

ABSTRACT

Title of Document: RENEWING COMMUNITY IN COLLEGE PARK

Kimberly Kramer, Master of Architecture, 2009

Directed By: Professor Brian Kelly, School of Architecture, Planning and Preservation

The Calvert School served the city of College Park for more than 50 years. Now vacant, the building still sits at the heart of the historic College Park community. Adaptively reusing this well-loved building as a community center will bring new life to the building and site and provide a much-needed center for community activities in College Park. Reusing an existing building will also help to conserve economic and environmental resources, as well as preserving a visual artifact of the history and sense of community that bind the neighborhood. This thesis explores and proposes a variety of approaches to adaptive reuse and building for community, attempting to find a design strategy that suits the building, the site, the community and the proposed program, while balancing aesthetics and functionality with cultural, historical and environmental responsibility.

RENEWING COMMUNITY IN COLLEGE PARK

By

Kimberly Kramer

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
2009

Advisory Committee:
Professor Brian Kelly, Chair
Professor Matthew Bell
Professor B.D. Wortham-Galvin

© Copyright by
Kimberly Kramer
2009

Dedication

To my father, who encouraged me to follow this path, and made it possible.

And to the friends, family and faculty whose support, encouragement and assistance helped me along the way.

Thank you.

Acknowledgements

This thesis would not have been possible without the suggestions, help and advice of many people. I would like to thank:

Brian Kelly, my committee chair, for his steadfast support and enthusiasm and continuous supply of good ideas and new solutions.

B.D. Wortham-Galvin, who shepherded this project along from first concept to final draft, providing a great deal of design guidance, encouragement and emotional support along the way.

Matthew Bell, who offered frank and helpful critiques and advice throughout the design process, and helped me to a deeper understanding of Palladio's work.

Elisa Vitale, Senior Planner for the City of College Park, who helped tremendously with the initial research for this project.

Ben Rivas, also with the City of College Park, for showing me around the Calvert School and helping to look after and maintain the building until it finds a new use.

Table of Contents

Dedication	ii
Acknowledgements	iii
List of Tables	vi
List of Figures	vii
Chapter 1: Adaptive Reuse	1
Cultural benefits	1
Environmental benefits	2
Economic benefits	3
Chapter 2: Site – The Calvert School	5
Description and brief history	5
Surrounding context	6
<i>Current conditions</i>	6
<i>Historical development</i>	14
<i>Future development</i>	16
Site documentation and analysis	21
Building documentation and analysis	31
Chapter 3: Program Analysis	45
Proposed building program	45
Program precedents	49
<i>Gleneagles Community Center</i>	49
<i>Plummer Park Community Center</i>	54
<i>West Street Community Center</i>	57
<i>Proposed Salk Institute Campus Community Center</i>	59
Program development	61
Chapter 4: Architectural Design Strategy	70
Adaptive reuse strategies	70
<i>Physical actions</i>	70
<i>Attitude</i>	71
<i>Matrix of design variables</i>	71
Design strategy precedents	72
<i>Porter House</i>	72
<i>Jim Rouse Visionary Center</i>	73
<i>New York Blood Center</i>	74
Design development	75
<i>Initial schemes</i>	75
<i>Scheme development</i>	80
<i>Scheme synthesis/refinement</i>	86
Design solutions	88
<i>Design solution #1: Town Square</i>	88
<i>Design solution #2: The Lawn</i>	96
<i>Comparative analysis of design solutions</i>	104
Chapter 5: Conclusion	122
Summary of the jury's assessment	122
Response to the jury's critique	125

Conclusions.....	134
------------------	-----

List of Tables

Table 1: Census 2000 age data for 20740 zip code (Author, with data from Census 2000)	61
Table 2: Census 2000 age data for 207xx zip codes (Census 2000).....	62
Table 3: Floor area for proposed program elements (Author).....	66
Table 4: Matrix of design variables (Author)	71
Table 5: Town Square - 5 point summary (Author)	104
Table 6: The Lawn - 5 point summary (Author).....	104
Table 7: Indoor program comparison (Author)	106
Table 8: Outdoor program comparison (Author).....	107
Table 9: Building envelope comparison (Author)	107

List of Figures

Figure 1: Calvert School, College Park, MD (Author)	5
Figure 2: Site timeline (Author, images from The First Twenty-Five Years of the City of College Park)	6
Figure 3: Relationship of site to Washington, DC (Live Search Maps)	7
Figure 4: Local context (Live Search Maps)	8
Figure 5: Walking radii from site (Author, base image from Google Maps)	9
Figure 6: Landmarks (Author, base image from Google Maps).....	9
Figure 7: Community resources (Author, base image from Google Maps)	10
Figure 8: Parks and playgrounds (Author, base image from Google Maps)	11
Figure 9: Main transportation routes around site (Author, base image from Google Maps)	12
Figure 10: Figure-ground diagram of site and surrounding area (Author)	13
Figure 11: Land use diagram of site and surrounding area (Author).....	13
Figure 12: Sketchup model of site (Author, base image from Google Maps).....	14
Figure 13: 1939 Sanborn map (with 1959 update) (1939-1959 Sanborn map)	15
Figure 14: Historic vs. Current figure-ground diagrams (Author, historic base map from 1939 Sanborn map)	16
Figure 15: Draft illustrative concept plan for Route 1 (Prince George’s County Planning Board)	17
Figure 16: Detail of Route 1 draft illustrative concept plan (Prince George’s County Planning Board)	17
Figure 17: Major planned developments around site (Author, base image from Google Maps)	18
Figure 18: East Campus Redevelopment Initiative – The Vision (East Campus Redevelopment Initiative) [the Calvert School site is located off of this map].....	19
Figure 19: East Campus Redevelopment Initiative – Master Plan (East Campus Redevelopment Initiative) [the Calvert School site is located off of this map].....	20
Figure 20: Cafritz site development plan (Ehrenkrantz, Eckstut & Kuhn Architects).....	21
Figure 21: Site plan (Author).....	22
Figure 22: Existing trees on site (Author).....	23
Figure 23: Site topography (Author, based on information from a U.S. Geological Survey GIS map).....	24
Figure 24: Historical water path (Author, based on information from the 1939 Sanborn Map).....	24
Figure 25: View to site from the northwest (Author)	25
Figure 26: View to site from the northeast (Author)	26
Figure 27: View to site from the southwest (Author)	27
Figure 28: View to site from the southeast (Author)	27
Figure 29: View from site to the southwest (Author)	28
Figure 30: View from site to the southeast (Author)	29
Figure 31: View from site to the north (Author).....	30
Figure 32: View from site to the northwest (Author)	30
Figure 33: Building elevation – north (Author).....	32

Figure 34: Building elevation – south (Author).....	32
Figure 35: Building elevation – west (Author)	32
Figure 36: Building elevation – east (Author)	32
Figure 37: Materiality – Calvert School building (Author).....	33
Figure 38: Materiality – surrounding context (Author)	33
Figure 39: Calvert School upper level floor plan (College Park city engineer)	35
Figure 40: Calvert School lower level floor plan (College Park city engineer)	35
Figure 41: Calvert School addition floor plan (College Park city engineer)	36
Figure 42: CAD drawing of Calvert School upper level floor plan (Author).....	36
Figure 43: CAD drawing of Calvert School lower level floor plan (Author).....	37
Figure 44: CAD drawing of Calvert School addition floor plan (Author)	37
Figure 45: Interior photo – main hallway (Author)	38
Figure 46: Interior photo – staircase (Author)	39
Figure 47: Interior photo – main hallway of 1954 addition (Author).....	40
Figure 48: Interior photo – upper level classroom (Author).....	41
Figure 49: Interior photo – classroom in 1954 addition (Author)	41
Figure 50: Interior photo – lower level (Author)	42
Figure 51: Calvert Hills playground (Author)	43
Figure 52: Calvert Hills playground – jungle gym (Author)	43
Figure 53: Calvert Hills playground – basketball court and play field (Author).....	44
Figure 54: Map showing site in relation to Old Town and Calvert Hills neighborhoods (Author, base image of City of College Park by Charles P. Johnson & Associates)..	45
Figure 55: College Park city hall (The Historical Marker Database)	46
Figure 56: Current location of city hall (Author).....	47
Figure 57: Aerial view of city hall (Google Maps).....	47
Figure 58: Entrance to city hall from town center (Google Maps street view)	48
Figure 59: Calvert School building - civic façade (Author)	48
Figure 60: Gleneagles Community Center - building section (Patkau Architects)	49
Figure 61: Gleneagles Community Center – exterior (Patkau Architects)	50
Figure 62: Gleneagles Community Center – exterior (Patkau Architects)	51
Figure 63: Gleneagles Community Center – gymnasium (Patkau Architects).....	52
Figure 64: Gleneagles Community Center – lower level plan (Patkau Architects)....	53
Figure 65: Gleneagles Community Center – main level plan (Patkau Architects)....	53
Figure 66: Gleneagles Community Center – upper level plan (Patkau Architects)....	53
Figure 67: Plummer Park Community Center – exterior (Koning Eizenberg Architecture)	56
Figure 68: Plummer Park Community Center – site plan (Koning Eizenberg Architecture)	56
Figure 69: West Street Community Center – exterior perspective	58
Figure 70: Proposed Salk Institute campus community center – program (ACSA)...	60
Figure 71: Parking options near the Calvert School site (Author).....	65
Figure 72: Proposed program (Author).....	67
Figure 73: Program analysis – proposed vs. existing sf (Author).....	68
Figure 74: Analysis of proposed program (Author)	69
Figure 75: Porter House (SHoP architects).....	72

Figure 76: Wood timber structure reused as space divider (Cho Ben Hollback + Assoc.)	73
Figure 77: Barrel staves reused as interior walls (Cho Ben Hollback + Assoc.).....	74
Figure 78: New York Blood Center (Ehrenkrantz, Eckstut & Kuhn).....	74
Figure 79: Initial scheme –Addition (Author)	75
Figure 80: Initial schemes – Subtraction, 1 st floor (Author)	76
Figure 81: Initial schemes - Subtraction, 2 nd floor (Author).....	76
Figure 82: Initial schemes - Alteration, 1 st floor (Author).....	77
Figure 83: Initial schemes - Alteration, 2 nd floor (Author).....	77
Figure 84: Initial schemes - Alteration 2, 1 st floor (Author).....	78
Figure 85: Initial schemes - Alteration 2, 2 nd floor (Author).....	78
Figure 86: Initial schemes - Recombination, 1 st floor (Author).....	79
Figure 87: Initial schemes - Recombination, 2 nd floor (Author).....	79
Figure 88: The Walk (Author)	80
Figure 89: The Walk/The Quad (Author)	81
Figure 90: Porches (Author)	82
Figure 91: Town Square (Author).....	83
Figure 92: The Lawn 1 (Author).....	84
Figure 93: The Lawn 2 (Author).....	85
Figure 94: Scheme development - The Lawn (Author)	86
Figure 95: Scheme development - Town Square (Author)	86
Figure 96: Scheme synthesis/refinement - drawings (Author)	87
Figure 97: Scheme synthesis/refinement - models (Author)	87
Figure 98: Design solution #1- Town Square (Author)	88
Figure 99: Perspective of town square (Author).....	89
Figure 100: Town Square - urban implications (Author)	90
Figure 101: Town Square - aerial views with city context (Author)	90
Figure 102: Town Square - first floor plan (Author)	91
Figure 103: Town Square - second floor plan (Author)	91
Figure 104: The Walk (Author)	92
Figure 105: Semi-private courtyard (Author)	93
Figure 106: Gymnasium with visual and physical connections to courtyard green space (Author).....	93
Figure 107: Gateway - entry to courtyard and connection between old and new (Author).....	94
Figure 108: View from Calvert Road (Author)	94
Figure 109: Entrance to semi-private courtyard (Author)	95
Figure 110: Design solution #2 - The Lawn (Author)	96
Figure 111: Lawn scheme aerial perspective (Author).....	97
Figure 112: View from Calvert Road (Author)	97
Figure 113: Park space, with view toward the lawn (Author)	98
Figure 114: Central lawn lined with colonnade (Author).....	98
Figure 115: Partial section of central lawn space and surrounding two-story colonnade (Author)	98
Figure 116: Second level of colonnade and connection to town assembly room (Author).....	99

Figure 117: Outdoor porch at second level (Author).....	99
Figure 118: The Lawn – iconic portion of existing building (Author)	100
Figure 119: Possible evidence that the “tail” of the historic building was a later addition (Author)	101
Figure 120: The Lawn – aerial views with city context (Author).....	102
Figure 121: The Lawn - first floor plan (Author)	103
Figure 122: The Lawn - second floor plan (Author).....	103
Figure 123: Town Square - 5 point summary (Author)	105
Figure 124: The Lawn - 5 point summary (Author)	105
Figure 125: Brick reuse - Town Square (Author)	108
Figure 126: Brick reuse - The Lawn (Author)	109
Figure 127: Existing trees on site (Author).....	109
Figure 128: Maintenance of existing trees - Town Square (Author)	110
Figure 129: Maintenance of existing trees - The Lawn (Author)	110
Figure 130: Program elements – key (Author)	112
Figure 131: Location of program elements – Town Square, Floors 1 & 2 (Author)	112
Figure 132: Location of program elements – The Lawn, Floor 1 (Author).....	113
Figure 133: Location of program elements – The Lawn, Floor 2 (Author).....	113
Figure 134: Access to daylight, program requirements – key (Author)	114
Figure 135 Access to daylight – Town Square, Floors 1 & 2 (Author).....	114
Figure 136: Access to daylight – The Lawn, Floor 1 (Author)	115
Figure 137: Access to daylight – The Lawn, Floor 2 (Author)	115
Figure 138: Noisy/quiet spaces- key (Author).....	116
Figure 139: Arrangement of noisy/quiet spaces - Town Square, Floors 1 & 2 (Author)	116
Figure 140: Arrangement of noisy/quiet spaces – The Lawn, Floor 1 (Author)	117
Figure 141: Arrangement of noisy/quiet spaces – The Lawn, Floor 2 (Author)	117
Figure 142: Public/private spaces – key (Author)	118
Figure 143: Arrangement of public/private spaces - Town Square, Floors 1 & 2 (Author).....	118
Figure 144: Arrangement of public/private spaces, The Lawn, Floor 1 (Author)....	119
Figure 145: Arrangement of public/private spaces, The Lawn, Floor 2 (Author)....	119
Figure 146: Served/Servant spaces – key (Author)	120
Figure 147: Arrangement of served/servant spaces - Town Square, Floors 1 & 2 (Author).....	120
Figure 148: Arrangement of served/servant spaces - The Lawn, Floor 1 (Author)..	121
Figure 149: Arrangement of served/servant spaces - The Lawn, Floor 2 (Author)..	121
Figure 150: Town Commons - new land use map (Author)	125
Figure 151: The Lawn - front and back (Author)	126
Figure 152: Sectional study of lawn (Author)	127
Figure 153: 3d representation of Lawn space (Author)	127
Figure 154: 3d representation Lawn space with increased height (Author)	127
Figure 155: Diagram of connections between indoor and outdoor programmed spaces - Town Commons (Author)	129
Figure 156: Diagram of connections between indoor and outdoor programmed spaces – The Lawn (Author)	130

Figure 157: Schematic exploration of relaxed geometries – Town Commons 1 (Author).....	131
Figure 158: Schematic exploration of relaxed geometries – Town Commons 2 (Author).....	131
Figure 159: Schematic exploration of relaxed geometries – The Lawn 1 (Author) .	132
Figure 160: Schematic exploration of relaxed geometries – The Lawn 2 (Author) .	133
Figure 161: Schematic exploration of relaxed geometries – The Lawn 3 (Author) .	133
Figure 162: Schematic exploration of combined scheme (Author)	135

Chapter 1: Adaptive Reuse

Adaptive Reuse is the process of adapting existing structures for new uses.¹

There are many reasons for property owners and developers to reuse existing structures rather than building new. These reasons generally fall into three main categories: Cultural, Environmental, and/or Economic.

Cultural benefits

Existing structures are repositories of valuable cultural resources. Older structures embody a link to the past, both in terms of architectural design and the history of people, places and events that become associated with them over time. The continued presence of these structures in a town or city maintains this link and provides a sense of continuity in a built fabric that is constantly changing.

The cultural value of this built heritage has been codified in laws that protect historic structures, from the National Historic Preservation Act² to state and local preservation ordinances. The Supreme Court has upheld the right of individuals to use such laws to protect their “aesthetic, conservational, and recreational” values.³ However, these recognized cultural benefits are not limited to structures that would generally be considered architecturally or historically significant. Every structure that has already been built has some cultural significance in terms of the forces that led to its creation, the style of its design, and the experiences of the people who have interacted with it. By preserving the culturally valuable aspects of these existing

¹ Wikipedia, “Adaptive Reuse,” http://en.wikipedia.org/wiki/Adaptive_reuse.

² Advisory Council on Historic Preservation, “National Historic Preservation Act of 1966,” <http://www.achp.gov/docs/nhpa%202008-final.pdf>.

³ *Sierra Club v. Morton*, 405 U.S. 727 (1972).

structures, property owners and developers can maintain that link to the past and retain the structure as a landmark even when it is necessary to make changes to meet new needs or to improve the structure's performance or appearance.

Environmental benefits

In addition to their value as repositories of cultural resources, existing structures also represent an investment of environmental resources. As we face a number of man-made environmental problems from ozone damage and global warming to the destruction of forests and habitats, we must think critically about how we will use the limited environmental resources that we have available to us. New building construction is a significant drain on these limited resources. The National Resources Defense Council (NRDC) reports that the wood used to build an average new American home is the equivalent of roughly three-quarters of an acre of forest.⁴ Half of the world's forests are now gone, they report, and more than 30 million acres more are lost every year.⁵ The demand for wood to build new houses fuels much of the destructive logging around the world.⁶

The demolition of existing structures is also a strain on the environment. The US Department of Energy (DOE) reports that the demolition of existing buildings creates 64.8 million tons of debris in the US per year.⁷ This demolition waste is typically sent unsorted to a landfill, wasting the energy that has already been

⁴ Natural Resources Defense Council, "How to Build a Better Home," <http://www.nrdc.org/cities/building/fwoodus.asp>.

⁵ Natural Resources Defense Council, "Forests," <http://www.nrdc.org/land/forests/default.asp>.

⁶ Natural Resources Defense Council, "How to Build a Better Home," <http://www.nrdc.org/cities/building/fwoodus.asp>.

⁷ Buildings Energy Data Book: September 2008, "1.4.14: 1996 Construction and Demolition Debris Generated from Construction Activities and Debris Generation Rates," U.S. Department of Energy, <http://buildingsdatabook.eere.energy.gov/>.

embodied in those materials through the extraction, manufacturing, shipping and building processes. Typical existing concrete column and beam assemblies, for example, have roughly 0.13MMBtu/sf of embodied energy, according to the DOE's calculations.⁸ This translates to about 20.17 pounds of CO2 equivalent emissions per square foot.⁹ If these materials are not recycled and reused, this embodied energy is simply wasted. Further, this demolition often simply makes way for new building construction which will create demand for even more resources.

Adaptively reusing existing structures, rather than building new, honors the investment of environmental resources that has already been made in those structures and reduces the demand for new building materials and greenfield sites. Like cultural value, these environmental resources are embodied by all existing buildings, not just those that have been identified as architecturally or historically significant.

Economic benefits

Property owners can also often realize an economic benefit from adaptively reusing an existing structure rather than building new. David Clark, who often works professionally with property owners making decisions about reuse, argues that "the most important factor in the decision to reuse is cost."¹⁰ The economic reality is that no matter how important existing buildings are as cultural and environmental resources, if reuse cannot be a profitable venture, it is much less likely to be pursued.

⁸ Buildings Energy Data Book: September 2008, "1.6.8: Embodied Energy of Column and Beam Assemblies in the U.S.," U.S. Department of Energy, <http://buildingsdatabook.eere.energy.gov/>.

⁹ Ibid.

¹⁰ David Clark, "Adaptive Reuse," *APT DC Newsletter*, Summer 2006, http://apt.dc.org.googlepages.com/Newsletters/SUMMER2006_.pdf.

He explains that there are, however, many cost advantages to reusing an older structure:

To begin with, there are lower establishment costs. There is little to no demolition required, land acquisition is often less expensive, and many if not all of the required utilities and services are already connected and may only need modernization. There are additional savings in the fact that the structure is already in place. Materials and their corresponding erection costs have already been accounted for.¹¹

Adaptive reuse projects may also be eligible for federal, state and/or local historic preservation tax credits.¹² The Structural Group, a company that often works on adaptive reuse projects, explains on its website that:

A common misconception is that it's more cost-efficient to tear down an old building and build a new structure. However, new construction - especially if the building is in a historic district - may fall under a set of building regulations that could have a financial impact on construction.¹³

In such a case, they conclude, it can be “much more cost-effective to preserve and adapt the existing structure to its new purpose.”¹⁴

¹¹ David Clark, “Adaptive Reuse,” *APT DC Newsletter*, Summer 2006, http://apt.dc.org.googlepages.com/Newsletters/SUMMER2006_.pdf.

¹² Ibid.

¹³ Design Cost Data E-News, “Preserving the Past: Historic Repair Requires Informed Approach”, Structural Group, <http://www.structural.net/Article/tabid/434/contentid/176/Default.aspx>.

¹⁴ Ibid.

Chapter 2: Site – The Calvert School

Description and brief history

The Calvert School (Figure 1) is located at 4601 Calvert Road, in College Park, Maryland. The building was originally built in 1938 to serve as an elementary school for the rapidly growing neighborhood.¹⁵ A later addition to the school was added in 1954. The building served the neighborhood as a school for more than 50 years, first as a public school, then as the Friends' Community School. Now vacant, the building still sits at the heart of the historic College Park community.



Figure 1: Calvert School, College Park, MD (Author)

¹⁵ Digital Sanborn Map Collection, “1939 Sanborn map,” University of Maryland Libraries, <http://sanborn.umi.com.proxy-um.researchport.umd.edu/> and Charles R. Davis, *The First Twenty-Five Years of the City of College Park*, (Publishing information not available).

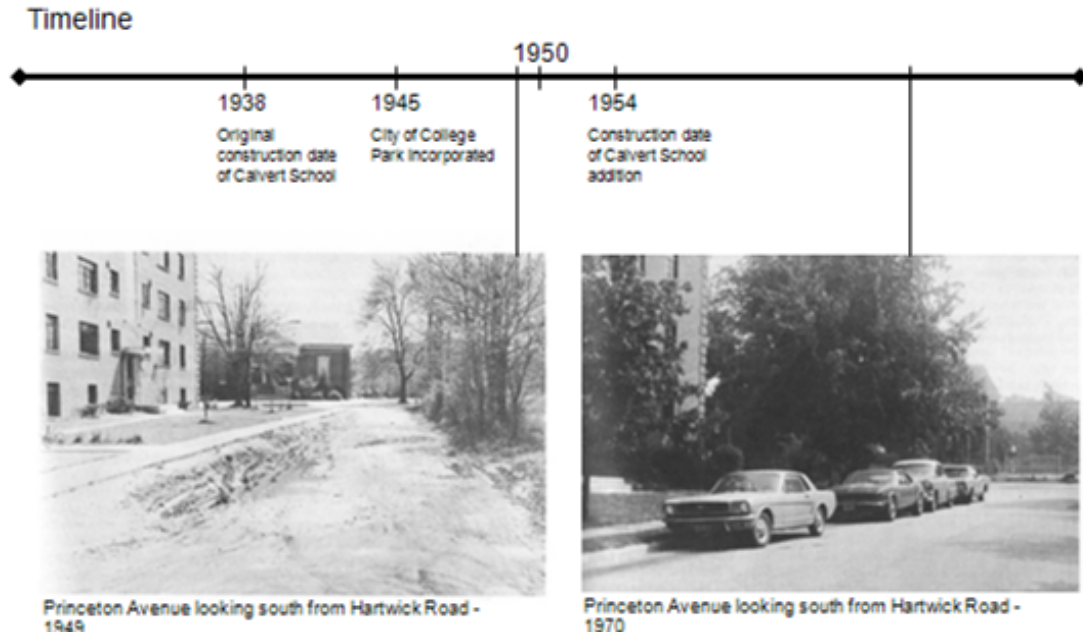


Figure 2: Site timeline (Author, images from *The First Twenty-Five Years of the City of College Park*)

Surrounding context

Current conditions

The Calvert School site is located in College Park, MD, a suburb of Washington, DC. College Park is about 9 miles NE from the center of the city, just inside the Beltway. (Figure 3) The site is located in the center of the residential neighborhood of Calvert Hills. It is also very close to the main University of Maryland campus in College Park, though it is separated from the campus by Route 1, a major north-south artery. (Figure 4)

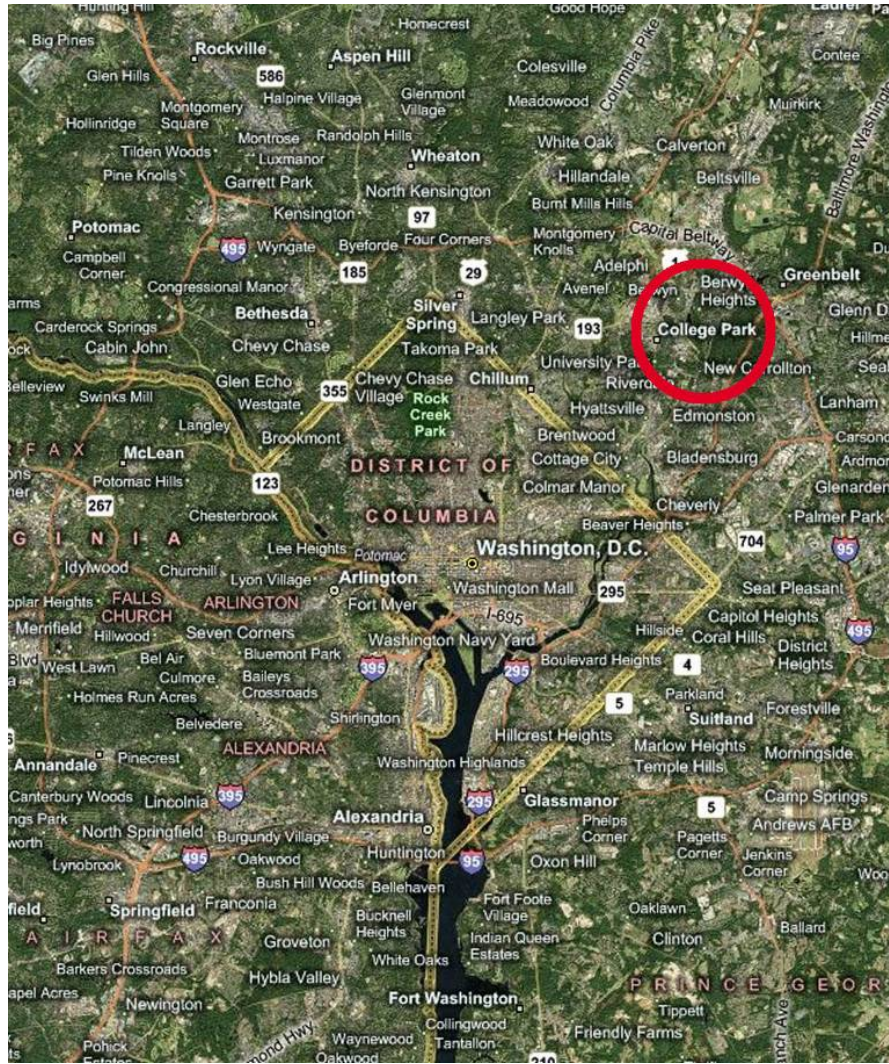


Figure 3: Relationship of site to Washington, DC (Live Search Maps)

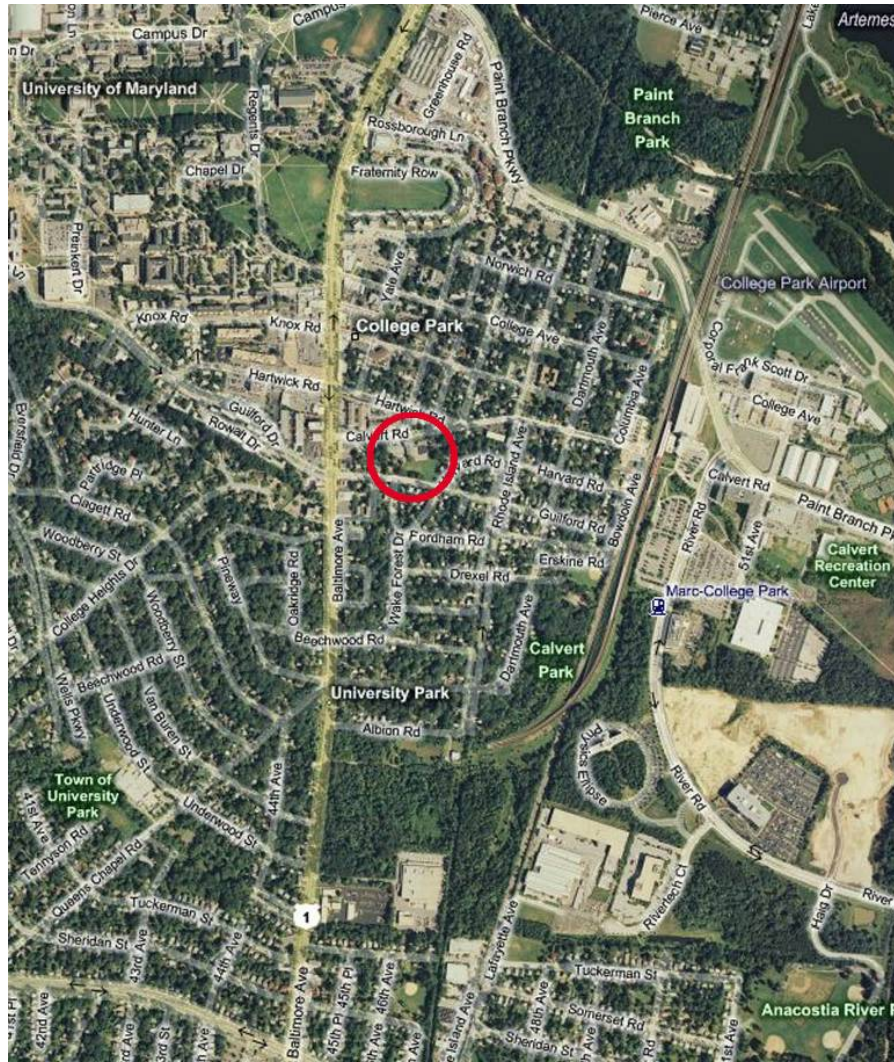


Figure 4: Local context (Live Search Maps)

Most of the Calvert Hills neighborhood, as well as a number of student residences, are located within $\frac{1}{4}$ mile of the Calvert School site. (Figure 5) The commercial center of College Park is also within $\frac{1}{4}$ mile of the site, and a few other local landmarks are located within a $\frac{3}{4}$ mile radius. The Metro/MARC station is less than $\frac{1}{2}$ mile from the site, as is the southeast corner of the University of Maryland College Park campus. The central campus “Mall” is located within $\frac{3}{4}$ mile of the site. (Figure 6)

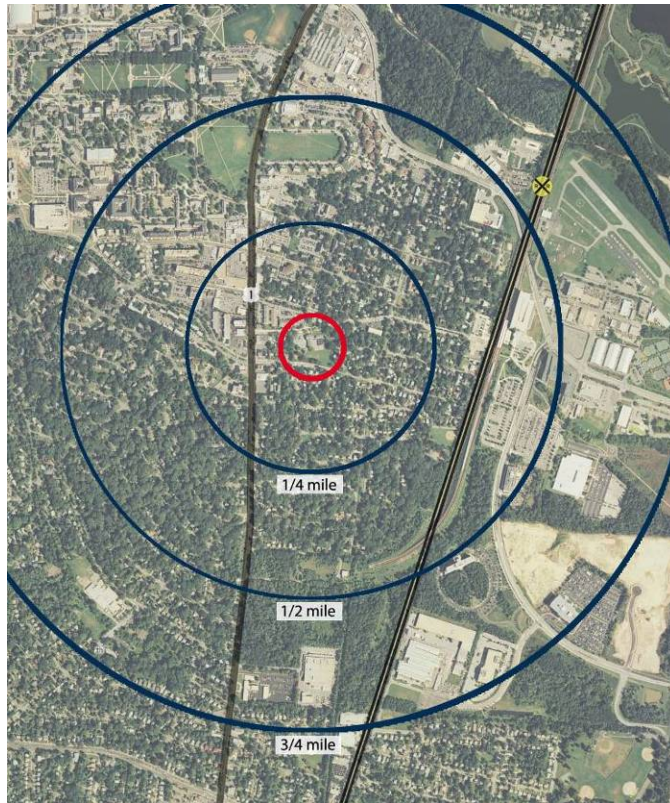


Figure 5: Walking radii from site (Author, base image from Google Maps)

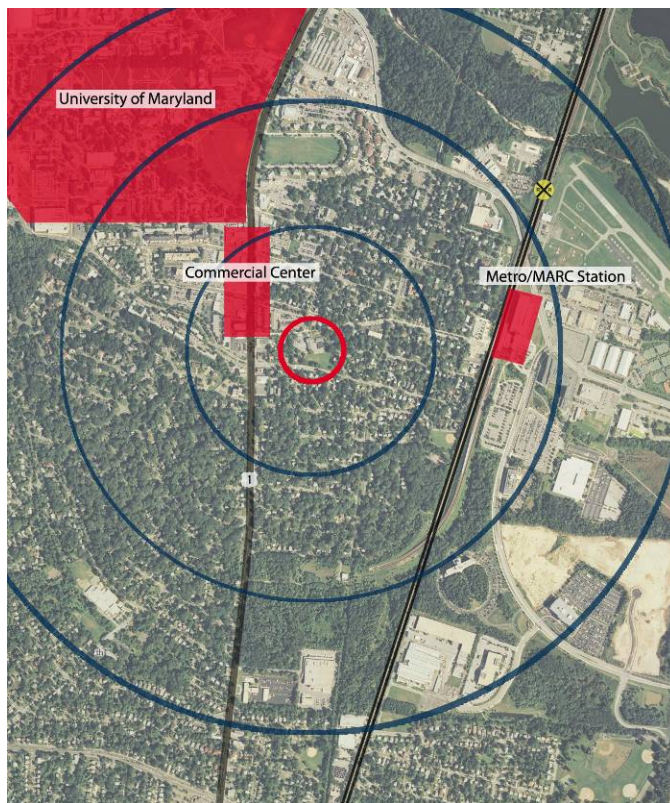


Figure 6: Landmarks (Author, base image from Google Maps)

A number of community resources are also located within walking distance of the Calvert School site. (Figure 7) The College Park city hall is located within $\frac{1}{4}$ mile of the site. Most of the other community resources in the area are located on the opposite side of the railroad tracks, between $\frac{1}{2}$ - $\frac{3}{4}$ mile from the site. These include the Aviation museum and sports facilities such as tennis courts and the Calvert Recreation Center. The recreation center houses a swimming pool and ice rink, and serves as the site of a weekly farmers' market.

