of the community. Looking at a wide range of libraries we can start to classify them into groups based on how the storage and reading spaces interact spatially. Examining the libraries has shown the general types

of spatial relationship between the “stacks” and “reading room”. The types of relationships are as follows:

1. Separate spaces - the reading room is divided from the stacks by a third intermediate space which has traditionally been the circulation desk or security check point.
2. One room - the stacks and reading functions are contained within the same space. This configuration is a very efficient use of limited space. The stacks are arranged around the perimeter allowing the patrons to have direct interaction with the knowledge. This is a common design for smaller branch libraries.
3. Stacks create spaces - a variation of the previous type, the stacks and reading function are contained within the same room, however the stacks create spaces. The variety of spaces created by the stacks allows for different types of learning whether by oneself or in collaborative groups.
4. Perimeter Space - the stacks and reading functions are contained within a single space. Migrating toward the natural light and views the reading spaces were shifted to the perimeter of the space. This shift placed the stack in the center of the space.
5. Contained Spaces - the spaces for storage and different ranges of quiet study are contained within small pods or boxes. The boxes can become objects within a large space for collaborative study. The arrangement of the elements can then establish zones within the room.

These are the general types and many libraries utilize a number of these spatial types simultaneously. Tracking the trends of spatial relationships through history can be coupled with the idea of an increase in the level of collaboration within the space. The spaces are evolving away from the function of storage of books and toward a place to collaborate with access to knowledge.

Precedents Analysis

Further research can be conducted to examine a range of precedents in depth. Three precedents are examined through the framework of how the library responds to the local context. These modern libraries mediate between the universal ideas and cultural context each to a different degree. The three libraries are examined based on the spatial relationship of reading spaces to storage spaces.

Cambridge Public Library

The Cambridge Public Library located in Cambridge, MA was designed by William Rawn Associates and completed in 2009. The library is an addition to the Van Brunt & Howe Library, (1888) located in Joan Lorentz Park. The library maintains the philosophy of a library within the park by placing the addition adjacent to the historic building. The library responds to the cultural context in both physical and programmatic ways. The architects used the first double skinned glass wall in the United States as the southern façade. The glass façade allows the library to take a step back from the historical building.



Figure 12: Cambridge Public Librar, double skinned façade, Source – Author 2014

Similar types of granite and sandstone were used as the solid functions of the library to connect existing context of the Van Brunt library. The architects wanted to design the central branch library to “celebrate the book”. In the digital age, the designs used the books as an element to propose their level of prominence. This is perhaps because Cambridge residents speak over 50 languages and are of diverse cultural backgrounds. Making a warm and welcoming space that has the books at the center signifies the library as a place for the community to learn. The library is extensively used with patron visits ranging between 1,000 and 2,000 per day. Patrons come to borrow books, use the free Wi-Fi, meet in small groups or just relax with reading material as they overlook the park.

Visitors of the Cambridge Library pass through the park on their way to the library entrance. Once inside they go by the stacks of books signifying the importance and relationship of the books to the building. The axis is terminated by the solid elements of the library. The stairs along the wall provide direction to the upper levels. Upon arrival on the second floor a visitor passes through the books

again to the view of the park. This spatial sequence is similar to the Exeter Library by Louis Kahn. Spatially the library places the space for reading along the perimeter overlooking the park. The architecture enhances the experience by cantilevering this space 15 feet from the structural columns. The offset of the structural columns not only provides an unobstructed view of the park but also a threshold between the reading space and the book storage. The library becomes an anchor to the community.

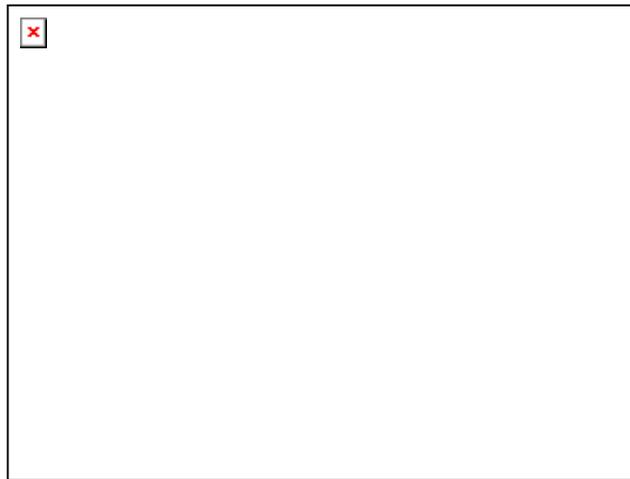


Figure 13: Cambridge Public Library Section, Source – Author, 2014

Charles Millar Library

The Charles Millar Library located in Ellicott City was completed in 2011. The library was designed by Grimm + Parker Architects to be the central branch library of Howard County. The library exterior relates to the cultural context by drawing inspiration from the natural stone of Ellicott City. Elements of the library make reference to historical attractions. The wall that intersects the building is inspired by the Tomas Viaduct, spanning the Patapsco River. Using this reference

within the construction and tectonic expression the library is related to the local identity. In addition to the heavy stone wall the building relates to the site by creating an edge to the natural landscape beyond. Although, in concept, the wall in the Charles Millar Library relates to the cultural context, the scale of the building volumes do not relate as strongly



Figure 14: Charles Millar library- entrance, Source – Author, 2014

The library is located adjacent to a residential neighborhood. The entrance to the Charles Millar Library is along the stone wall through a lobby space which is connected to a community multipurpose room and café. Unlike the other library previously examined, the Charles Millar Library places the computer stations as a “pod” within the center of the ground floor. This places the central focus on the computer among a sea of books. The end of the axis is terminated by a staircase which takes the visitor up to the second level. The second level is devoted to fiction, non-fiction and reference materials while children and teenager’s books are on the

lower level. The entrance sequence is reminiscent of the classical libraries such as Boston Public Library and St Genevieve. Similar to the Cambridge Library the books reside in the center of the space and the reading spaces are along the perimeter. However, unlike the Cambridge Library the reading zone is very unpleasant. There is no threshold between the stacks and the reading space. The quality of light is harsh due to the limited shading provided by the building façade. A unique feature of the library is the inclusion of the Howard County Historical Society office.

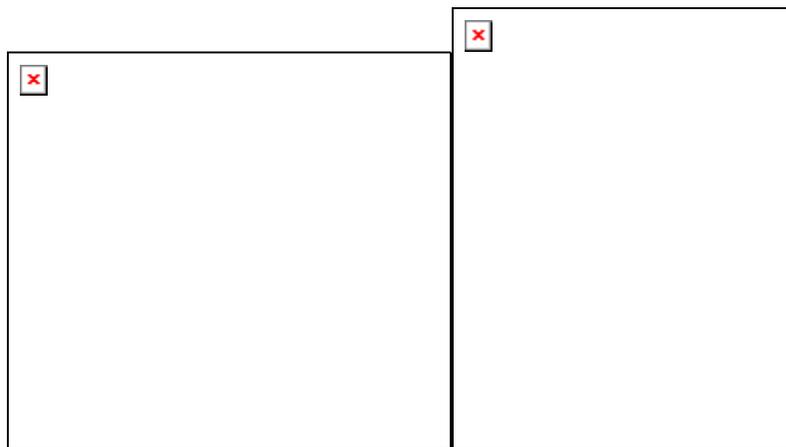


Figure 15: Charles Miller Library & Enoch Pratt Library Section, Source - Author, 2014

Dobbs Ferry Public Library

Dobbs Ferry Public Library in Dobbs Ferry, NY was completed in 2003 by Peter Gisolfi Associates. The library represents the fusion of “universal” and “local”. The library attempts to integrate the patterns of local context. The Dobbs Ferry Library incorporates the pattern of the civic building within the community by identifying itself with a tower element. The size and materials of the library’s volumes are of a similar scale as the surrounding buildings, further fitting in with the

context. The library is located on a corner site at the intersection of two streets. To accommodate both streets the library uses a universal concept for the parti. The building's parti consists of two solid masses with a glass bridge connecting them.

Universal Program Diagram

Throughout the analysis of the community libraries in the United States a common programmatic and spatial response is revealed. The library requires an extraordinary variety of spaces in which to read, to think, to dream, and to celebrate knowledge. To determine the appropriate size of the different programmatic elements, four examples of program for community library were studied in Figure 23.



Figure 16: Library Program Precedent Study, Source - Author, 2014

From these programmatic studies the approximate square footage and proportion of programmatic spaces are compared between similar libraries. The study is beneficial to understand the sizing of space for this thesis. An estimate for the breakdown of the types of spaces within the library results from the programmatic studies. A library needs space for the storage of materials, patron reading space, gathering spaces for small and large groups, and space for offices and building services. This will be the standard program applied to the proposed three sites of Alexandria, Chestertown and Cumberland.

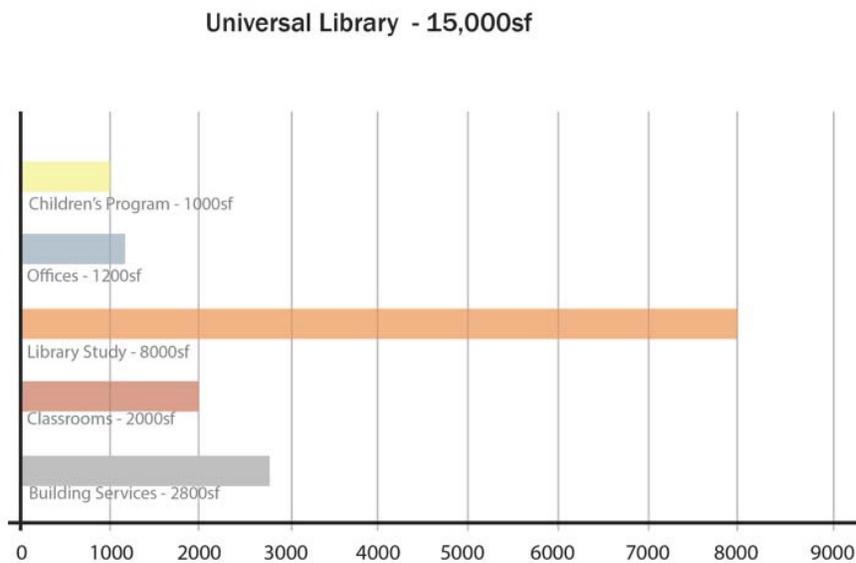


Figure 17: Purposed Universal Program, Source – Author, 2014

Universal Diagram

Reading Room

Study cubical	200
Reading Room	7,500
Young Adults	500

Children's Program	800
Total	9,000
Classrooms	
Conference Room	500
Multipurpose Room	1,100
Total	1,600
Offices	
Circulation Desk	200
Workroom	500
Office	200
Total	900
Building Services	
Building Services	500
Restroom	700
Storage	300
Circulation	2,000
Total	3,500
Total	15,000

Figure 18: Purposed Universal Program, Source – Author, 2014



Figure 19: Program Space Sized, Source – Author, 2014

Chapter 5: Sites

Introduction

After analysis of local and community libraries within the United States a spatial diagram is revealed. Applying the spatial diagram to three different sites will demonstrate how the architecture adjusts for the cultural context. The sites selected for the study extend across the Mid-Atlantic region to include Alexandria VA, and Cumberland and Chestertown MD. The sites were chosen based upon their location within the same geographical region of the United States and the strong sense of local character.

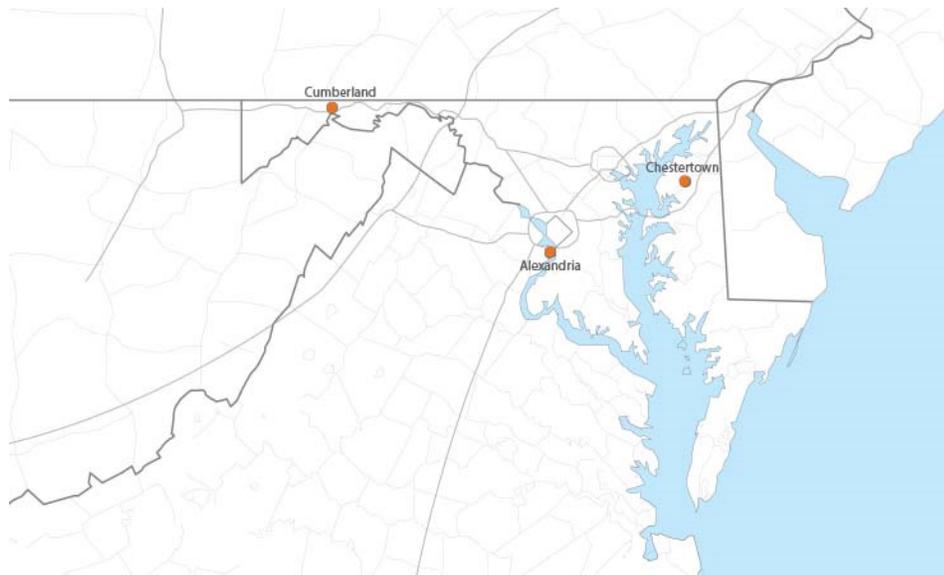


Figure 20: Potential Site Locations, Source – Author 2014

Alexandria, VA

Alexandria, VA is located on the Potomac River across from Washington DC. Its current population is approximately 146,294 residents.

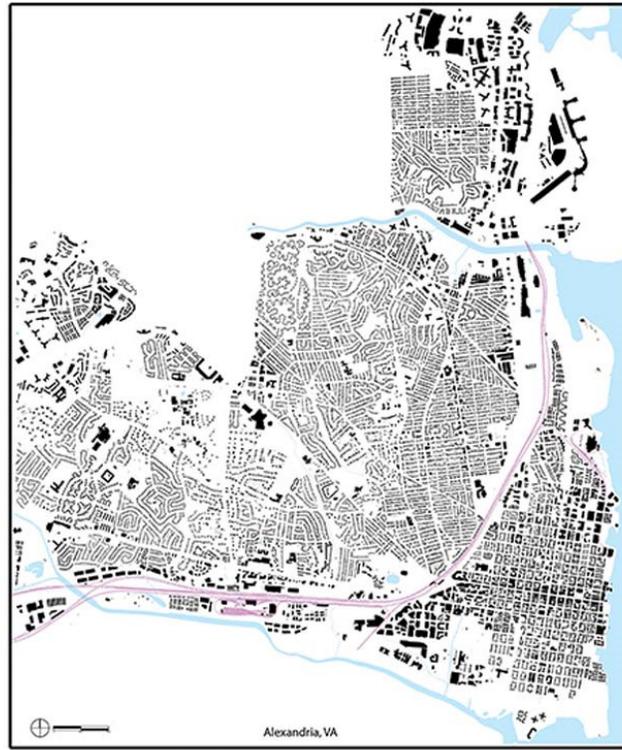


Figure 21: Alexandria, VA - Figure ground, Source – Author 2014

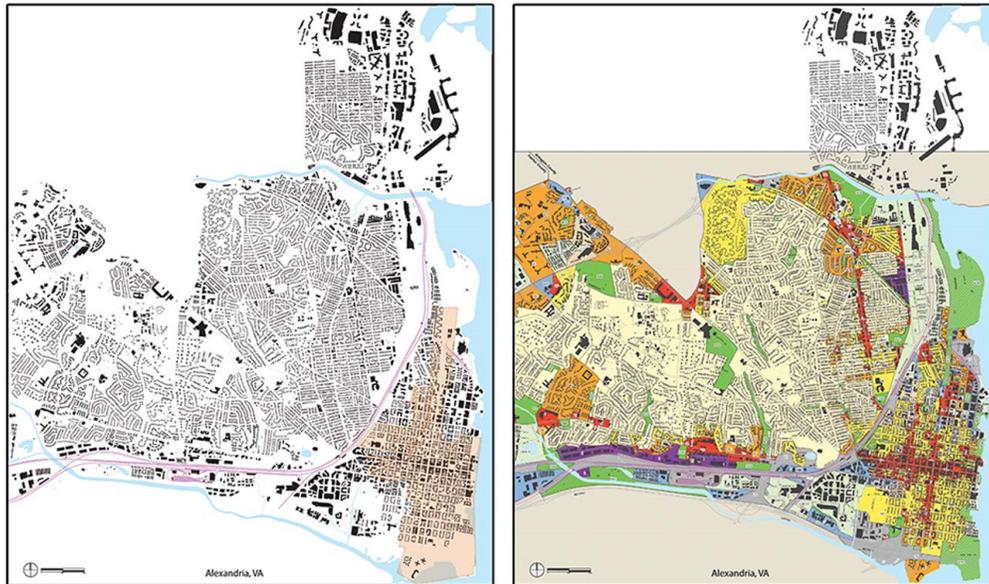


Figure 22: Alexandria, VA – Historic district & Land Use, Sources – Author 2014

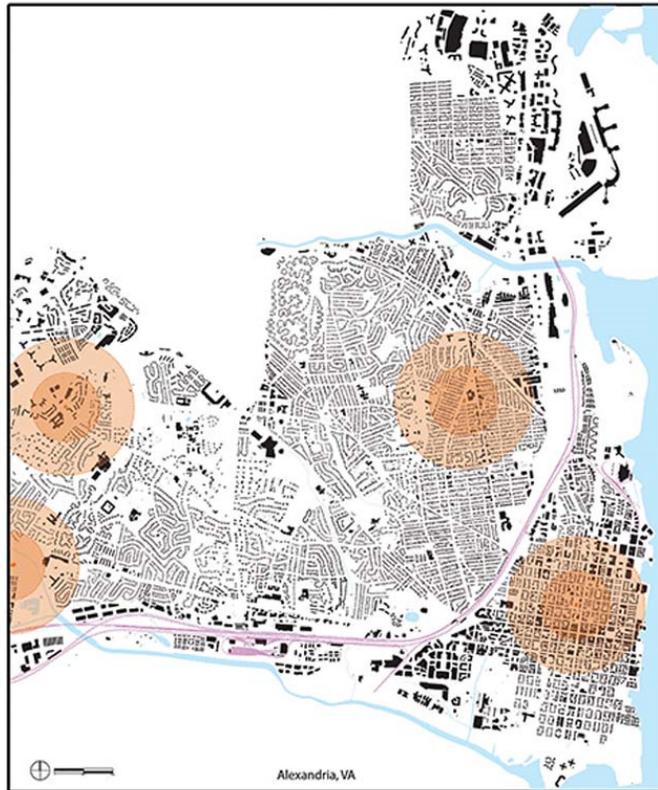


Figure 23: Alexandria, VA – Current Library Locations, Source – Author 2014

Site history

On October 21, 1669, the Governor of Virginia granted 6,000 acres of land on the western shore of the Potomac River to Captain Robert Howsing. The grant would become part of the current city of Alexandria. At the time, tobacco was the cash crop of the colonies. In order to ship the crop across the ocean, plantation owners needed places to store their crop and a place to load the barrels onto sea going ships. This created the establishment of rolling house and wharves along the Potomac river.⁴⁸

The attributes of Alexandria were favorable for the development of the wharves and rolling houses. To facilitate more trade and engage in a social environment, the

⁴⁸ Voges, Nettie Allen. *Old Alexandria: where America's past is present* page 31

merchants and plantation owners in Fairfax County petitioned for the establishment of a new town. In 1748 Alexandria was approved by the General Assembly.⁴⁹ The city was divided into 84 lots, each a half acre in size. They were sold with the provision that the owner must construct a building of brick, stone or wood within two years. Between 1750 and 1779 Alexandria grew both as a trading post and as a military staging area. In 1779 it became a port of entry for foreign vessels. As a result Alexandria was one of the ten busiest ports in America.

In order to expand the city, the shoreline of the Potomac was filled in. The extra land allowed merchants to build wharves and increase the number of ocean going vessels because of the river's deep channel. Concurrently, the density within the city increased as landowners subdivided their lots and rented or sold them to skilled artisans or grocers and small merchants. Through the mid-19th century Alexandria faced another shift. With its close proximity to the capital it became known as a "bedroom community". The desirable location and subsequent growth encouraged development of the historic areas of the downtown. In response to the sudden development of the city an historic district was designated in 1946. The designation was only the third to be named in the United States. The preservation and protection of the historic downtown helped the Alexandria economy by establishing another dimension, tourism. Now Alexandria is seen as a place with a strong character and change of pace from the bustle of Washington DC.

⁴⁹Voges, Nettie Allen. *Old Alexandria: where America's past is present* page 32

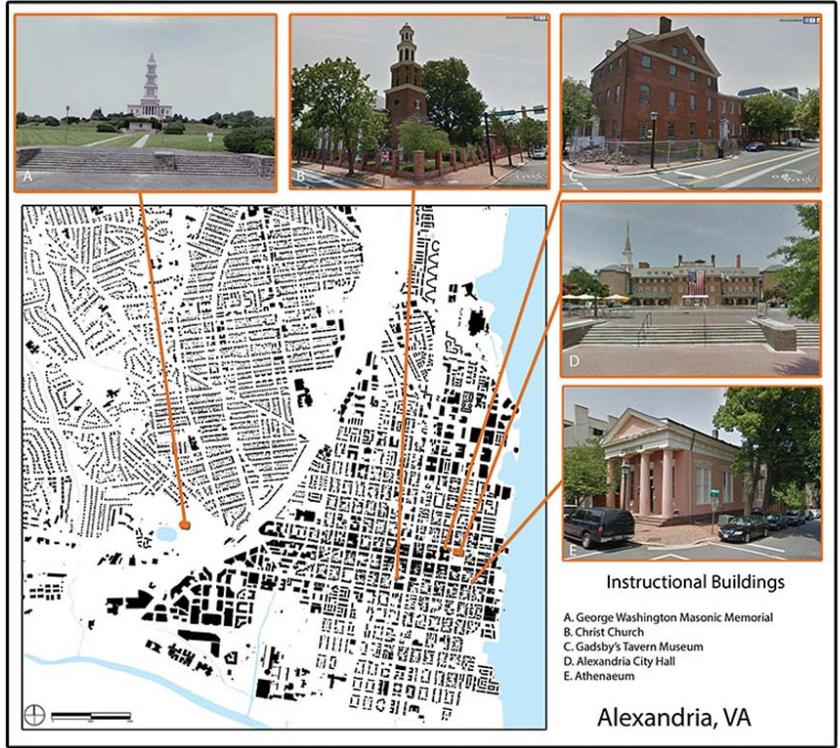


Figure 24: Alexandria, VA – Civic Buildings, Source- Diagram by Author, Underlay Google Maps, 2013



Figure 25: Alexandria, VA – Residential Buildings, Source- Diagram by Author, Underlay Google Maps, 2013

Site Analysis

The analysis of Alexandria consists of three different scales; the urban form, the building scale, and the detail scale. Using all three scales exposes a complete vision of the patterns of development. Alexandria was laid out in a grid with streets running parallel and perpendicular to the Potomac River. The analysis diagrammed in the figures below show the relationship of the main streets of Alexandria and the main spaces within the city.



Figure 26: Street Frontage and public space, Source – Author, 2014

Further analysis of the patterns of the development in Alexandria, reveals a spatial sequence of the relationship of the buildings. The comparison includes the forms of three types of building within Alexandria; the small house, the large house, and the civic buildings. The analysis compared a few main features such as the building setbacks, entry location, proportion, and the window area and rhythm and roof types.

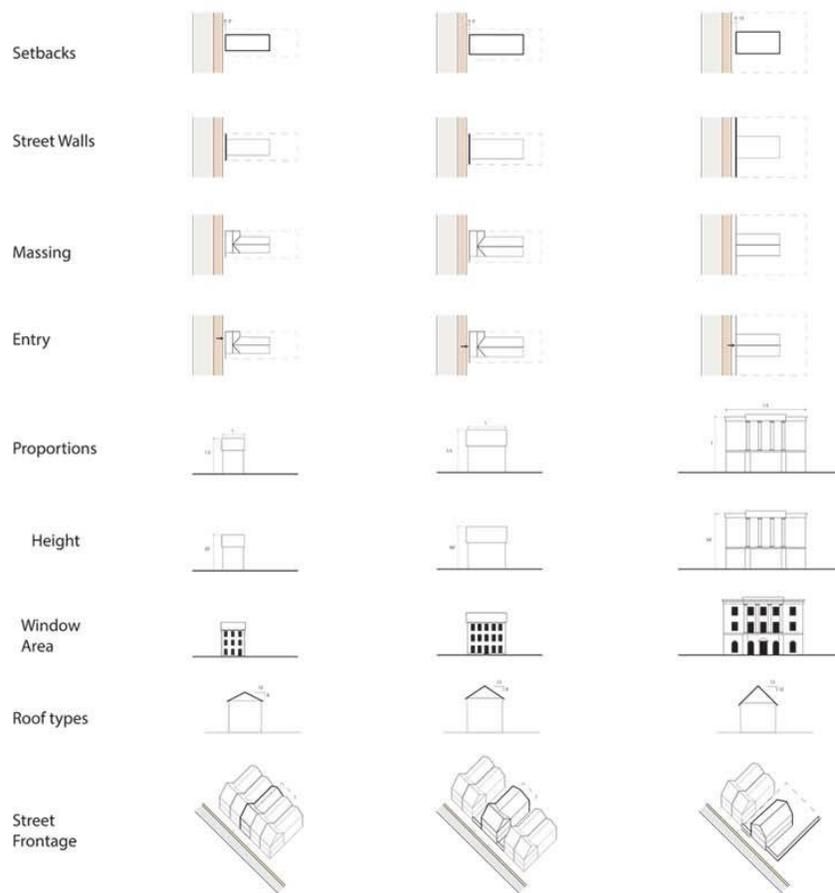


Figure 27: Alexandria, VA – Form code, Source – author 2014

The conclusions drawn from this analysis disclose the spatial sequence and pattern of development of a large building in Alexandria. The following five

diagrams in figures 35 through 39 show the general pattern for building setback and massing, open space, street wall articulation, roof form, and window size and rhythm.

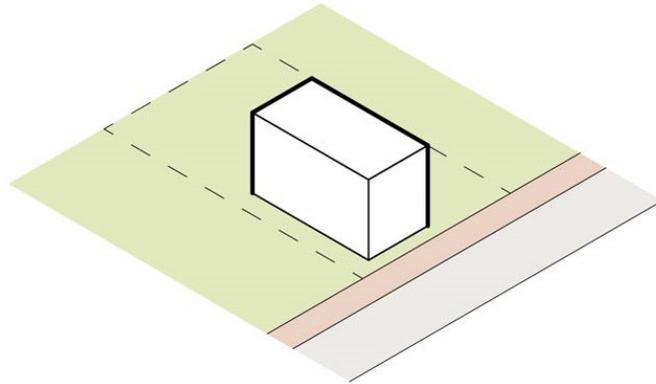


Figure 28: Alexandria, VA – Setback and Massing, Source – author 2014

Alexandria's blocks were originally subdivided into four lots. However, over time those lots have been divided and sold to create deep narrow lots. As a result, the majority of the buildings are long narrow buildings that front the street. The edge of the public realm is created by the exterior wall of the buildings.

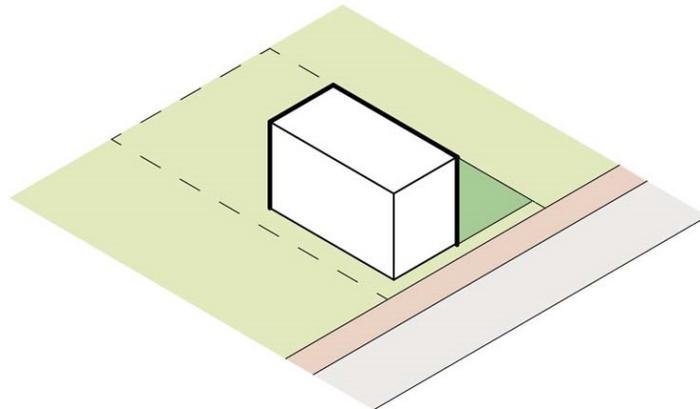


Figure 29: Alexandria, VA – Open spaces, Source – author 2014

In order to create a continuous edge of the public realm, open space is located adjacent to the building. This open space is experienced as a private space to the building and is separated from the public realm by a physical threshold.

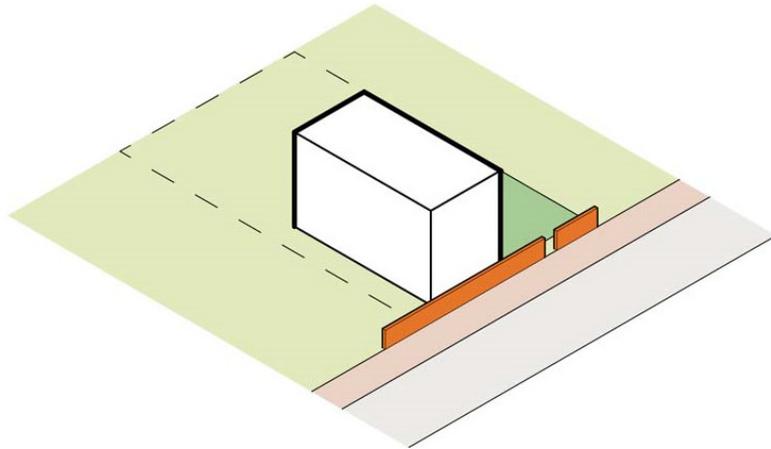


Figure 30: Alexandria, VA – Street Wall, Source – author 2014

The open space is divided by a physical threshold. In Alexandria this threshold is characterized as a full or chest height solid wall. The solid nature of the wall emphasizes the importance of the public realm as it replicates the surfaces of the buildings. This also defines the separation between the private garden and the public street.

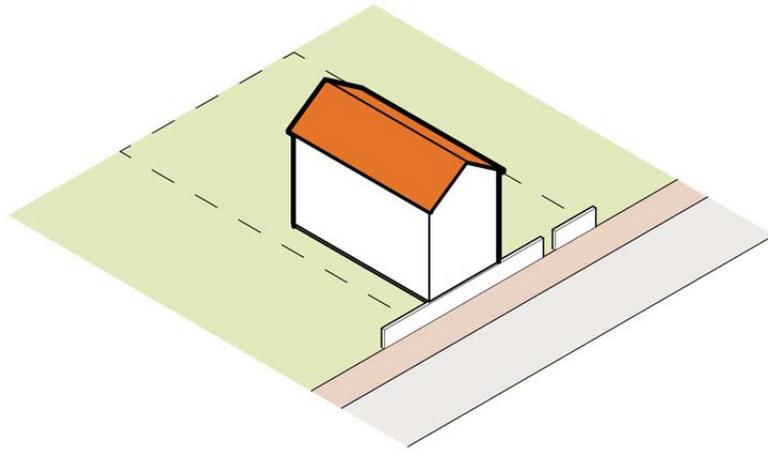


Figure 31: Alexandria, VA – Roof types, Source – author 2014

Similar with the patterns in Chestertown, the roof form signals important buildings. Alexandria has an unwritten tradition of the typical buildings facing the eaves of their roof parallel to the street. The important buildings become the exception to the rule. They face their pediment toward the street.

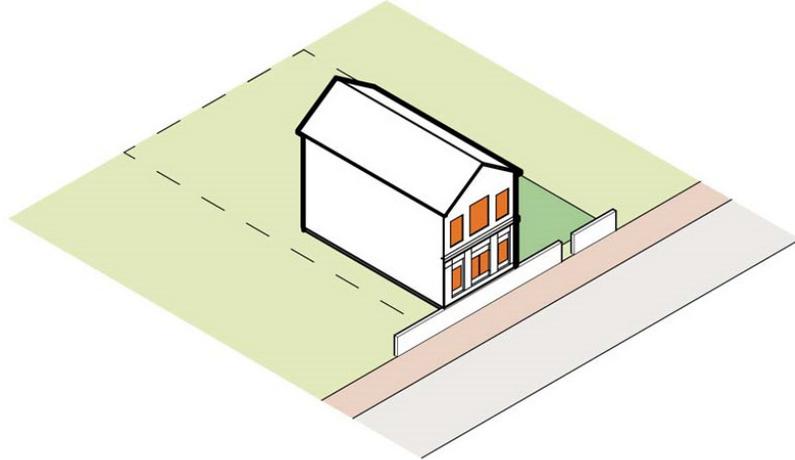


Figure 32: Bay Rhythm and Openings, Source – author 2014

A variety of window patterns exist within Alexandria. They range from the small openings in houses to the larger opening in the factories along the waterfront. However, all the windows share a similar proportion of 1:2 or 1:3 and a vertical orientation. Referring to the patterns of development at the detail scale shows the variety of ways to make an opening in Alexandria. The diagram below shows a matrix of different types of windows.

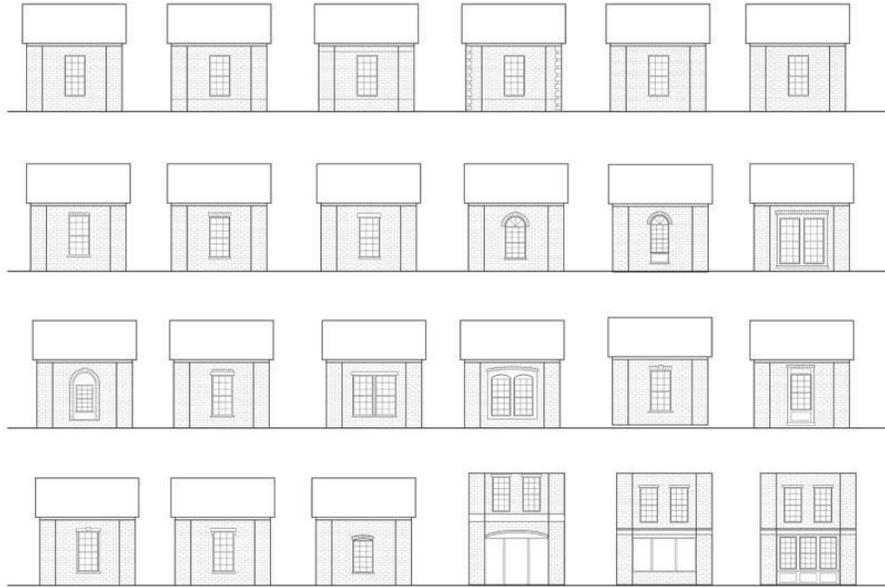


Figure 33: Alexandria, VA – Types of Windows, Source – author 2014



Figure 34: Alexandria, VA – Materials, Source – author 2014

The material palette of Alexandria consists of stone, brick, and sidings. The primary building material is brick and it is used for most of the larger buildings and a few smaller buildings. Stone is occasionally found as the foundation material. The style and types of openings in Alexandria vary in style and type but there are some

commonalities. The openings are spaced far enough apart for a shutter to open on each side of the window. The walls in Alexandria have a pattern of articulating the pilasters or edges of the buildings.