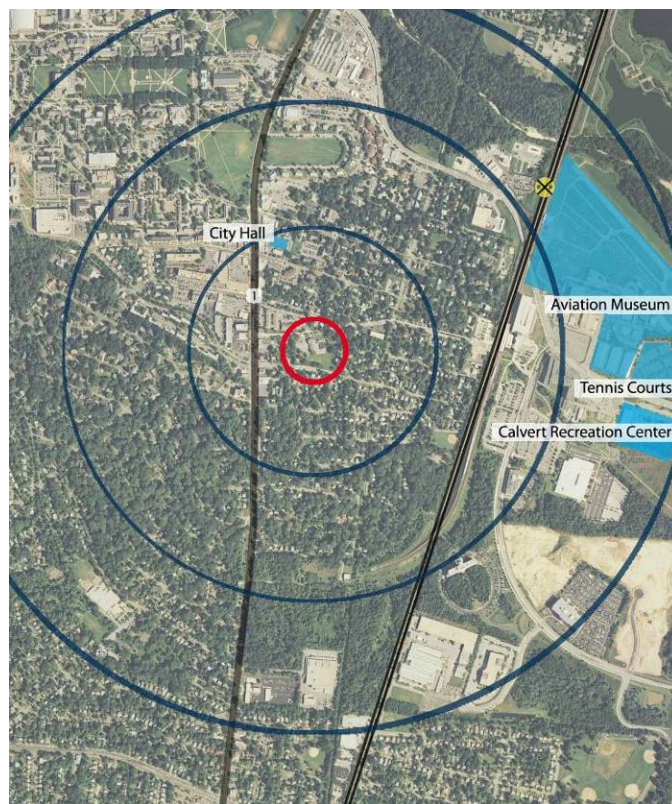


Figure 7: Community resources (Author, base image from Google Maps)

In addition to these community resources, there are also a number of parks and playgrounds within walking distance of the site. (Figure 8) There is a playground and a large play field located on the site itself and Calvert Park and another playground are located within $\frac{1}{2}$ mile of the site. Three larger parks (Paint Branch

Park, Lake Artemesia and the Anacostia River Park) are located within $\frac{3}{4}$ - 1 mile of the site.



Figure 8: Parks and playgrounds (Author, base image from Google Maps)

Route 1 is the main north-south road through College Park. It goes south to the city and north to the Beltway and beyond, and has a fairly heavy traffic flow. The other major automobile route near the site is Calvert Rd., which runs east-west directly in front of the school building, connecting Route 1 to the Metro/MARC station. This road gets more traffic than the quiet neighborhood roads that surround it because it is the most direct connection from Route 1 to the station. The Rhode Island Ave. walking/biking trail also runs north-south, crossing over Calvert Rd. at about its mid-point. (Figure 9) Traffic-calming measures have been put in place to ensure that this crossing is pedestrian-friendly.

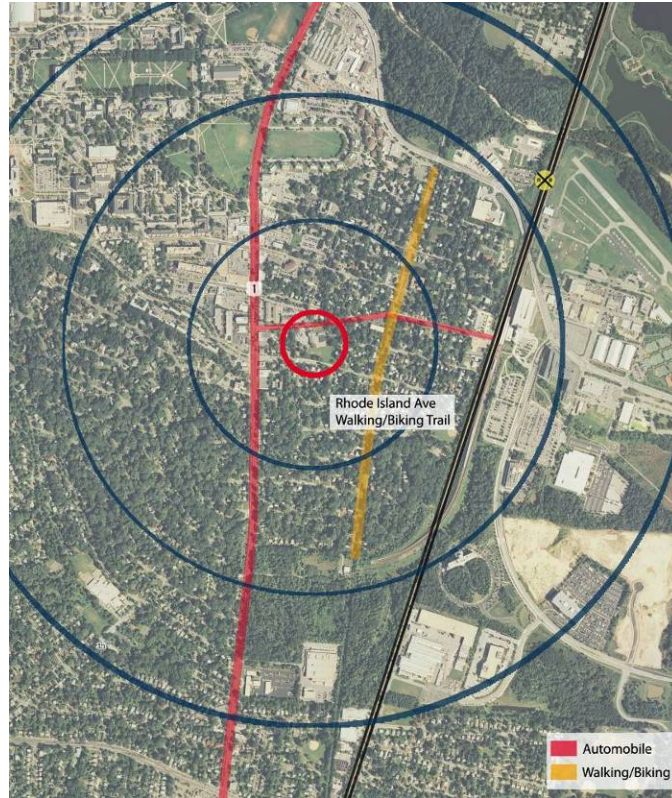


Figure 9: Main transportation routes around site (Author, base image from Google Maps)

A figure-ground diagram of the site and surrounding area (Figure 10) shows that the Calvert School building and site are both fairly large compared to the immediate context. While there are larger buildings clustered along Route 1, the school building is surrounded by small houses. This context lends an additional sense of importance to the building since, from the site, it reads as the only civic-scale building in a field of single-family houses.

A land use diagram of the same area (Figure 11) highlights similar aspects of the surrounding context. The Calvert School building and site are clearly located in a primarily residential neighborhood. However, the site is also very close to the retail area on either side of Route 1. The only other civic-scale buildings in this area are the University of Maryland buildings to the north, approximately 4 blocks away.

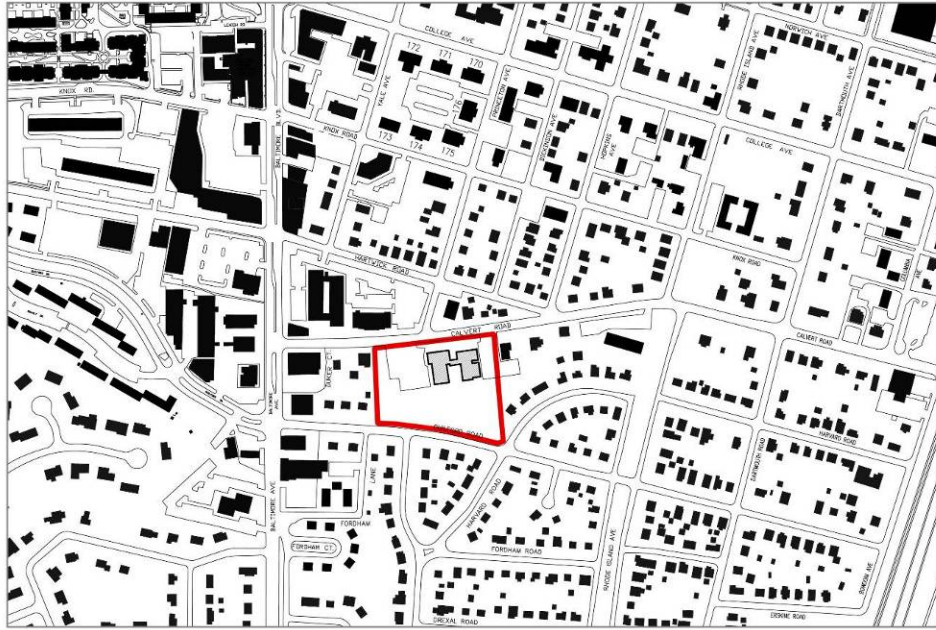
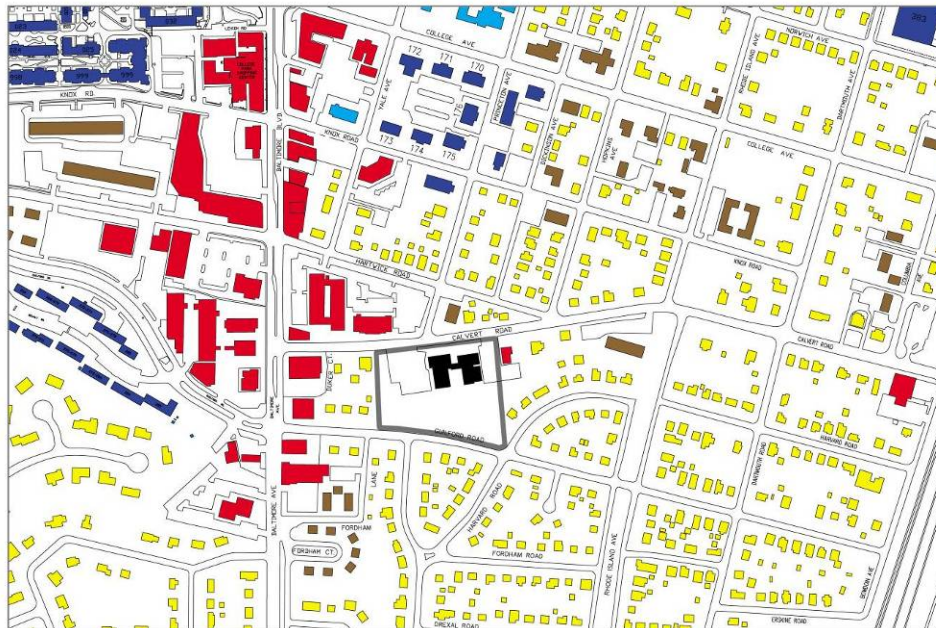


Figure 10: Figure-ground diagram of site and surrounding area (Author)



- Retail/Commercial
- Single-family residential
- Multi-family residential
- Civic/Public
- Institutional (U of MD)
- Vacant

Figure 11: Land use diagram of site and surrounding area (Author)

A digital 3D model of the site and surrounding area (Figure 12) shows the character of the building fabric around the site. Note the fairly low-density residential development surrounding the site, and the increase in density along Route 1.



Figure 12: Sketchup model of site (Author, base image from Google Maps)

To the south and east, the site is bordered by typical 1940s-50s-style single-family housing. To the north, it is bordered by a mix of single-family housing, multi-family apartment buildings and retail development.

Historical development

In 1939, the Sanborn Insurance Company created a map of this area which shows each building, its lot, and a bit of information about the construction materials used. (Figure 13) Because the map was updated in 1959, it shows both the original school building and the later addition. The map identifies the school building as the “College Park School.” The original section of the building is labeled “Built 1938, wood trusses.” The addition is labeled “Noncomb. 1954, conc. fl. gyp. rf, on steel joists, cin. bl., br. faced walls, susp’d ceil’g”. A close examination of the map shows

that the front (northern) portion of the addition was actually built in 1952. There is a note on this section of the map that says “Cin. bl., br. faced, built 1952”. This map also shows the original path of the stream that ran through this area, directly through the site. This stream is now contained underground.



Figure 13: 1939 Sanborn map (with 1959 update) (1939-1959 Sanborn map)

The Sanborn map provides a snapshot of the built context around the school as of the time of the last update in 1959. A comparison of the 1959 and 2009 figure-ground diagrams shows that the built context surrounding the Calvert School building and site has changed very little over this time. (Figure 14) The main difference is that the 2009 map shows some additional build-up along Route 1.



Figure 14: Historic vs. Current figure-ground diagrams (Author, historic base map from 1939 Sanborn map)

Future development

In December 2008, the Prince George's County Planning Board held a public Design and Development Charrette. One of the products of this charrette was a draft illustrative concept plan for Route 1. (Figure 15) The proposed future changes focus mostly on an increase and improvement in the retail buildings lining both sides of Route 1. The Calvert School is located at the very southern end of the area being considered in this plan. A close-up view of the Route 1 draft illustrative concept plan (Figure 16) shows that while the Calvert School building is close to some of the proposed changes, it is outside of the area of consideration. No changes are planned to its immediate context.



Figure 15: Draft illustrative concept plan for Route 1 (Prince George's County Planning Board)



Figure 16: Detail of Route 1 draft illustrative concept plan (Prince George's County Planning Board)

Two major future building developments are planned for the area around the Calvert School site. Both are located within $\frac{3}{4}$ mile of the site. (Figure 17) The East Campus development to the north of the site is a University of Maryland project that is currently moving through the permitting and community review process. (This planned development is included in the Route 1 draft illustrative concept plan shown in Figure 15 and Figure 16.) The Cafritz Site, to the south of the Calvert School site, is a private development. It is currently on hold due to zoning permit denials. If completed, these two planned developments will serve as caps at the north and south end of the Rhode Island Ave. walking/biking trail. This trail, located along the path of the trolley which used to connect College Park to Washington, DC, also passes close to the Calvert School site (about $\frac{1}{8}$ mile from the site).

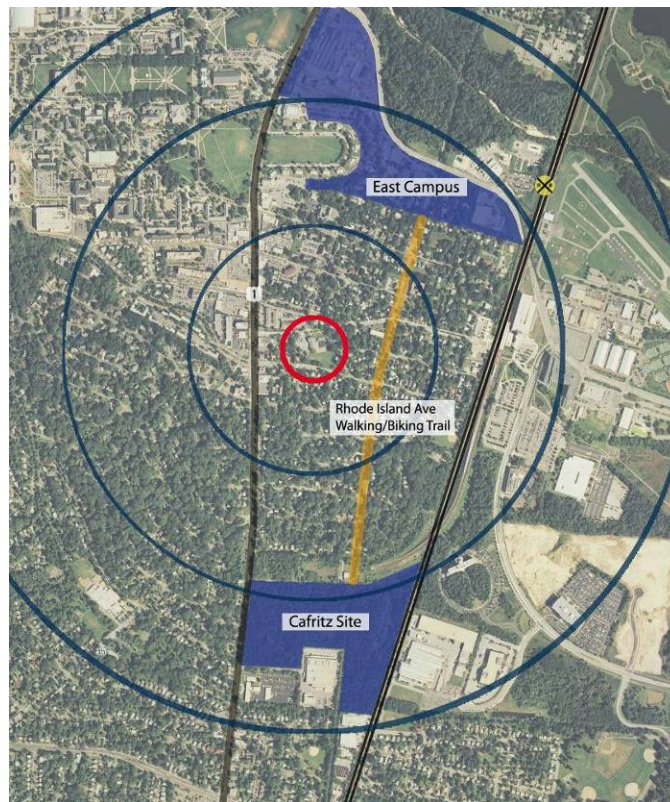


Figure 17: Major planned developments around site (Author, base image from Google Maps)

Figure 18 shows the vision behind the proposed East Campus redevelopment initiative. The concept is to bring some of the campus community across Route 1. This is land that is already owned by the University, but it currently contains just scattered support facilities. The East Campus site plan (Figure 19) shows the proposed phasing of the project, as well as proposed land uses. The first phase of the plan envisions a combination of retail and housing, along with a light rail transit station. The second phase focuses mostly on student housing.

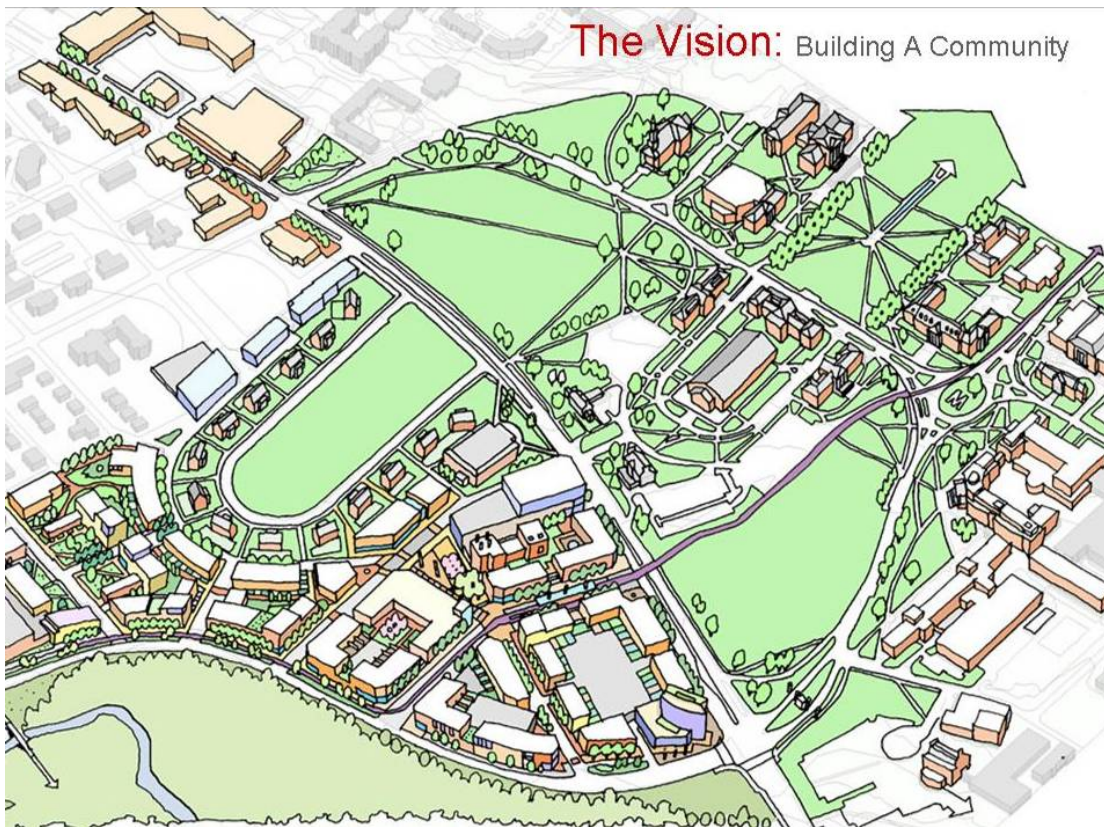


Figure 18: East Campus Redevelopment Initiative – The Vision (East Campus Redevelopment Initiative) [the Calvert School site is located off of this map]

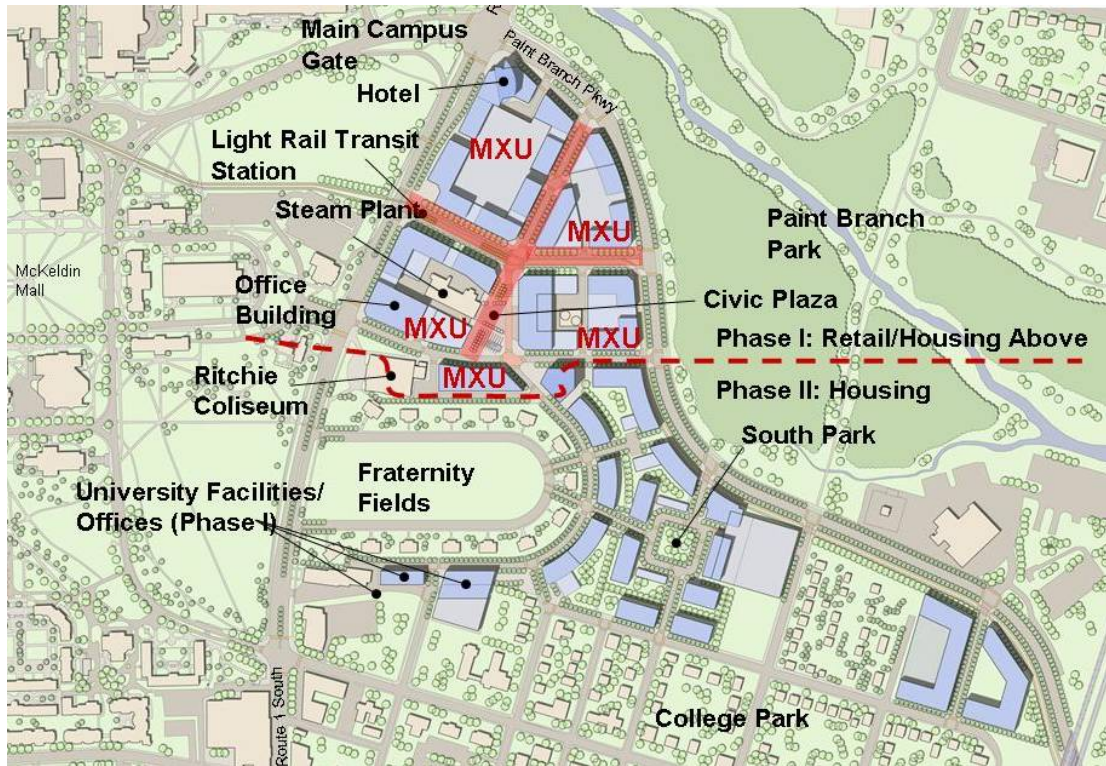


Figure 19: East Campus Redevelopment Initiative – Master Plan (East Campus Redevelopment Initiative) [the Calvert School site is located off of this map]

The Cafritz site is located to the south of the Calvert School site, between three small-scale residential neighborhoods: Calvert Hills, University Park and Riverdale Park. The design proposal for the Cafritz site includes new retail space, including a grocery store, dry cleaners and health club, as well as open green space. (Figure 20) The proposed design is planned as a walkable development, with pedestrian/bicycle access from the Metro station and surrounding neighborhoods.



*Figure 20: Cafritz site development plan (Ehrenkrantz, Eckstut & Kuhn Architects)
[the Calvert School site is located off of this map]*

Site documentation and analysis

The Calvert School site fills an entire block in the north-south direction. In addition to the building, it includes a playground and large play field, outdoor basketball court, and two parking lots. (Figure 21) There are a number of existing trees on the site, including some large, well-established trees. (Figure 22) Most of the existing trees are deciduous. There are six coniferous trees, but these are not very healthy, and may need to be removed regardless of whether they are accommodated by the new site plan.



Figure 21: Site plan (Author)

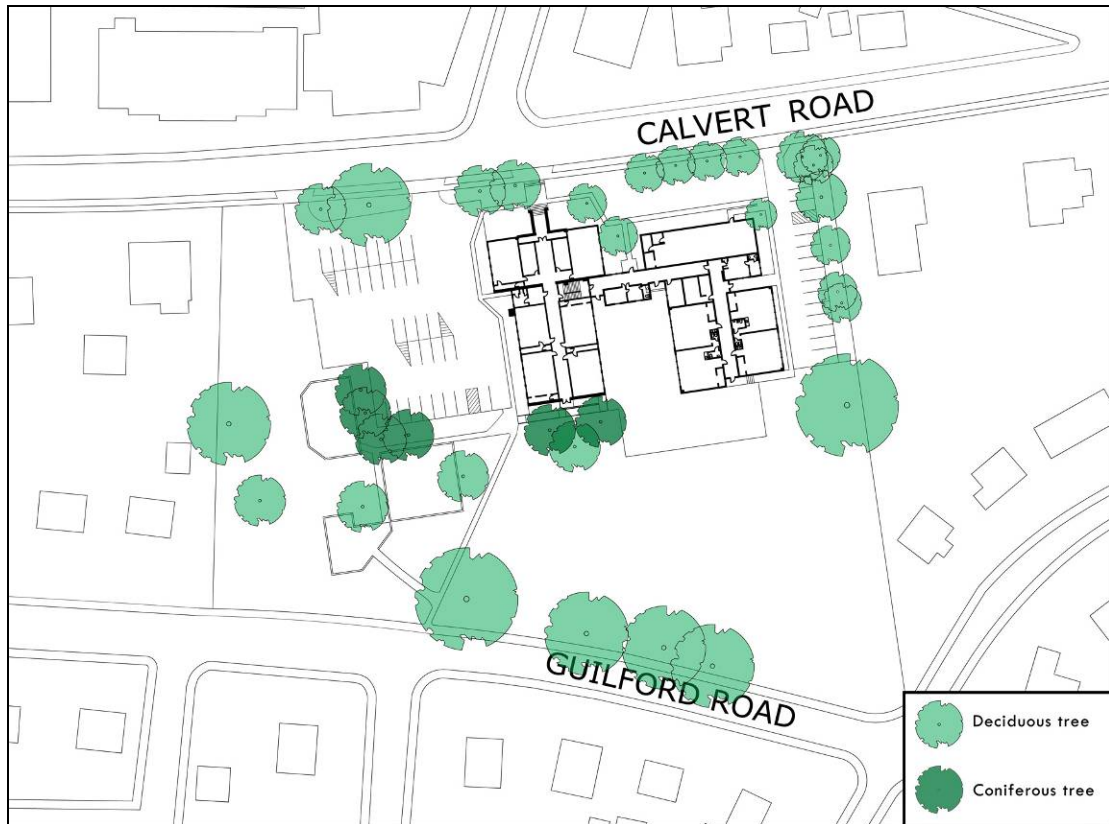


Figure 22: Existing trees on site (Author)

The topography of the site is generally very flat. A topographical map of the area showing changes in elevation at a scale of 10 feet shows no change in elevation across the site. (Figure 23) However, a close observation of the site shows that there is, in fact, a drop of about 2.5 feet from the northwest corner to the southeast corner of the site.

While there is currently no above-ground water on the site, the 1939 Sanborn Fire Insurance map shows that there was, historically, a creek that flowed across the site. (Figure 24) The creek has since been contained in pipes and moved underground, however water is still an important issue for the site, which floods easily in heavy rain.

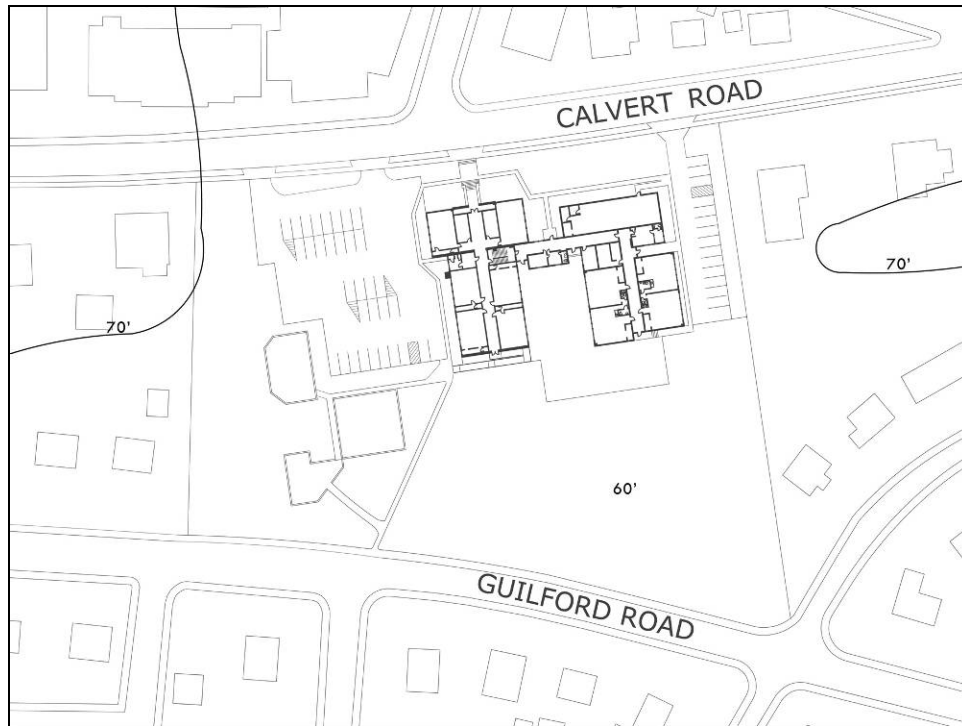


Figure 23: Site topography (Author, based on information from a U.S. Geological Survey GIS map)

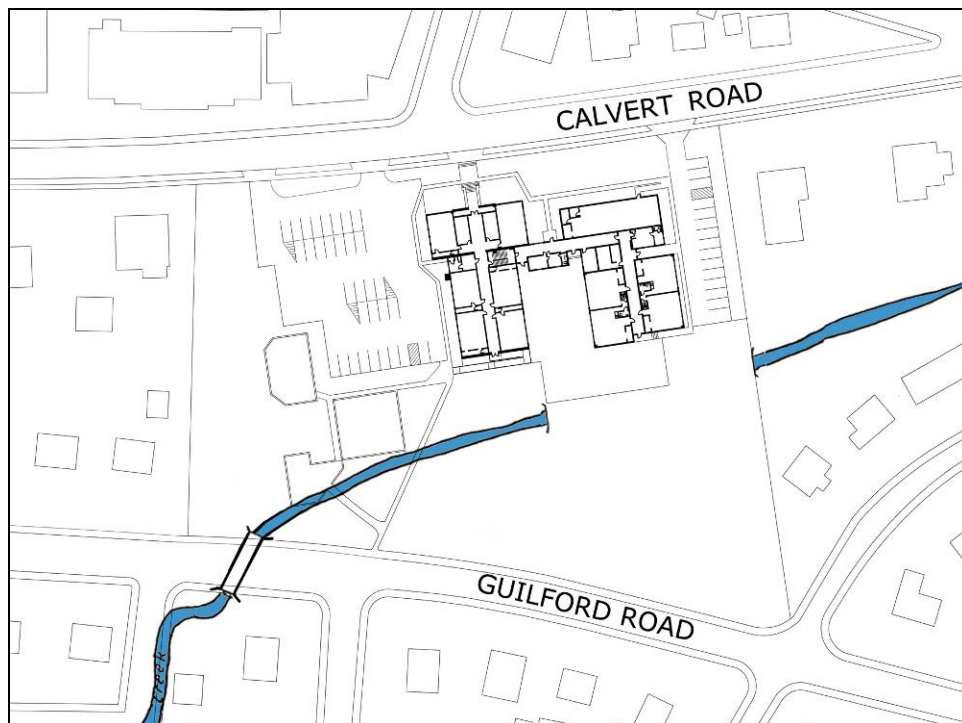


Figure 24: Historical water path (Author, based on information from the 1939 Sanborn Map)

Most visitors approach the building from the northwest as they pull into the visitor parking lot on the west side of the school. Looking to the site from this angle, the view is dominated by the massing of the original 1938 school building. (Figure 25)



Figure 25: View to site from the northwest (Author)

If, on the other hand, a visitor approaches from the northeast (perhaps walking from the Metro station), the 1952/1954 addition is clearly visible in the foreground, with the original 1938 building in the background. (Figure 26) While both sections of the building have only one above-ground floor, there is a significant height difference between the two pieces of the building, because the upper level of the 1938 building is raised by half a story. This may have been to give the building more prominence as an important civic building, but it probably had more to do with the tendency of this area to flood easily. Many of the surrounding houses have a raised first story as well.



Figure 26: View to site from the northeast (Author)

Views to the site from the south are dominated by the playground and play field on the site. Looking toward the building from the southwest, one looks out across the Calvert Hills playground. (Figure 27) From this angle, the building does not present a prominent façade, instead fading into the background behind the trees and playground equipment. Looking toward the building from the southeast, one looks out across the play field and across the basketball court. (Figure 28) When the building was in use as a school, the play field was frequently used for soccer matches and other organized sports for elementary-age children. It was also used as a play field during recess on school days. It is still used on the weekends for soccer practices and matches, but is now primarily used as a dog-walking area by local residents. On sunny days, students from the university also use it for informal games of frisbee and baseball. The basketball court behind the building is frequently used by university students.



Figure 27: View to site from the southwest (Author)

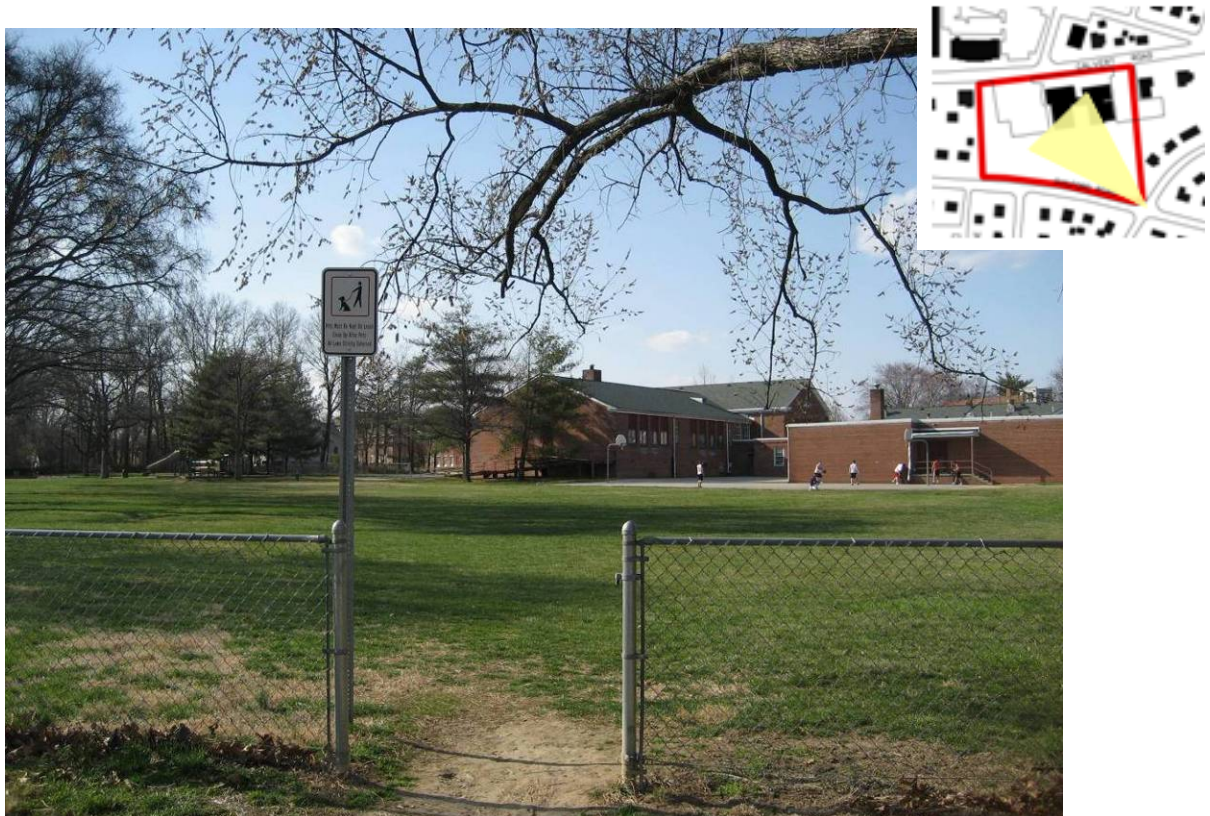


Figure 28: View to site from the southeast (Author)

Views from the building toward these outdoor site features show the relationship of the building to the site, and to the context beyond. Looking from the ramp at the back (south) of the building towards the Calvert Hills playground to the southwest, one can see the network of pathways that cut across the site, linking the building to the playground and the sidewalk on Guilford Road beyond. (Figure 29) When the building was in use as a school, this ramp was used as access to the playground and play field during recess. From the top of the ramp looking toward the southeast, one can see the basketball court and the play field, as well as the neighborhood beyond. (Figure 30) This field is in use throughout the day as an area for dog walking.