Specific Site Analysis



Figure 35: Alexandria, VA – Site location, Source- Diagram by Author, Underlay Google Maps, 2013

In the southern portion of Alexandria is Lyles-Crouch Traditional Academy. Currently the school is located on the corner of Gibbon St and Asaph St. Figure 43 shows the context of the neighborhood as mostly residential townhomes facing the park. This thesis proposes building a library on the east side of the park to better define the park area and entrance plaza to the school.



S Pitt Street



Wilker Street



S St Asaph Street



Figure 36: Alexandria, VA – Site photos, Source – Author, 2014

Cumberland, MD

Cumberland MD is located in the Allegheny Mountain range of western Maryland. Cumberland is located on the confluence of Wills Creek and the Potomac River. Its current population is approximately 20,572 residents.

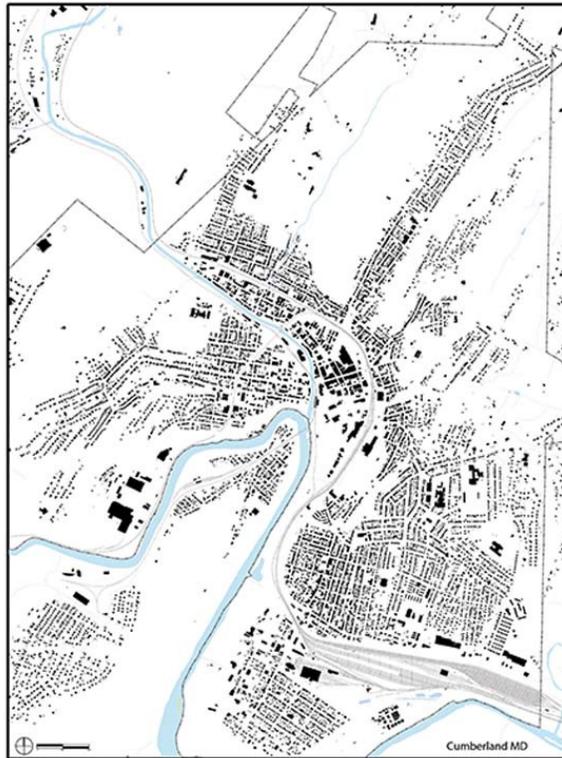


Figure 37: Cumberland, MD - Figure ground, Source – Author 2014

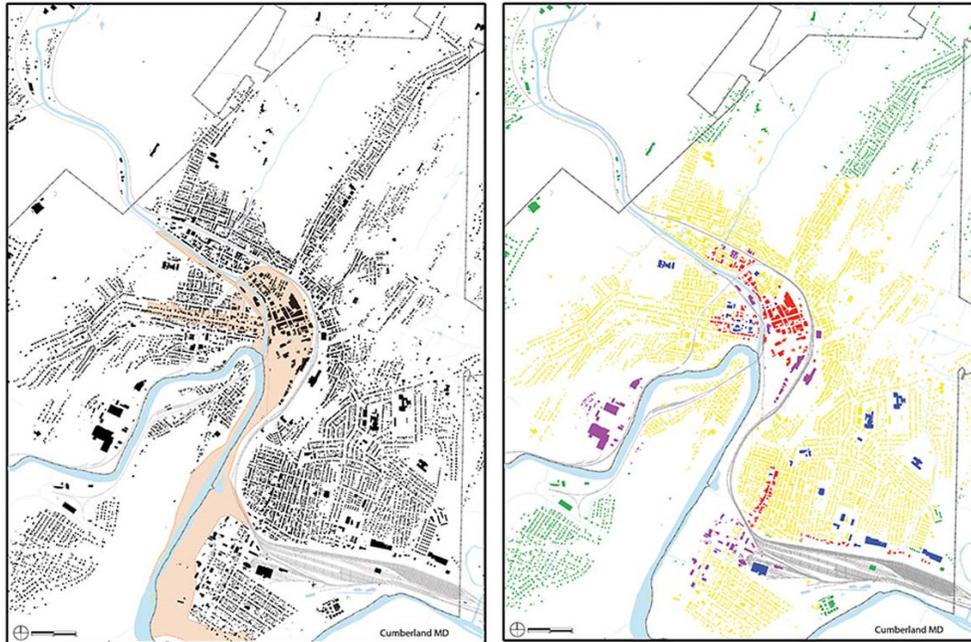


Figure 38: Cumberland, MD – Historic district & Land Use, Source – Author 2014

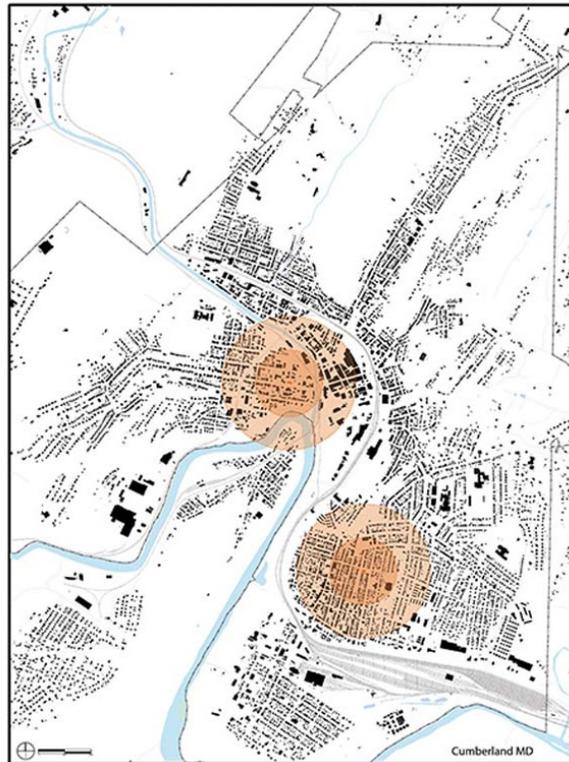


Figure 39: Cumberland, MD – Current Library Locations, Source - Author, 2014

Site history

The city of Cumberland was officially established in 1787 by Maryland's General Assembly. However, generations of American Indians and European Americans had settled on this western outpost previously. The unique geographical conditions made Cumberland a logical place to establish a settlement. A gap in the Allegheny Mountains made it essential to military and trading operations. In 1754, Fort Cumberland was constructed as a military center for the French and Indian War.⁵⁰ The fort was located on what is now the existing downtown. Cumberland was known as the Queen City, because in the 1800's it was the second largest city in a Maryland. The city gained its fame by being a transportation hub. The first national road, introduced in 1806, was Route 40 which runs through Cumberland. As a transportation center between the east and the west, Cumberland prospered with industrial economy. Additionally, there were tremendous amounts of natural resources like stone, iron ore, coal, and timber which attracted major manufacturing industries in glass, breweries, fabrics, and tinplate. In order to accommodate the industrial economy new forms of transportation such as the train and C&O canal were introduced.

The C&O canal was a 184.5 mile long shipping waterway that connected Cumberland to Georgetown, Washington DC and Alexandria. The connection between the cities resulted in a dialogue. Natural resources and industrial goods were loaded on to ships in Cumberland and transported to DC for market. In return, manufactured goods and social influences would be shipped back to Cumberland. The life on a canal became

⁵⁰ Lowdermilk, Will. *History of Cumberland, Maryland*

an integral part of the culture of Cumberland.⁵¹ Similar to other industrial towns, the introduction of technology in the mid 1900's weakened Cumberland's economy. Cumberland now relies heavily on tourism to bring money into their economy. The beautiful landscapes and historic sites attract visitors. One example is the Allegheny County Court House. It was designed by Wright Butler in 1893. He based his design on Richardsonian Romanesque style.⁵²

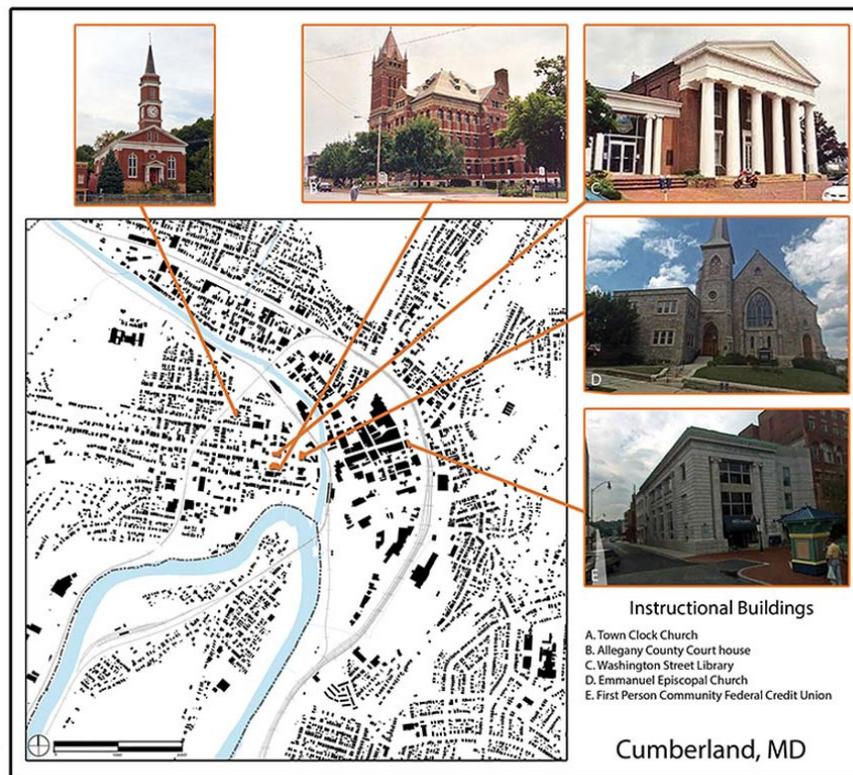


Figure 40: Cumberland, MD – Civic Buildings, Source- Diagram by Author, Underlay Google Maps, 2013

⁵¹ Lowdermilk, Will. *History of Cumberland, Maryland*

⁵² Lowdermilk, Will. *History of Cumberland, Maryland*



Figure 41: Cumberland, MD – Residential Buildings, Source- Diagram by Author, Underlay Google Maps, 2013

Site Analysis

Utilizing the three different scales of urban form, the building scale, and the detail scale, the pattern of development of Cumberland is uncovered. Cumberland developed along the water and the old site of the Fort Cumberland. Washington Street which now runs through the old fort connects across the Wills Creek to Baltimore Street. The analysis diagrams in the figures below show the relationship of the main streets of Cumberland to the spaces within the city.

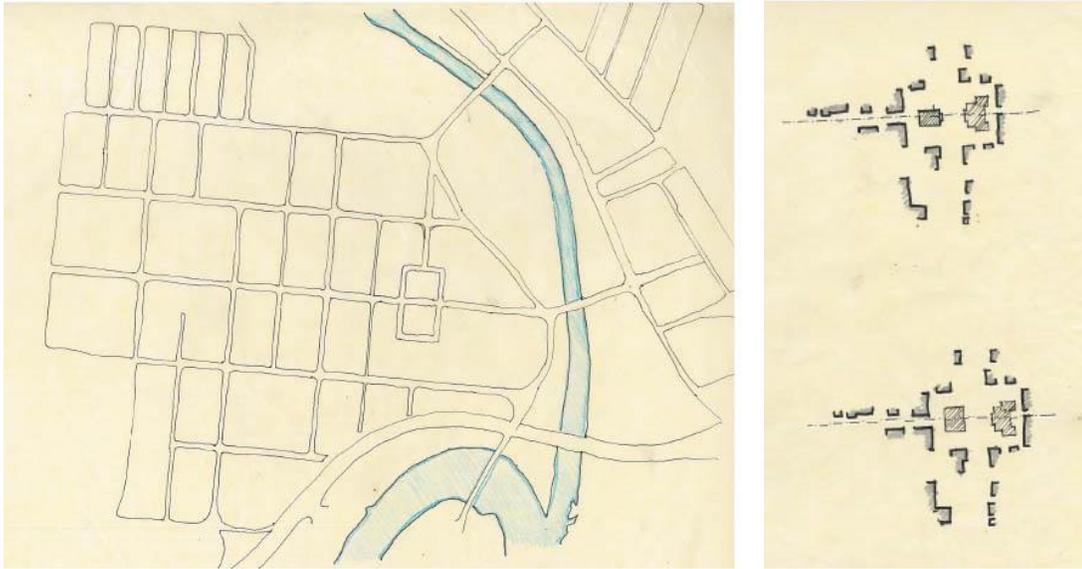


Figure 42: Cumberland, MD – Street Configuration and public space, Source – Author, 2014

Further analysis of the patterns of the development in Cumberland reveals a spatial sequence of the relationship of the buildings. The comparison includes the forms of three types of building within Cumberland; the small house, the large house, and the civic buildings. The analysis compared a few main features such as the building setbacks, entry location, proportion, and the window area and rhythm and roof types.



Figure 43: Cumberland, MD – Form Code, Source – Author, 2014

2

From the analysis conclusions can be drawn about the spatial sequence and pattern of development of a large building in Cumberland. The following five diagrams in figures 51 through 55 show the general pattern for building setback and massing, open space, street wall articulation, roof form, and window size and rhythm.

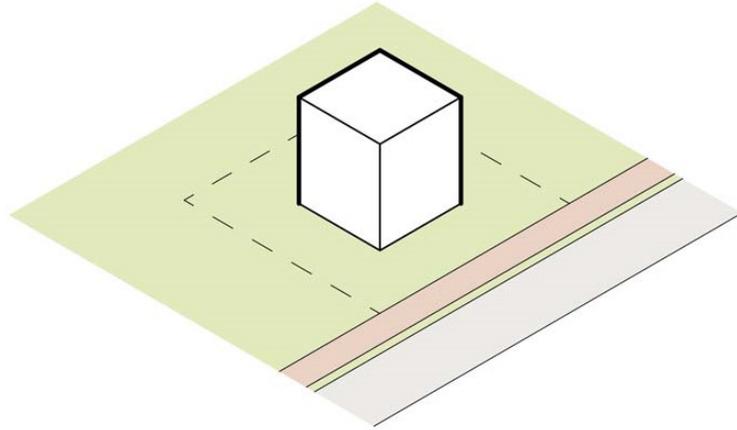


Figure 44: Cumberland, MD – Setback and Massing, Source – Author, 2014

The challenges presented by the topography affected the size of the lots. The lots are broad with shallow back yards. As a result the buildings were placed just off the street to create a small front yard. The lot size is a possible explanation as to why the buildings take on a square footprint.

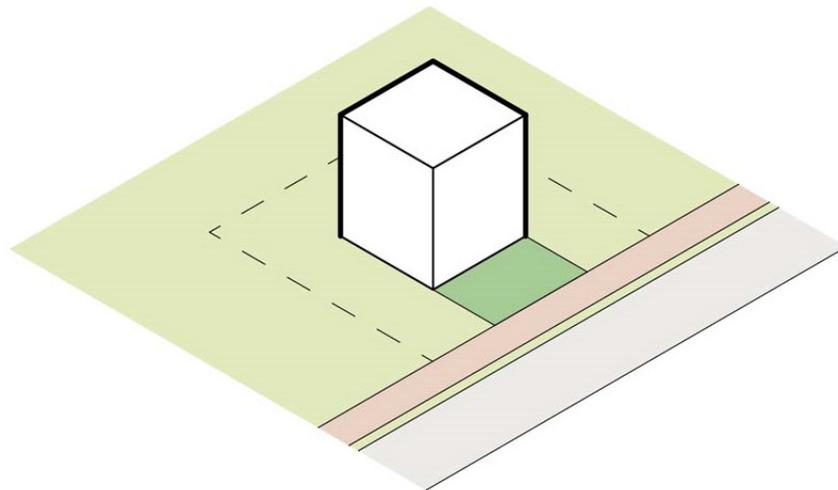


Figure 45: Cumberland, MD – Open Space, Source – Author, 2014

The open space in Cumberland is located primarily in front of the building. The open space provides a space to buffer the private spaces of the house from the

public realm of the street. Since the space meets the public realm its characteristics are more of the formal quality.

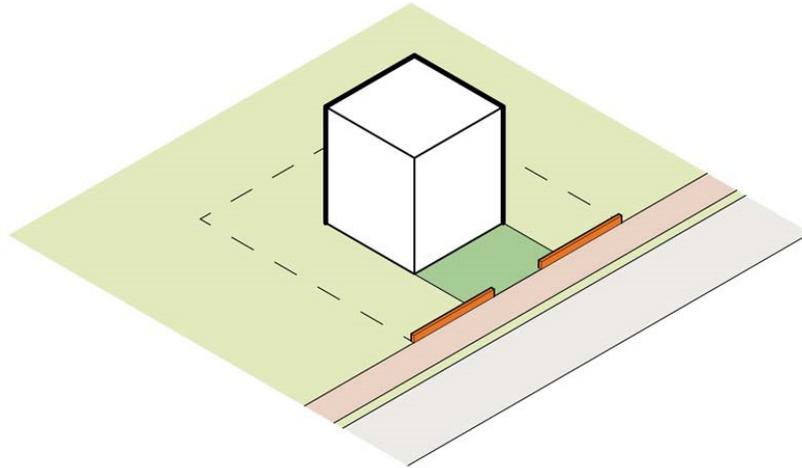


Figure 46: Cumberland, MD – Street Walls, Source – Author, 2014

The separation of the open space in front of each building and the public realm is defined by a physical threshold. The threshold separates the public realm of the street from the semi-public open space. The threshold is characterized as a chest height line of bushes or a short solid wall. The quality of this threshold signals the separation of the two spaces.

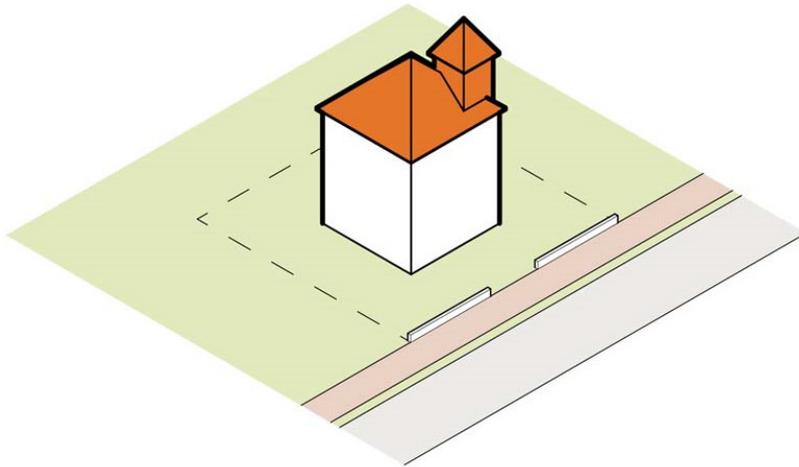


Figure 47: Cumberland, MD – Roof types, Source – Author, 2014

Similar to the mountain range reaching towards the sky the roof forms in Cumberland embody the upward extension. The roofs are generally hip roofs with steeply pitched slopes. The skyline is also marked by tower elements that signal the position of and importance of the civic buildings.

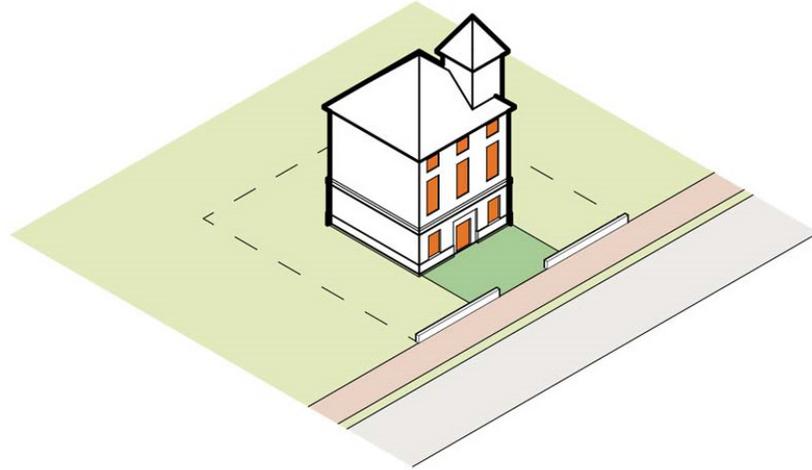


Figure 48: Cumberland, MD – Bay Rhythm and openings, Source – Author, 2014

A variety of window patterns exist within Cumberland. They range from the small punch opening to a tall double story window to a grouping of windows to become a horizontal reading. In general the windows share a vertical orientation with a proportion of 1:2 or 1:3. The window is also set deep within the wall.

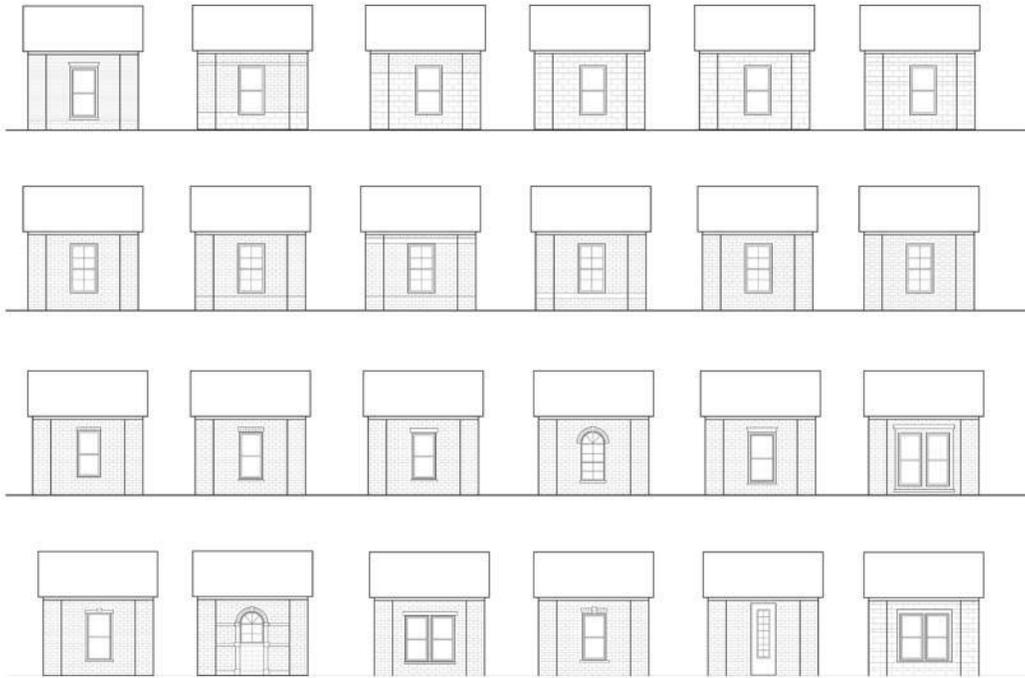


Figure 49: Cumberland, MD – Types of Windows, Source - Author, 2014



Figure 50: Cumberland, MD – Materials, Source - Author, 2014

Focusing on the patterns of materials and making openings the following analysis looks at the detail scale. The diagram below shows a matrix of different types of windows found in Cumberland. The material palette of Cumberland consists of stone,

brick, and sidings. The primary building material is brick and is used for both small and large buildings. Stone is found primarily on the foundations and site walls. However, many churches are constructed out of stone from local quarries. The style and types of prevailing openings found in Cumberland vary from building to building but each has common aspects. There is a tremendous variety in the style and types of opening made in Cumberland but there are a few common features. Each opening is made by a deep recess in the wall. The deep recess gives the expression of the wall wrapping into the building. There is also a pattern to use materials similar to the wall to give the appearance that the wall surface continues.

Specific Site Analysis



Figure 51: Cumberland, MD – Site location, Source- Diagram by Author, Underlay Google Maps, 2013

The Washington Street Library first opened in 1934. Initially it inhabited the existing space previously built as the Allegany County Academy. The Greek revival style building was completed in 1850 (history of Cumberland 366). The Allegany County Academy was the first public school in Allegany County. Future additions and renovations in 1966 expanded the library to incorporate a Maryland room with the largest reference collection in Allegany County.

The academy occupied one side of the Prospect Square. On the other side is the Allegany County Court House. The square was set aside for the use of public buildings. (Cumberland Hist 270) The buildings surrounding the square are occupied by local businesses. This thesis proposes a master plan for the square that places the new branch library building on the east side of the square currently used as the parking lot for Emmanuel Episcopal Church.

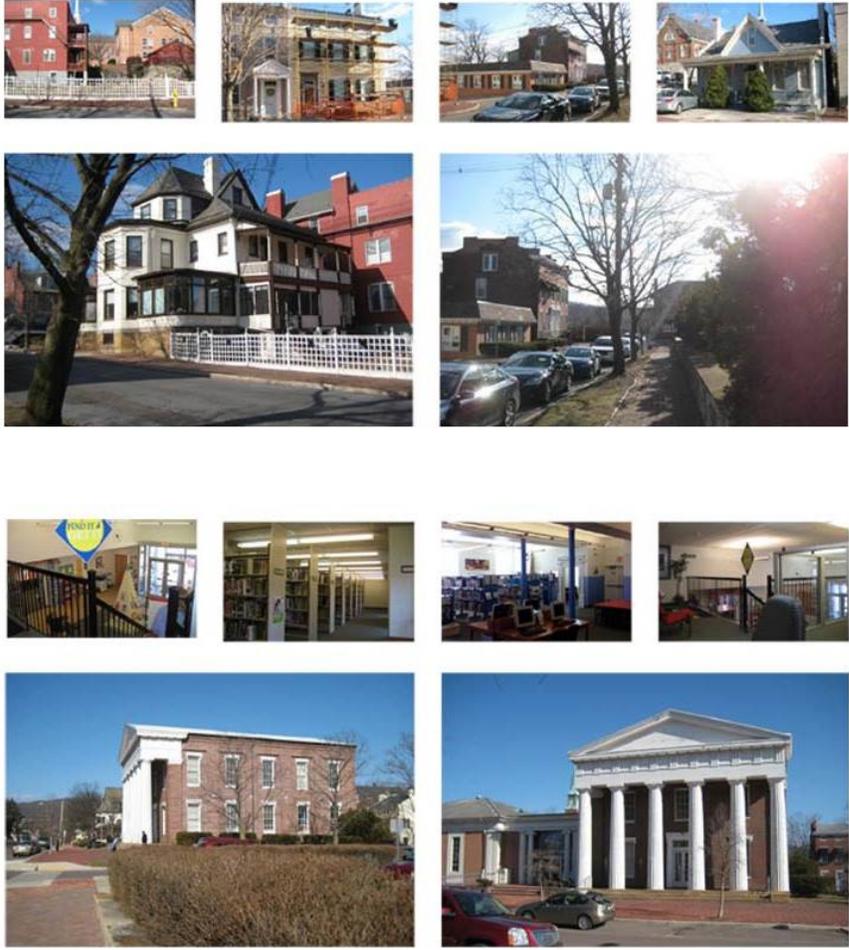


Figure 52: Cumberland, MD – Site photos, Source – Author, 2014

Chestertown, MD

The town of Chestertown is located on the Eastern Shore of Maryland on the Chester River. Its current population is approximately 5,368 residents. The town has an intimate relationship with Washington College.

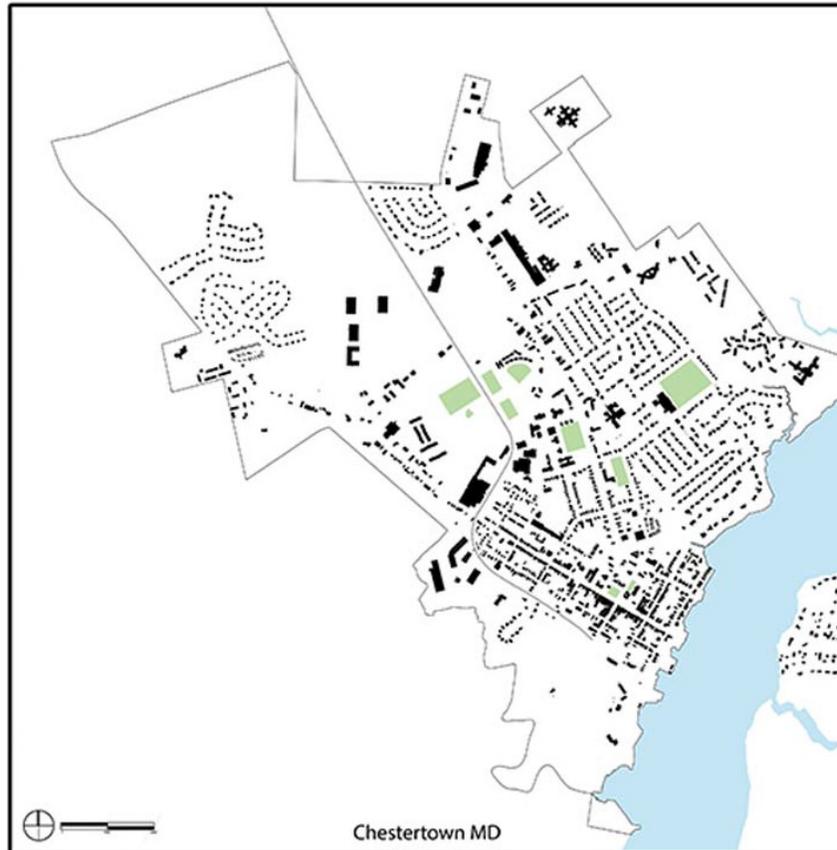


Figure 53: Chestertown, MD - Figure ground, Source – Author 2014

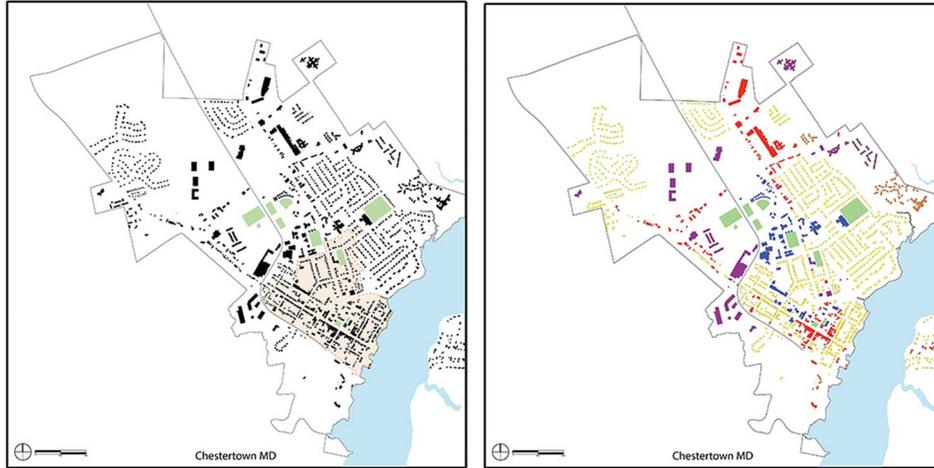


Figure 54: Chestertown, MD Historical District & Land Use, Source – Author 2014

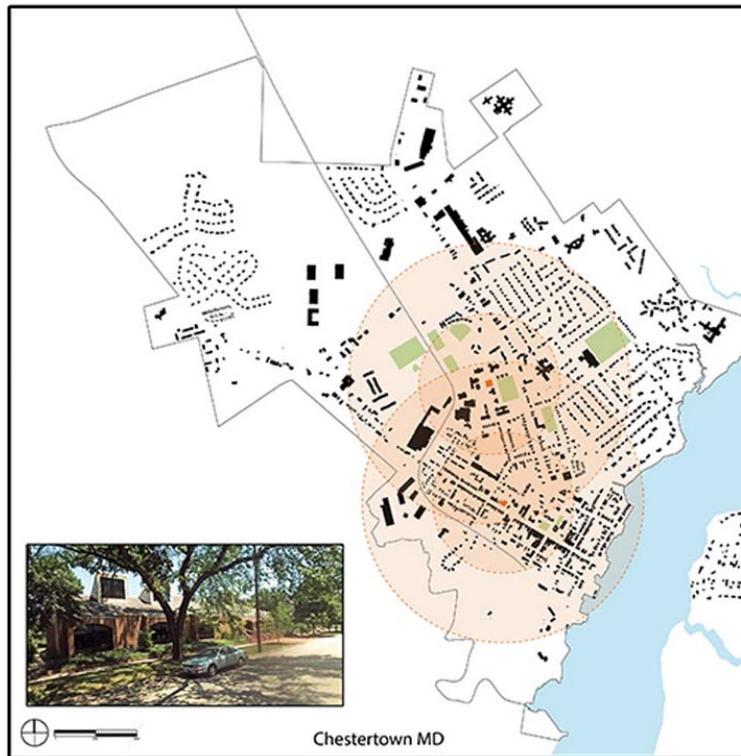


Figure 55: Chestertown, MD – Current Library Locations, Source – Author 2014

Site history

Chestertown was founded in 1706 by English settlers. Located on the Chester River it was named as a royal port of entry. With this distinction Chestertown became a very important trading post. Chestertown grew as a market and educational center. Washington College was established in 1782, attracting scholars. The agricultural industry of the region was defined as landowners farmed small plantations and exported their crops in ships. Once named a port of entry Chestertown became a market for regional goods. To accommodate the expansive growth of the city, the city established a grid with a main street and a cross street in 1730. In the center was a market square and courthouse. The economy of Chestertown thrived during this time as a trading post between Annapolis and Philadelphia. Into the 1800's the town's economy declined with the introduction of the train and shifted away from the agricultural economy. As with most colonial towns across the nation Chestertown has shifted to an economy of tourism. In 1893 a fire destroyed much of the original town including the original courthouse. The town was rebuilt to reflect a cohesive street edge and construction of similar materials. These features contribute to the continuation of a town with a strong sense of character. In response to the desire to preserve the character of the town, an historical district was established in 1960.