Figure 29: View from site to the southwest (Author)



Figure 30: View from site to the southeast (Author)

Looking out from the front (north) door of the school building, one can see how Princeton Ave. curves away. (Figure 31) This means that visitors always approach the building on the oblique, rather than on axis, whether walking or driving. The view from the front door includes the apartment building that appears in the historical 1949 photo (Figure 2) and a large parking lot associated with the nearby office park. Looking to the northwest from the building's front door, one sees the corner of the school parking lot and the path that most visitors used to get from the parking lot to the school entrance. (Figure 32) Across Calvert Ave., the office park and its parking lot are visible behind a screen of trees on the Calvert School site.



Figure 31: View from site to the north (Author)



Figure 32: View from site to the northwest (Author)

Building documentation and analysis

The north elevation (Figure 33) is the primary elevation of the original 1938 building. While the original building does have a facade that speaks to its function as a civic building, the later addition does not. City offices are now located in this northern piece of the addition. The south elevation (Figure 34) of both the original building and the addition is fairly closed to the park behind. There are three entrances on this side, but only two small windows. The classroom windows open up to a paved courtyard space rather than the rear of the building.

The building's west elevation (Figure 35) is original to the 1938 building. It is a fairly interesting facade, with quite a number of windows for the classrooms and lower level spaces, as well as a chimney that serves the basement furnace. This facade faces the building's main parking lot. The east elevation (Figure 36) is made up entirely of the 1952/1954 additions. It reads largely as a service facade, and faces a small parking lot that also serves the building.

The building materials used in the Calvert School building (Figure 37) are fairly typical of this area of Maryland. The building is faced in red brick. The bricks are turned every seven rows to create horizontal bands in the facade. The trim around the windows, doors and roof are mostly painted white, though the classroom windows are shaded and trimmed with a red-painted wood. The roof is covered in gray shingles. The building also has metal accents such as the ramp handrail and some window grills.



Figure 33: Building elevation – north (Author)



Figure 34: Building elevation – south (Author)



Figure 35: Building elevation – west (Author)



Figure 36: Building elevation – east (Author)

The building materials used in the surrounding neighborhoods (Figure 38) are very similar to those used in the Calvert School building. Most houses are made of brick. Some are painted, but many still show the natural color of the brick. Many of the houses still have the older style of windows with many small panes that are used on the older sections of the school building, but some have the larger single-pane glass used on school building's newer windows. Most of the roofs in the neighborhood are covered in grey shingle similar to that used on the school, and many have white columns and porches similar to that on the school's main entrance, though different in scale. Vinyl siding is also common in the surrounding neighborhood, particularly for later additions to the houses.

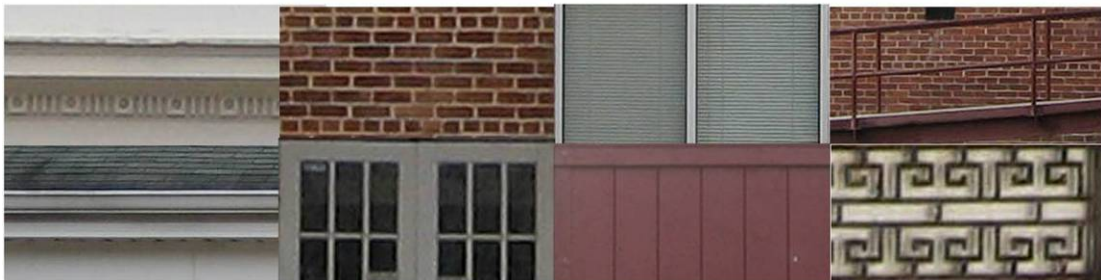


Figure 37: Materiality – Calvert School building (Author)

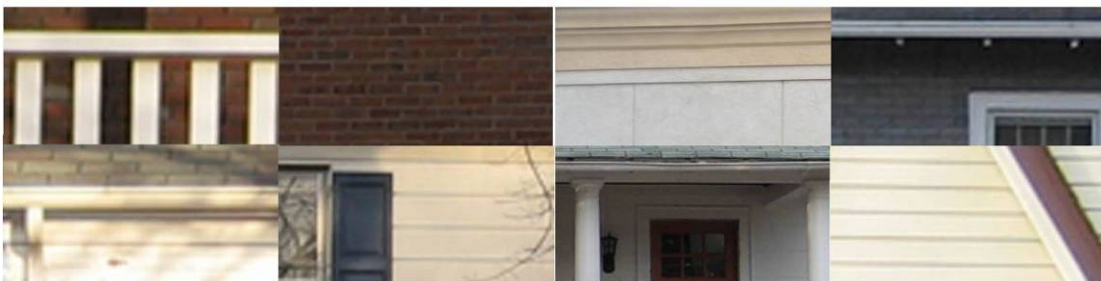


Figure 38: Materiality – surrounding context (Author)

A comparison of the original floor plan to the existing building shows that it is largely unchanged. The upper floor was designed with only six classrooms. (Figure 39) The later addition was simply attached to the stairwell on the side of the building. The original lower level floor plan shows the arrangement of some of the building's mechanical systems. (Figure 40) Interestingly, there are no classrooms on this lower level, which may have been (and may still be) prone to flooding. The plan for the 1954 addition shows that the northern piece, which was probably built in 1952, was originally in use as a library. (Figure 41) The addition added four additional classrooms, as well as some additional office and storage space.

Scaled renderings of the original floor plans show that each of the six classrooms in the original building is roughly 40 x 30 ft. Each also has a large closet. They are arranged symmetrically around a central axis that extends the length of the building. The upper floor of the original building was almost entirely devoted to classroom space. (Figure 42) The only exceptions are a small office and boys and girls restrooms. On the lower level of the original building, the largest room is a multi-purpose room, which is roughly 40 x 100 ft. (Figure 43) The rest of the lower level is devoted to office, storage and mechanical space. The addition's four classrooms are roughly 40 x 40 ft. (Figure 44) Classrooms 1 and 2 are connected by a small passageway between them, as are classrooms 3 and 4. The classrooms in the addition are equipped with sinks and restrooms right inside the classrooms.

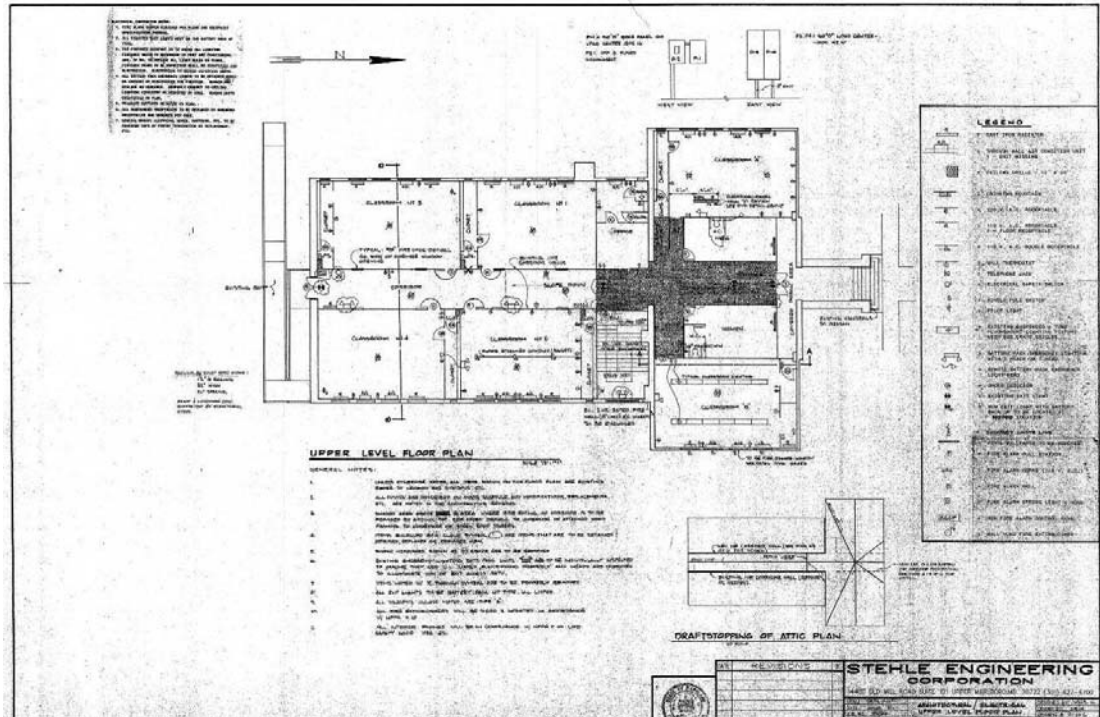


Figure 39: Calvert School upper level floor plan (College Park city engineer)

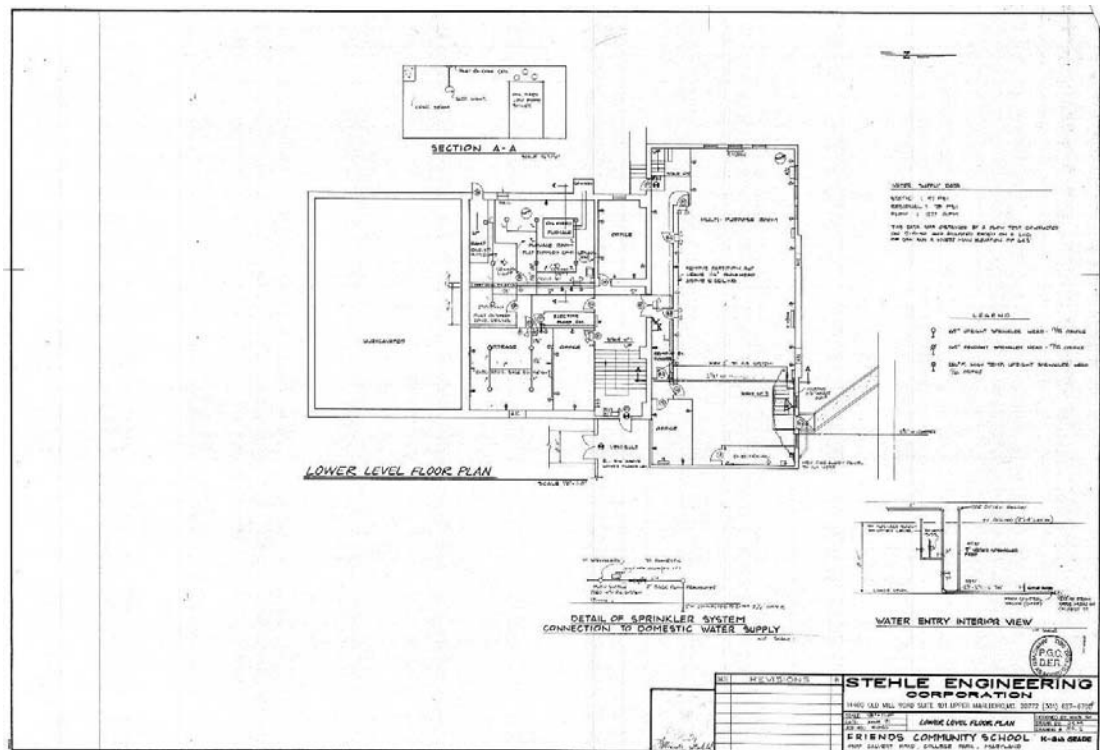


Figure 40: Calvert School lower level floor plan (College Park city engineer)

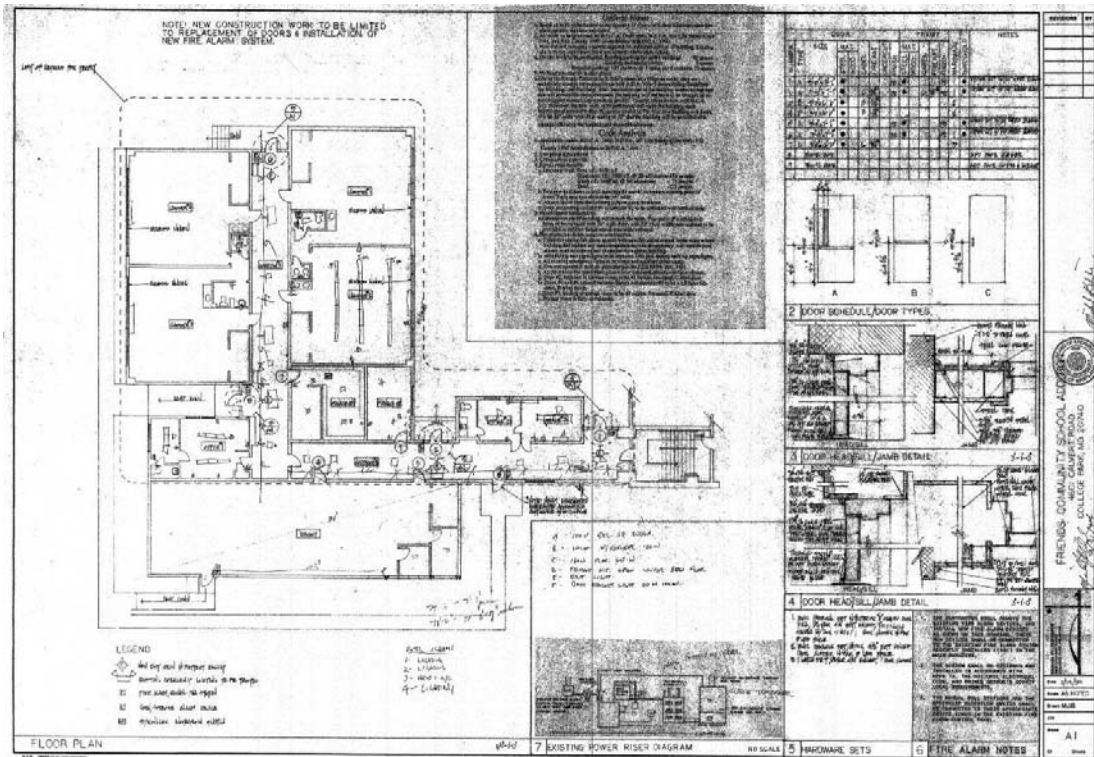


Figure 41: Calvert School addition floor plan (College Park city engineer)



Figure 42: CAD drawing of Calvert School upper level floor plan (Author)

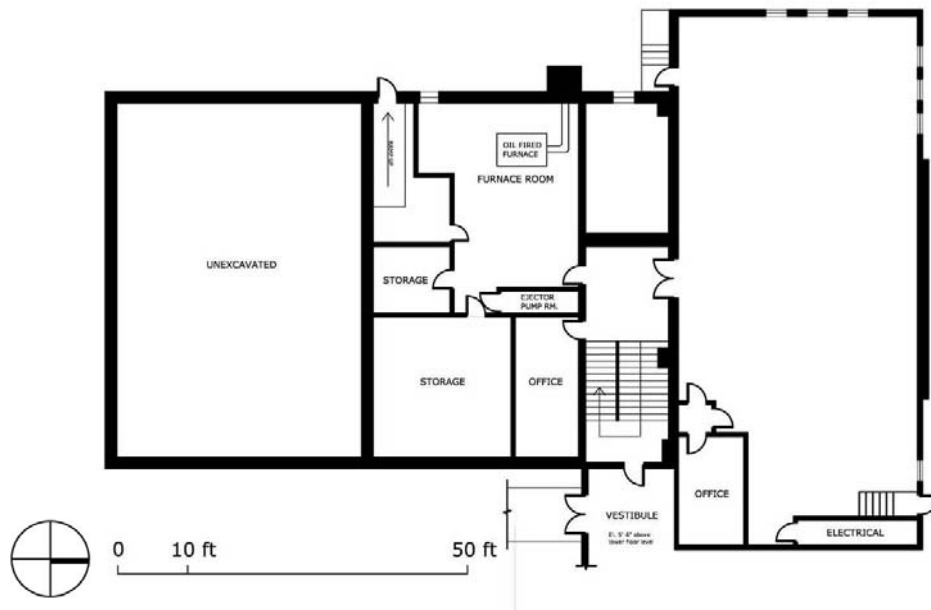


Figure 43: CAD drawing of Calvert School lower level floor plan (Author)

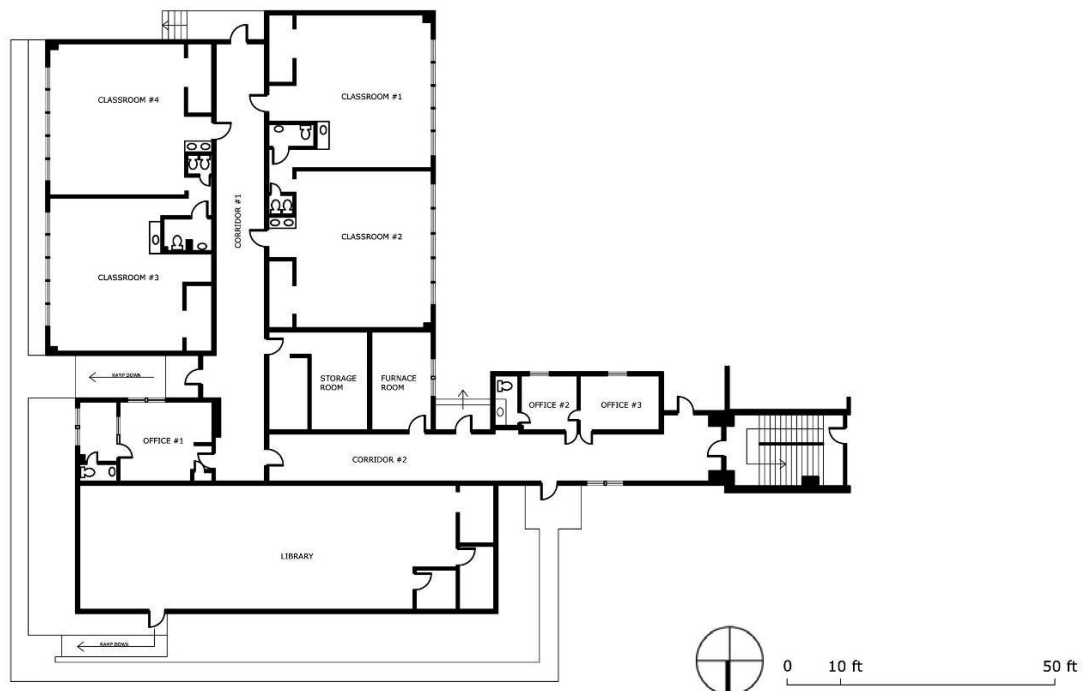


Figure 44: CAD drawing of Calvert School addition floor plan (Author)

The main hallway of the original 1938 building is the main axis of the building, travelling straight from the front door to the back door, and bisecting the

building. (Figure 45) It is a fairly wide hallway. The light from the stairway can be seen coming through the doorway on the left.



Figure 45: Interior photo – main hallway (Author)

The interior staircase is the point of connection between the original building and the later additions. (Figure 46) The addition is half a story down from the upper level of the original building (the first landing on the staircase, shown in Figure 46). The staircase then continues an additional half-story down to the lower level of the main building.



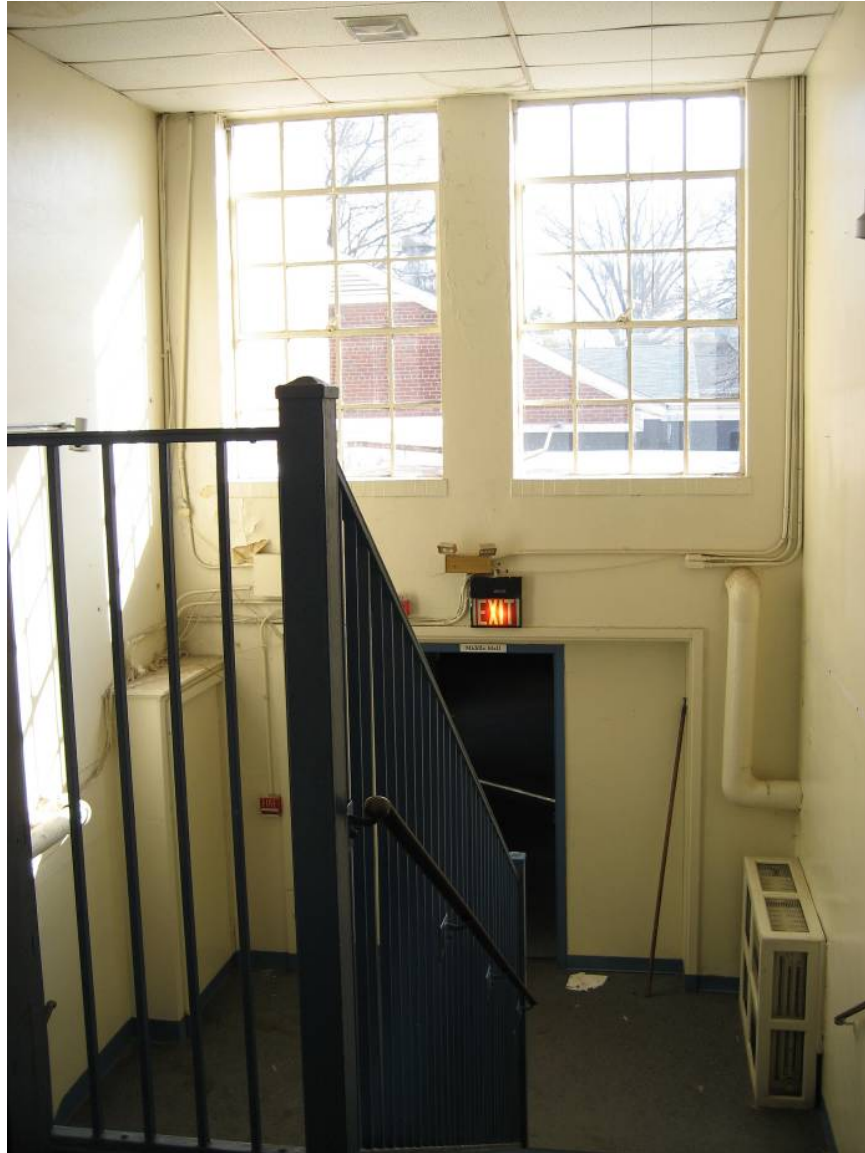


Figure 46: Interior photo – staircase (Author)

The main hallway of the addition is arranged similarly to that in the main building, with classrooms arranged symmetrically on either side. The scale of this hallway is slightly less generous, particularly in terms of height, and it suffers from a lack of natural light. (Figure 47)

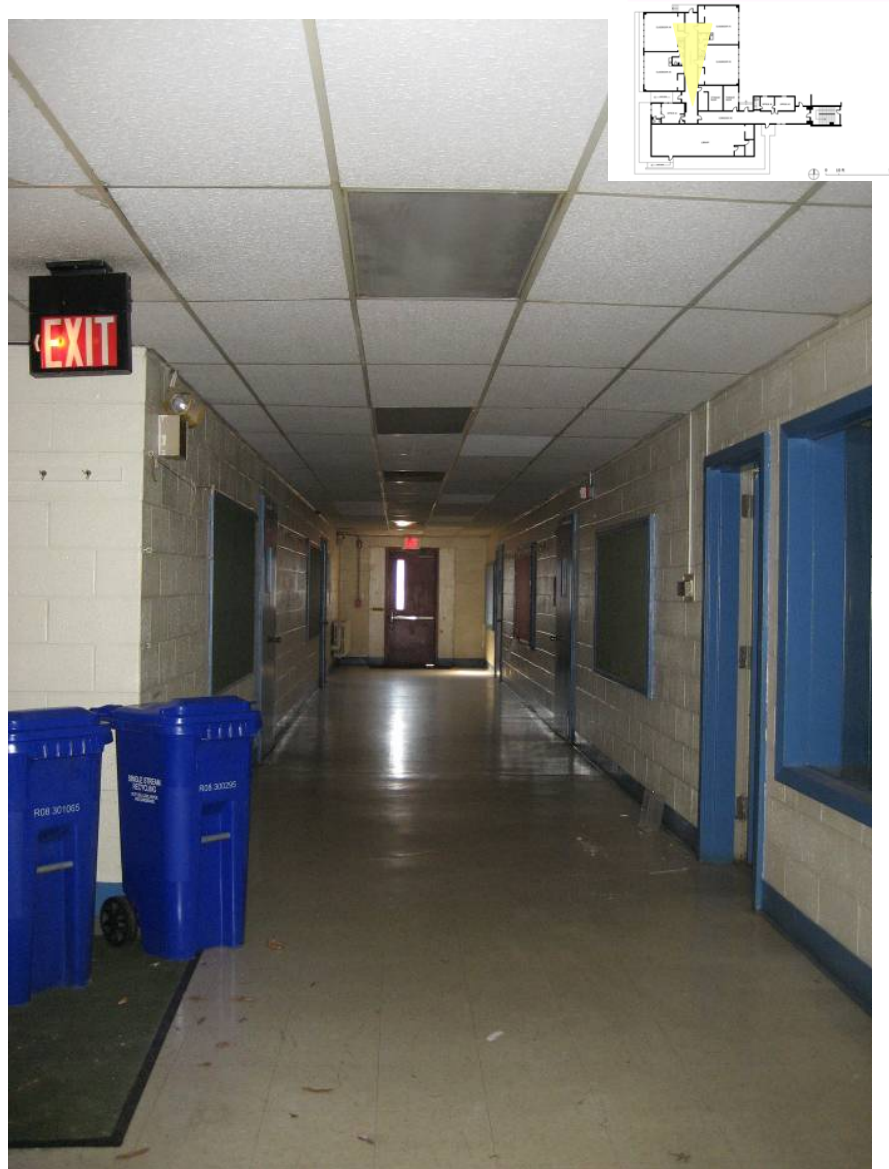


Figure 47: Interior photo – main hallway of 1954 addition (Author)

Each of the classrooms in the original building receives a lot of natural light from a row of windows along the long wall. However, on the west side of the building, the glare can get very strong. Mechanical systems and radiators are exposed in these areas. (Figure 48) The classrooms in the addition are similar to those in the main building. Each receives natural light from a row of windows along the long wall. (Figure 49) The interior finishes throughout the school building are showing wear.



Figure 48: Interior photo – upper level classroom (Author)



Figure 49: Interior photo – classroom in 1954 addition (Author)

The multipurpose room on the lower level is the largest space in the building, but it has been separated with dividers to create some separate spaces. (Figure 50)

This space has been used in the past for community meetings.



Figure 50: Interior photo – lower level (Author)

The playground on the site is a public playground owned by the city of College Park. (Figure 51) It has three distinct areas: a section for very young children, a jungle gym section for older children (Figure 52), and a swing set. When the building was in use as a school, this playground was used every day during recess. While it now sees less use, on nice days it is still frequently used by families from the surrounding neighborhood, and occasionally by university students.



Figure 51: Calvert Hills playground (Author)



Figure 52: Calvert Hills playground – jungle gym (Author)



Figure 53: Calvert Hills playground – basketball court and play field (Author)

Chapter 3: Program Analysis

Proposed building program

The Old Town and Calvert Hills neighborhoods of College Park (Figure 54) are fairly tight-knit, active communities. However, they currently lack venues for community activities.

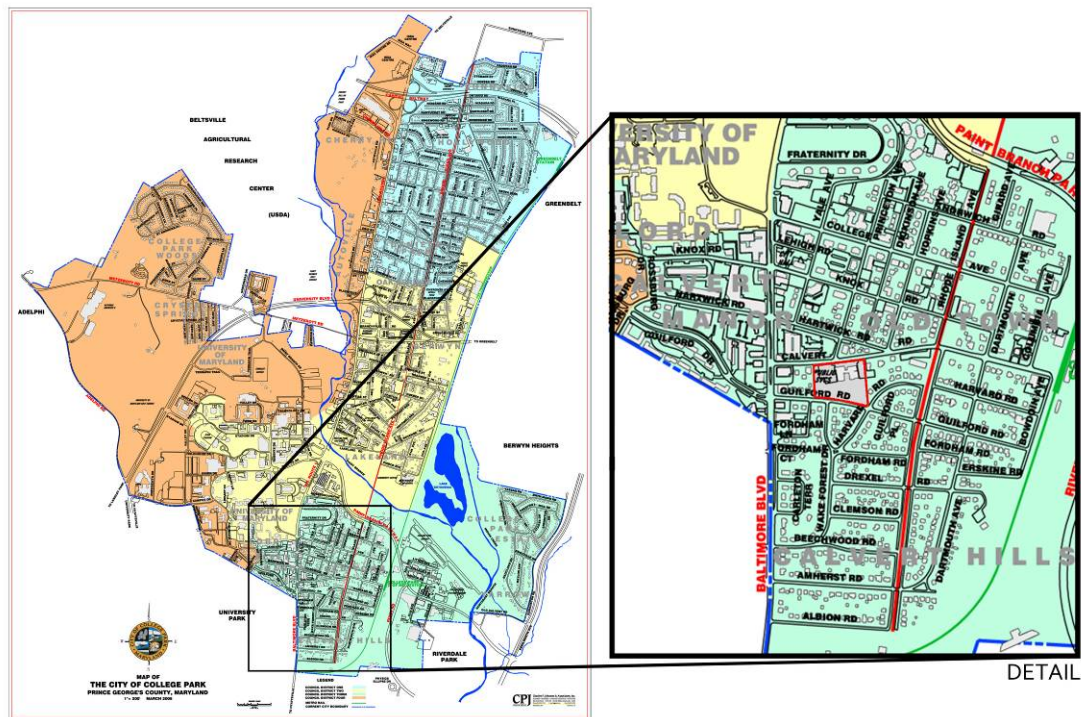


Figure 54: Map showing site in relation to Old Town and Calvert Hills neighborhoods (Author, base image of City of College Park by Charles P. Johnson & Associates)

Even when abandoned, the Calvert School Building serves as an informal location for many community activities. The playground, basketball court, and field still serve as gathering places and centers of community activity. The building is even occasionally opened up so that a town meeting can be held inside. I propose that the building be adapted and reused to serve as a community center for College Park, while the site is maintained and improved as a site for the activities that it currently hosts.

In addition to the community center program, I propose that the building be adapted and reused to house the College Park city hall. College Park's city hall is currently housed in a non-descript building (Figure 55) a couple of blocks north of the



Figure 55: College Park city hall (The Historical Marker Database¹⁶)

Calvert School site. (Figure 56) The current city hall building lacks both program space for community activities and a strong civic presence. An aerial view of the city hall shows that it is located in the center of a parking lot behind a row of one-story retail on Route 1. (Figure 57) The front door faces the back entrance to a haircutter and a sandwich shop. The entrance to the current city hall from the street is barricaded and unwelcoming (Figure 58), forcing visitors to enter the site from the back, through the surrounding parking lot.

The main building on the Calvert School site has a much stronger presence as a civic building, both in terms of façade and approach. I believe that it will be a much more appropriate location for the city's government seat, and including this program on the site will help to activate it further as the center of community in College Park.

¹⁶ Anacostia Trails Heritage Area, "College Park City Hall." The Historical Marker Database, <http://www.hmdb.org/marker.asp?marker=13161>.