The town has a strong sense of history and character. To foster and preserve the history of Chestertown the residents participate in festivals and traditions. During the American Revolutionary period Chestertown citizens participated in the revolt against England by conducting a tea party tax protest. The residents hold a festival each May to honor and remember their own involvement in a tea party. Another

tradition is the Dawnrigging weekend to commemorate the final weekend of the sailing of the Schooner Sultana. The Schooner Sultana is a replica of a British ship that sailed the north Atlantic during the American Revolution. The ship functions as a living school to communicate the history and tradition of sailing in the 1700's. The Dawnrigging weekend festival makes Chestertown the destination for tall ships and wooden boats from ports around the world.



Figure 56: Chestertown, MD – Residential Buildings, Source- Diagram by Author, Underlay Google Maps, 2013



Figure 57: Chestertown, MD – Civic Buildings, Source- Diagram by Author, Underlay Google Maps, 2013

Site Analysis

Examining Chestertown from three different scales, the urban form, the building, and the detail level offers a complete understanding of the patterns of development. With an urban sense, Chestertown was laid out around a single main street, High Street. The street runs perpendicular to the water, with N Cross Street crossing to create the center of town. The center of town is marked by the Fountain Park. The analysis diagrams in the figures below show the relationship of the main streets of Chestertown and major spaces in the city.



Figure 58: Chestertown, MD – Street Configuration and public spaces. Source – Author, 2014

Additional analysis of the spatial sequence of the relationship of the buildings and how they meet the street has uncovered interesting patterns. A comparison of the forms of the three types of building found in Chestertown includes the small house, the large house, and civic buildings. The comparison analyzes many features such as the building setbacks, entry location, proportion, window area, and rhythm and roof types.

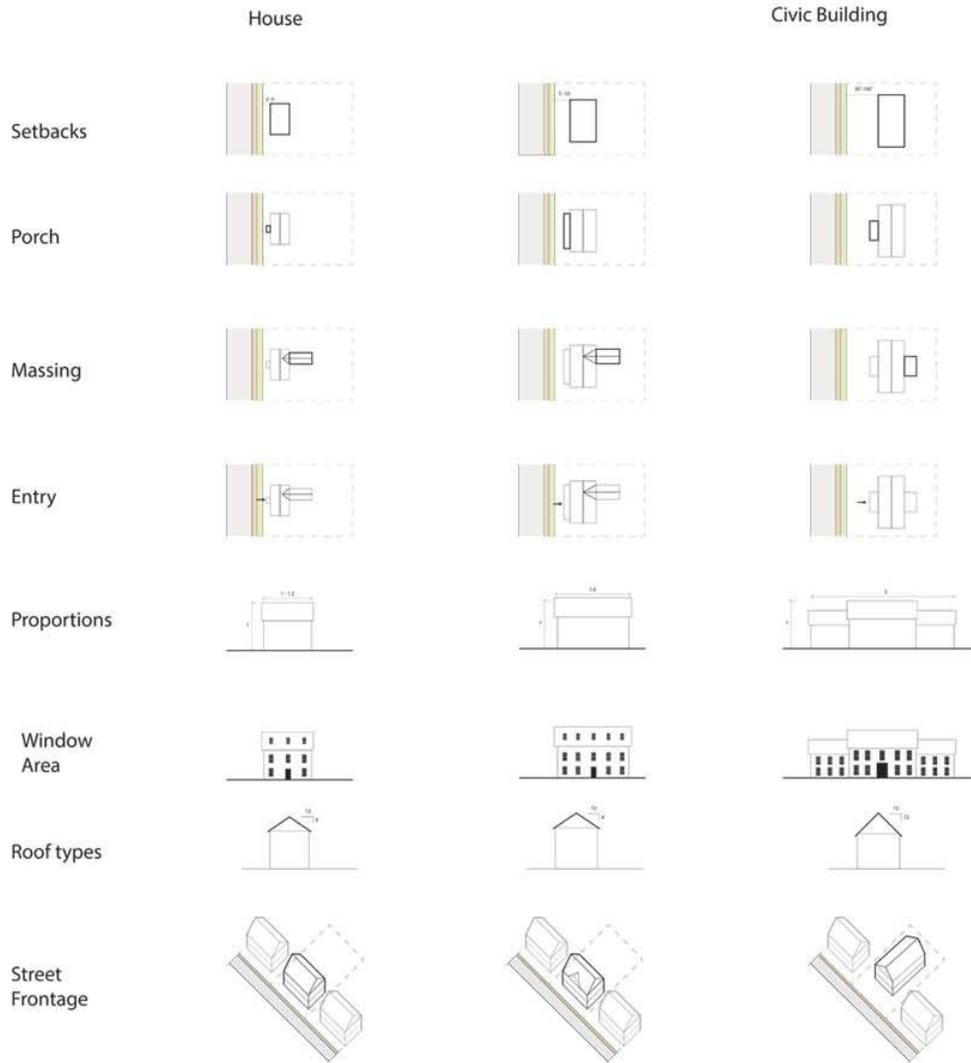


Figure 59: Chestertown, MD - Form Code, Source – Author, 2014

From this matrix of comparison conclusion can be drawn about the spatial sequence and pattern of development of a large building in Chestertown. The following five diagrams in figures 67 through 71 show the general pattern for building setback and massing, open space, street wall articulation, roof form, and window size and rhythm.

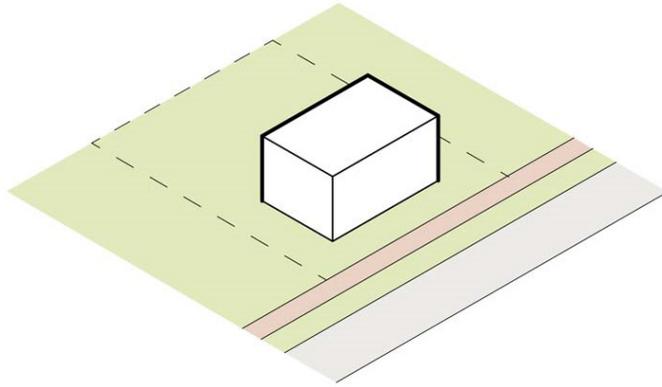


Figure 60: Chestertown, MD - Setbacks and Massing, Source – Author, 2014

The history of larger plantation size summer homes resulted in the lot sizes in Chestertown being large lots both in depth and width. The primary orientation of a building on the site is to have the long side parallel to the street. The buildings begin to create a street wall to define the public realm of the street. Buildings range in size from one and half story to two stories.

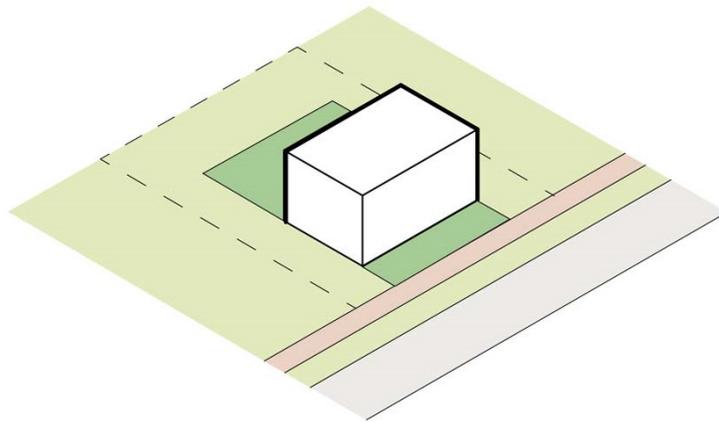


Figure 61: Chestertown, MD – Open Space, Source – Author, 2014

The open spaces in Chestertown are characterized by having a more formal quality in the front yard which addresses the public realm. Larger garden spaces are located in the rear of the property and take on a quality of private retreat and

reflection space. The building becomes the threshold between the semi-public front yard and the private garden space.

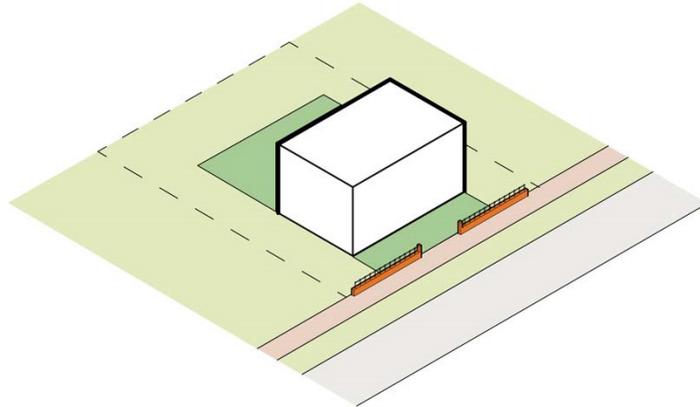


Figure 62: Chestertown, MD – Street Walls, Source – Author, 2014

The definition of the public realm is further enhanced with a threshold to separate the public realm from the semi-public space. The threshold is characterized as a porous barrier. Examples are picket fences and low growing shrubs. The nature of the porous barrier establishes a subtle distinction between the public realm and the semi-public space of the front yard.

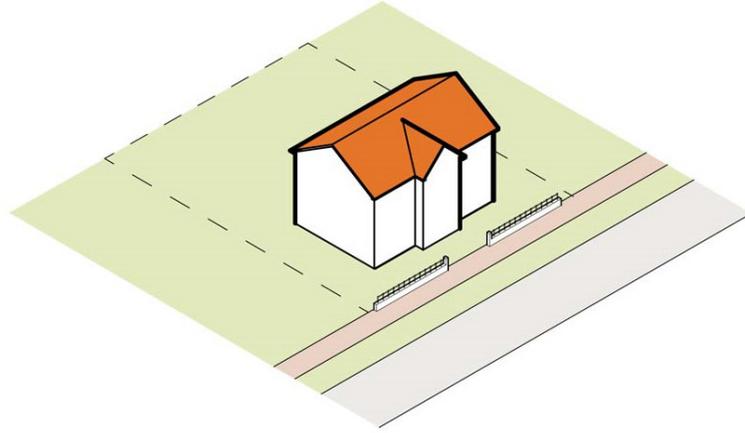


Figure 63: Chestertown, MD – Roof Types, Source – Author, 2014

The roof is a prominent form in Chestertown. The analysis showed the development of a pattern. The houses face the eaves of the roof parallel to the street. This creates a background or normal condition which the major civic building of the town breaks by facing the pediment towards the street. This exception expresses the importance of the building and signifies the importance to all the residents.

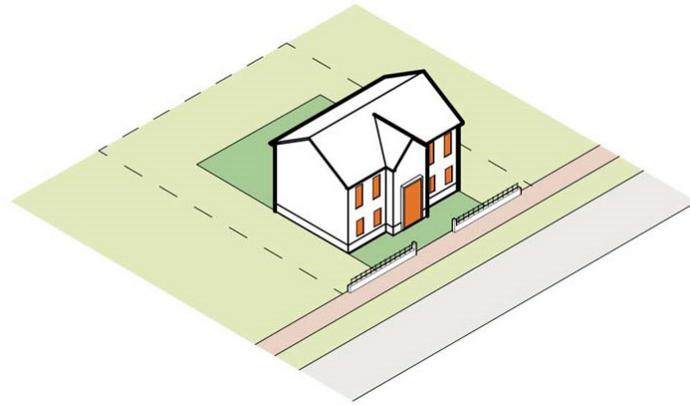


Figure 64: Chestertown, MD – Bay Rhythm and Openings, Source – Author, 2014

There are many types of windows in Chestertown, however there are general elements that are common to many of the buildings. The windows retain a more vertical orientation with a proportion of 1:2 or 1:3. The rhythm of the windows reinforces the simplistic nature of the wall. Windows are spaces according to a proportioning system and are never placed very close together.

The last scale of analysis is the detail level. The analysis focused on the patterns of material and methods of making openings. The diagram below shows a matrix of different types of windows found in Chestertown.

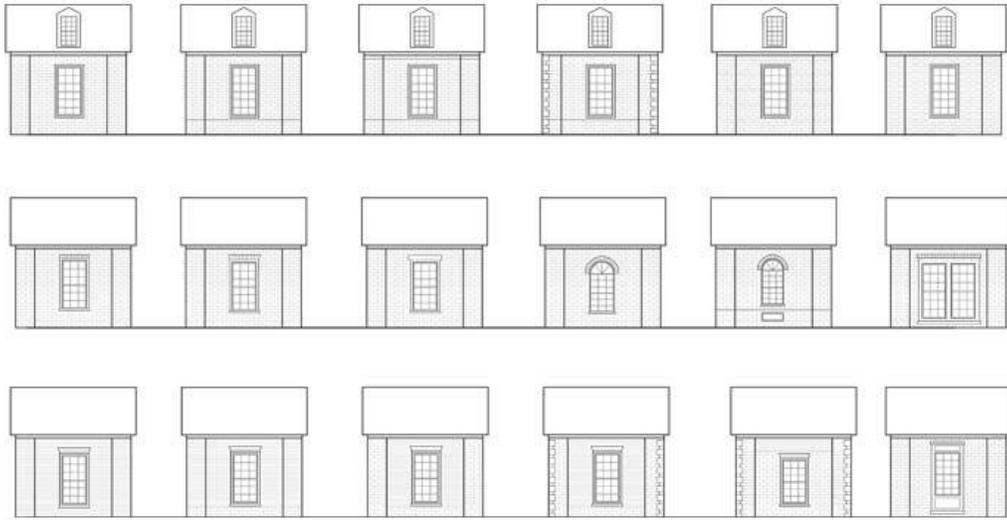


Figure 65: Chestertown, MD - Types of Windows, Source – Author, 2014



Figure 66: Chestertown, MD - Materials, Source – Author, 2014

The material palette of Chestertown consists of stone, brick, and sidings. Stone is found in trace amounts for foundations and brick is the primary material used for major buildings. It is used as both a veneer and bearing walls construction. There is a tremendous variety in the style and types of openings made in Chestertown but there are a few common features. First the openings are recessed slightly into the wall. This gives the appearance of a single, plain wall surface. Second the surrounding window mullions are much thicker on edges of the window.

Specific Site Analysis

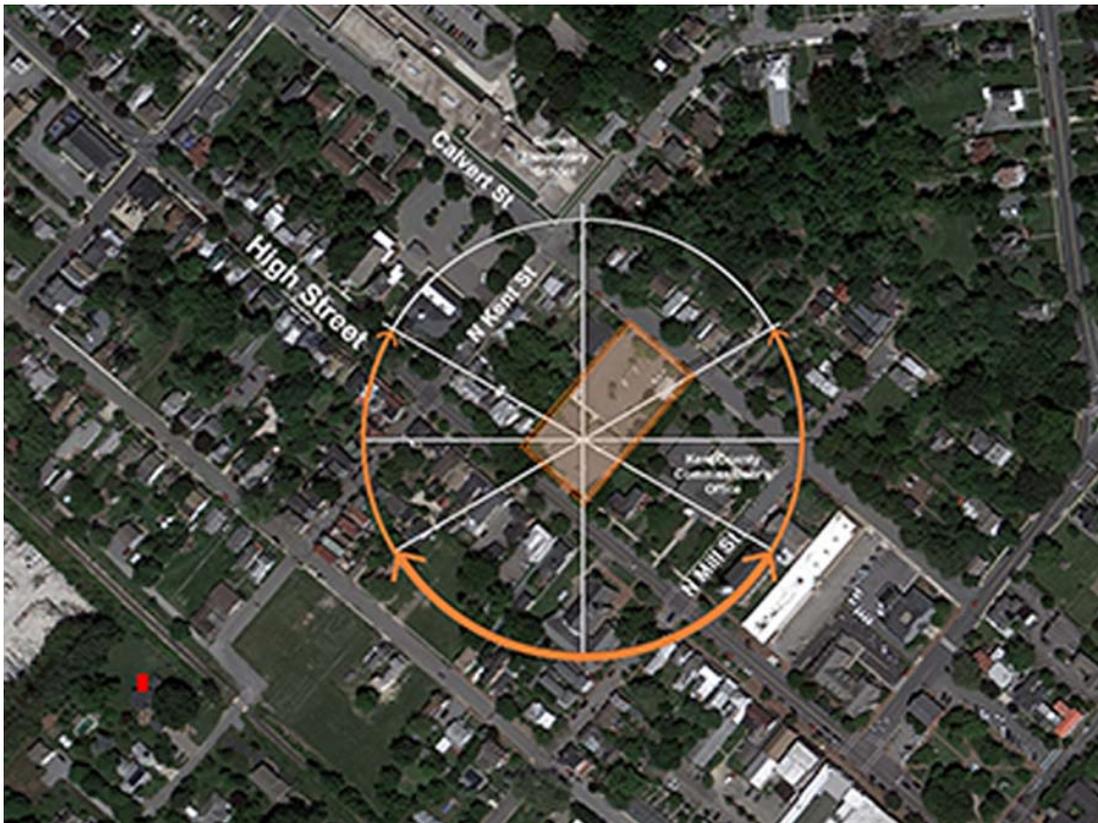


Figure 67: Chestertown, MD - Site location, Source- Diagram by Author, Underlay Google Maps, 2013

The current branch library in Chestertown is located fronting High Street in the block between N Kent St and N Mill St. The library as seen in figure 75 was constructed in 1960. The library is located in the residential area of High Street. This thesis proposes designing a new library building that responds to the cultural identity of Chestertown to replace the existing library building.



Southside High Street



Northside High Street

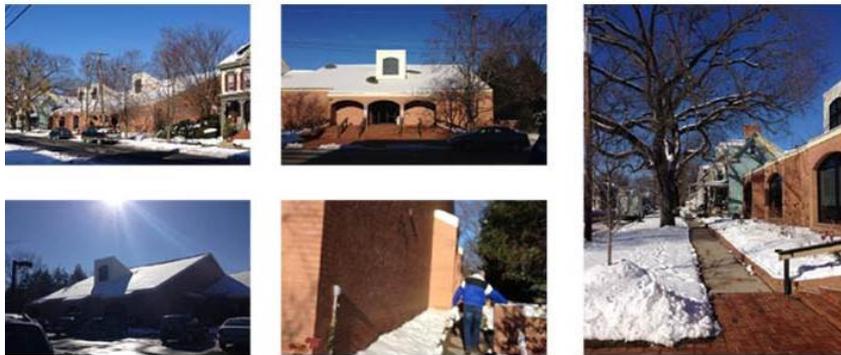


Figure 68: Chestertown, MD – Site Images, Source – author, 2014

Conclusions

Since the sites are within the same geographical location of the Mid-Atlantic region and each has a similar climate, the concluding similarities are striking. Each site used brick and stone as materials to distinguish the civic buildings from the fabric buildings of the city. There is also similarity in the architectural styles of both civic and residential buildings. Even with these similarities each town has its own distinct character and identity. The analysis illustrated the nuanced differences between each site. The differences exist in the three scales of the urban form, building, and detail. Differences are what make a place distinctive and cohesive. The next section will discuss the exploration of variation to the patterns to development.

Chapter 6: Process of variations

This thesis explores the integration of universal ideas from around the globe with the local patterns of development. Commencing a design with the local patterns of development perpetuate the character and identity of the site. This section will describe the process of investigation to integrate universal ideas within the local forms. The investigation was done on three scales, urban form and building and detail. The process explored variation on the existing patterns to understand the full range of possibility. The results of this process will be discussed in the following chapter as it relates to each site.

Urban form

The following diagrams show the variation of how the library at Chestertown created a public space. The concept of a public space adheres to the universal idea of having a public gathering space connected to the library. In this case the variations explore how to continue the street wall of the surrounding houses while creating a space grand enough to reflect the importance of the library.

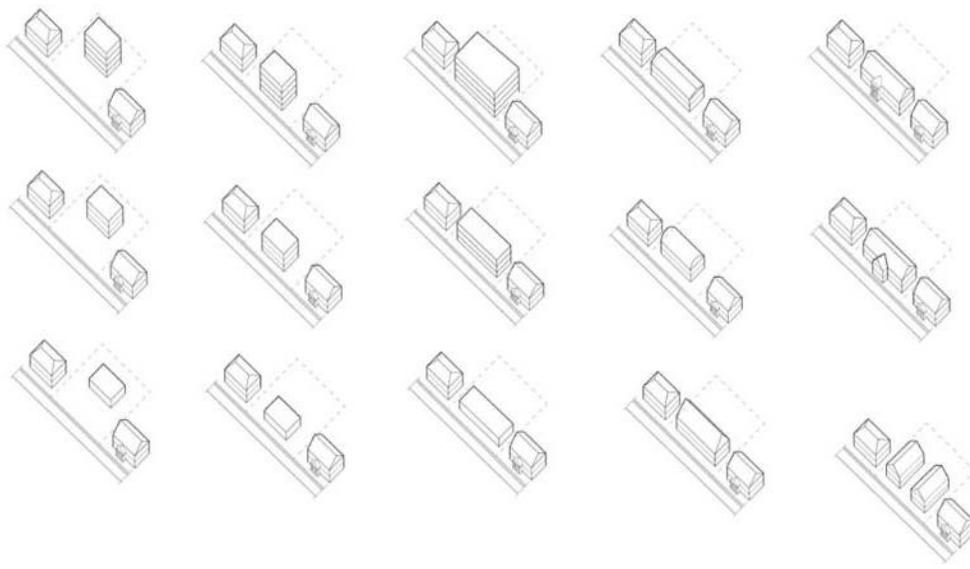


Figure 69: Chestertown, MD - Variation on public space, Source- Author, 2014

Building

At the building scale, the patterns of window treatments and their rhythms were challenged by universal ideas. The investigation looked at starting with the existing element such as the window type and size. Then variations are done with only a single change, such as emphasizing the base or creating hierarchy. This process keeps the variation within the patterns of the place and integrates universal ideas.

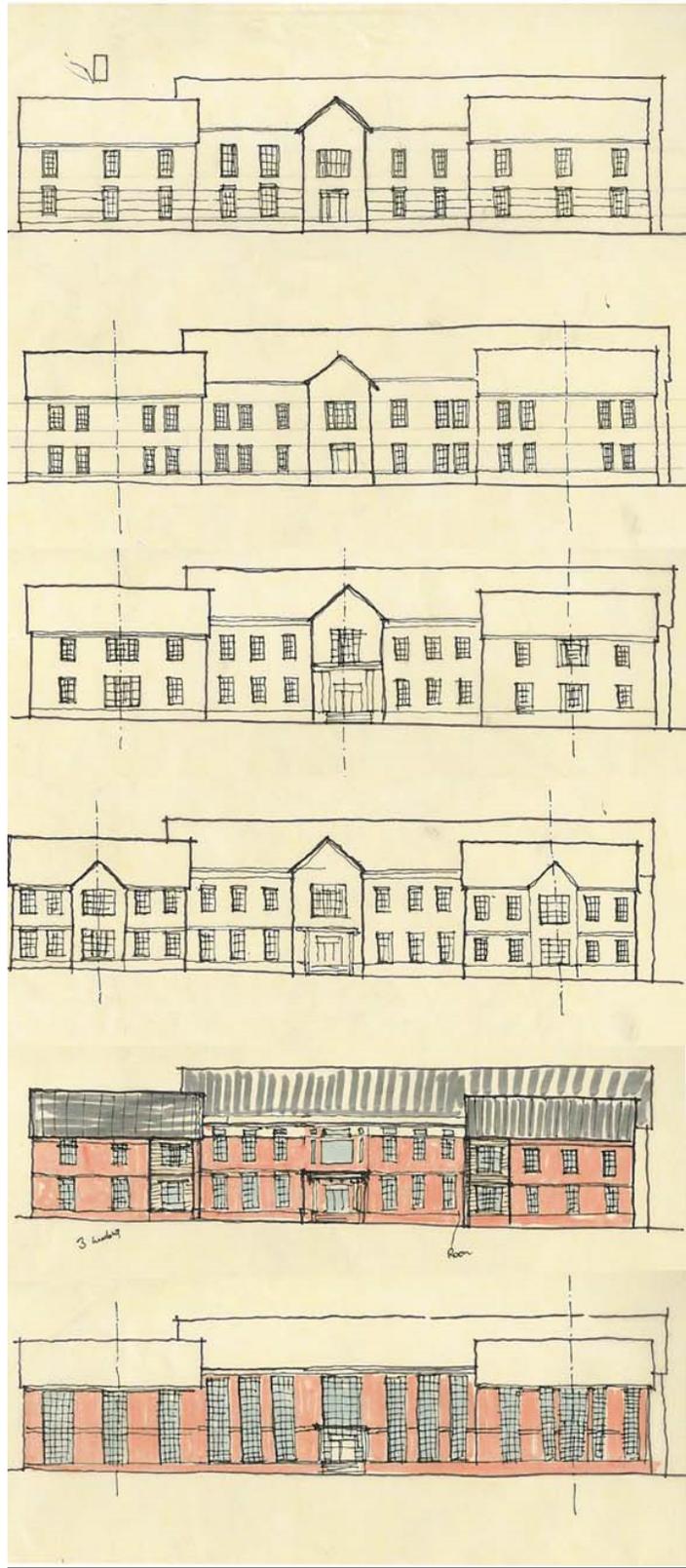


Figure 70: Chestertown, MD – Elevation Variation, Source- Author, 2014

Detail

The details of the building allow for the most interpretation. The following diagrams show the exploration on the variation of how a column could be detailed. The variations begin with the basic configuration and are then pushed by universal materials and construction technics. The details also start to reflect the tradition of ship building within Chestertown.

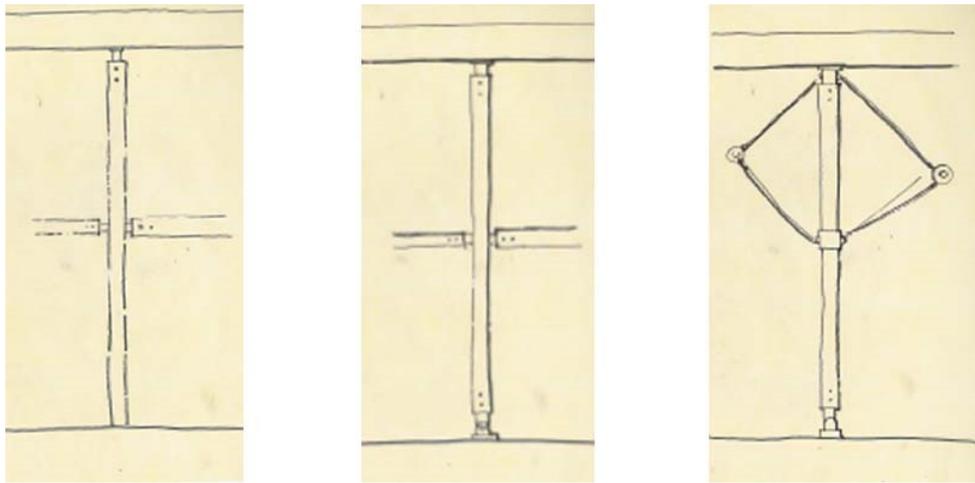


Figure 71: Chestertown, MD – Column Variation, Source- Author, 2014

Chapter 7: Architectural Response

The analysis of this thesis uncovered nuanced differences between the three sites of Alexandria, Cumberland and Chestertown. The result of this investigation was three library buildings. The design for the buildings responded to the integration of the universal ideas from around the globe with the patterns of the local place. The three buildings are described in three scales; urban form, building scale and detail.

Alexandria, VA



Figure 72: Alexandria, VA – Site Location, Source- Author, 2014

The design reflects the three scales of investigation. This site was chosen based on the connection to the existing park and the school. Following the urban pattern of creating edges within Alexandria, the library holds the street edge and defines the public realm by continuing the street wall language around the building. The building

is situated to provide a defined edge to the existing park and create an entry plaza for the school and library to share.

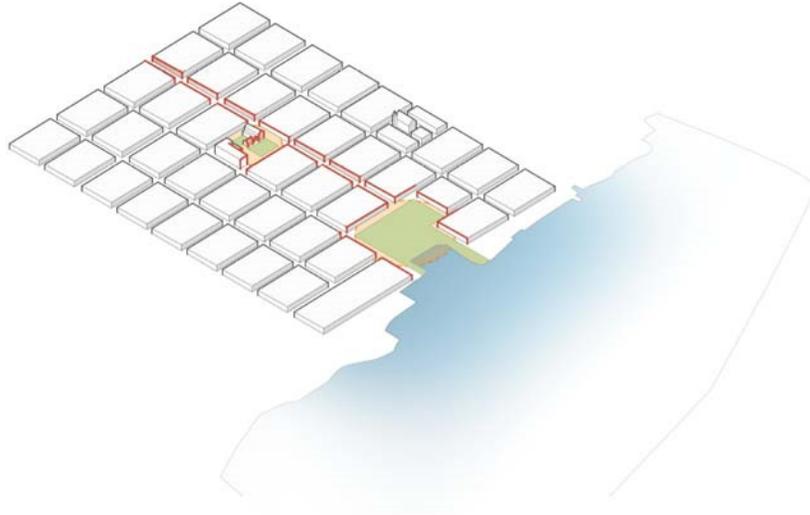


Figure 73: Alexandria, VA – Urban Connection, Source- Author, 2014

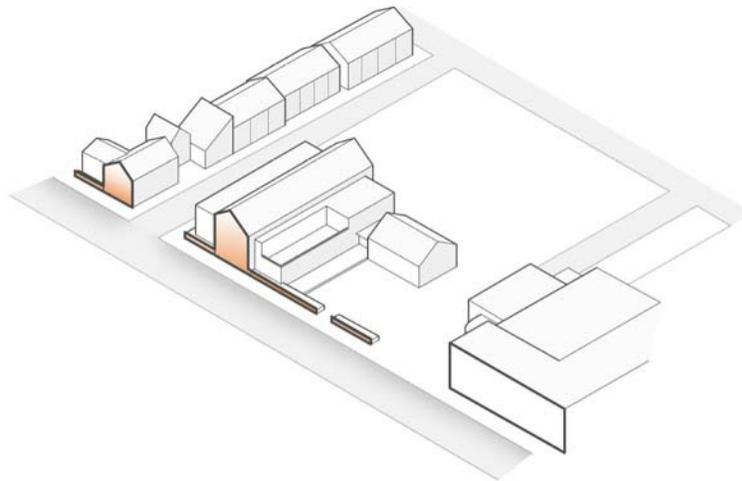


Figure 74: Alexandria, VA – Street wall, Source- Author, 2014

The library in Alexandria is the result of the integration of the classical configuration of a library and the response to the local patterns of making civic buildings. As stated before a civic building in Alexandria breaks the roof pattern of the fabric buildings

and faces the pediment to the street. The classical promenade of a library is to enter under the main reading room, transverse the library to a set of grand stairs that releases the visitor in the main reading room. As the visitor looks out over the main reading room they are aware of their journey. The library fuses the two ideas and creates a sequence of spaces that is inspired by the classical promenade but uses the element found in the patterns of Alexandria. Figures 82 - 84 Illustrates the sequence of spaces and thresholds

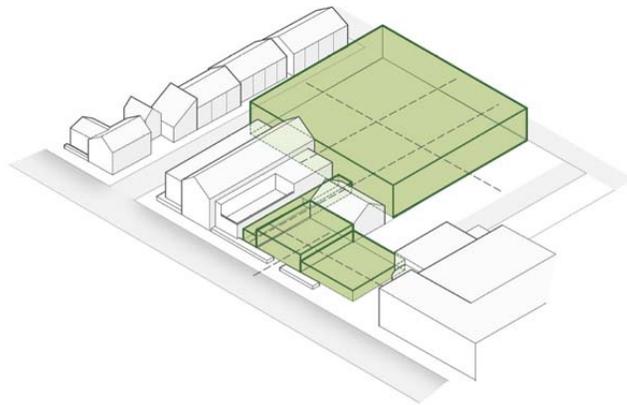


Figure 75: Alexandria, VA – Open Space, Source- Author, 2014

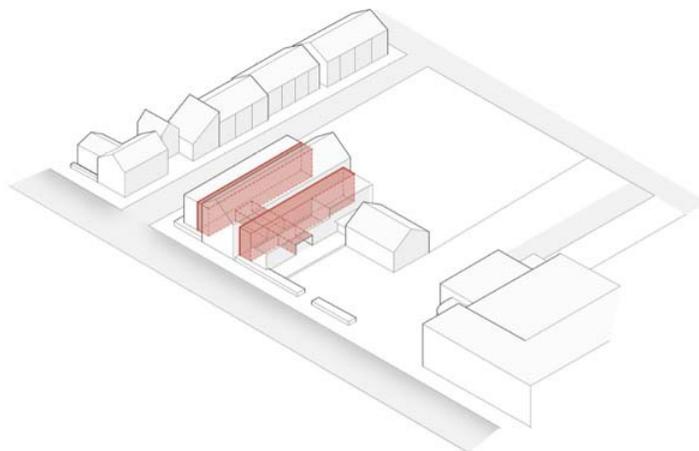


Figure 76: Alexandria, VA – Circulation, Source- Author, 2014

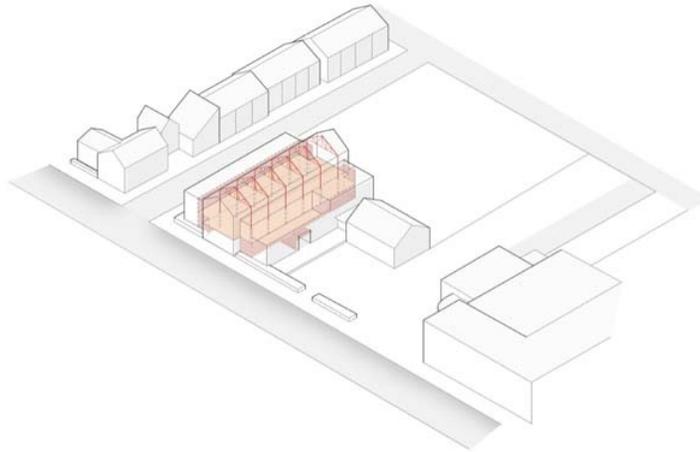


Figure 77: Alexandria, VA – Thresholds, Source- Author, 2014

At the detail scale the library in Alexandria sought to draw inspiration from the particulars of the place. Over the years this site was home to many different factory buildings. The window detailing and structure of the library reference the industrial character.