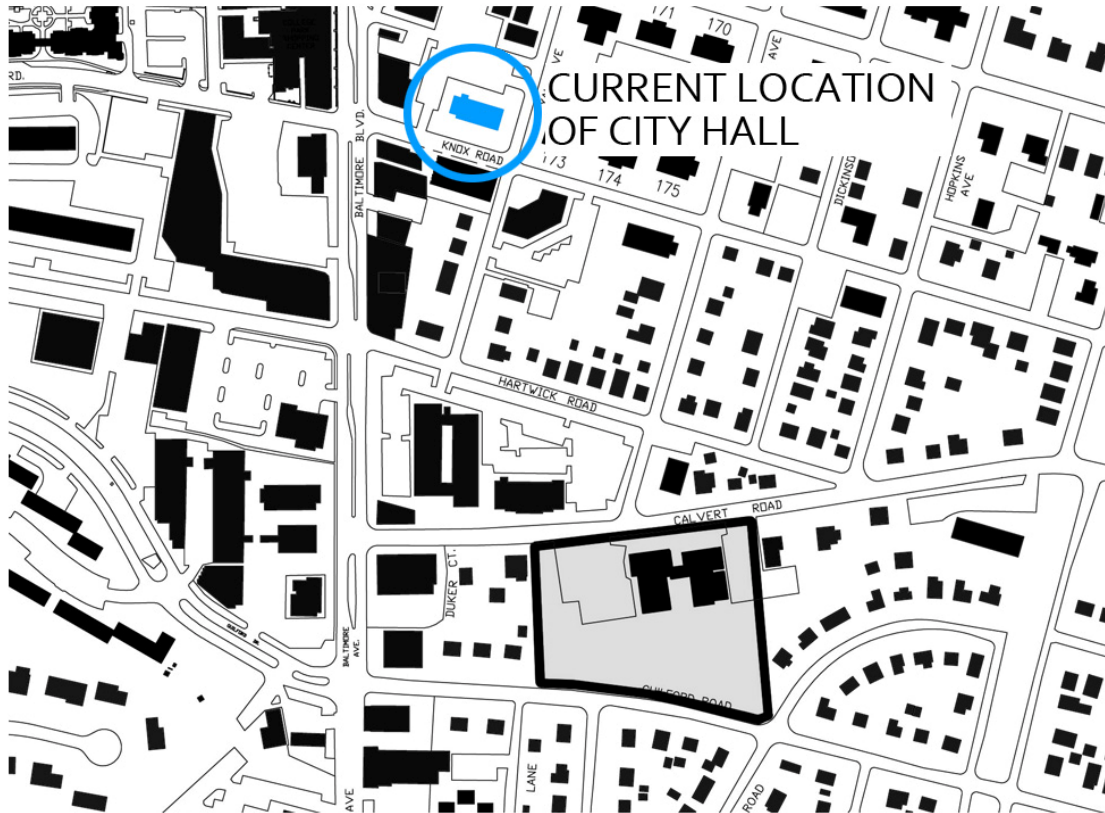


Figure 56: Current location of city hall (Author)



Figure 57: Aerial view of city hall (Google Maps)



Figure 58: Entrance to city hall from town center (Google Maps street view)



Figure 59: Calvert School building - civic façade (Author)

Program precedents

Gleneagles Community Center

Patkau Architects, West Vancouver, British Columbia (2000-2003)

The designers of the Gleneagles Community Center limited the building's footprint by spreading the program across three levels.¹⁷ Because of the steep slope of the site, the Gleneagles building has a very dynamic section, with entrances to the building occurring on different levels. (Figure 60)

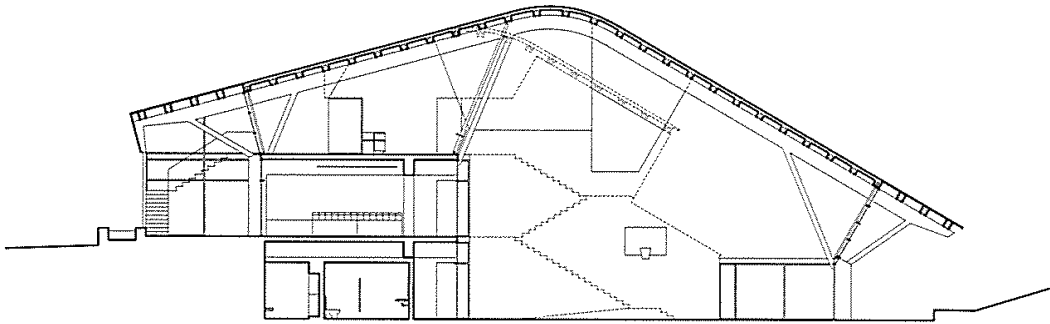


Figure 60: Gleneagles Community Center - building section (Patkau Architects)

On the lower level, the program includes a gymnasium, multipurpose room, youth room, arts room, workshop, and a fair amount of outdoor terrace space. (Figure 64) The entrance to the community center at this level is sheltered but welcoming. A number of entrance doors opening onto green space allow free movement in and out of the building. (Figure 61) The main (intermediate) level contains the street entrance, which is also sheltered by an overhanging porch. (Figure 62). The program on this level includes a “community living room,” which provides an informal gathering place at the entrance to the building, as well as a cafe, meeting room, administration, child care, and a children’s playground. (Figure 65)

¹⁷ Patkau Architects, Patkau Architects (New York, NY: The Monacelli Press, Inc, 2006), p165



Figure 61: Gleneagles Community Center – exterior (Patkau Architects)

The program on the upper level is focused on fitness facilities, with a training studio and fitness equipment area as well as a room for counseling services. (Figure 66) The large volume of the gymnasium rises the entire height of the building, allowing a visual connection between this space and many of the others in the community center. (Figure 63) This height also creates a very open and light feeling throughout this space and the others that are visually connected to it.

The Gleneagles Community Center provides a very relevant precedent in terms of program elements that would be appropriate for the proposed community center on the Calvert School site. Gleneagles is particularly relevant as a precedent for this project because of the similarity in scale between the two buildings.



Figure 62: Gleneagles Community Center – exterior (Patkau Architects)

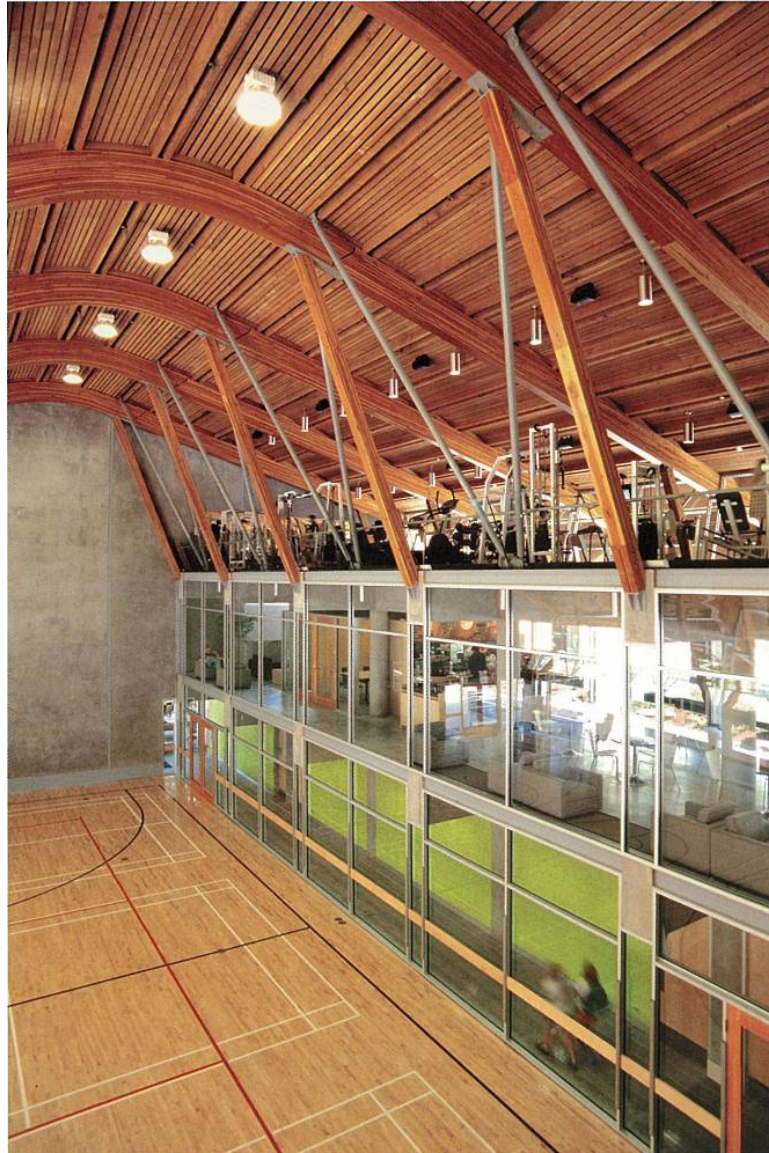


Figure 63: Gleneagles Community Center – gymnasium (Patkau Architects)

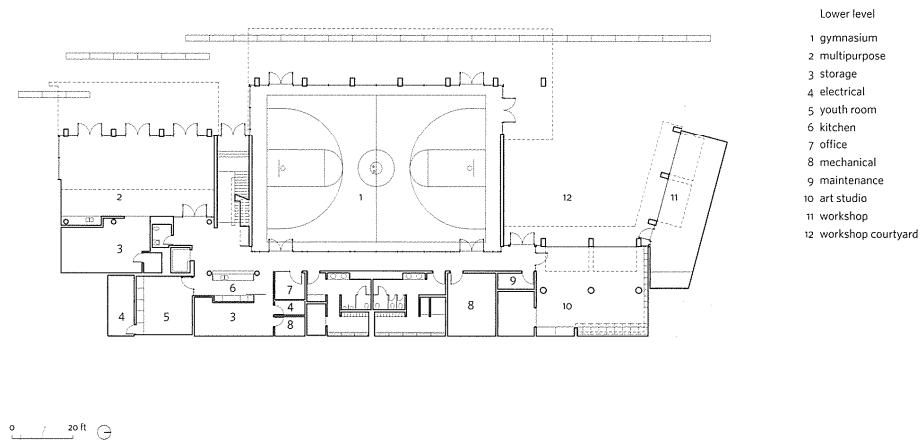


Figure 64: Gleneagles Community Center – lower level plan (Patkau Architects)

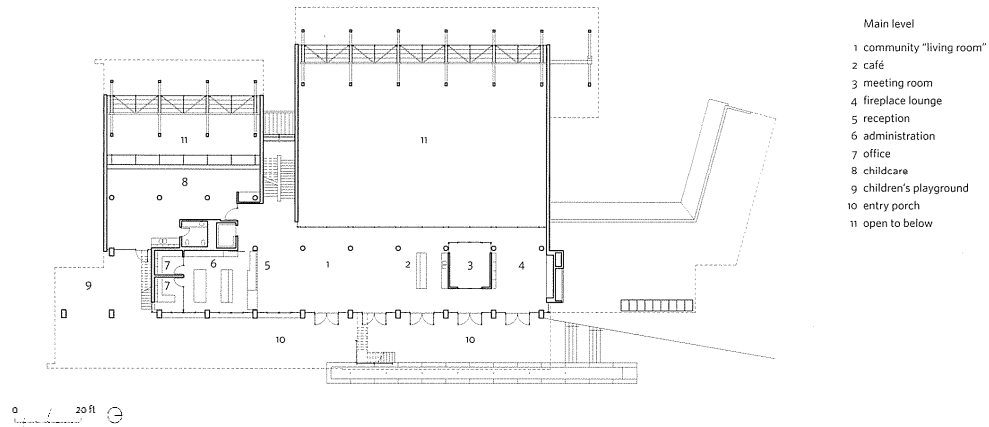


Figure 65: Gleneagles Community Center – main level plan (Patkau Architects)

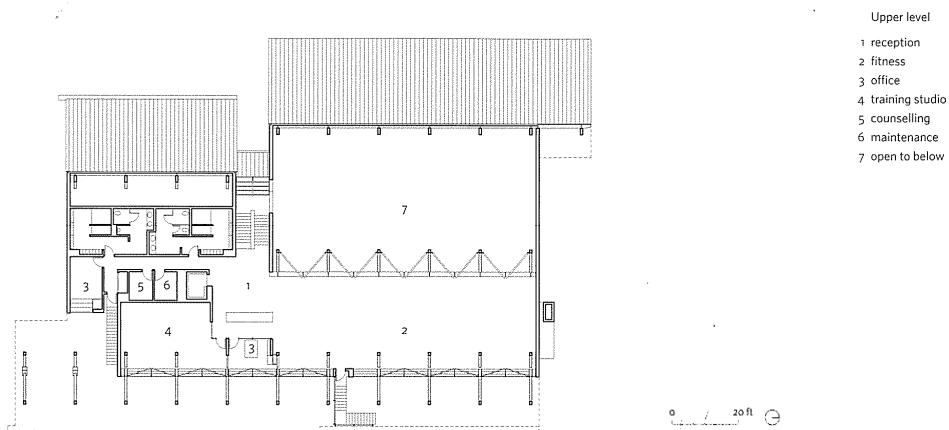


Figure 66: Gleneagles Community Center – upper level plan (Patkau Architects)

Plummer Park Community Center
Koning Eizenberg Architecture, West Hollywood, CA (2000)

The designers of the Plummer Park Community Center were hired by the community to revitalize their existing community center. The initial plan was to renovate the original building for senior services, and to add a separate facility for teens. However, after studying the building and its surroundings, the designers suggested that the community rethink this approach. Instead, they proposed a single facility that would house the intergenerational facilities under one roof, creating a building program that was both more inclusive and more flexible.¹⁸ (Figure 68)

The resulting building is organized with the teen lounge on one end of the building and the senior lounge on the other, with senior services in between, grouped around the senior lounge. The design team also intervened outside of the building, adding a new tree-lined parking lot that runs the length of the building. The designers explain:

It was designed not only to bring a sense of the park to the street but also to acknowledge that people really *use* these places. Although often ignored, parking lots are real and important zones of activity. For buildings like community centers, they are key social spaces – as important as interior spaces – where people linger and continue conversations and encounters started indoors.¹⁹

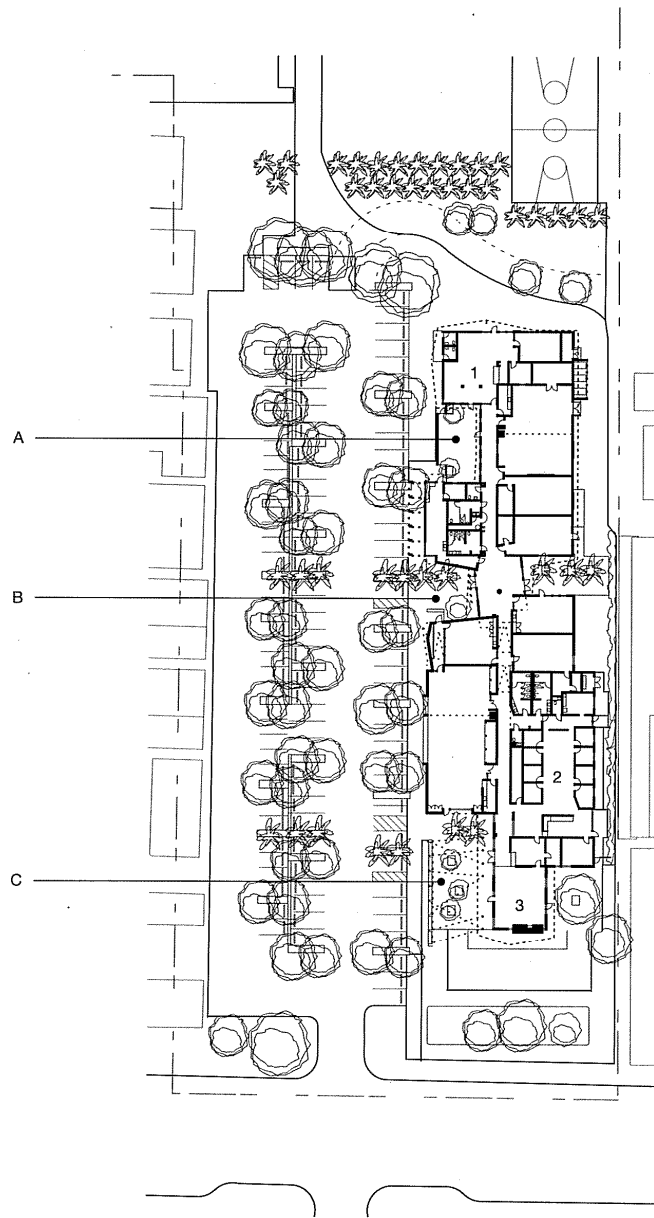
The intergenerational tensions that the designers dealt with in this project are sure to arise in a community center project based in College Park as well. The designers' attitude of inclusivity and integration is laudable and should be considered, and perhaps even pushed further, as a response to the town-gown tensions that exist in the community of College Park.

¹⁸ Koning Eizenberg Architecture, *Architecture isn't just for special occasions.*, (New York, NY: The Monacelli Press, Inc, 2006), 43.

¹⁹ Ibid, 44.



Figure 67: Plummer Park Community Center – exterior (Koning Eizenberg Architecture)



- 1 Teen lounge
- 2 Senior services
- 3 Senior lounge



Site Plan

0 8 16 32 Feet

Figure 68: Plummer Park Community Center – site plan (Koning Eizenberg Architecture)

West Street Community Center
Koning Eizenberg Architecture, New York, NY (2002)

Two years after designing the renovation of the Plummer Park Community Center, Koning Eizenberg was asked to submit an “exploratory proposition” for a project which would suggest new opportunities for the devastated community of Manhattan, one year after the World Trade Center fell.²⁰ A number of designers took part in the project, with each team focusing on a different element of community life, such as housing, offices and retail, hotels, a library, and a community center. The Koning Eizenberg team explored a proposition for a new community center, with a program that included recreation facilities, room for teens and younger kids, a community conference center, neighborhood retail (including a big bookstore, cafes and a farmers market), a winter garden, senior center and senior housing.²¹

The design exercise did not move past the diagrammatic stage, and the scale of this project is much larger than could be accommodated by the Calvert School site. Nevertheless, this exploration is relevant to the project at hand in terms of the program elements that were selected as vital elements of an effort at community (re)building.

²⁰ Koning Eizenberg Architecture, *Architecture isn't just for special occasions*, (New York, NY: The Monacelli Press, Inc, 2006), 185.

²¹ Koning Eizenberg Architecture, *Architecture isn't just for special occasions*, (New York, NY: The Monacelli Press, Inc, 2006), 185.



Figure 69: West Street Community Center – exterior perspective

Proposed Salk Institute Campus Community Center
Association of Collegiate Schools of Architecture (ACSA) competition, La Jolla, CA
(2008-2009)

The 2008-2009 ACSA “Preservation as Provocation” competition challenges architecture students to rethink Louis Kahn’s iconic Salk Institute. The Institute is in need of additional space, as well as additional amenities to “support the needs of scientists and employees.”²² Part of the proposed new program for the site is a community center, which “will support the science and operational needs of the Institute.”²³ The program for the campus community center includes a library, conference facilities, offices, a dining facility, lounge, and employee exercise facilities.

While this precedent cannot offer guidance in terms of adjacencies and design, it does have a very clear and complete set of program requirements, which may prove to be very helpful in determining the exact program requirements for a new community center in College Park. It is important to note, however, that because the proposed Salk Institute campus community center is significantly larger than the current area of the Calvert School buildings, the size of some program elements may need to be reconsidered in order to make them more appropriate for the site.

²² <https://www.acsa-arch.org/competitions/08-09%20Comp/08-09%20Preservation%20Comp%20Salk%20-%20PROGRAM.pdf> [Need to format footnote properly]

²³ <https://www.acsa-arch.org/competitions/08-09%20Comp/08-09%20Preservation%20Comp%20Salk%20-%20PROGRAM.pdf> [Need to format footnote properly]

Campus Community Center

Conference Facilities		
Multi-purpose Hall	subdivided into 3 spaces (1000 SF each)	3,000 SF
Meeting Rooms	2 @ 1,000 SF each	2,000 SF
Conference Room	2 @ 500 SF each	1,000 SF
Pre-function Foyer		1,000 SF
Back of House/Staging Area		1,000 SF
Storage		1,500 SF
Restrooms	2 @ 400 SF each	800 SF
Offices		
Lobby/Reception		500 SF
Administration Offices	4 @ 150 SF each	600 SF
Support Offices		1,200 SF
Copy Room		150 SF
Server Room		100 SF
Storage		100 SF
Restrooms	2 @ 400 SF each	800 SF
Library		
Stacks	2,500 linear feet of shelving	1,500 SF
Folios	1,920 linear feet of shelving	600 SF
Periodical	1,000 linear feet of shelving	1,050 SF
Thesis Collection	125 linear feet of shelving	200 SF
Media/DVD		200 SF
Reference Terminals	4 @ 20 SF each	80 SF
Circulation Desk		80 SF
Librarian's Office		200 SF
Store Room		300 SF
Restrooms	2 @ 100 SF each	200 SF
Dining/Faculty Lounge		
Lounge		1,500 SF
Kitchen		1,500 SF
Service Area		500 SF
Restrooms	2 @ 200 SF each	400 SF
Employee Exercise facilities		
Gym		1,000 SF
Lap Pool		1,000 SF
Locker Room	2 @ 600 SF	1,200 SF
Shower/Restrooms	2 @ 200 SF	400 SF
Community Center Total		25,660 Net SF
Community Center Total Net Square Feet Plus 20% Allowance For mechanical, circulation, structure, etc.		30,800 Gross SF (30,792 GSF)

Figure 70: Proposed Salk Institute campus community center – program (ACSA)

Program development

Before developing the program, it is important to decide which community the community center will serve. The city of College Park suffers from a problem common among college towns. The city's population is split almost evenly between college-age residents and families, seniors and other more permanent residents.

Table 1 summarizes the national census age data for the 20740 (College Park) zip code.

Table 1: Census 2000 age data for 20740 zip code (Author, with data from Census 2000²⁴)

Percent of total population	
Under 18 years	11.2
18 to 24 years	44.6
25 to 44 years	22.6
45 to 64 years	13.4
65 years and over	8.4
Median age (years)	22.7

This data shows that the largest segment of the population of 20740 by far (nearly half of the total population) is the 18-24 age group, which is likely made up mostly of University of Maryland students. Table 2 shows the data for the College Park zip code along with the same data for all of the surrounding zip codes. The 18-24 year-old population in College Park is much higher than that of any surrounding zip code.

²⁴ <http://factfinder.census.gov/>

Table 2: Census 2000 age data for 207xx zip codes (Census 2000²⁵)

Geographic area	Total population	Percent of total population					Median age (years)
		Under 18 years	18 to 24 years	25 to 44 years	45 to 64 years	65 years and over	
ZCTA 207	894,999	26.8	10.2	33.6	22.0	7.5	33.3
5-DIGIT ZCTA							
ZCTA 20701	40	15.0	32.5	20.0	17.5	15.0	31.5
ZCTA 20705	22,802	23.8	9.5	35.4	22.2	9.0	35.0
ZCTA 20706	37,642	28.1	8.9	31.6	23.0	8.4	34.1
ZCTA 20707	25,637	22.8	7.8	39.4	21.6	8.4	34.8
ZCTA 20708	25,062	26.3	9.7	39.4	18.5	6.2	31.1
ZCTA 20710	7,782	27.6	10.2	34.0	19.4	8.8	31.1
ZCTA 20711	6,065	25.4	7.2	29.0	26.2	12.2	38.3
ZCTA 20712	9,067	25.0	11.9	36.9	19.0	7.3	31.9
ZCTA 20714	4,008	28.0	7.2	36.2	21.4	7.3	33.9
ZCTA 20715	25,226	24.9	8.1	29.0	25.4	12.7	38.3
ZCTA 20716	19,595	26.5	6.2	40.5	19.6	7.2	34.1
ZCTA 20720	14,713	30.6	5.9	34.2	24.6	4.7	35.7
ZCTA 20721	22,412	28.2	6.7	31.4	27.2	6.4	37.2
ZCTA 20722	5,400	27.3	8.9	30.2	23.6	10.1	35.5
ZCTA 20723	24,079	29.5	7.2	39.6	19.2	4.5	32.6
ZCTA 20724	13,032	25.2	8.5	42.4	18.5	5.4	32.6
ZCTA 20732	8,205	30.5	6.2	34.4	22.8	6.1	35.1
ZCTA 20733	2,810	27.0	6.4	32.7	24.9	9.0	37.6
ZCTA 20735	32,887	27.2	6.7	30.6	26.9	8.7	36.9
ZCTA 20736	6,633	28.5	6.2	28.0	29.0	8.2	38.7
ZCTA 20737	19,938	30.0	11.7	35.0	17.7	5.6	29.6
ZCTA 20740	31,041	11.2	44.6	22.6	13.4	8.4	22.7
ZCTA 20743	41,549	30.0	8.6	30.2	22.4	8.9	33.4
ZCTA 20744	48,198	25.6	7.5	28.2	30.2	8.4	38.1
ZCTA 20745	27,692	29.2	9.6	31.6	22.8	6.9	32.2
ZCTA 20746	28,530	29.6	9.3	33.3	20.9	6.9	31.3
ZCTA 20747	39,920	30.1	8.9	33.3	21.2	6.4	32.0
ZCTA 20748	40,035	25.9	8.4	30.7	25.2	9.8	35.4
ZCTA 20751	2,237	25.2	5.5	32.4	26.4	10.5	38.9
ZCTA 20754	6,525	27.5	6.4	25.4	31.8	9.0	40.1
ZCTA 20755	9,903	39.0	16.8	40.3	3.7	0.3	22.6
ZCTA 20758	797	20.1	6.8	26.1	29.6	17.4	43.6
ZCTA 20759	1,684	27.4	4.9	27.2	28.0	12.5	40.6
ZCTA 20762	7,925	35.0	16.3	44.9	3.6	0.2	24.5
ZCTA 20763	2,438	30.3	8.6	38.1	16.0	7.0	32.3

²⁵ <http://factfinder.census.gov/>

The proposed community center for will strive to serve the varied constituencies that make up the College Park community, and to provide a place for them to meet and to interact. Because the University of Maryland students are well-served by a community center of their own, the center will focus primarily on the needs of the permanent residents of the College Park community. However, it will also attempt to bridge the town/gown divide in the city of College Park by creating opportunities for positive interaction between university students and the more permanent residents of the College Park community.

Rather than set aside isolated spaces designed specifically for this purpose, the goal will be to design both individual building program elements and the overall experience of the building to encourage this kind of interaction. For example, a senior lounge and activity area will provide not only a social gathering space for seniors, but also a place for senior training, health information sessions, etc. that could be organized in conjunction with the University's School of Public Health to bring in students as educators and helpers. A child care center will provide an important community service for families in College Park, while providing opportunities for training and hands-on experience for students in the University's School of Education. Through these programs, university students will have an opportunity to form positive bonds with area residents, while learning and practicing their chosen fields of study. In this way, one program space can serve the needs of the permanent community of College Park, while also serving as a venue for improved communication between students and city residents.

The following list of proposed program elements is based on an analysis of the needs of the College Park community and study of the community center precedents presented earlier in this chapter.

Proposed program elements

Indoor

- Community “living room” (informal gathering space)
- Cafe
- Multipurpose room(s)
- Meeting room(s)
- Arts room
- Child care
- Senior lounge/activity area
- Teen/youth lounge/activity area
- Gymnasium
- Offices/administration areas
- Town hall functions
- Library

Outdoor

- Sports fields
- Playground
- Child care activity area
- Park/outdoor space appropriate for adult use

While the site plan for the new community center will include some parking for employees, disabled visitors, and child care pick up/drop off, the amount of parking on site will be dramatically reduced. This decision is based on an analysis of the parking options available near the site (Figure 71) which shows that there is plenty of parking available within a short walk of the site.

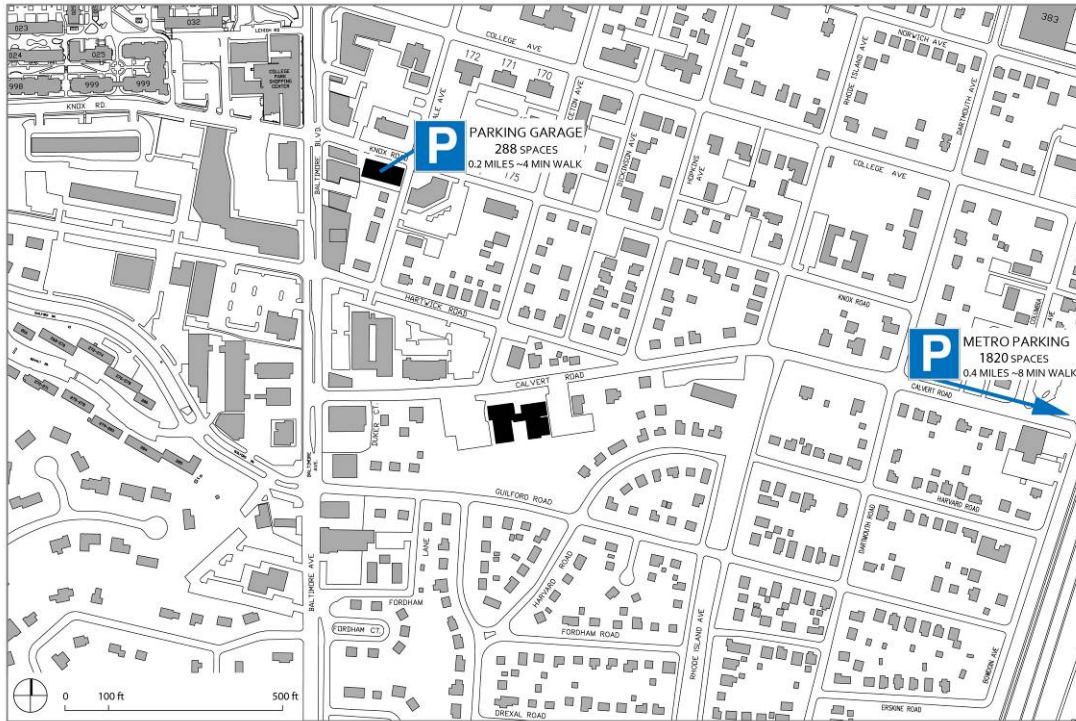


Figure 71: Parking options near the Calvert School site (Author)

Table 3 explores the appropriate floor area to devote to each program element, based on the program precedent projects presented at the beginning of this chapter. West Street Community Center has been excluded from this table because the design was diagrammatic, and was never developed to this level of detail. Only the senior and teen areas from the Plummer Park Community center are included in the table because these are the only program areas identified on the designers' floor plan.