Figure 78: Alexanaria, VA – Wall detail, Source- Author, 2014

The wall surface continues the cities pattern of articulation of pilasters and orientation and size of the windows. The design of the trusses and main reading space reference

the qualities of factories found on the site. The integration of the universal ideas and the patterns found in Alexandria dictate the details that reflect the identity of the place.



Figure 79: Alexandria, VA – Wilkes St Elevaiton, Source- Author, 2014



Figure 80: Alexandria, VA – Library Program, Source- Author, 2014



Figure 81: Alexandria, VA – Site Plan, Source- Author, 2014

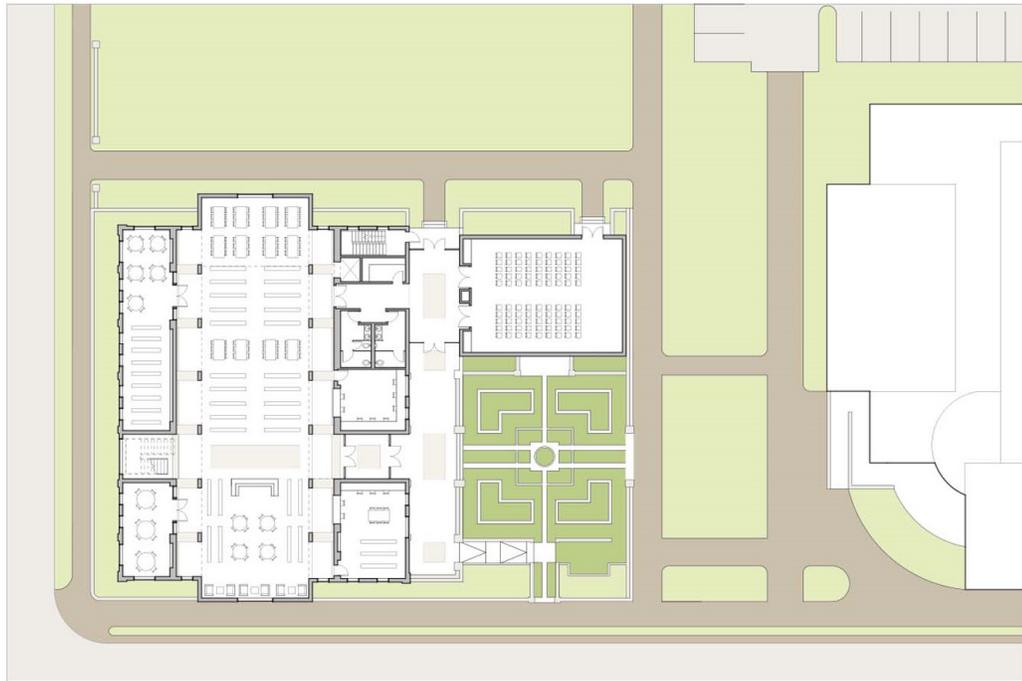


Figure 82: Alexandria, VA – First Floor Plan, Source- Author, 2014

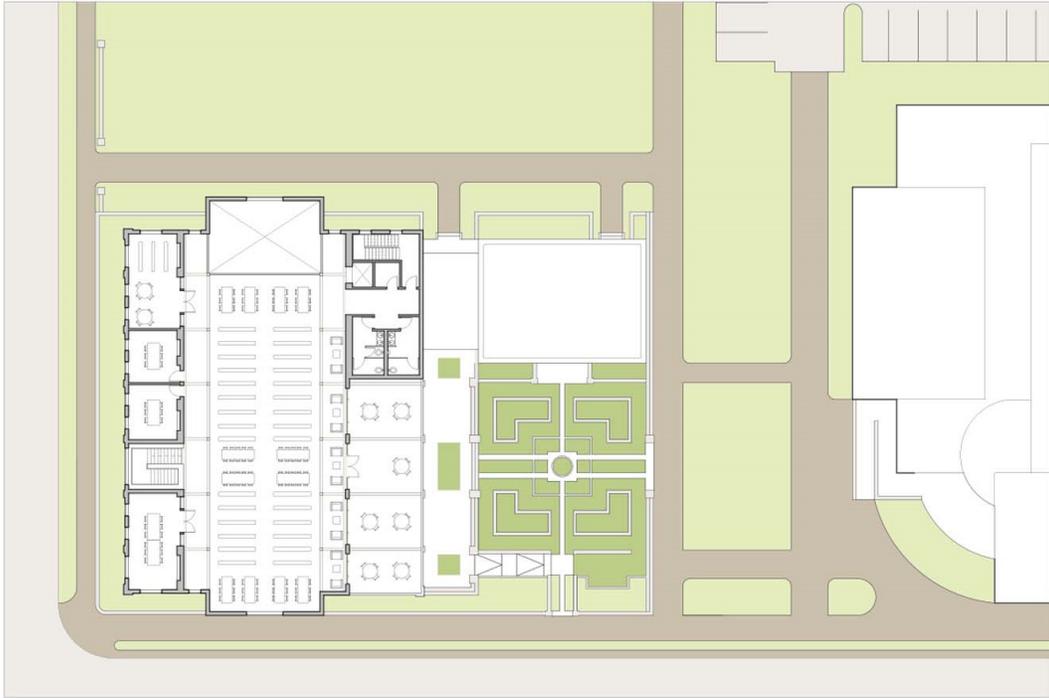


Figure 83: Alexandria, VA – Second floor plan, Source- Author, 2014



Reading Room – Alexandria

Figure 84: Alexandria, VA – Reading Room Perspective, Source- Author, 2014



Park View – Alexandria

Figure 85: Alexandria, VA – Garden Perspective, Source- Author, 2014



Figure 86: Alexandria, VA – Section Perspective, Source- Author, 2014

Cumberland, MD

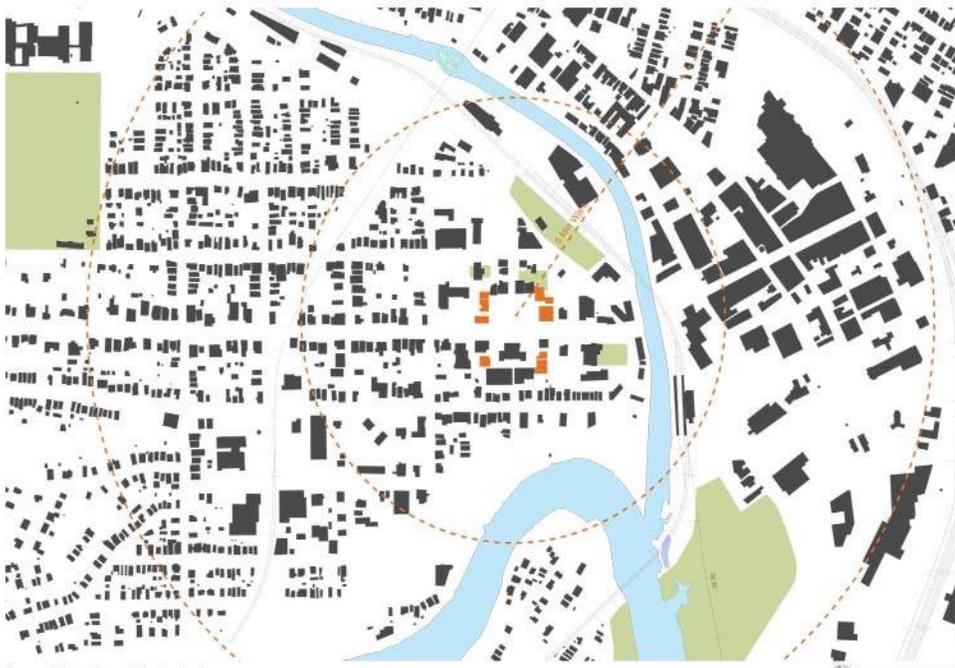


Figure 87: Cumberland, MD – Site location, Source- Author, 2014

The location of the library in Cumberland was determined after various options were considered and studied. The library was placed on the east side of Prospect Square to reference the history of the square and create a relationship with the existing Allegany Courthouse. The proposed location creates a cross axis to the existing axis of the square and the Allegany Courthouse. The two intersecting axis emphasize the importance of the library in relationship to the county court house and the new public square. Figure 95 shows the connection of Prospect Square to main commercial district.

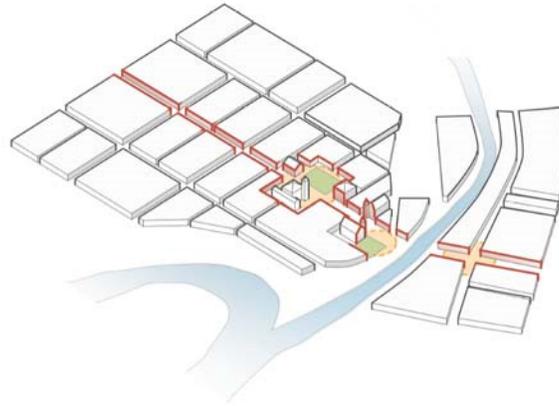


Figure 88: Cumberland, MD – Urban Connection, Source- Author, 2014

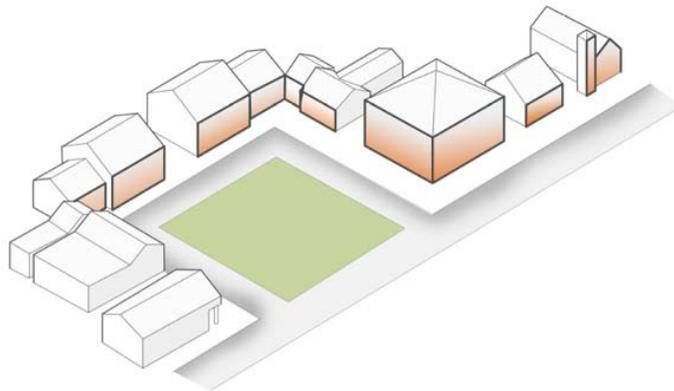


Figure 89: Cumberland, MD – Street Walls, Source- Author, 2014

Drawing inspiration from the natural, mountainous features of Cumberland and the pattern of buildings reaching to the sky or cosmos, the library in Cumberland is designed around a central space. The central space is the heart of the library where the community can gather. This concept also references the axis mundi and reach towards the heavens. The books are organized around the central space and provide a

threshold between the communal learning of the void and individual learning at the inhabitable wall. Figures 99 show the layers of spaces that separate the central space from the Prospect Square.

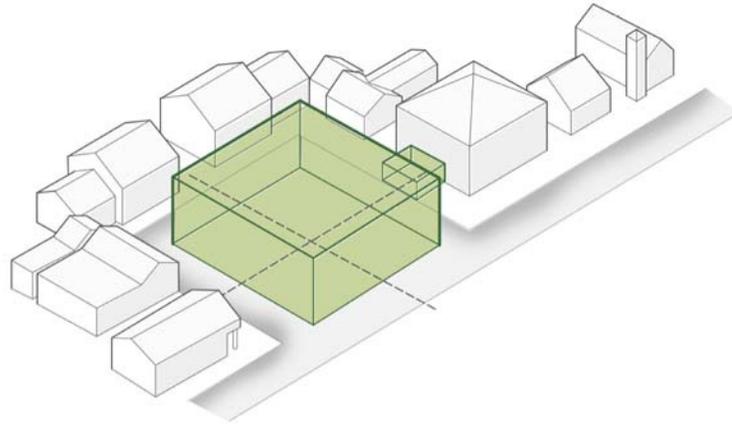


Figure 90: Cumberland, MD – Open Space, Source- Author, 2014

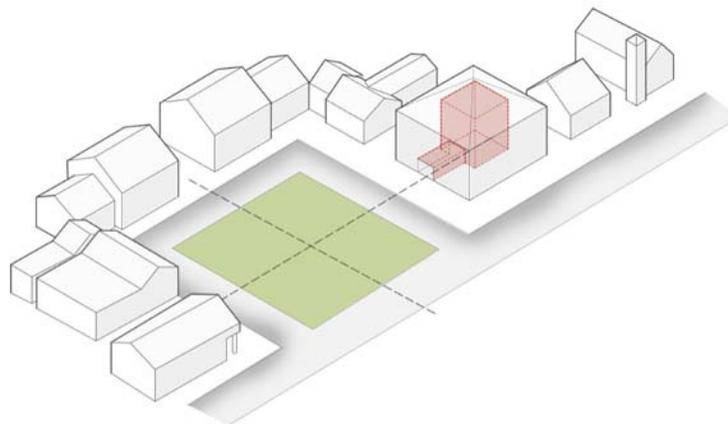


Figure 91: Cumberland, MD – Circulation, Source- Author, 2014

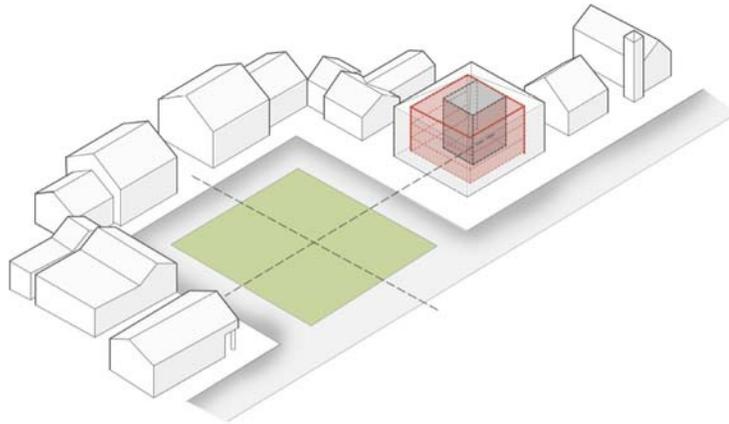


Figure 92: Cumberland, MD – Thresholds, Source- Author, 2014

The design of the opening in the exterior wall sought to integrate the large glass openings of contemporary buildings with the wrapping nature of wall surfaces in Cumberland. The window opening is recessed deep into the wall. This allows the wall surface to wrap around the corner expressing the thickness of the wall. In order to continue the surface of the wall, vertical mullions were added to emphasize the verticality within the buildings.

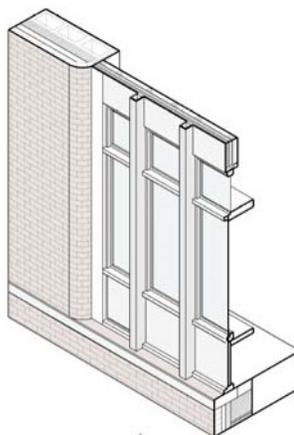


Figure 93: Cumberland, MD – Wall Detail, Source- Author, 2014

The design for the library in Cumberland assimilates the local patterns with global concepts of imago mundi and contemporary expressions of surface. The concepts are visible from the urban scale to the detail.