The figures from this table were analyzed and developed further to create a final proposed program, which groups the program elements into three main program areas: A Home for Community, Town Hall, and Exercise & Activity. (Figure 72) This program was then analyzed to better understand the requirements and characteristics of each of the program elements. (Figure 73 and Figure 74)

Table 3: Floor area for proposed program elements (Author)

Proposed building elements	Gleneagles Community Center	Plummer Park Community Center	Salk Institute proposed community center	College Park Community Center (proposed)
Indoor				
Community “living room”	730 sf	--	N/A	750 sf
Library/lounge	N/A	--	4,410 sf (Stacks: 1,500 sf)	300 sf
Cafe	300 sf	--	3,900 sf	300 sf
Multipurpose room(s)	1,300 sf	--	3,000 sf (3 @ 1,000 each)	N/A
Meeting room(s)	N/A	--	2,000 sf (2 @ 1,000 each)	2 @ 250 sf
Tutoring room	N/A	--		500 sf
Child care	1,000 sf	--	N/A	1,000 sf
Teen/student lounge	400 sf	600 sf	N/A	500 sf
Senior lounge	N/A	500 sf	N/A	500 sf
Art studio	1,000 sf	--	N/A	1,000 sf
Reception	250 sf	--	N/A	150 sf
Offices/adminis- tration areas	500 sf	--	3,450 sf	2 @ 500 sf
Town hall functions	N/A	--	N/A	12,250 sf
Gymnasium	4,500 sf	--	1,000 sf	7,000 sf
Classrooms	N/A	--	3,450 sf	2 @ 250 sf
Aerobics equipment	2,500 sf	--	N/A	500 sf
Weight training	650 sf	--	4,410 sf (Stacks: 1,500 sf)	500 sf
<i>Total area (gross)</i>	<i>34,500 sf</i>	<i>11,000 sf</i>	<i>30,800 sf</i>	<i>31,000 sf</i>
<i>Current gross area of existing Calvert School building (original building + addition) = 20,837 sf</i>				
Outdoor				
Sports fields	N/A	--	N/A	60,000 sf
Playground	1,200 sf	--	N/A	15,000 sf
Child care activity area	600 sf	--	N/A	600 sf
Park	N/A	--	N/A	~2,000 sf (will vary by scheme)

Proposed Program

A Home for Community

Community "living room"	750 sf
Library/lounge	300 sf
Café	300 sf
Meeting rooms	2 @ 250 sf
Tutoring room	500 sf
Child care	1,000 sf
Teen/student lounge	500 sf
Senior lounge	500 sf
Art studio	1,000 sf
Reception	150 sf
Offices/administration areas	500 sf
Restrooms	300 sf
Total net:	6,300 sf
Gross space adjustment	950 sf (15% of net sf)
Total gross:	7,250 sf

Town Hall

Large meeting/assembly room	1,000 sf
Meeting rooms	3 @ 500 sf
Mayor's office	500 sf
Offices/administration	7,150 sf
Restrooms	500 sf
Total net:	10,650 sf
Gross space adjustment	1,600 sf (15% of net sf)
Total gross:	12,250 sf

Exercise & Activity

Main gymnasium/Activity space	7,000 sf
Classrooms	2 @ 250 sf
Changing/locker rooms	500 sf
Aerobics equipment (treadmills/ellipticals)	500 sf
Weight training	500 sf
Offices	500 sf
Restrooms	500 sf
Total net:	10,000 sf
Gross space adjustment	1,500 sf (15% of net sf)
Total gross:	11,500 sf

Total indoor space: 31,000 sf

Outdoor activity area/park	2,000 sf
Playground	15,000 sf
Sports fields	60,000 sf

Figure 72: Proposed program (Author)

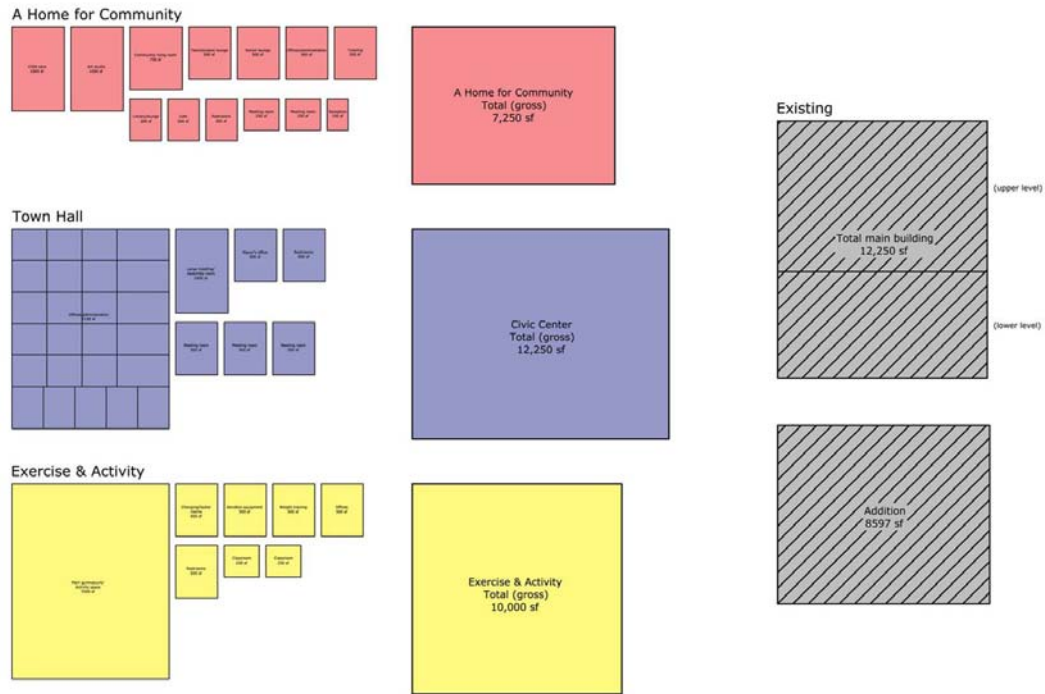


Figure 73: Program analysis – proposed vs. existing sf (Author)

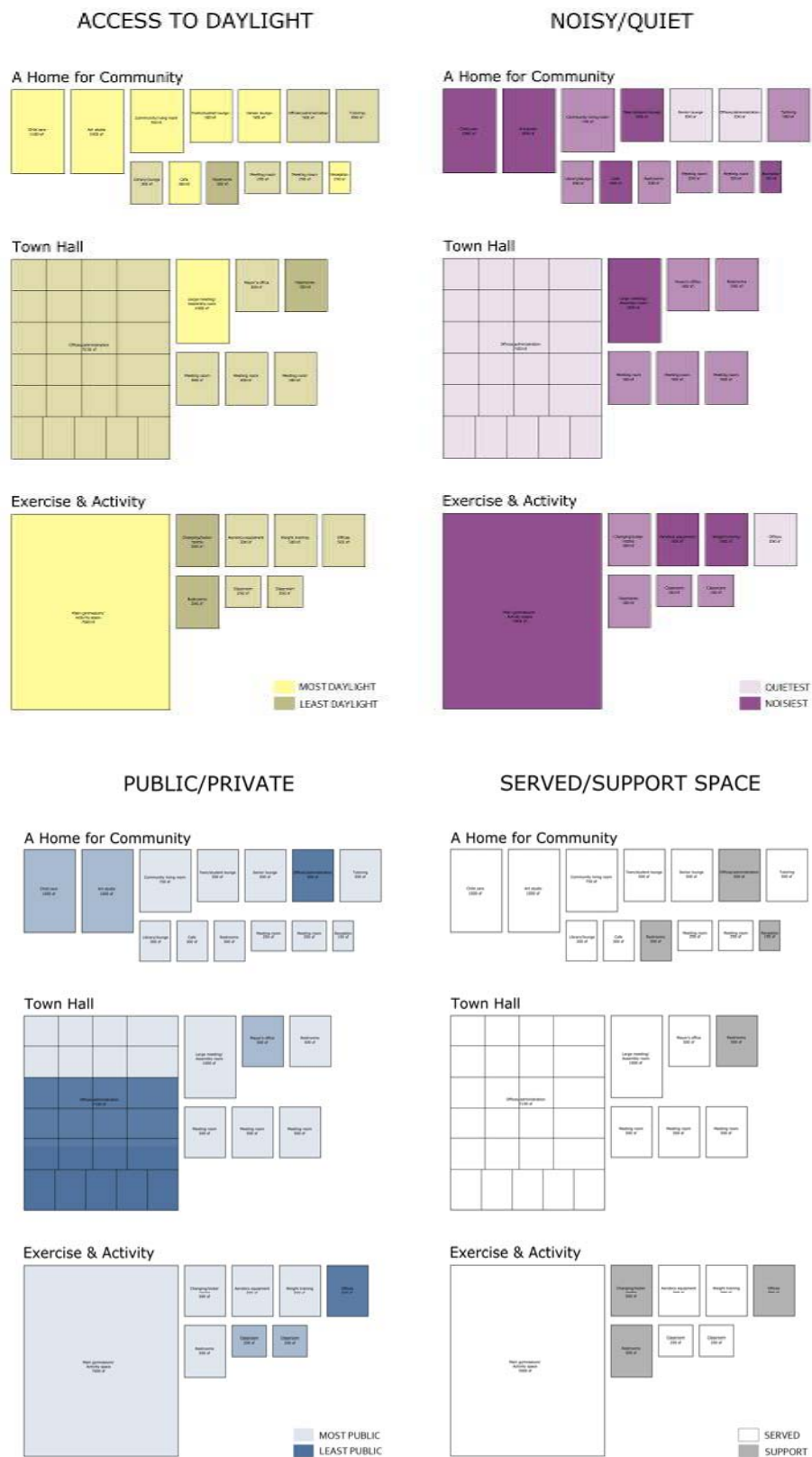


Figure 74: Analysis of proposed program (Author)

Chapter 4: Architectural Design Strategy

Adaptive reuse strategies

In order to create a conceptual framework to understand the vast array of adaptive reuse strategies that are available to a designer, it is helpful to define a few categories or types of subsequent action into which all projects can be sorted. As a starting point, I will adopt a simplified version of the taxonomy of variables defined by Garth Rockcastle for the Subsequent Action exhibit at the University of Maryland.²⁶

Physical actions

The actions that designers take to develop or transform a building during the process of adaptation for reuse can be divided into four categories:

- Addition (of new or alternative material)
- Subtraction (of existing material)
- Alteration (partial modification of material)
- Recombination (rearrangement of material)

While some projects may fall into just one of these categories, most will use a combination of some or all of these strategies. Nonetheless, the enumeration of distinct categories of action is useful to create a conceptual framework to understand the design moves that are employed in adaptive reuse projects.

²⁶ <http://publications.ingagepublication.com/UMDSAEXHIBIT/digitalpublication.php>

Attitude

The range of possible approaches to an adaptive reuse project may be further clarified by an additional categorization of what I will call ‘attitude’ (these are a subset of the variables that Rockcastle identifies as ‘backgrounds’):

- Similar (substantially like)
- Complimentary (in ways related to)
- Contrasting (substantially different)

As in the case of the variables of physical action, one project may encompass some or all of these attitudes within the range of actions taken. However, it may be useful to identify a project’s primary attitude, in order to clarify its design intentions.

Matrix of design variables

Combining the variables of physical action and attitude creates a matrix of design variables into which any adaptive reuse project can be placed:

Table 4: Matrix of design variables (Author)

	Similar	Complimentary	Contrasting
Addition			
Subtraction			
Alteration			
Recombination			

Some projects will not fit neatly into one cell of this matrix. However, for most projects, a dominant strategy in terms of physical action and attitude will be identifiable, and can be used for appropriate categorization.

Design strategy precedents

Porter House

SHoP architects, New York, NY, 2003

	Similar	Complimentary	Contrasting
Addition			X
Subtraction			
Alteration			
Recombination			

At Porter House, SHoP architects renovated a 30,000 sf warehouse for conversion to condominiums. They preserved the historic shell of the existing building, and added an additional 15,000 sf through an addition attached to the roof and cantilevered over the adjacent building.²⁷ The facade of the new addition, made of zinc and glass, presents a striking contrast to the historic brick facade. (Figure 75)



Figure 75: Porter House (SHoP architects)²⁸

²⁷ <http://www.architecture-page.com/go/projects/porter-house>

²⁸ <http://www.chi-athenaeum.org/archawards/2005/2005photos/PorterHouse.jpg>

Jim Rouse Visionary Center
Cho Benn Hollback + Assoc., Baltimore, MD
 2004

	Similar	Complimentary	Contrasting
Addition			
Subtraction			
Alteration			
Recombination		X	

As an imaginative expansion to the American Visionary Art Museum in Baltimore, Cho Benn Hollback + Associates adapted and renovated an abandoned 1936 whiskey barrel warehouse to create exhibit, classroom and conference/performance space.²⁹ The designers recycled not only the shell of the existing building, but recycled and repurposed some of the interior elements as well. The wood timber structure that was originally used to hold stacked kegs of whiskey was removed, reconfigured, and reassembled to serve as new interior space dividers. (Figure 76) Whisky barrel staves were repurposed for use as interior wall coverings. (Figure 77) By imaginatively repurposing these original interior elements the designers were able to create a very interesting and layered interior while saving materials and retaining a visual memory of the building's past.



Figure 76: Wood timber structure reused as space divider (Cho Ben Hollback + Assoc.)³⁰

²⁹ Garth Rockcastle, "Subsequent Action," University of Maryland Exhibit Catalog, <http://publications.ingagepublication.com/UMDSAEXHIBIT/digitalpublication.php>.

³⁰ Cho Benn Holback + Assoc., "Rouse Visionary Center," <http://www.cbhassociates.com/projects/archive/cultural/museums/avam.htm>.

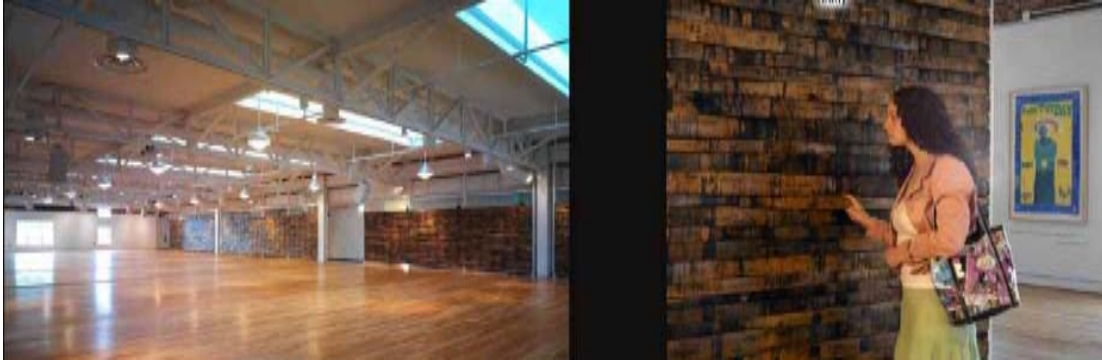


Figure 77: Barrel staves reused as interior walls (Cho Ben Hollback + Assoc.)³¹

New York Blood Center

Ehrenkrantz, Eckstut & Kuhn, Long Island City, NY, 2007

	Similar	Complimentary	Contrasting
Addition			
Subtraction			
Alteration		X	
Recombination			

In this project, Ehrenkrantz, Eckstut & Kuhn transformed a 1960s warehouse in Queens into a new blood center for New York. The building's large-span steel structural system, masonry exterior walls, and fenestration were all reused and found to be remarkably efficient for the new use.³² The original bones and organization of the building still read clearly though the new insertions/alterations.



Figure 78: New York Blood Center (Ehrenkrantz, Eckstut & Kuhn)³³

³¹ Garth Rockcastle, "Subsequent Action," University of Maryland Exhibit Catalog, <http://publications.ingagepublication.com/UMDSAEXHIBIT/digitalpublication.php>.

³² Ibid.

³³ Ibid.

Design development

Initial schemes

The design process began with an exploration of how the proposed program could fit into the site and the existing building. This exploration was organized around the adaptive reuse strategy matrix that was used to analyze the precedents presented above. However, it focuses only on the “physical actions” axis, disregarding the more style-based “attitude” axis at this early phase of the design process.

The first scheme (Figure 79) focuses on a strategy of addition, maintaining all of the existing buildings and programmed outdoor spaces on the site, and simply adding to them. The blue, red and yellow shading within the building outlines corresponds to the color scheme established in the program analysis diagram in Figure 73, and indicates where the major program areas are located.

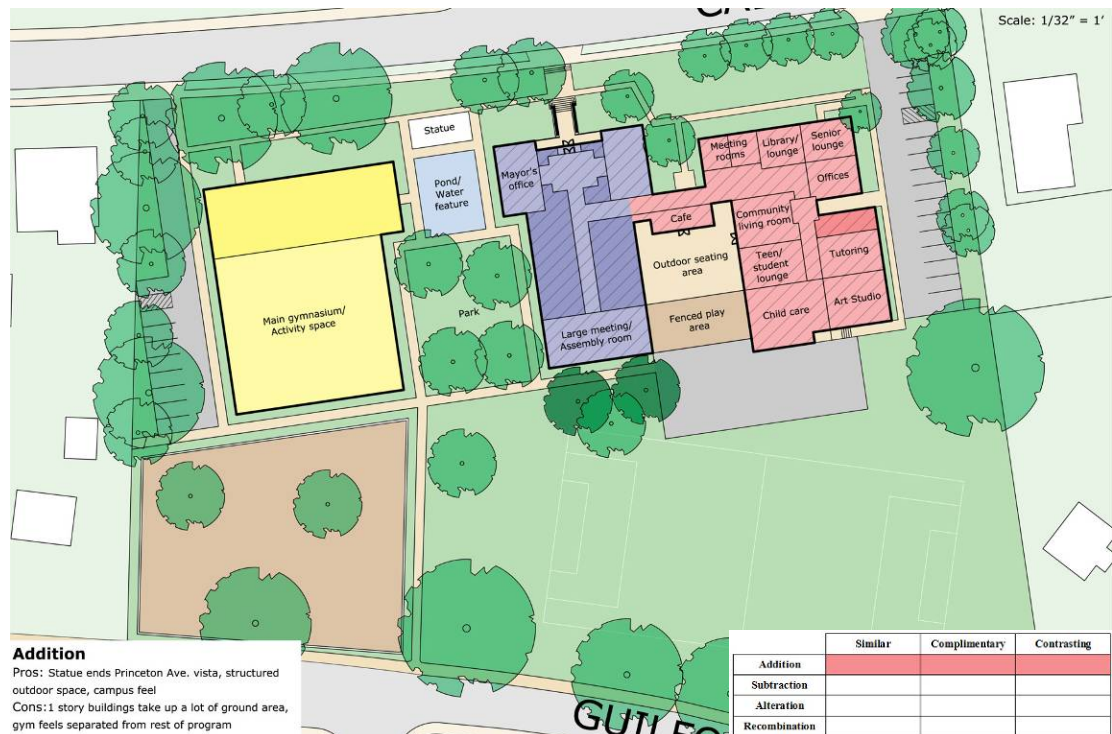


Figure 79: Initial scheme –Addition (Author)

The second proposal focuses on subtraction as a design strategy. In this scheme, only the historic 1938 building is retained, while the 1952-1954 addition (which is less significant, both in terms of historic and aesthetic value) is subtracted.

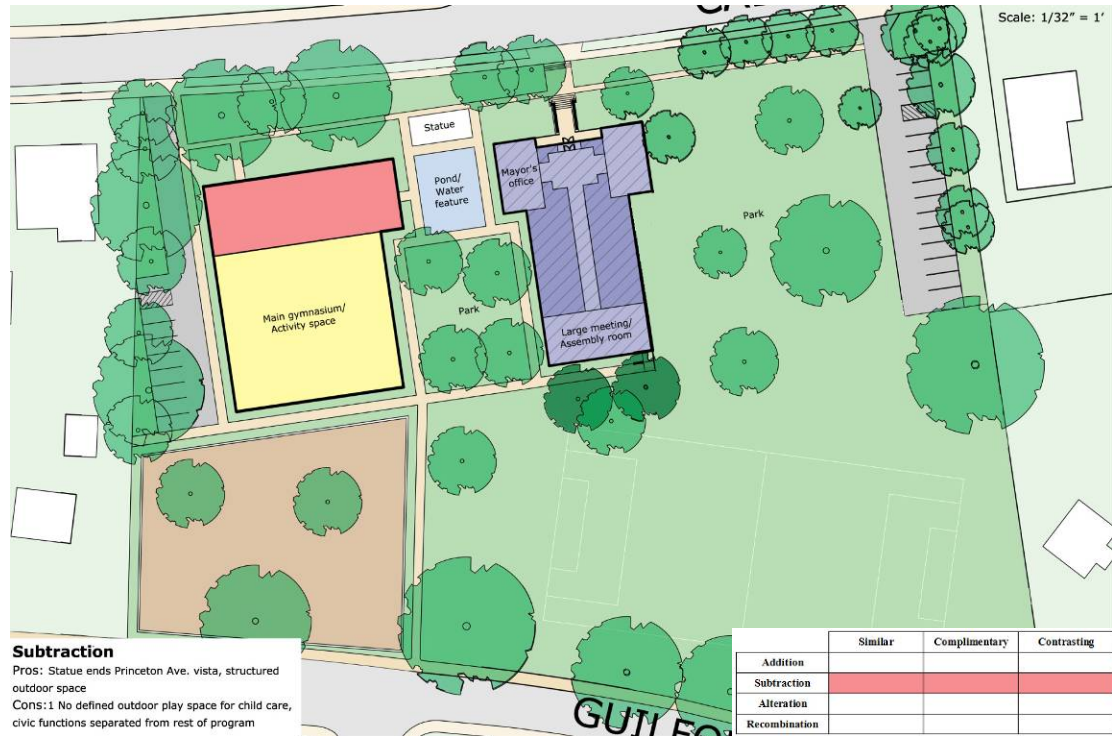


Figure 80: Initial schemes – Subtraction, 1st floor (Author)

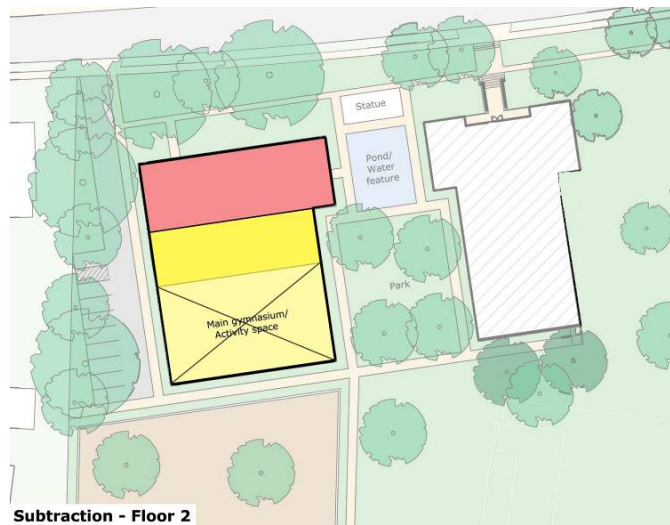


Figure 81: Initial schemes - Subtraction, 2nd floor (Author)

The third strategy is one of alteration. All of the current buildings on site are retained, but they are altered and expanded to accommodate the larger program proposed for the community center. The programmed outdoor spaces are also altered and moved to different areas of the site.

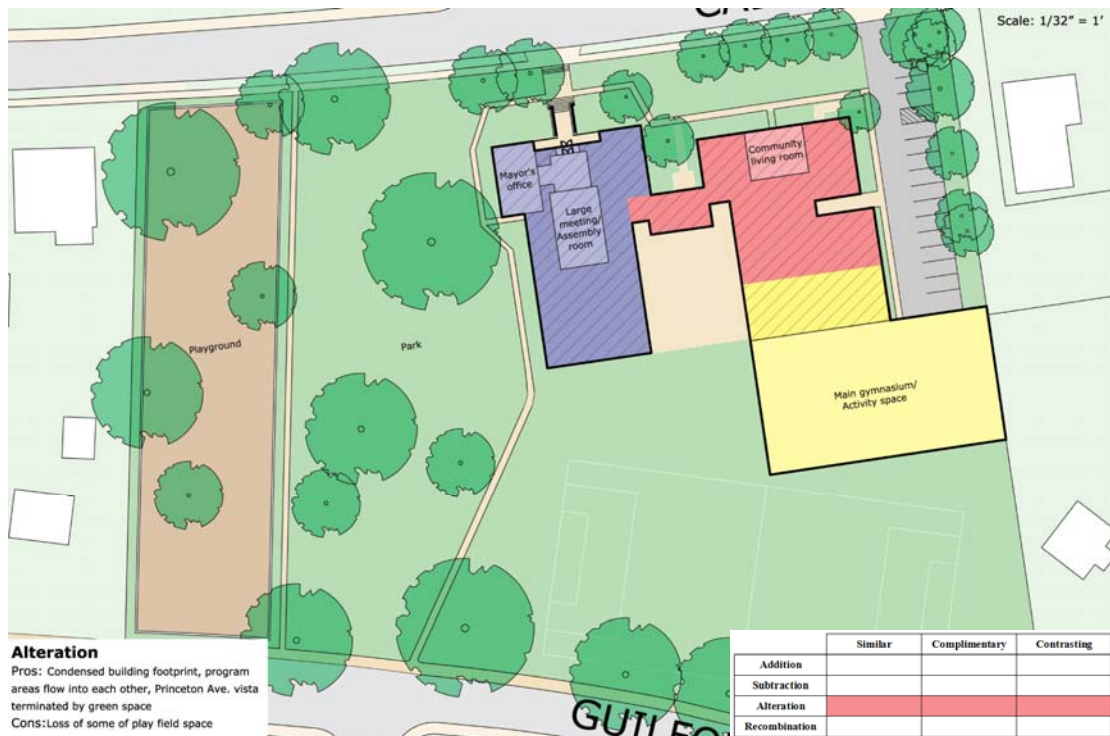


Figure 82: Initial schemes - Alteration, 1st floor (Author)

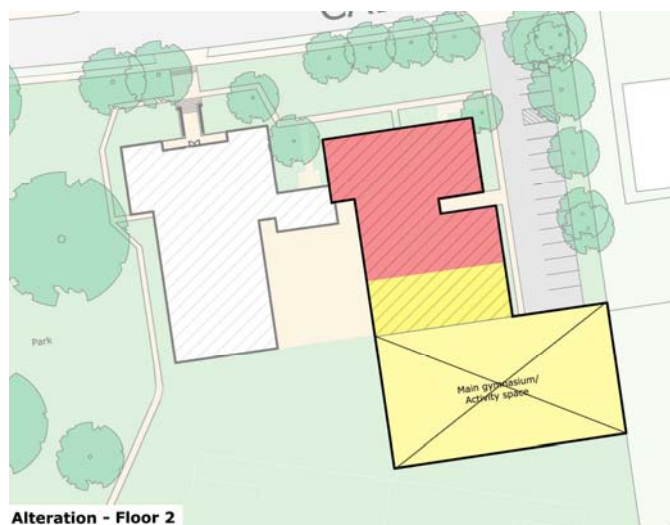


Figure 83: Initial schemes - Alteration, 2nd floor (Author)

The fourth strategy is another take on alteration. This design takes its inspiration from the Gleneagles precedent, putting the gymnasium in a central location where it can be overlooked by the other program elements and can serve as a central gathering place.

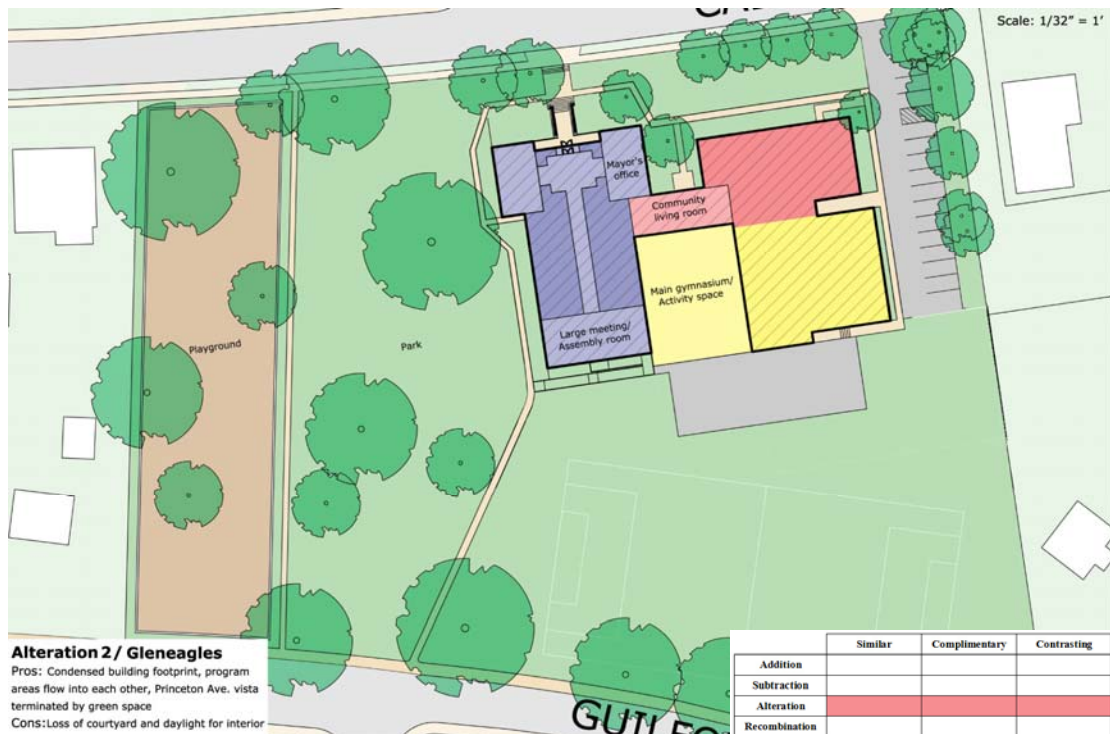


Figure 84: Initial schemes - Alteration 2, 1st floor (Author)

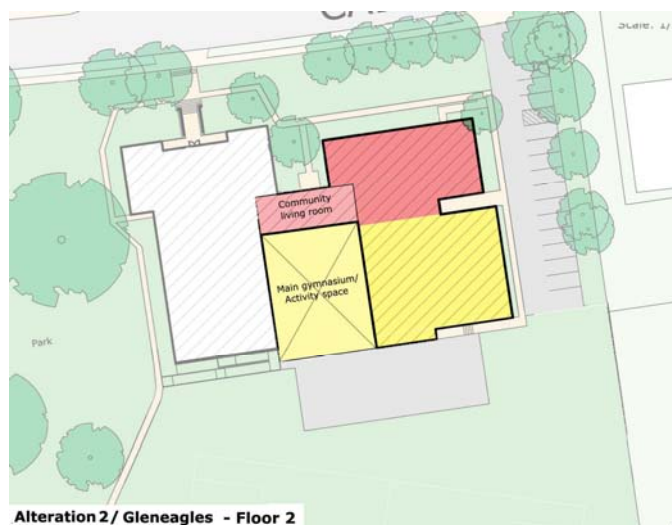


Figure 85: Initial schemes - Alteration 2, 2nd floor (Author)

The final of the initial schemes employs a strategy of recombination. The original 1938 building is retained, and the 1952 section of the addition is extracted from the current composition, resulting in a different site strategy and a new passage between the buildings. The removed material is recombined to form a new addition.

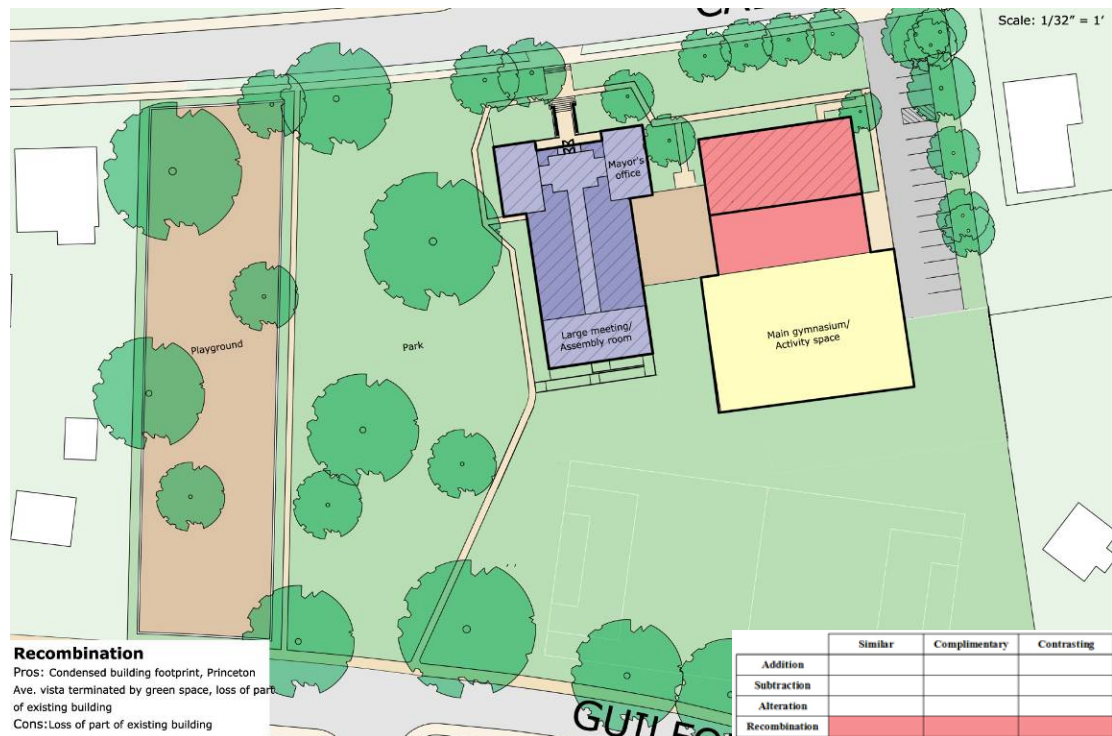


Figure 86: Initial schemes - Recombination, 1st floor (Author)

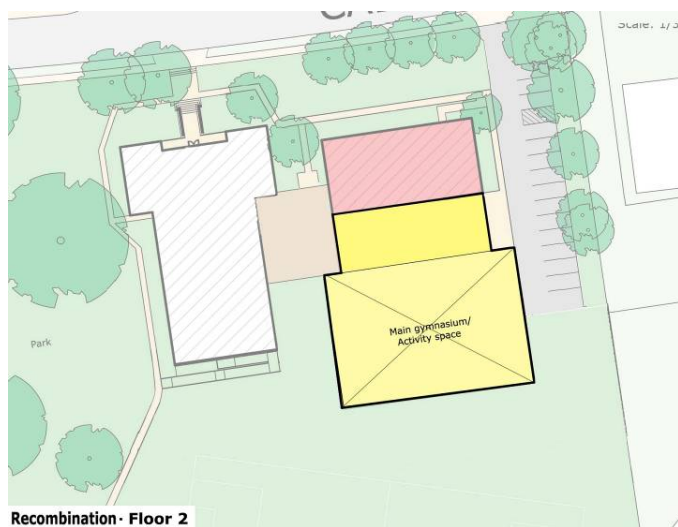


Figure 87: Initial schemes - Recombination, 2nd floor (Author)

Scheme development

The initial set of site proposals was largely constrained by the established program proposal. In order to free the design process from these constraints, the design process was shifted at this point to a series of freehand explorations of different site strategies. Each strategy was named according to the organizing concept around which it was developed.

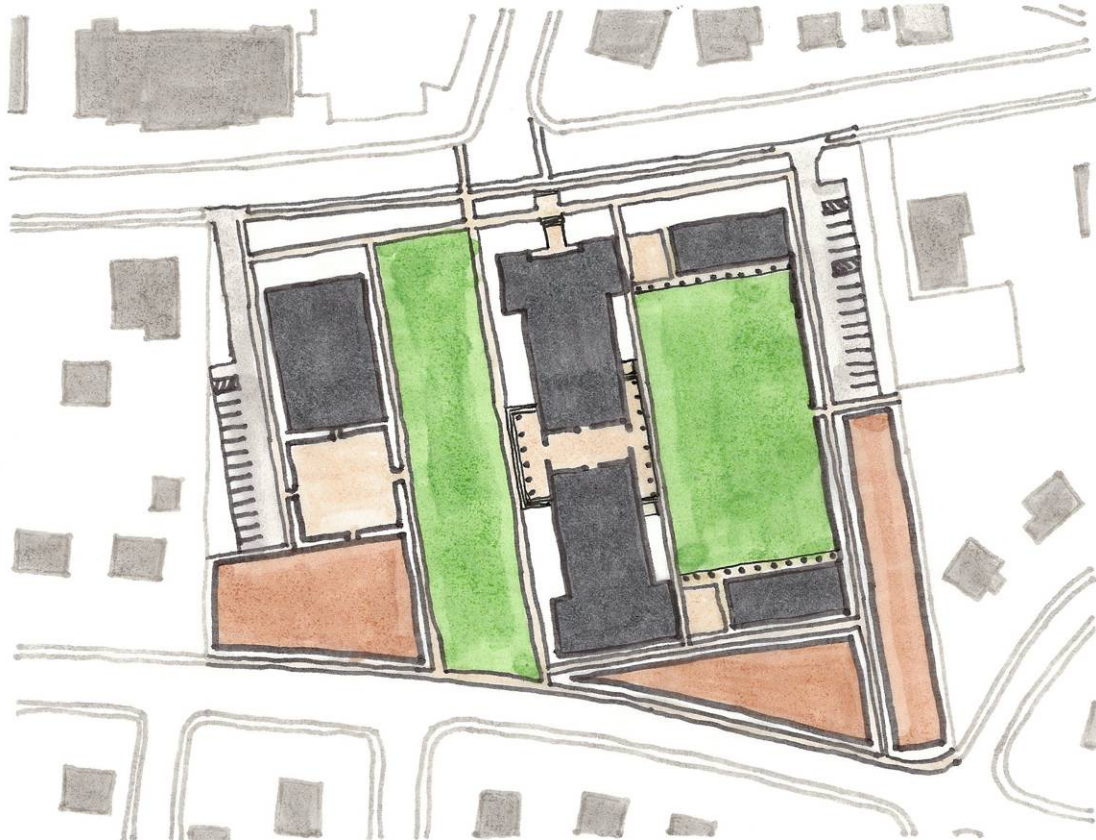


Figure 88: The Walk (Author)

The Walk (Figure 88): This design focused on creating a connection between the neighborhoods to the north and south of the site. This connection took the form of *The Walk*, a public promenade that created a visible connection between the neighborhoods and a public gathering space in front of the main building for festivals, farmers markets and even protests. This scheme maintained the historic 1938

building and incorporated a new building shaped as its mirror image. It also added a few other small buildings to create a semi-private courtyard on the east side of the site, and a strong cross-axis across the site



Figure 89: *The Walk/The Quad* (Author)

The Walk/The Quad (Figure 89): This scheme combined the concept of *The Walk* with the creation of a more intimate *Quad*-like space that could be used for smaller gatherings. In this scheme, an addition is placed at the southern end of the 1938 building to front *The Quad* and create a symmetrical façade facing *The Walk* and a compression and expansion of space across *The Walk*, in conjunction with the large building on the other side. The form of *The Walk* in this scheme is changed to respond to the geometries of the site and surrounding neighborhood.

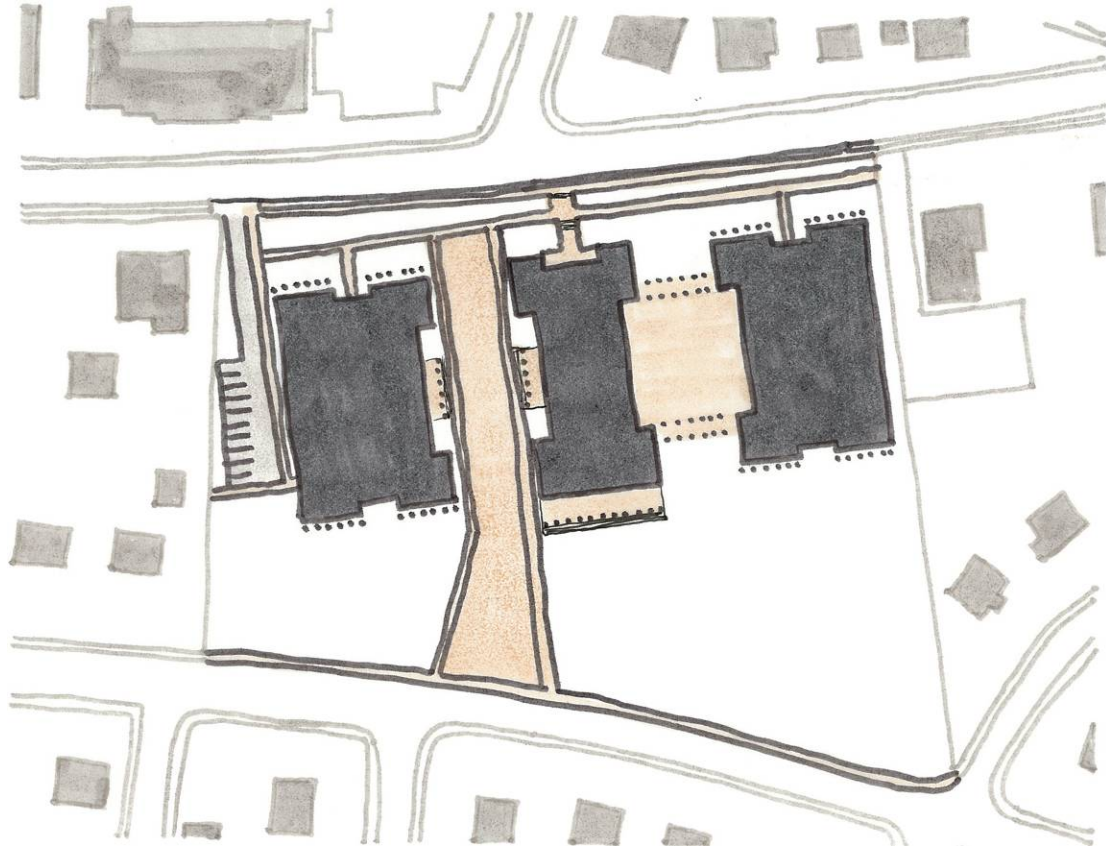


Figure 90: Porches (Author)

Porches (Figure 90): This site plan retains *The Walk* in its revised form from the previous scheme. However, the main focus of this scheme is on the creation of *Porches*, interstitial spaces between indoor and outdoor rooms where informal interactions can take place. It takes its inspiration from traditional porches, common in the vernacular architecture surrounding the site. The porches of the neighborhood houses serve as gathering places and symbols of community. This scheme suggests that the new community center might benefit from the inclusion of covered outdoor spaces that reference the traditional porch form and attempt to replicate its success in creating informal areas for community interaction.

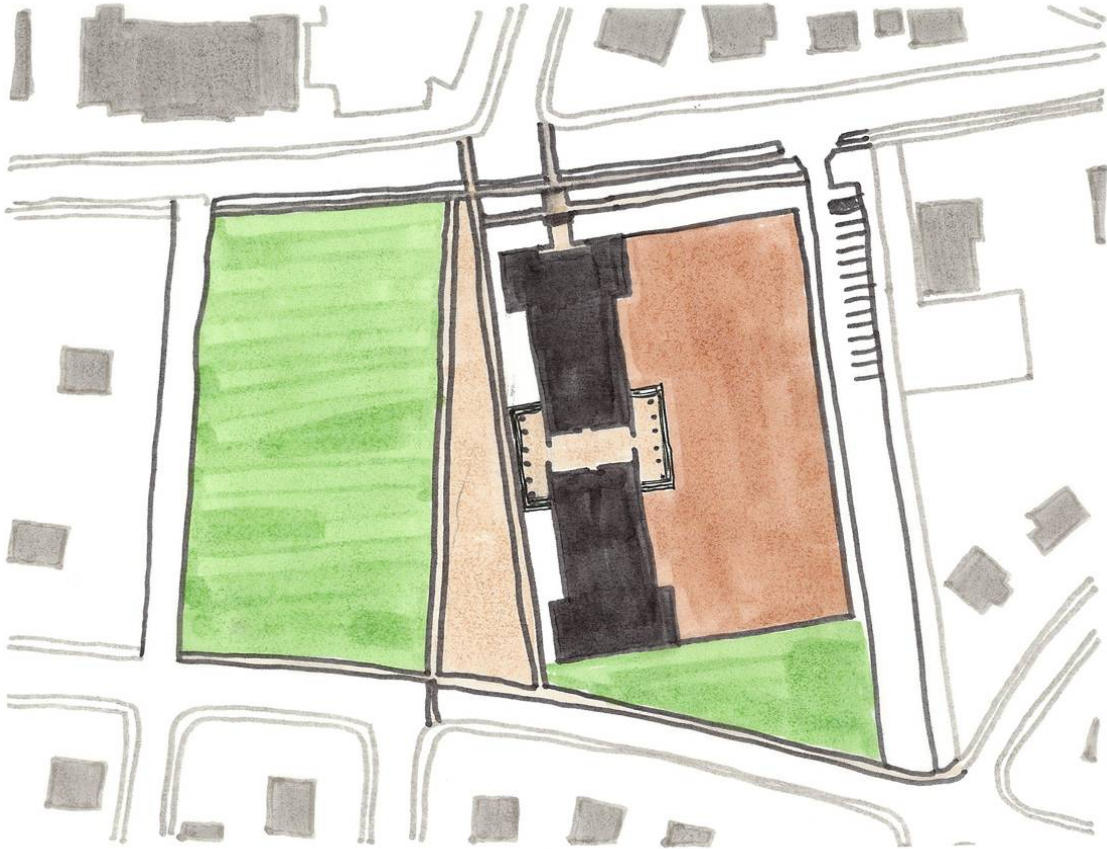


Figure 91: Town Square (Author)

Town Square (Figure 91): The *Town Square* scheme also retains the notion of *The Walk*, changing its form yet again to present a different response to the geometries of the site and surrounding context. This scheme again mirrors the form of the historic 1938 building, creating a large civic building which fronts *The Walk* and a large green space conceived of as a town square. This scheme cuts two new streets through the site to increase the porosity of the block. The town square is a large green space open on all sides to the larger community, rather than contained by the forms of the community center's buildings. The connection between the old and new buildings in this scheme becomes a focal point, and a new ceremonial entrance to the community center and the more contained, semi-private outdoor space behind the building.

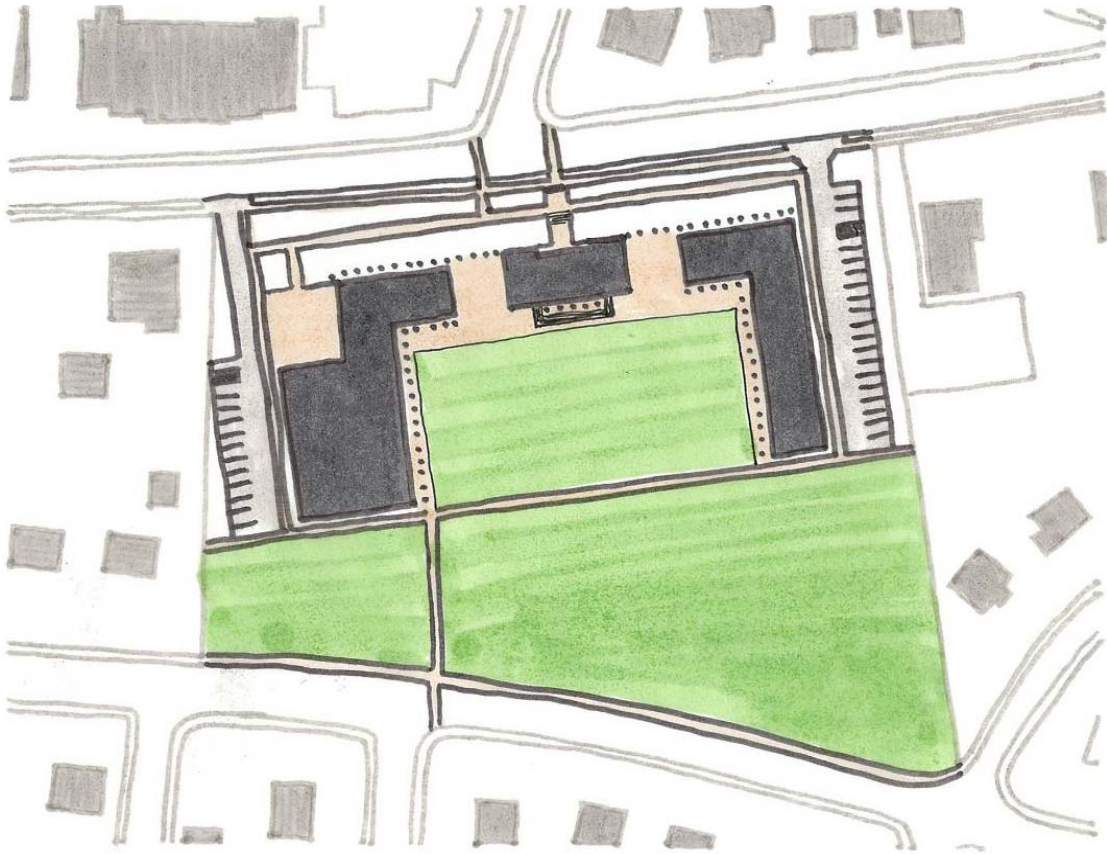


Figure 92: The Lawn 1 (Author)

The Lawn 1 (Figure 92): This design groups the buildings on the northern part of the site, preserving the southern portion for a large green space. Variety of outdoor space is created by the contrast between the formality of the lawn element contained within the building forms and the less-structured concept of a lawn on the southern end of the site. In this scheme, only the “head house” element of the original 1938 building is retained. The buildings are visually and spatially tied together with a series of colonnades, which create outdoor spaces similar to the porches discussed in a previous scheme. A strict symmetry of the built forms is maintained around the perimeter of the formal lawn, but this stricture is relaxed around the outside edges, allowing for changes in the building sizes to accommodate different program elements. A connection is made between the neighborhoods to the north and south of

the site, but it is at a much smaller, less-ceremonial scale than in the previous schemes.



Figure 93: The Lawn 2 (Author)

The Lawn 2 (Figure 93): This scheme is a variation on the first *Lawn* scheme. In this design, the formal lawn element is eliminated, and only the less-structured lawn on the southern half of the site is retained. The formal outdoor space in this scheme is defined by paved plazas rather than a formal green space. The entire historic 1938 building is retained, and is flanked on either side by a new building. Here again, symmetry is maintained only on the inner face of these buildings, while the outer edge is allowed to shift to accommodate different program elements. As in the previous scheme, a smaller-scale connection is made across the green space to connect the neighborhoods on the north and south sides of the site.

Scheme synthesis/refinement

In the next stage of the design process, the set of site proposals that had been developed was considered, tested and revised through a series of stages of scheme development, synthesis and refinement. During this process, two of the main organizing concepts began to emerge as the most compelling site solutions: *Town Square* and *The Lawn*. Each of these concepts was tested further in different configurations and in combination with *The Walk* concept, though drawings and models.

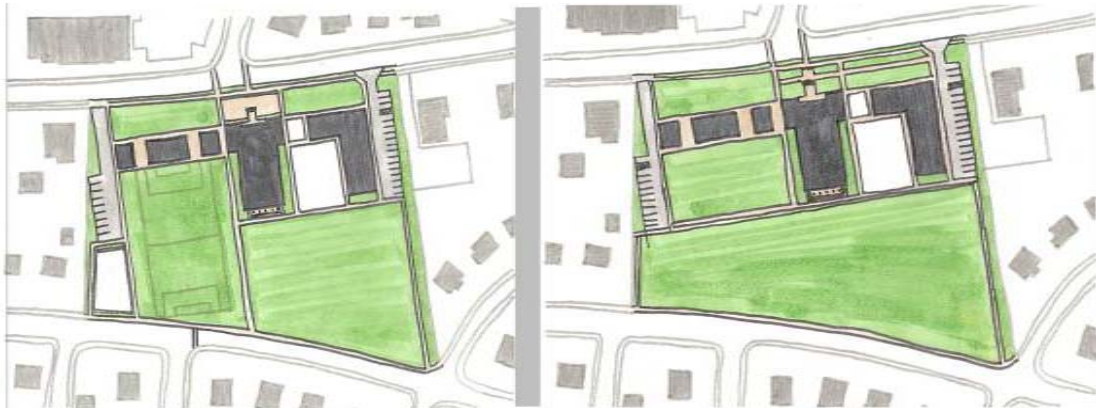


Figure 94: Scheme development - The Lawn (Author)



Figure 95: Scheme development - Town Square (Author)

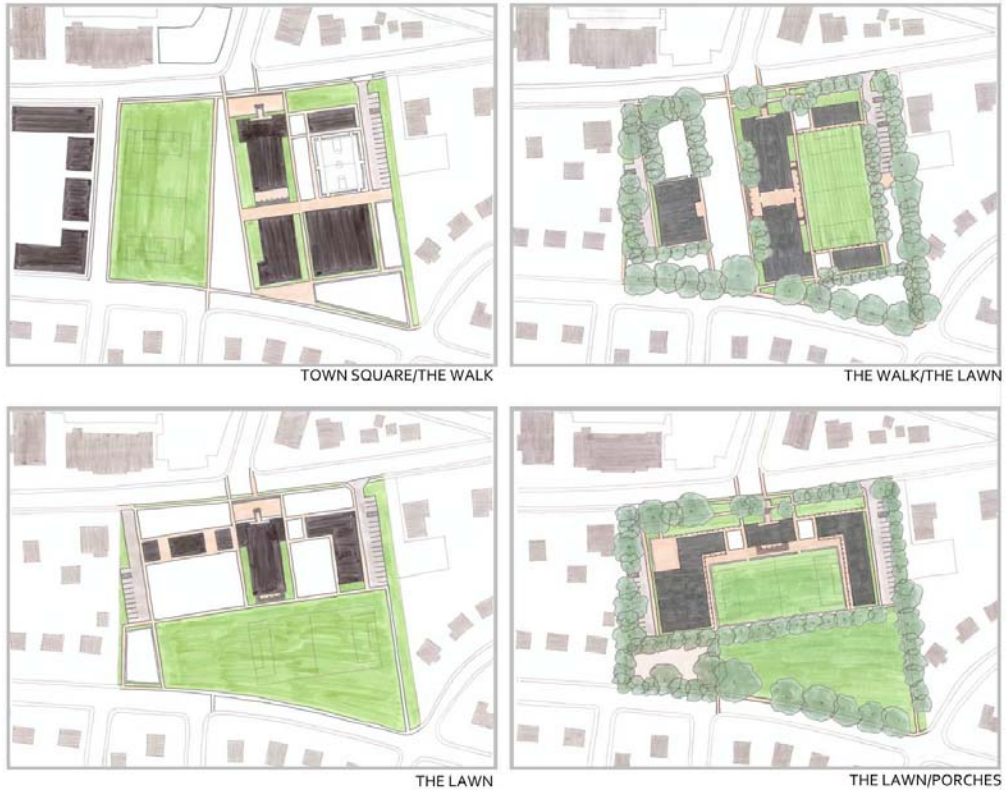


Figure 96: Scheme synthesis/refinement - drawings (Author)

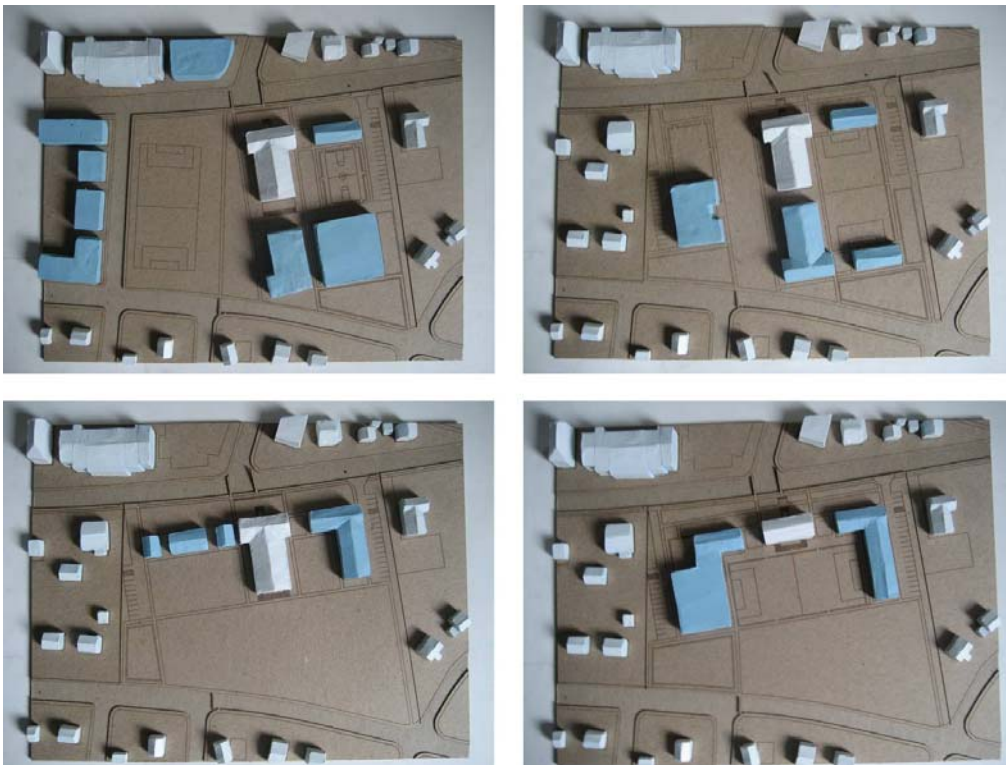


Figure 97: Scheme synthesis/refinement - models (Author)

Design solutions

After consultation with my thesis committee, I decided to continue to develop the two most promising design solutions through to the public review, rather than narrowing it down to one. The committee felt that this would be a rare opportunity to develop two different schemes to a high level of resolution, and a beneficial exercise in understanding the advantages and disadvantages of different site strategies and approaches.

Design solution #1: Town Square

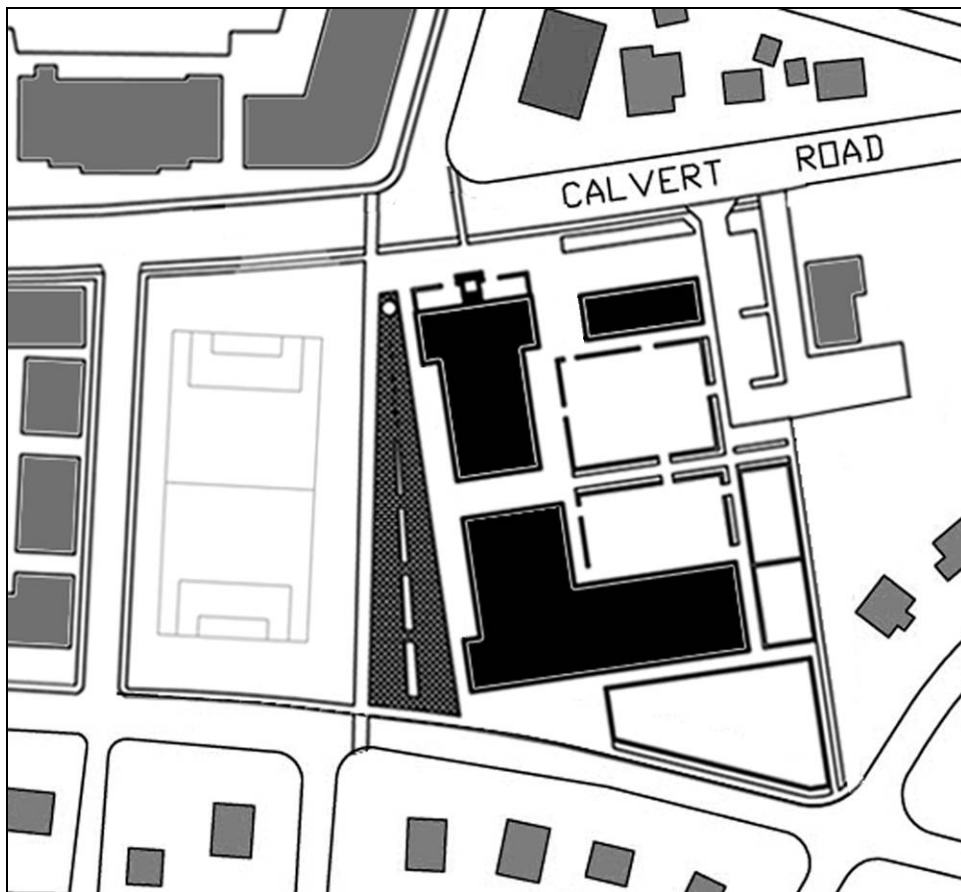


Figure 98: Design solution #1- Town Square (Author)

The *Town Square* proposal creates a new communal green space which is open on all sides to the surrounding community. (Figure 99) This space is intended to serve as a new town square for College Park, helping to anchor the community center as the heart of civic activity in the city. The space is sized to accommodate a soccer field appropriate for children's teams up to age 11. However, the use of this space is not intended to be restricted to soccer. It can be used for dog walking, casual picnics and strolls, pick-up games softball or frisbee, festivals, farmers markets, protests, outdoor movie showings, and many other community activities.

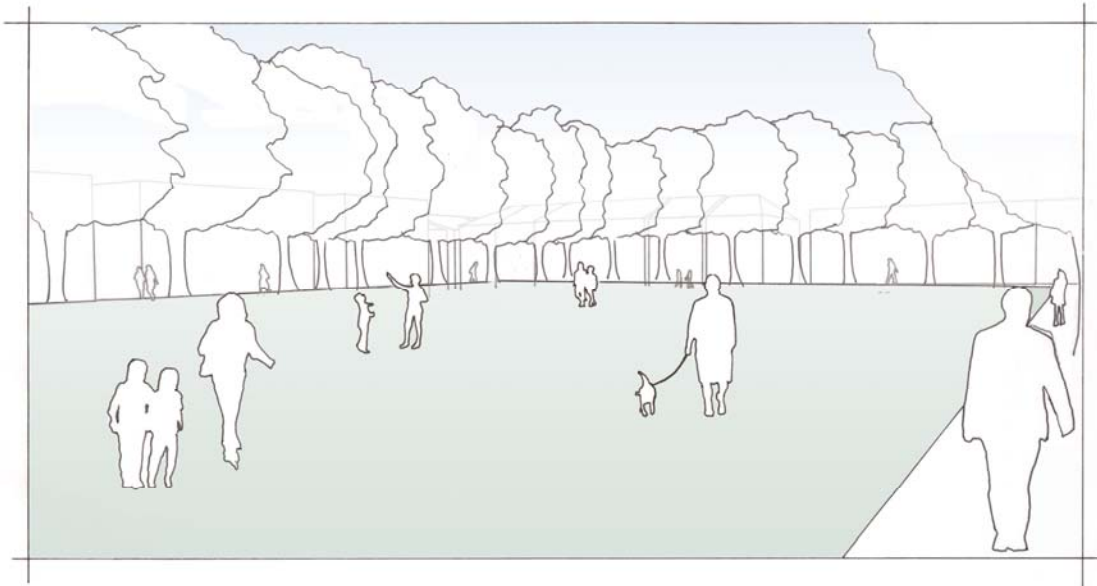


Figure 99: Perspective of town square (Author)

In this scheme, a new road is cut through the block to increase connectivity between the two sides of the site. The lots facing this new street and the town square would be developed from single-family housing to higher-density development more appropriate to their newly-prominent positions fronting the town square. (Figure 100)

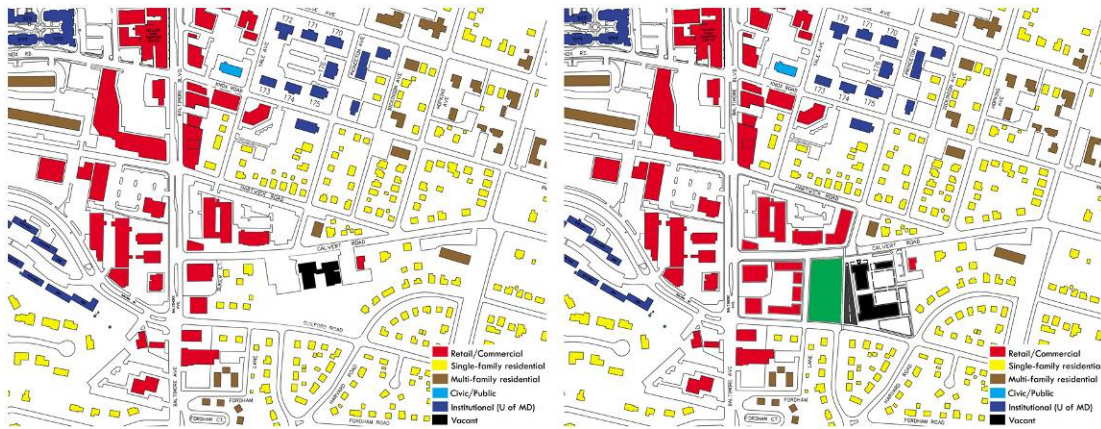


Figure 100: Town Square - urban implications (Author)



Figure 101: Town Square - aerial views with city context (Author)



Figure 102: Town Square - first floor plan (Author)



Figure 103: Town Square - second floor plan (Author)

In the *Town Square* proposal, the town hall functions are contained entirely in the existing 1938 building, which is almost exactly the same size as the existing city hall. An additional new small building positioned along Calvert Road next to the historic building provides additional office space for the city's administrators. The large new building on the southern half of the site contains both the Home for Community and the Exercise & Activity program functions.

A prominent tree-lined *Walk* feature provides a strong connection between the neighborhoods on either side of the site and mediates between the large, open town square and the buildings' façades. This area incorporates a water feature which references the historical presence of the creek on the site, though it does not replicate its path.



Figure 104: The Walk (Author)

In this scheme, the buildings form a courtyard which houses open space of a very different character from that in the town square. The enclosure of the buildings makes this space feel semi-private, dedicated to the needs of the community center and its users. (Figure 105) The interior spaces surrounding this courtyard have strong visual and physical connections to this green space, with program elements such as

outdoor café seating that spill out into the outdoor space during nice weather. (Figure 106)



Figure 105: Semi-private courtyard (Author)

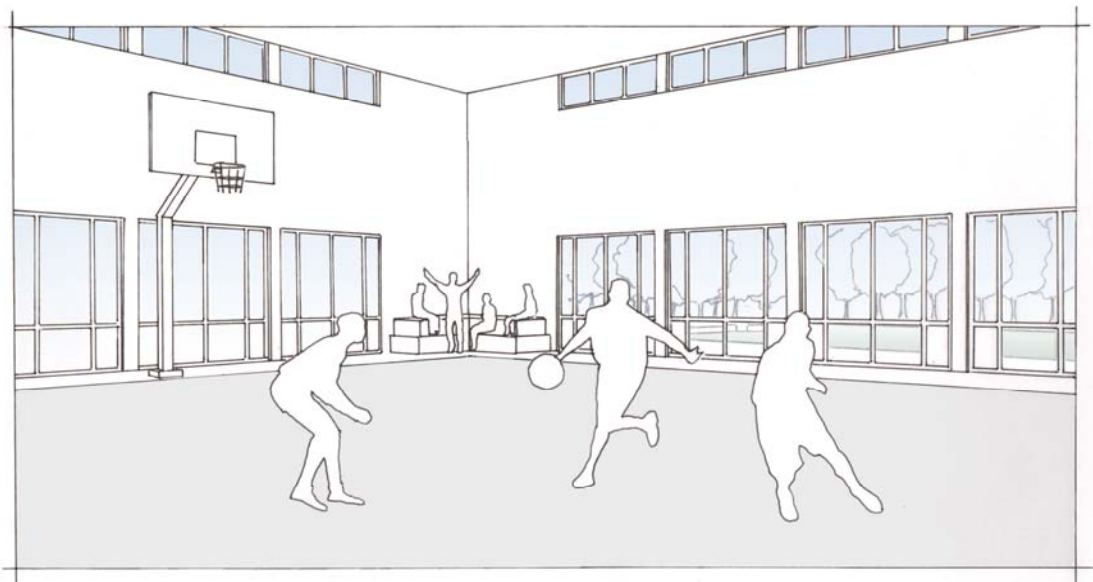


Figure 106: Gymnasium with visual and physical connections to courtyard green space (Author)

The courtyard is entered either from the *Walk*, through the ceremonial gateway which connects the old building with the new (Figure 107) or through the gap between the buildings on Calvert Road (Figure 108 and Figure 109).