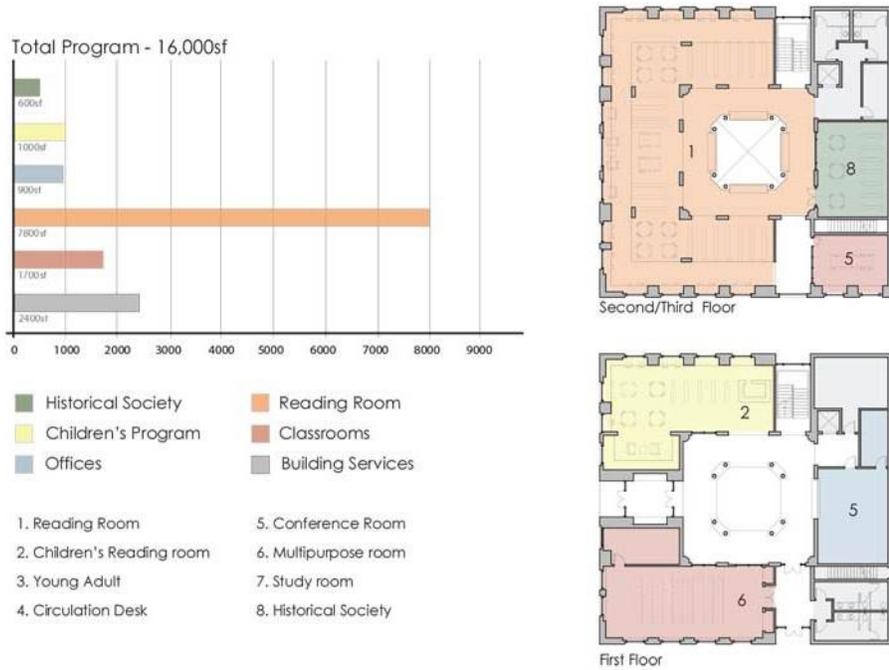


Figure 94: Cumberland, MD – Library Program, Source- Author, 2014



Figure 95: Cumberland, MD – Site Plan, Source- Author, 2014

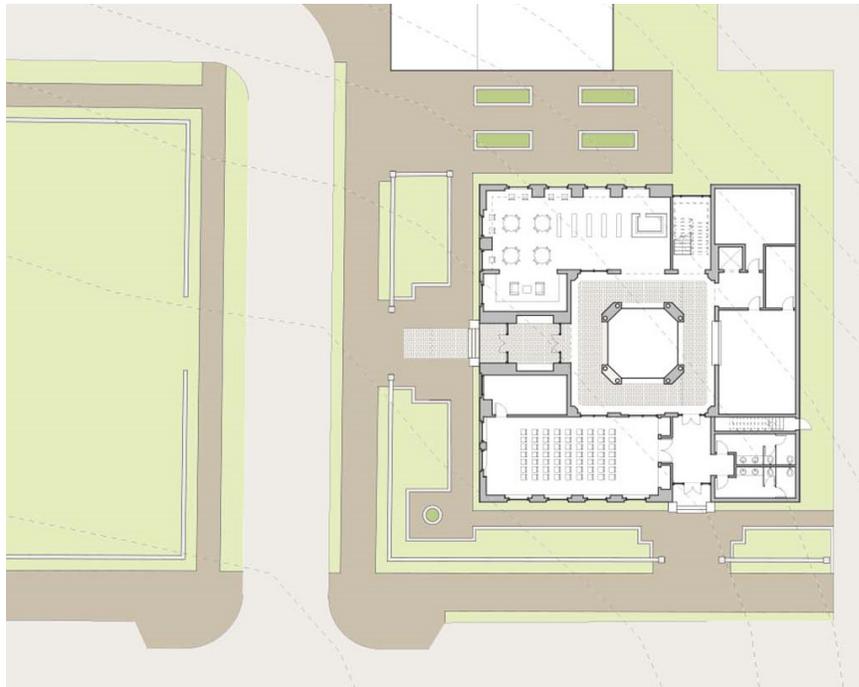


Figure 96: Cumberland, MD – First Floor Plan, Source- Author, 2014

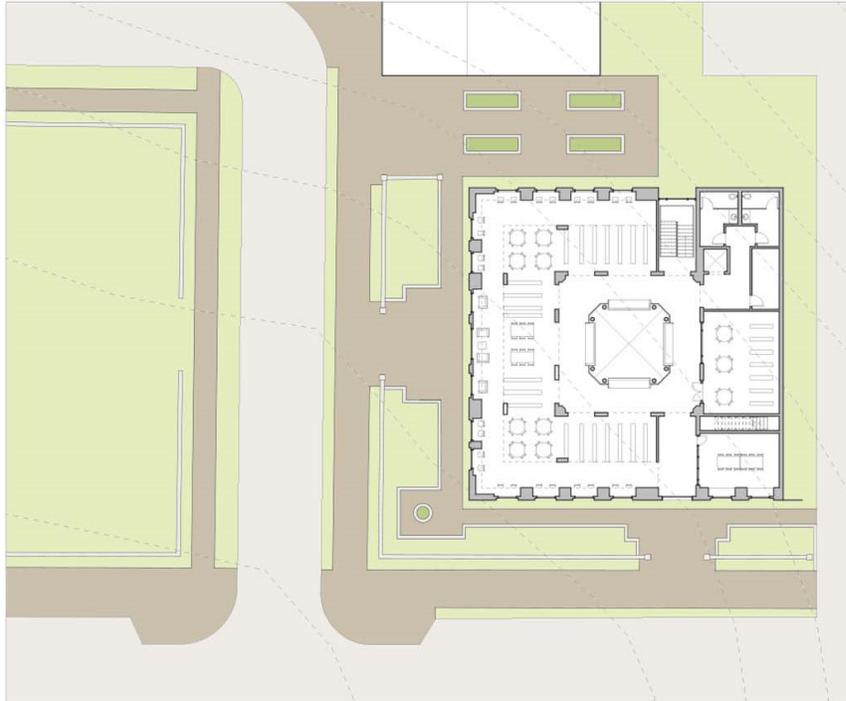


Figure 97: Cumberland, MD – Second Floor Plan, Source- Author, 2014



Figure 98: Cumberland, MD – Prospect Square Elevation, Source- Author, 2014



Reading Room – Cumberland

Figure 99: Cumberland, MD – Reading room, Source- Author, 2014



Park View – Cumberland

Figure 100: Cumberland, MD – Park View, Source- Author, 2014



Figure 101: Cumberland, MD – Section Perspective, Source- Author, 2014

Chestertown, MD



Figure 102: Chestertown, MD – Site Location, Source- Author, 2014

The design of the library in Chestertown blends the universal ideas for details with the spatial patterns of Chestertown. From the scale of the city, the library respects the scale of its contexts by bridging the gap between the existing buildings and providing an appropriately sized open space. Analysis determined the location of the formal gathering space to be placed in the front of the building. To reference this pattern the formal forecourt is located in the front of the building while the private garden is located in the rear. The library also signifies its importance by facing the pediment towards the street. In the analysis it was revealed this pattern marks the civic building within Chestertown.

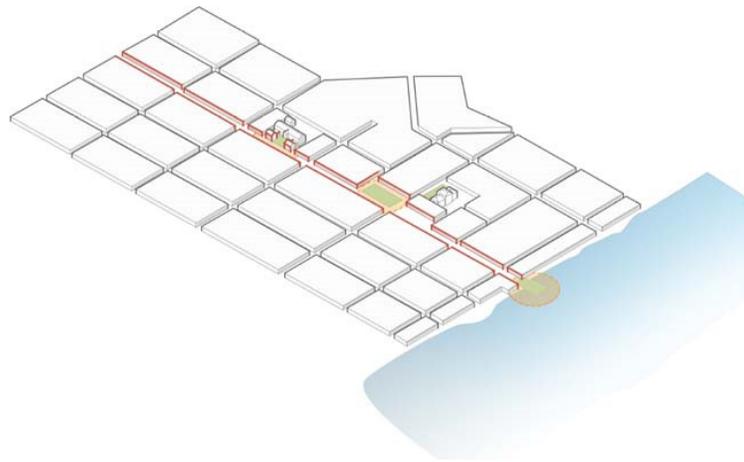


Figure 103: Chestertown, MD – Urban Connection, Source- Author, 2014

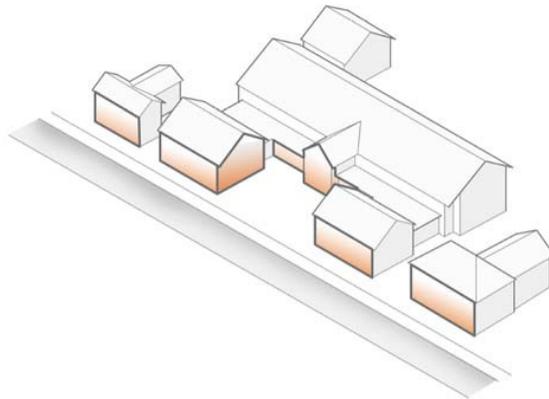


Figure 104: Chestertown, MD – Street walls, Source- Author, 2014

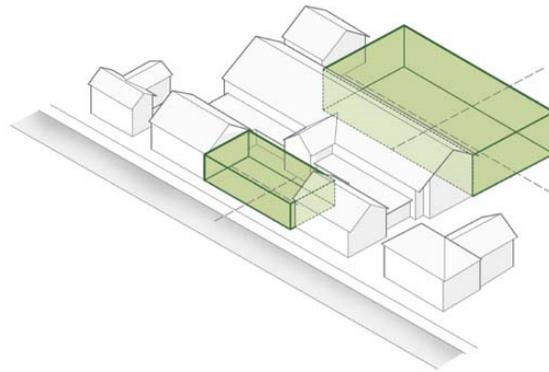


Figure 105: Chestertown, MD – Open Space, Source- Author, 2014

The circulation of the building continues the spatial sequence. The circulation is the connective tissue bonding all the individual rooms of the library together. The connections generate multiple thresholds for the visitor to cross. The most significant threshold is the thickened zone of the study rooms splitting the circulation hall from the main reading space. Figure 113 and 114 shows relationship of the thickened zone to the circulation hall.

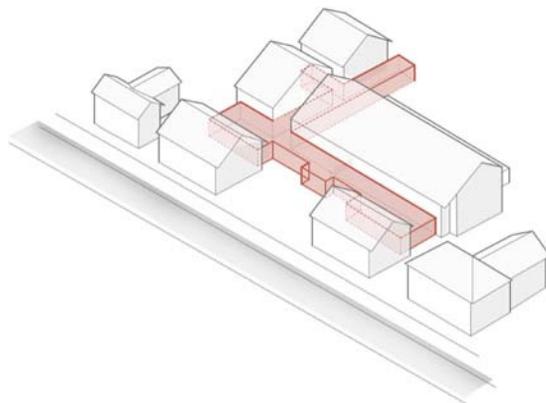


Figure 106: Chestertown, MD – Circulation, Source- Author, 2014

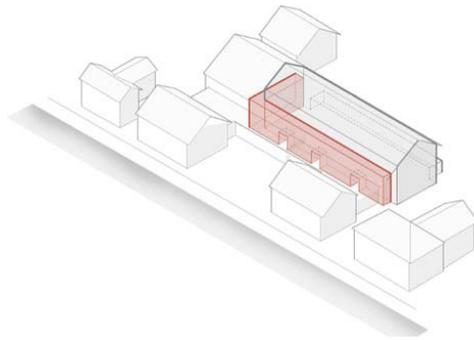


Figure 107: Chestertown, MD – Threshold, Source- Author, 2014

Chestertown has a strong history and association to the boating industry. The influences have extended into the Chestertown festival schedule. New events, such as the Dawnrigging Festival, have been added to acknowledge and preserve the renewed interest in boat craft. The library draws inspiration from the craft of making wooden boats. The design for the columns and stairs specifically reference the tradition of ship building which relates locally to Chestertown and also globally. The columns are designed to resemble a mast of a boat in the way the cross bracing joint is detailed. The library in Chestertown fuses the global tradition of boating craft with the spatial patterns of the town.

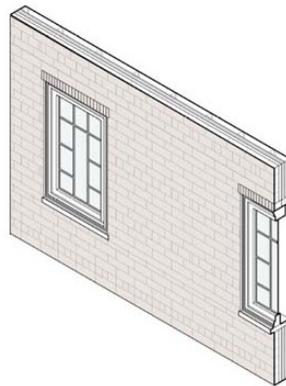


Figure 108: Chestertown, MD – Wall Detail, Source- Author, 2014

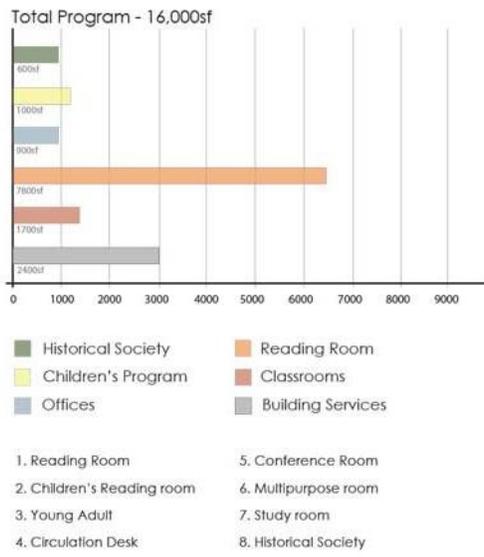


Figure 109: Chestertown, MD – Library Program, Source- Author, 2014



Figure 110: Chestertown, MD – Site Plan, Source- Author, 2014

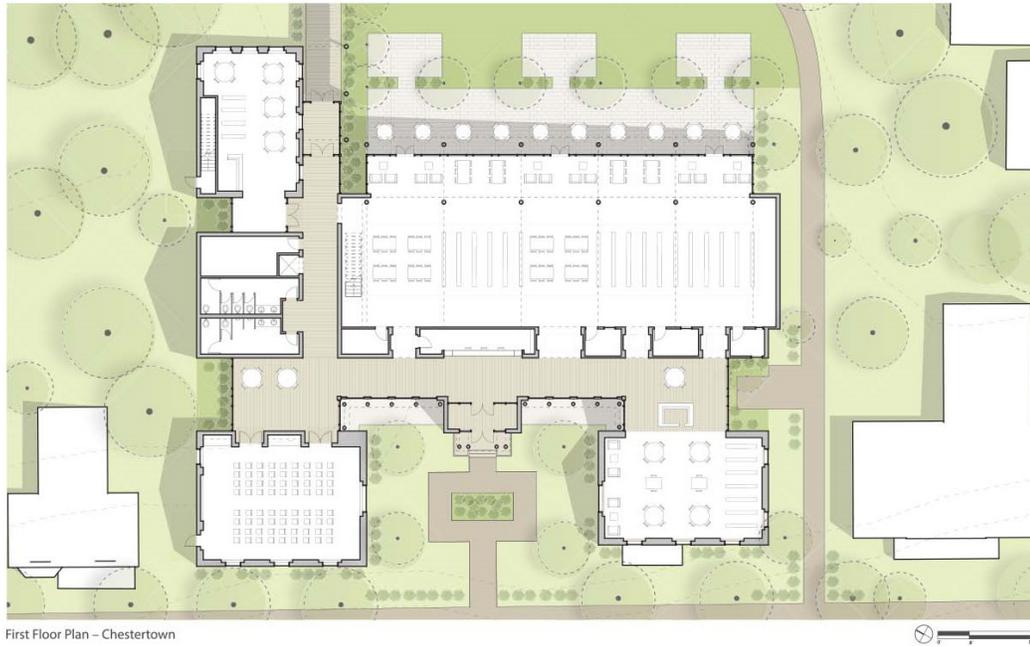


Figure 111: Chestertown, MD – First Floor Plan, Source- Author, 2014

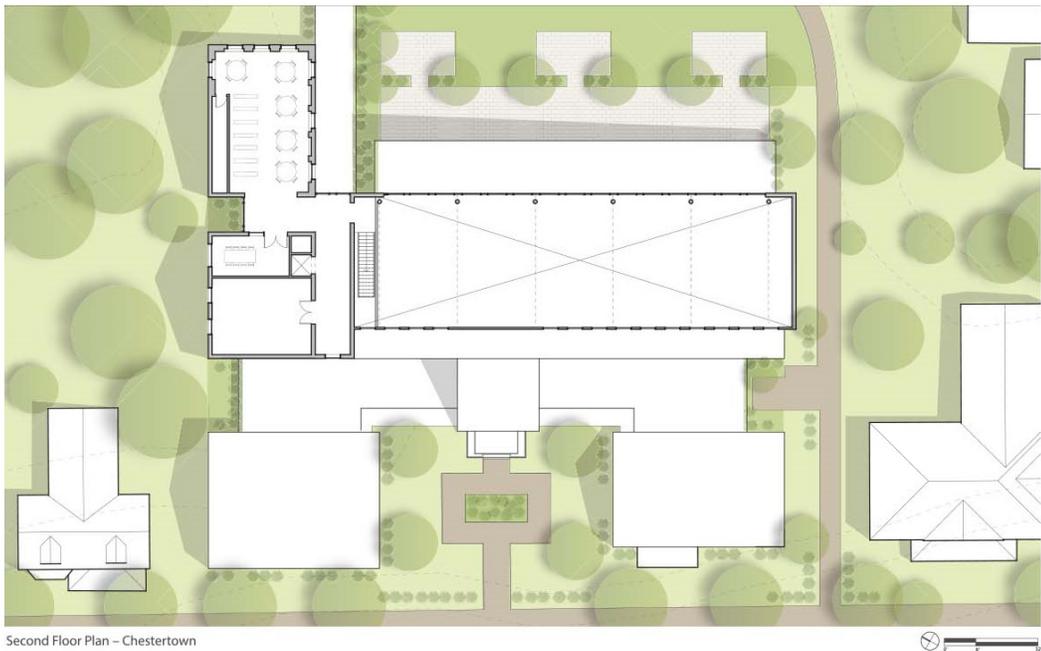


Figure 112: Chestertown, MD – Second Floor Plan, Source- Author, 2014



Reading Room – Chestertown

Figure 113: Chestertown, MD – Reading Room, Source- Author, 2014



Entry Court – Chestertown

Figure 114: Chestertown, MD – Entry Perspective, Source- Author, 2014



High Street Elevation – Chestertown

Figure 115: Chestertown, MD – High Street Elevation, Source- Author, 2014



Figure 116: Chestertown, MD – Section Perspective, Source- Author, 2014

Chapter 8: Conclusion

In the conflict between the “universal” and “local” the question raised how to establish a sustainable culture. A sustainable culture is the integration of universal and local traditions fused into a culture that is reminiscent of the past and yet still looks forward to the future. The identity of a culture is composed of more than physical materials and climatic response. The culture is dependent on the local traditions and values that have shaped its development. The exploration of this thesis unveiled subtle nuanced differences between the three cities. These differences are a result of patterns that are woven into the identity of a culture. The proposed libraries’ design acted as case study into how a building can draw inspiration from the universal while continuing the spatial patterns of a culture. This approach to design illustrates an understanding of the nuanced patterns of a culture, and the dialog they have with the “universal”.

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