Figure 107: Gateway - entry to courtyard and connection between old and new (Author)



Figure 108: View from Calvert Road (Author)



Figure 109: Entrance to semi-private courtyard (Author)

Design solution #2: The Lawn

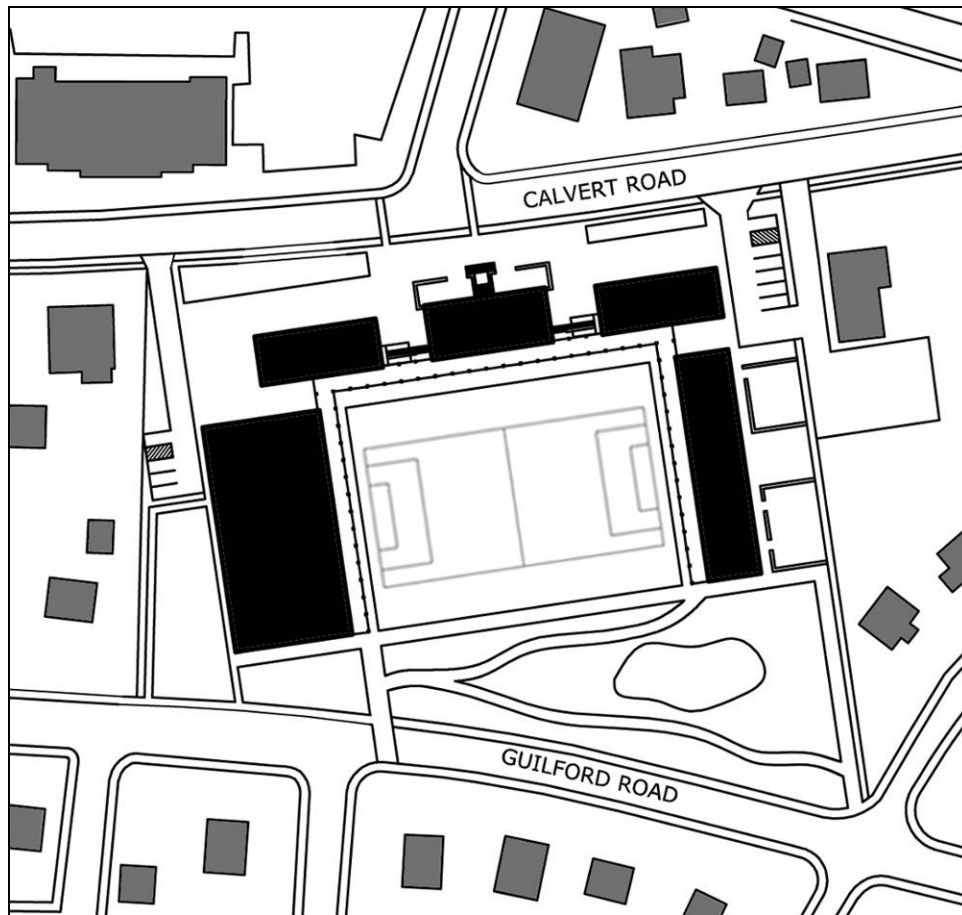


Figure 110: Design solution #2 - The Lawn (Author)

The *Lawn* proposal focuses inward, on a large lawn which forms a communal outdoor “room” between the buildings. The buildings in this scheme are grouped on the northern half of the site, creating a strong “front” facing Calvert Road. (Figure 111 and Figure 112) The southern part of the site is filled with a large, informal park space. In the center of this park, along the original path of the creek that flowed through the site, is a pond. (Figure 113)



Figure 111: Lawn scheme aerial perspective (Author)



Figure 112: View from Calvert Road (Author)

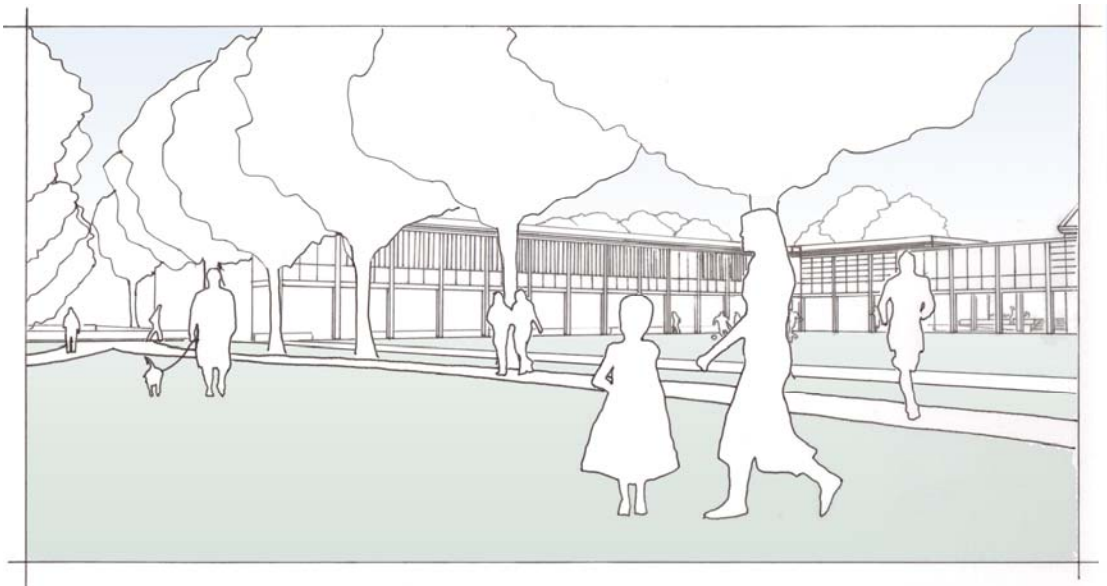


Figure 113: Park space, with view toward the lawn (Author)

The central lawn is lined with a colonnade which creates a covered open-air porch at ground level connecting the five buildings and creating an informal space for neighbors to meet. (Figure 114) There are benches under this colonnade where community members can sit in the shade to talk and to watch soccer games and other events held on the lawn. (Figure 115)



Figure 114: Central lawn lined with colonnade (Author)

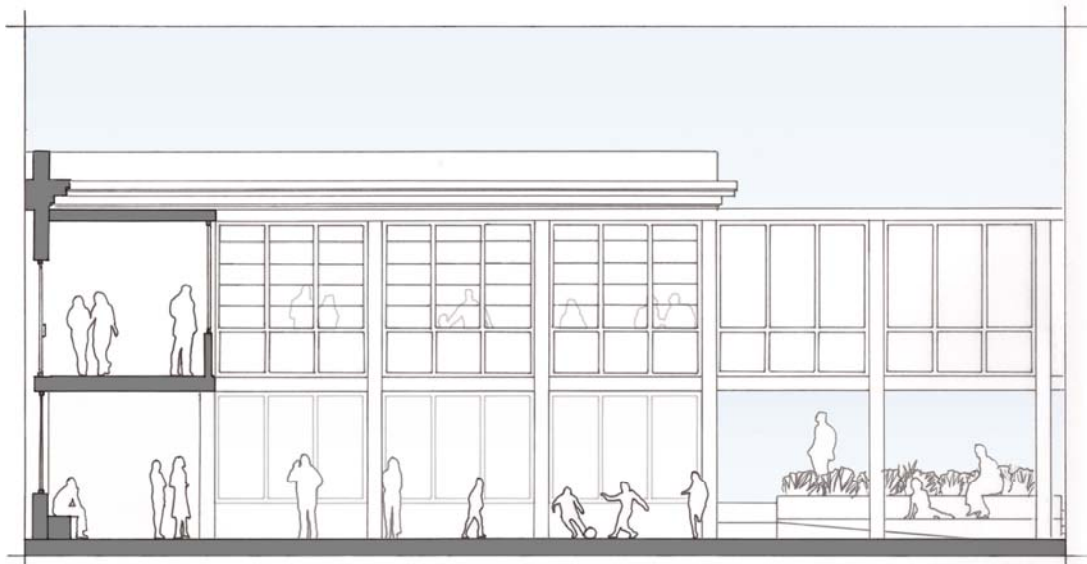


Figure 115: Partial section of central lawn space and surrounding two-story colonnade (Author)

On the second floor, the liner is mostly conditioned space connecting the buildings (Figure 116), though there is an open porch on the second floor outside of the community living room where visitors to the community center can sit and chat or watch the games and other events being held on the Lawn. (Figure 117)

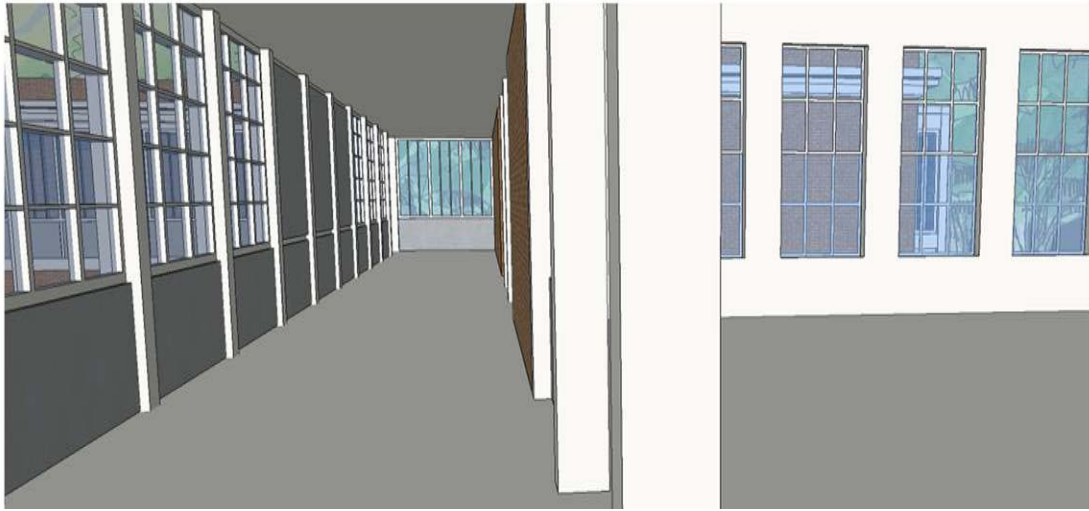


Figure 116: Second level of colonnade and connection to town assembly room (Author)

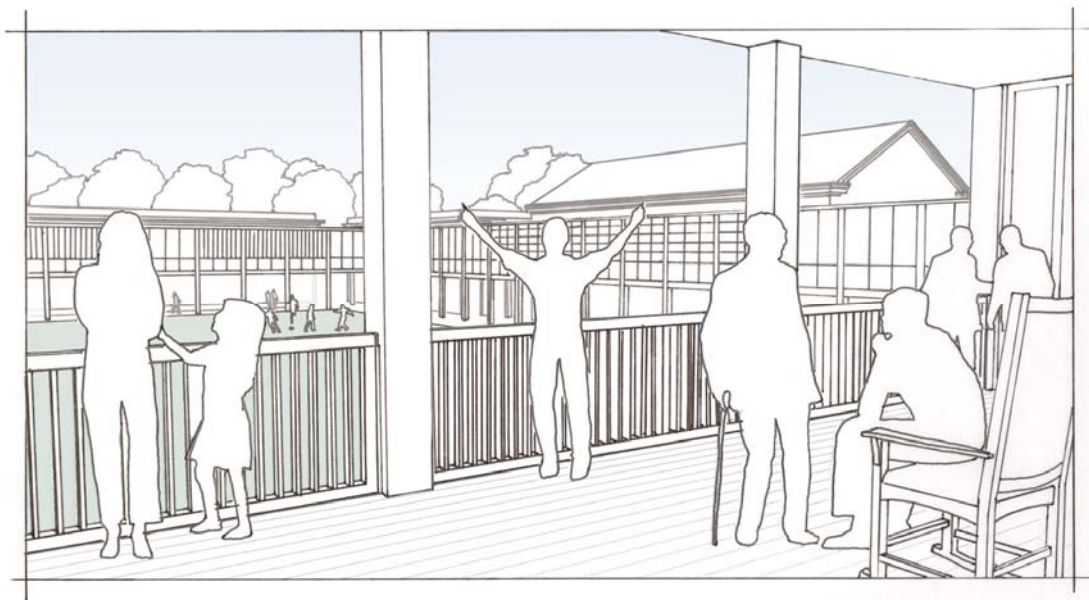


Figure 117: Outdoor porch at second level (Author)

In this scheme, only the iconic “head house” element of the historic 1938 building is retained. (Figure 118) The fact that the south wall of this piece of the building is a solid brick wall with only small punched openings to make connections to the “tail” element of the building suggests that this may, in fact, have been the original construction on the site, and that the building’s “tail” was later added on.

(Figure 119) The town hall functions are contained in this iconic portion of the historic building and the two small new buildings to either side of it, facing Calvert Road. The Home for Community and Exercise & Activity program areas are contained in two long buildings which frame the lawn on the east and west sides.



Figure 118: The Lawn – iconic portion of existing building (Author)



CONNECTION BETWEEN THE SOUTH WALL OF THE "HEAD HOUSE" AND THE "TAIL" OF THE 1938 BUILDING



SOUTH WALL OF "HEAD HOUSE" AT BASEMENT LEVEL



EXTERIOR CONDITION AT CONNECTION POINT

Figure 119: Possible evidence that the "tail" of the historic building was a later addition (Author)



Figure 120: The Lawn – aerial views with city context (Author)



Figure 121: The Lawn - first floor plan (Author)



Figure 122: The Lawn - second floor plan (Author)

Comparative analysis of design solutions

Each of the two final schemes presented above takes a different attitude toward the preservation of the existing building, the creation of communal outdoor space, connections between neighbors and neighborhoods and sidedness with relation to the existing context. The attitude of the Town Square scheme on these issues can be summarized in 5 main points:

Table 5: Town Square - 5 point summary (Author)

<i>The Town Square Scheme:</i>	
1	Maintains the entire historic 1938 building
2	Creates a new town square for College Park
3	Incorporates “The Walk” feature, which creates a prominent and ceremonial pedestrian connection between the neighborhoods to the north and south of the site
4	Creates separate public and semi-private outdoor space
5	Is outward embracing

The attitude taken by The Lawn scheme on the same issues is quite different. It can be summarized by the following 5 main points:

Table 6: The Lawn - 5 point summary (Author)

<i>The Lawn Scheme:</i>	
1	Maintains the just the iconic portion of the 1938 building
2	Creates a large outdoor communal “room”
3	Creates “porches” – interstitial spaces for informal interaction
4	Creates a “front on Calvert” and a backyard facing the neighborhood
5	Is inward looking embracing

Figure 123 and Figure 124 explore these differences in diagram form.

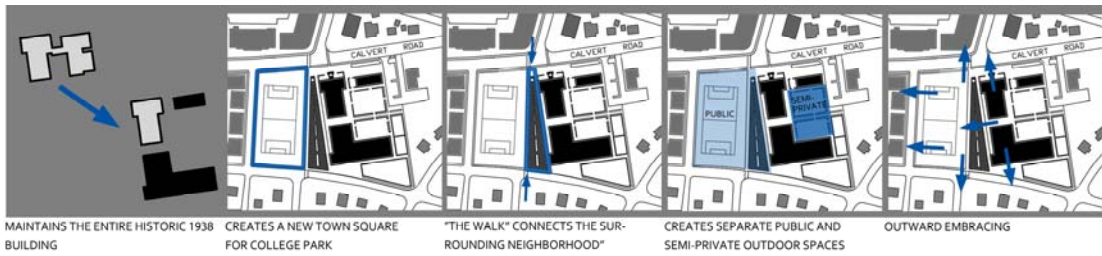


Figure 123: Town Square - 5 point summary (Author)

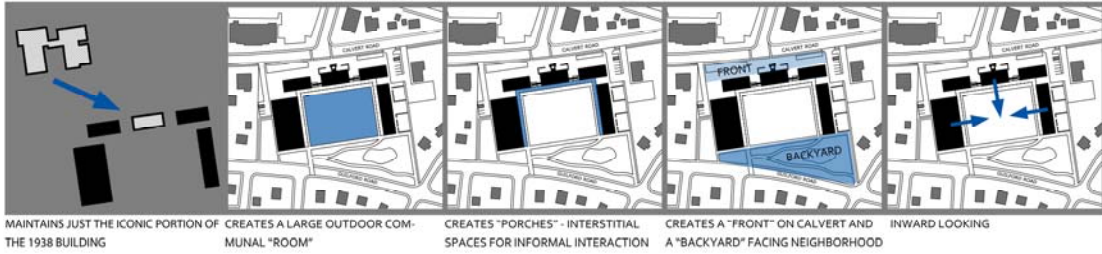


Figure 124: The Lawn - 5 point summary (Author)

A comparison of the square footage figures for each scheme shows that the *Lawn* proposal has about 4,500 sf more indoor space than the *Town Square* proposal. (Table 7) This is due, in part, to the inclusion of additional program elements, such as the conditioned second story of the colonnade and bleachers, a stretching area and a walking track in the gymnasium. However, it is also due to a less efficient arrangement of space, as indicated by the consistently higher percentage difference in this scheme between net and gross square footage.

It is also interesting to compare the total outdoor space provided by each scheme. Though the indoor square footage of the *Town Square* scheme is only slightly smaller than that of the *Lawn* scheme, it provides more than 20,000 additional square feet of programmed outdoor space. (Table 8)

Table 7: Indoor program comparison (Author)

Indoor Program	Town Square	The Lawn
A Home for Community		
Community “living room”	2,760 sf (1,380 sf @ 2 floors high)	2,360 sf (1,180 sf @ 2 floors)
Library/lounge	290 sf	300 sf
Café	440 sf	590 sf
Meeting rooms	2 @ 300 sf	N/A (combined w/ tutoring room)
Tutoring room	N/A (combined w/ teen lounge)	533 sf (includes meeting room)
Child care	1,050 sf	1,050 sf
Teen/student lounge	780 sf (includes tutoring room)	700 sf
Senior lounge	200 sf	500 sf
Art studio	870 sf	1,050 sf
Gallery	290 sf	N/A
Reception	N/A	N/A
Offices/administration areas	400 sf	425 sf
Restrooms	470 sf	450 sf
Total net:	8,150 sf	7,958 sf
Mechanical, circulation, etc.	2,350 sf (22% of net sf)	3,292 sf (29% of net sf)
Total gross:	10,500 sf	11,250 sf
Town Hall		
Large meeting/assembly room	1,590 sf	2,090 sf
Meeting rooms	3 @ 730 sf, 520 sf, 300 sf	320 sf
Mayor’s office	450 sf	320 sf
Offices/administration	7,665 sf	6,880 sf
Restrooms	1,300 sf	866 sf
Total net:	12,555 sf	10,476 sf
Mechanical, circulation, etc.	6,045 sf (33% of net sf)	5,404 sf (34% of net sf)
Total gross:	18,600 sf	15,880 sf
Exercise & Activity		
Main gymnasium/Activity space	12,000 sf (6,000 sf @ 2 floors high)	12,600 sf (6,300 sf @ 2 floors)
Classrooms	2 @ 250 sf	2 @ 300 sf
Changing/locker rooms & restrooms	2 @ 500 sf	2 @ 500 sf
Aerobics equipment & weight training	1,050 sf	1,300 sf
Stretching area	N/A	300 sf
Walking track	N/A	1,700 sf
Bleachers	N/A	620 sf
Offices	390 sf	425 sf
Restrooms	N/A (combined w/ changing rooms)	80 sf (others combined w/ changing)
Total net:	14,940 sf	17,725 sf
Mechanical, circulation, etc.	1,160 sf (7% of net sf)	5,075 sf (22% of net sf)
Total gross:	16,100 sf	22,800 sf
Total indoor space:	45,200 sf	49,850 sf

Table 8: Outdoor program comparison (Author)

Outdoor Program	Town Square	The Lawn
<i>Programmed Outdoor Space</i>		
Town commons	43,350 sf	N/A
The Walk	16,500 sf	N/A
Lawn	7,000 sf	25,300 sf
The Park	N/A	28,100 sf
Playground	9,250 sf	4,800 sf
Outdoor art area/sculpture garden	5,600 sf	1,800 sf
Dog park	2,200 sf	2,500 sf
Child care outdoor play area	1,500 sf	1,400 sf
Total programmed outdoor space:	85,400 sf	63,900 sf

It is also useful to compare the building envelope required by each of the schemes.(Table 9) While the *Town Square* scheme has slightly more roof space than the *Lawn* scheme, it has a smaller total building envelope, which makes it a more economical choice.

Table 9: Building envelope comparison (Author)

Building Envelope	Town Square	The Lawn
<i>Vertical building envelope</i>		
New	22,200 sf	33,300 sf
Existing	11,310 sf	7,072 sf
Total	33,510 sf	40,372 sf
<i>Horizontal building envelope (roof)</i>		
New	16,532 sf	20,400 sf
Existing	7,636 sf	2,800 sf
Total	24,168 sf	23,200 sf
Total building envelope	57,678 sf	63,572 sf

A smaller building envelope is also likely to improve the building's energy efficiency by decreasing the area over which heat or cool air is lost to the outside. The *Town Square* scheme also reuses more of the existing building envelope, which means that it actually requires about 11,000 fewer square feet of new building

envelope than the Lawn Scheme, making it both more economically efficient and more sustainably effective in terms of material conservation and reuse.

In other categories of conservation and reuse, such as reuse of the brick from the 1952/4 extension and maintaining existing mature trees on site, a comparison of the two schemes shows that they achieve very similar results. (Figure 125-Figure 129)

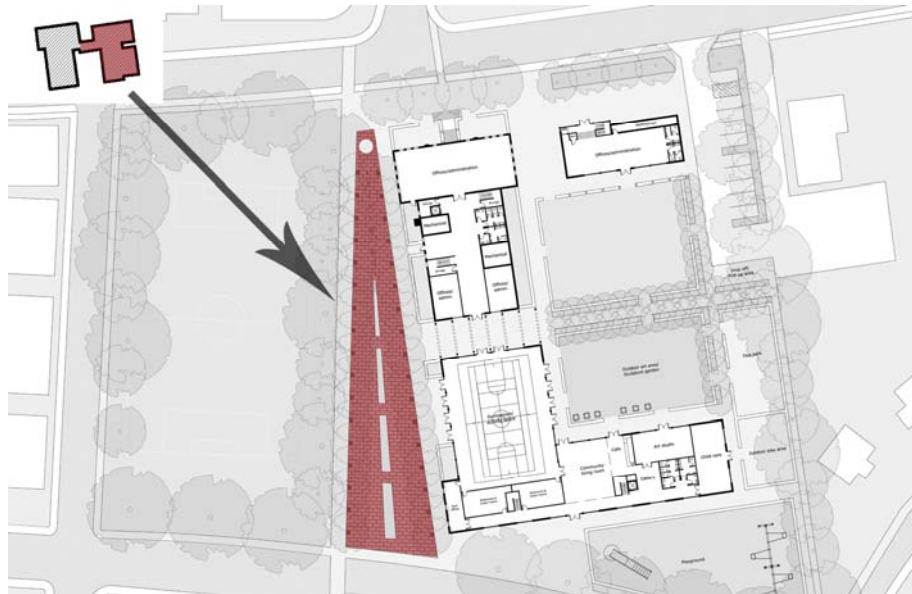


Figure 125: Brick reuse - Town Square (Author)

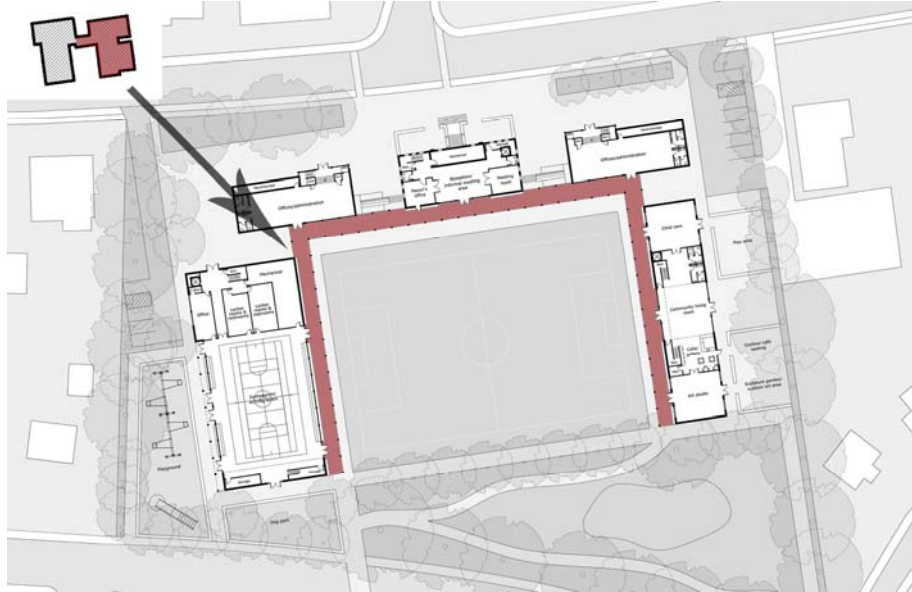


Figure 126: Brick reuse - The Lawn (Author)



Figure 127: Existing trees on site (Author)



Figure 128: Maintenance of existing trees - Town Square (Author)



Figure 129: Maintenance of existing trees - The Lawn (Author)

Finally, a comparative analysis of the location of the various program elements in the two schemes, in terms of adjacencies, access to daylight, isolation of noisy/quiet program elements, public and private elements, and served/servant spaces explores some of the some of the other subtle differences between the schemes.

(Figure 130-Figure 149)

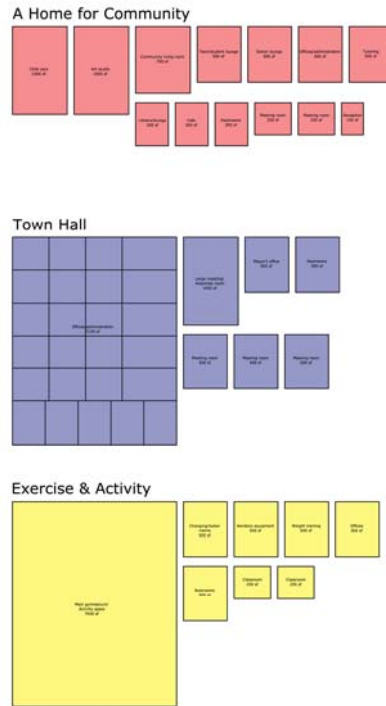


Figure 130: Program elements – key (Author)



Figure 131: Location of program elements – Town Square, Floors 1 & 2 (Author)



Figure 132: Location of program elements – The Lawn, Floor 1 (Author)

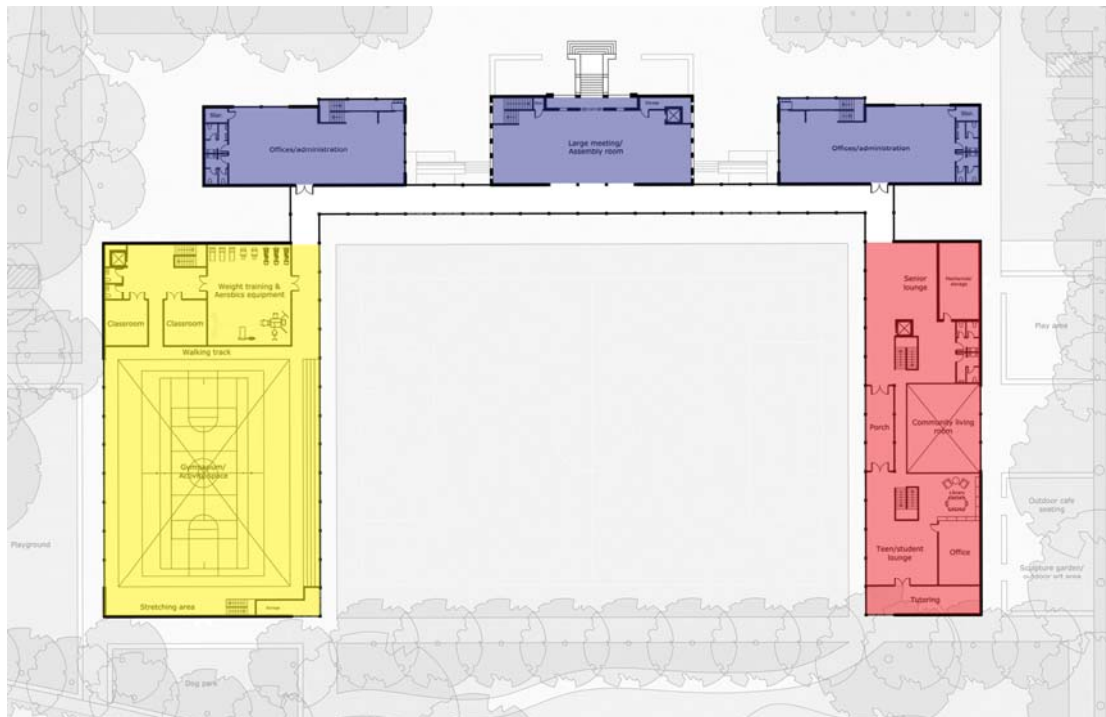


Figure 133: Location of program elements – The Lawn, Floor 2 (Author)

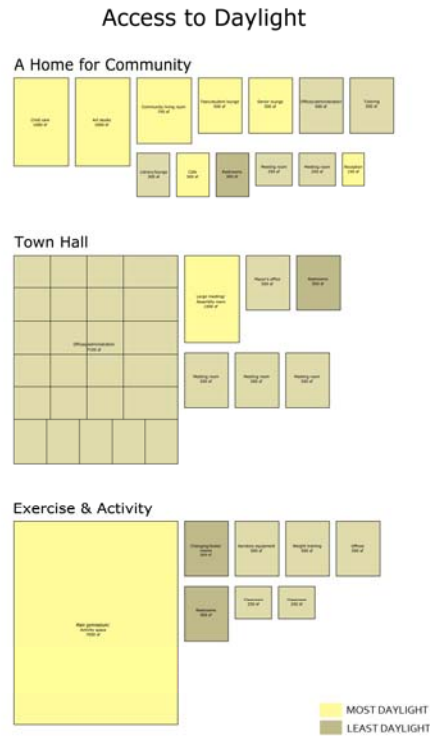


Figure 134: Access to daylight, program requirements – key (Author)



Figure 135 Access to daylight – Town Square, Floors 1 & 2 (Author)

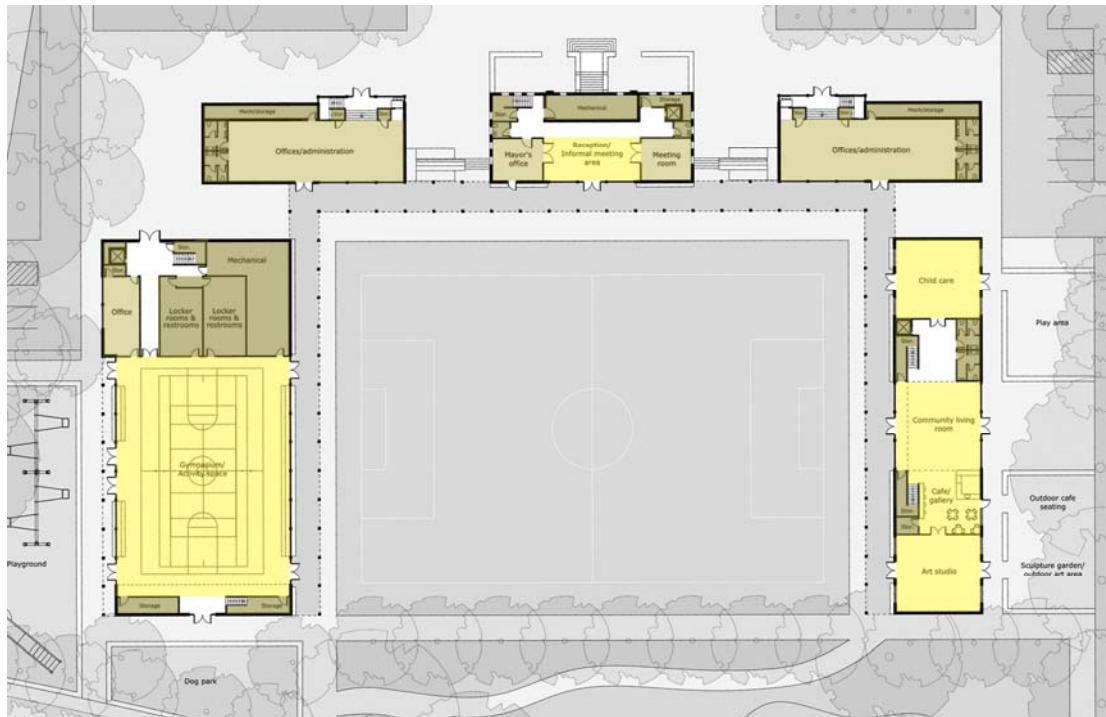


Figure 136: Access to daylight – The Lawn, Floor 1 (Author)

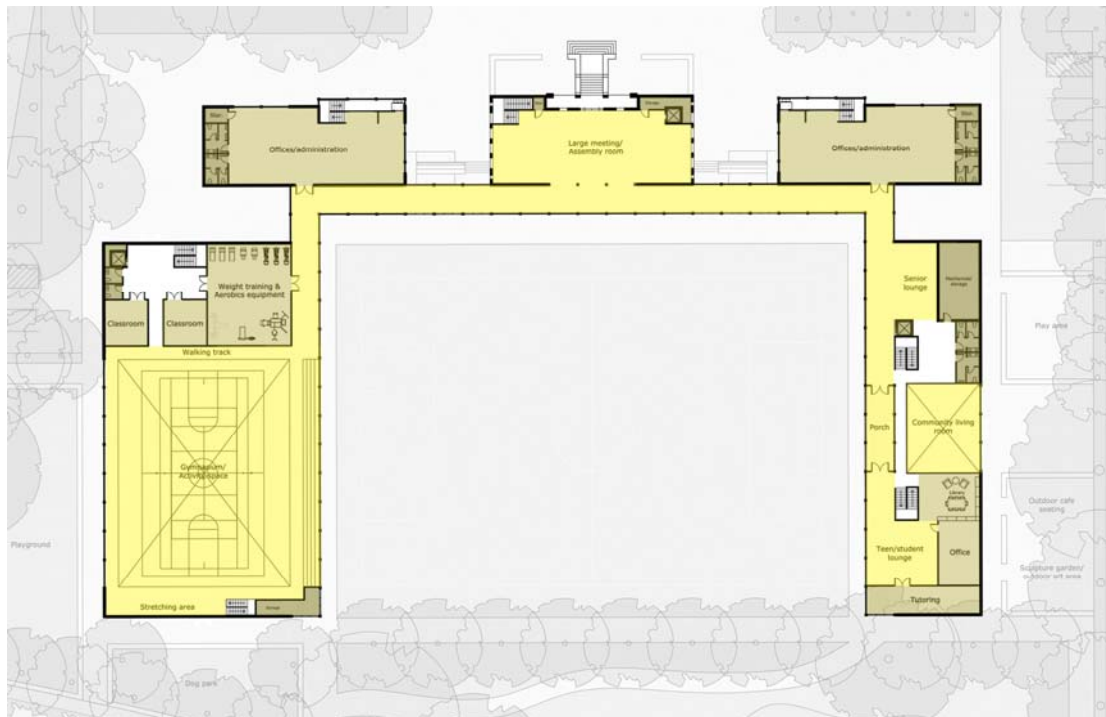


Figure 137: Access to daylight – The Lawn, Floor 2 (Author)

[illegible]

The image displays two architectural floor plans of a school building, likely for a primary or secondary school. The plans are presented in a side-by-side comparison, showing different room arrangements and labels.

Left Plan (Original Layout):

- Top Section:** Labeled "Office/administration".
- Middle Section:** Labeled "Office/administration" and "Office/administration".
- Bottom Section:** Labeled "Office/administration" and "Office/administration".
- Central Area:** Labeled "Outdoor art area/ sculpture garden".
- Right Side:** Labeled "Group and PSE art work" and "Dance hall".
- Bottom Right:** Labeled "Outdoor play area".
- Bottom Left:** Labeled "Playground".

Right Plan (Revised Layout):

- Top Section:** Labeled "Office/administration".
- Middle Section:** Labeled "Office/administration" and "Office/administration".
- Bottom Section:** Labeled "Office/administration" and "Office/administration".
- Central Area:** Labeled "Outdoor art area/ sculpture garden".
- Right Side:** Labeled "Group and PSE art work" and "Dance hall".
- Bottom Right:** Labeled "Outdoor play area".
- Bottom Left:** Labeled "Playground".

The plans show a large central hall, several classrooms, and administrative offices. The right plan shows a similar layout but with different room arrangements and labels. Both plans include outdoor areas like a playground and a large garden.

116



Figure 140: Arrangement of noisy/quiet spaces – The Lawn, Floor 1 (Author)

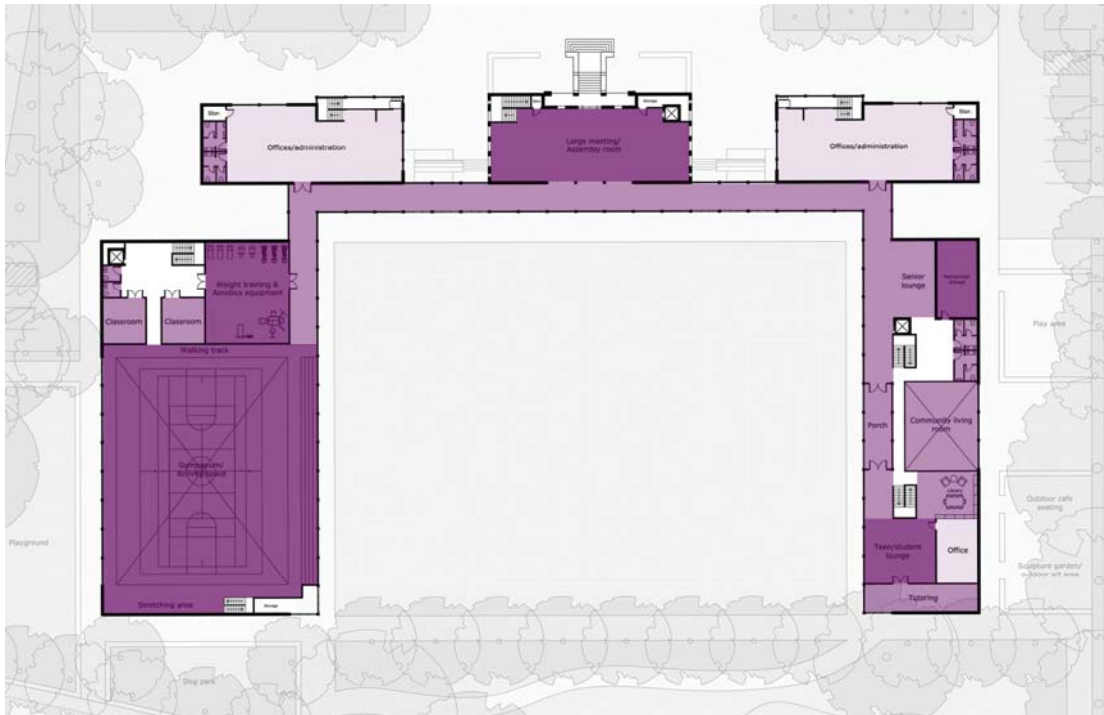


Figure 141: Arrangement of noisy/quiet spaces – The Lawn, Floor 2 (Author)

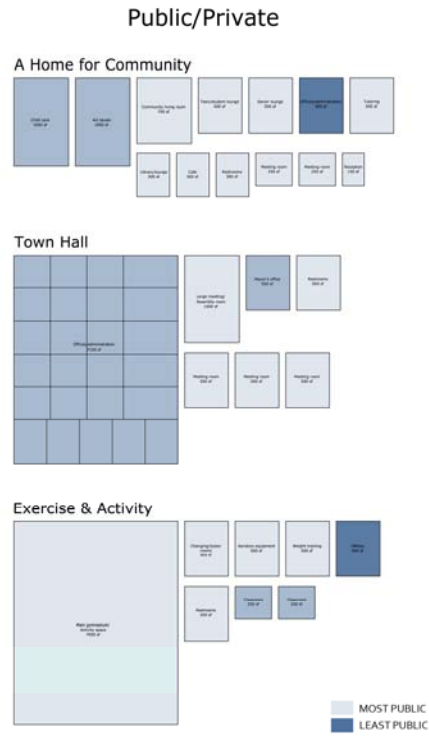


Figure 142: Public/private spaces – key (Author)



Figure 143: Arrangement of public/private spaces - Town Square, Floors 1 & 2 (Author)

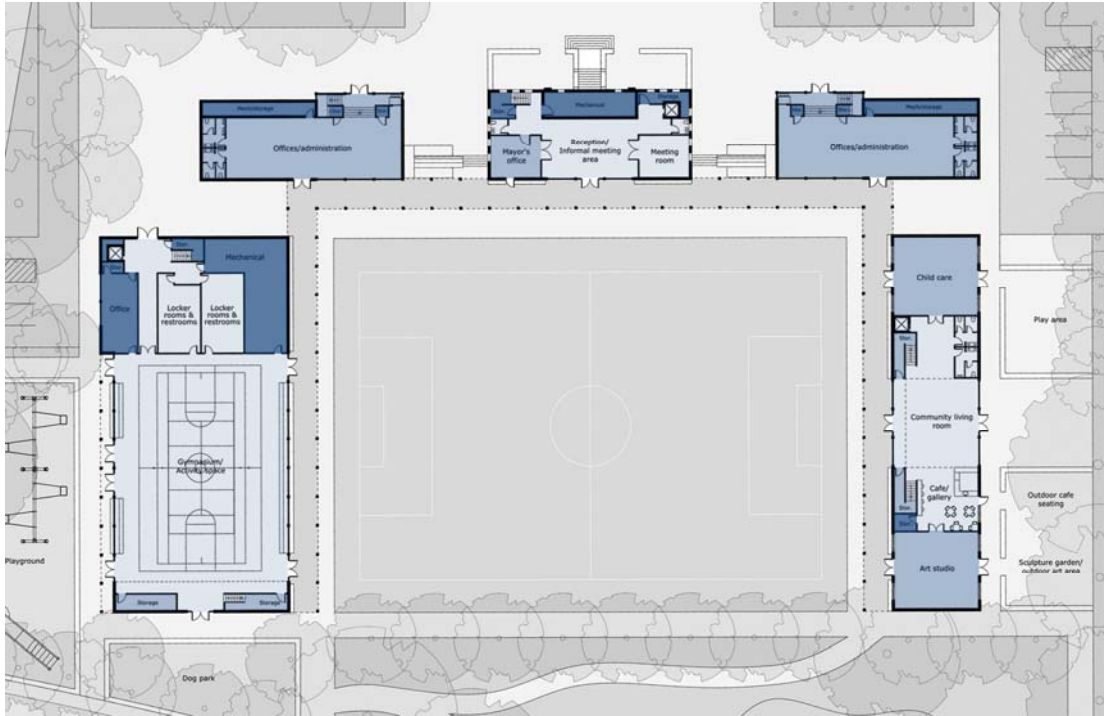


Figure 144: Arrangement of public/private spaces, The Lawn, Floor 1 (Author)

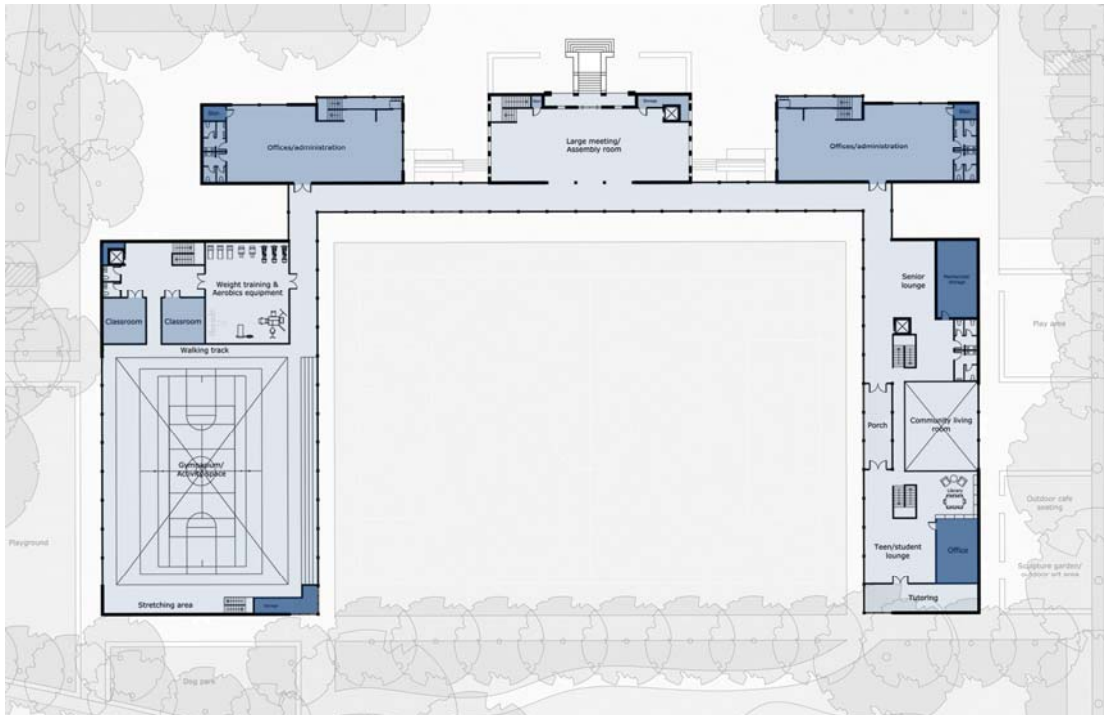


Figure 145: Arrangement of public/private spaces, The Lawn, Floor 2 (Author)

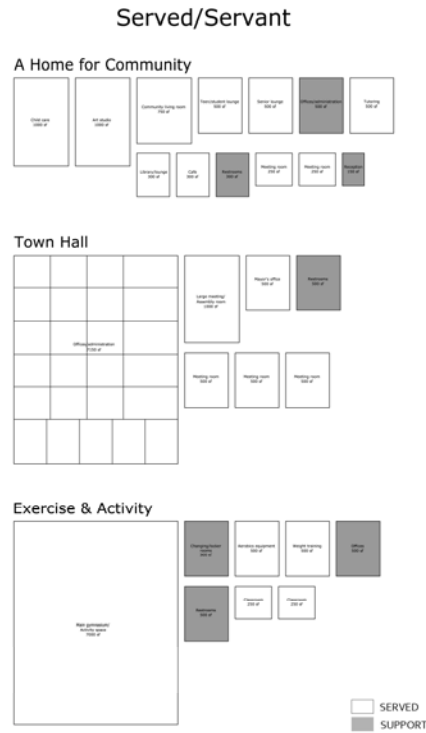


Figure 146: Served/Servant spaces – key (Author)

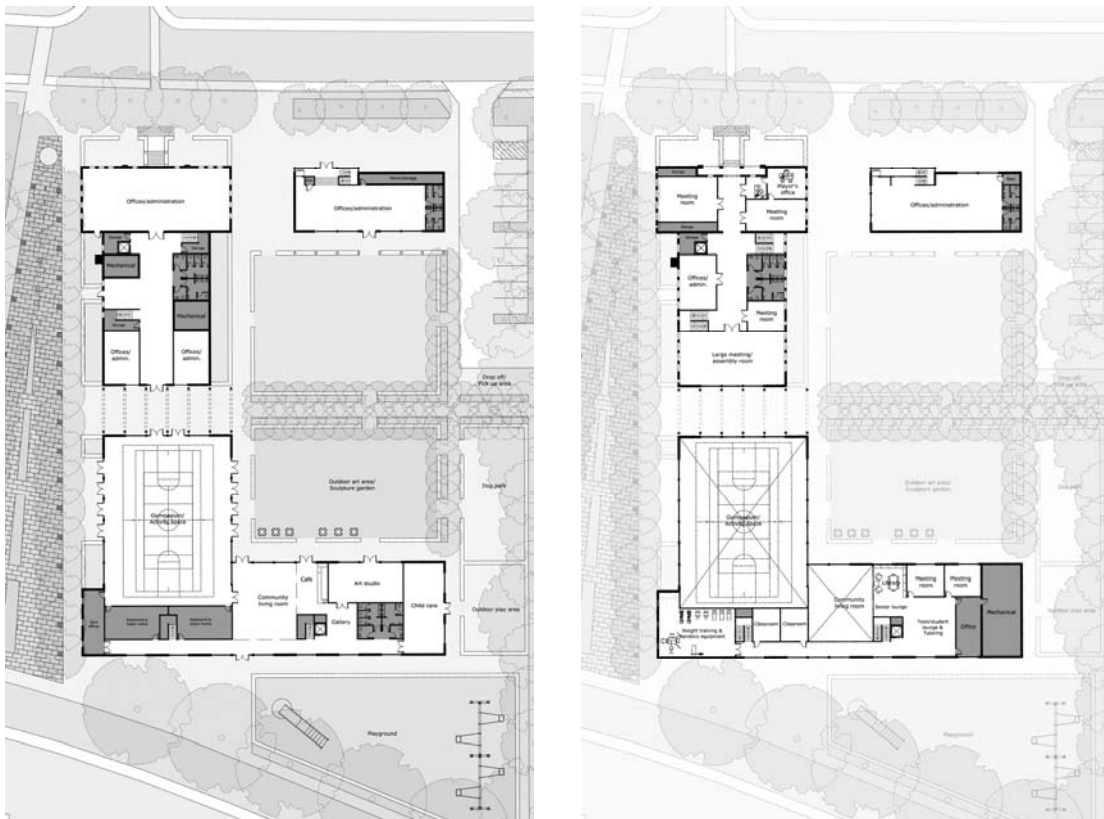


Figure 147: Arrangement of served/servant spaces - Town Square, Floors 1 & 2 (Author)

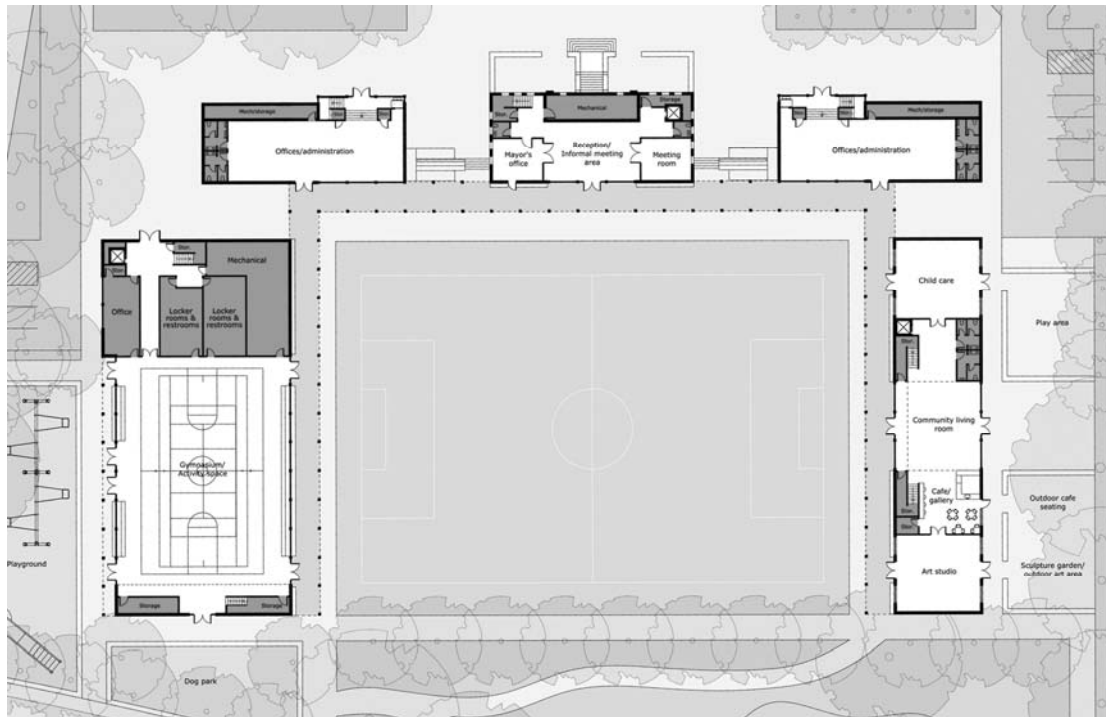


Figure 148: Arrangement of served/servant spaces - The Lawn, Floor 1 (Author)

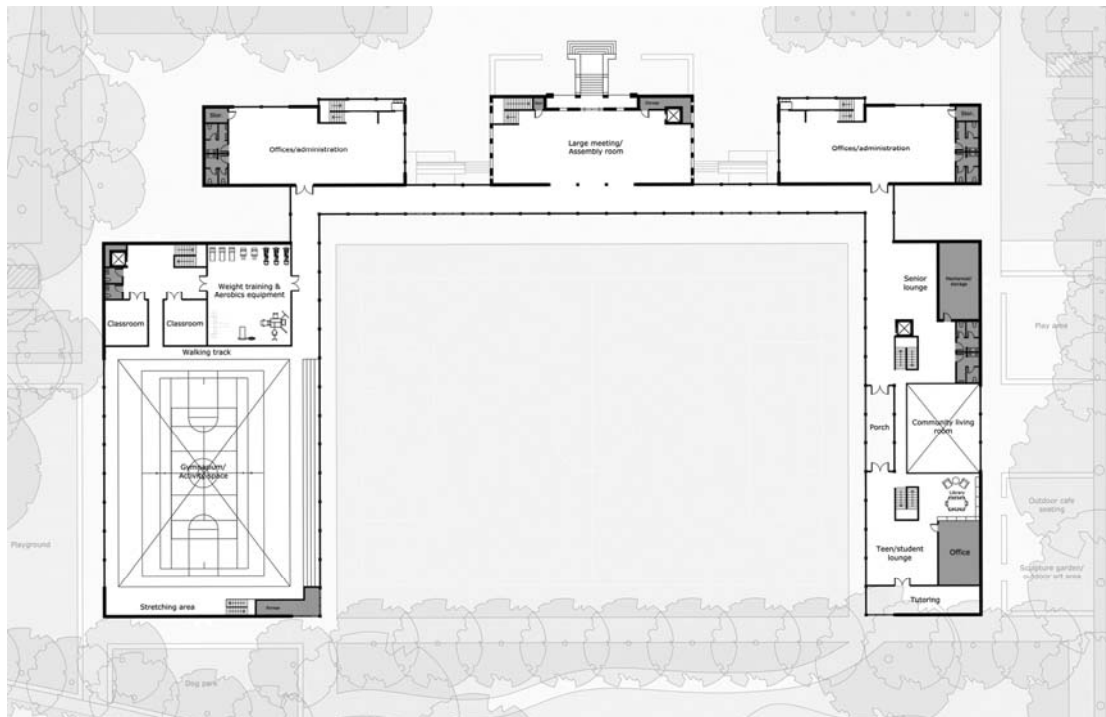


Figure 149: Arrangement of served/servant spaces - The Lawn, Floor 2 (Author)

Chapter 5: Conclusion

Summary of the jury's assessment

The two design solutions outlined above were presented to and critiqued by a jury of architects and consultants from related fields on November 16, 2009. Most of the jury's comments focused on the relative advantages and disadvantages of the two schemes.

Town Square:

The jury appreciated that this scheme builds on what is already there on the site, and that it creates a sense of sequence to the community spaces. They also felt that it succeeds in creating spaces on a human level and that it transitions well from high to lower density development from the west side of the site to the east side. They felt that it created a great pedestrian connection between the north and south sides of the site and also created a nice opportunity to use the west façade to sculpt the retail area.

The jury was concerned that it may not be smart to get rid of so much of the parking on site. They suggested that parking could help to bring more activity to the site, and help to support the retail area proposed in the Town Square scheme. The jury was also suggested that adding more retail to the site is not the best strategy, since retail in College Park is already struggling. They proposed that the new buildings facing the town square be used as rental units for student housing instead. This strategy would bring additional people to the site and ensure that there are eyes on the park at all times of day, making it a safer space. Finally, the jury suggested

that “Town Commons” would be a more appropriate name for the scheme than “Town Square,” since the latter seems to imply a more intense urban condition than actually exists around the site.

The Lawn:

The Jury appreciated that the Lawn scheme, unlike the Town Square scheme, allows the buildings to organize the site, and affords the designer more control over the architecture. They also felt that this scheme created a great public space, and some jurors felt that this was a better scheme than the other because of its sidedness. They suggested, however, that the open grassy space on the south end of the lot should not be called a “backyard,” but instead a “park.” They felt that the formal Lawn could be improved by a better understanding of the section of this outdoor “room,” suggesting that it ought to feel more enclosed and more like a “space” than it currently does. One jury member suggested the UVA lawn as a precedent for a study of this kind of outdoor space and an example of a project with a succession of different types of outdoor spaces.

The jury felt that this scheme did not adequately address the idea of a front door for the lawn/outdoor room, and that the scheme might be improved if the very formal geometry of the buildings was relaxed at the edges to respond to the geometry of the site and the neighborhood and to create a Walk to bring pedestrian traffic straight through the site. The jury also suggested that the second floor of the colonnade that wraps around the Lawn should be outdoor, unconditioned space, to connect people to the space on multiple levels.

General comments:

Some of the jurors questioned the decision to continue to develop two separate schemes, arguing that either one must be chosen, or perhaps different options should be explored which would combine the two schemes into one. They felt that both of the schemes were too formal, and the geometries too stiff, especially considering the site conditions. They suggested that the schemes would fit better in a strict urban grid, and that they might be improved by angling some of the buildings to respond to the site. One juror also suggested that some of the outdoor program spaces seem to be floating, rather than being embraced by the architecture. This juror suggested that diagramming the public spaces and their relationship to the interior spaces to figure out how to better integrate them into the design.

The jurors also suggested that the drawings ought to have more people in them to give a better sense of how the spaces will be inhabited. They also suggested that while I had summarized some of the advantages of each scheme, I had not adequately analyzed the disadvantages inherent in each. They suggested that I ought to do this in order to better understand the trade-offs were I to choose one scheme over the other. Finally, the jurors suggested that I share my research and design proposals with the elected officials of College Park, who might be interested in new ideas for how to develop this site.

Response to the jury's critique

I appreciated the insightful comments and feedback that I received from the jury, and generally agreed with their assessment of the relative strengths and weaknesses of the two schemes.

Town Square:

I agree that “Town Commons” would be a more appropriate description for this scheme, and will refer to it as such from this point onward. I also agree that additional retail space may not be the best land use for the new higher-density buildings facing the west side of the town commons. The suggestion to develop this instead as rental housing seems like a good strategy, bringing additional people into the area who will make use of and watch over the commons. These buildings could still have some light retail, or non-retail commercial at ground level.



Figure 150: Town Commons - new land use map (Author)

I disagree with the jury's argument that more parking should be retained on site. I think that it would be beneficial to have on-street parallel parking along the new street that has been cut through the block along the edge of the town commons, but I don't think that it is necessary to allot additional area to surface parking on the site. Most of the residents from the neighborhoods served by the community center will be able to walk to the site, and I believe that those who can't will be well-served by the new parking garage two blocks to the north.

The Lawn:

I agree with the jury's suggestion that the grassy space on the south end of the lot should be called a "park" rather than a "backyard," and have generally thought of it as such throughout the design process. The term "backyard" was applied in the analysis diagram to convey the sense of sidedness in this scheme, which has a strong built-up front on the busier Calvert Road, and a more informal organization facing the neighborhood across Guilford Road, analogous to a house's front and back yards. Perhaps this relationship would be more clearly and succinctly explained by the terms "front" and "back." (Figure 151)

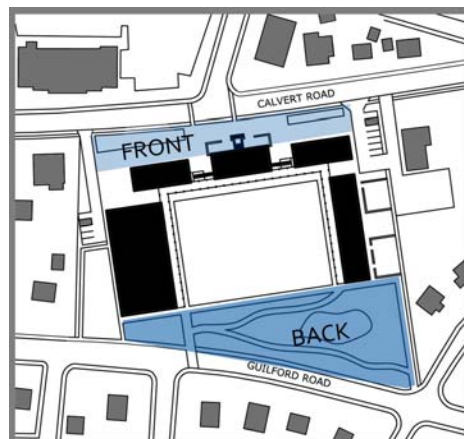


Figure 151: The Lawn - front and back (Author)

I also agree with the jury's assessment that a real understanding of the sectional qualities of the Lawn space is required to understand the experience of that space. After studying the UVA Lawn as a precedent, I completed a sectional study which shows that the *Lawn* in its current configuration is, indeed, a very long and shallow space. (Figure 152 and Figure 153) While I think that it is defined well enough to read as a "space," I agree that the proportions might be improved if the liner that surrounds this space became taller, so that the height of the space is better balanced with the length and width. (Figure 154)

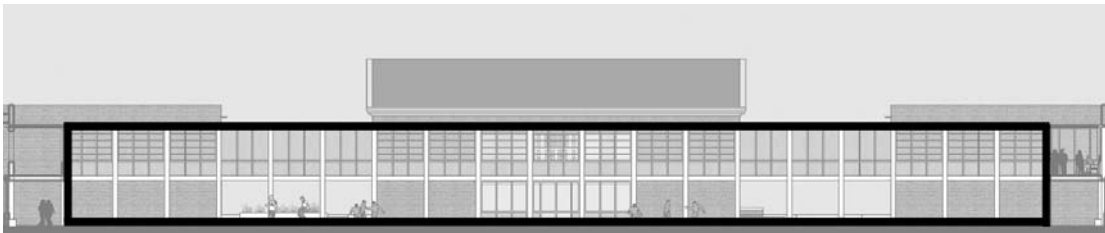


Figure 152: Sectional study of lawn (Author)

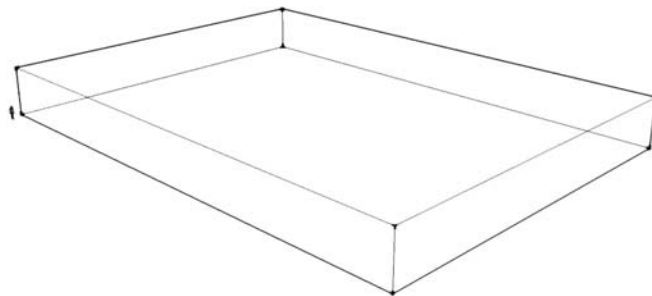


Figure 153: 3d representation of Lawn space (Author)

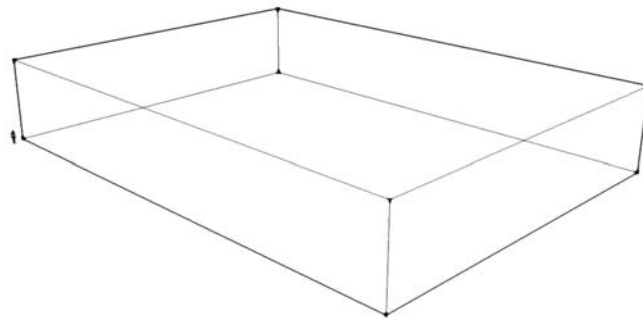


Figure 154: 3d representation Lawn space with increased height (Author)

I understand the jury's desire to see a stronger connecting element, similar to the Walk, incorporated into this design, and agree that the scheme might be improved by such a connection across the site. I also understand the argument that was made for the second floor of the colonnade that wraps around the Lawn to be outdoor, unconditioned space. I had considered this solution myself, but came to the conclusion that the resulting sacrifice in building area, program functionality and connectivity may not worth the trade-off.

General comments:

My committee and I continue to stand by the decision to develop two separate schemes through to the end of the design process. It has provided me with a unique educational opportunity to better understand the later implications of schematic design decisions that I have not been able to have in other contexts, where a design must be chosen fairly early in the process in order to ensure adequate completion. While I have taken note of the advantages and disadvantages of each scheme as they became apparent throughout the design process, I agree with the jury's assessment that this element of analysis was under-represented in the public presentation, particularly in terms of the disadvantages, and have added additional images and analysis to the "Comparative analysis of design solutions" section of this document.

I also agree with the jury's comments that the perspective drawings that I presented ought to give a better sense of the character of the spaces. I have improved and updated some of the perspective drawings presented in the "Design solutions" section of this document.

In response to one juror's comments that some of the outdoor program spaces seem to be floating, rather than being embraced by the architecture, I diagrammed the outdoor public spaces and their relationship to the interior spaces. (Figure 155 and Figure 156) After studying the results of this diagramming exercise, I felt that the programmed outdoor spaces were well-located to form connections with the related indoor spaces (with the possible exception of the playground in the *Lawn* scheme). However, it is true that additional formal moves could be made to reach out to and embrace some of the outdoor elements such as the playground space in each scheme.



Figure 155: Diagram of connections between indoor and outdoor programmed spaces - Town Commons (Author)



Figure 156: Diagram of connections between indoor and outdoor programmed spaces – *The Lawn*
(Author)

I understand the jury's feeling that the geometries of the two schemes presented were too rigid for the non-orthogonal geometry of the site, and after the public presentation, I explored some possible schemes with a more relaxed geometry at the schematic level. Figures 157 & 158 present two different options for a *Town Commons* scheme which responds more effectively to the southern edge of the site. Figure 157 explores an option in which the shape of the building morphs to meet the edge of the site, while Figure 158 shows an option in which the building on this edge is fronted by a paved plaza or garden space which mediates between the orthogonal geometry of the buildings and the looser geometry of the site. I believe that this second scheme represents a more successful solution.



Figure 157: Schematic exploration of relaxed geometries – Town Commons 1 (Author)



Figure 158: Schematic exploration of relaxed geometries – Town Commons 2 (Author)

Figures 159-161 present three different options for a *Lawn* scheme that responds more effectively to the western edge of the site. Figures 159 & 160 respond to this edge with an additional built form on the western side of the gymnasium building. I believe that the scheme presented in Figure 160 is the more successful of these schemes because it responds more effectively to the setback of the surrounding building context as well as the edge of the site. Figure 161 presents a scheme in which an outdoor walled playground space is used to mediate between the geometry of the site and that of the buildings. I believe that this scheme is more successful than the other two in terms of appropriateness for the proposed program and best use of the space.

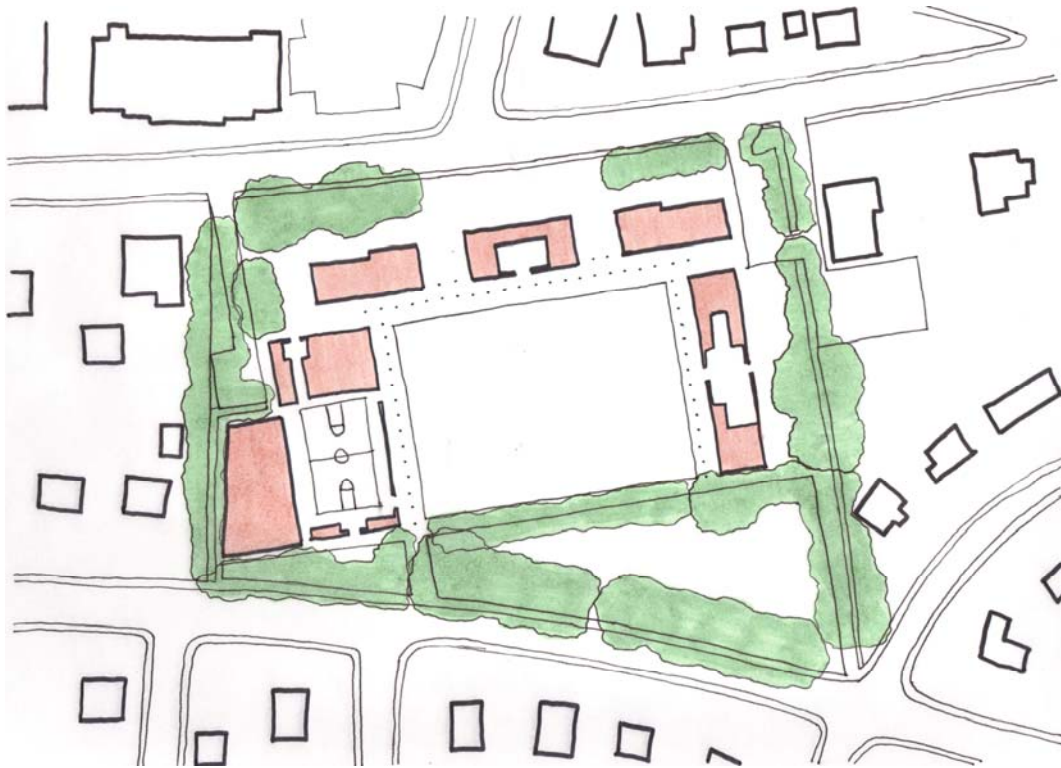


Figure 159: Schematic exploration of relaxed geometries – The Lawn 1 (Author)



Figure 160: Schematic exploration of relaxed geometries – The Lawn 2 (Author)



Figure 161: Schematic exploration of relaxed geometries – The Lawn 3 (Author)

Conclusions

After conducting an extensive comparative analysis of the two proposed schemes, I have come to the conclusion that neither scheme offers a solution that is clearly better for the site and the community. Rather, through the process of developing two schemes to this level of completion and analyzing their comparative attributes, I have been able to understand the advantages and disadvantages of each scheme, and the tradeoffs that result from different design moves and solutions.

I very much appreciate the jurors' suggestion that I share my research and design proposals with the elected officials of College Park, and intend to do so. I believe that when I do, it will be an advantage to have two separate schemes to present rather than one complete solution, because I think that this approach invites and enables a discussion about priorities that is important for a building project that is intended to serve the community. Offering the two different schemes and the associated analysis allows the community to have an informed discussion about which elements are most important to them and to understand the tradeoffs that must be made when one element is prioritized over another. For example, if maximizing outdoor space or maintaining more of the historic building are issues that members of the community feel strongly about, then the *Town Commons* scheme may best suit their interests. However, the analysis that has been presented in this study will allow them to understand the tradeoffs that they will have to make in terms of access to daylight, clarity of front/back conditions, and other issues that are prioritized in the *Lawn* scheme.

I believe that, after a fruitful discussion based on the existing proposals and analysis, the next step in the design process would be to use this information about the community's priorities to create a hybrid scheme which maximizes as many of the highest priorities as possible. Figure 162 shows a sample of what this next step might involve. This image shows a schematic exploration of a scheme which combines elements from both the *Town Commons* and the *Lawn* proposals. This scheme maintains the open space of the *Town Commons* scheme, and combines it with a formal lawn element. The new buildings on the site are condensed into one large building to improve efficiency and cost-effectiveness, and to set off the unique nature of the historic element that is retained. Two new roads are cut through the east and west sides of the site to improve connectivity across the site for both pedestrians and automobile traffic.

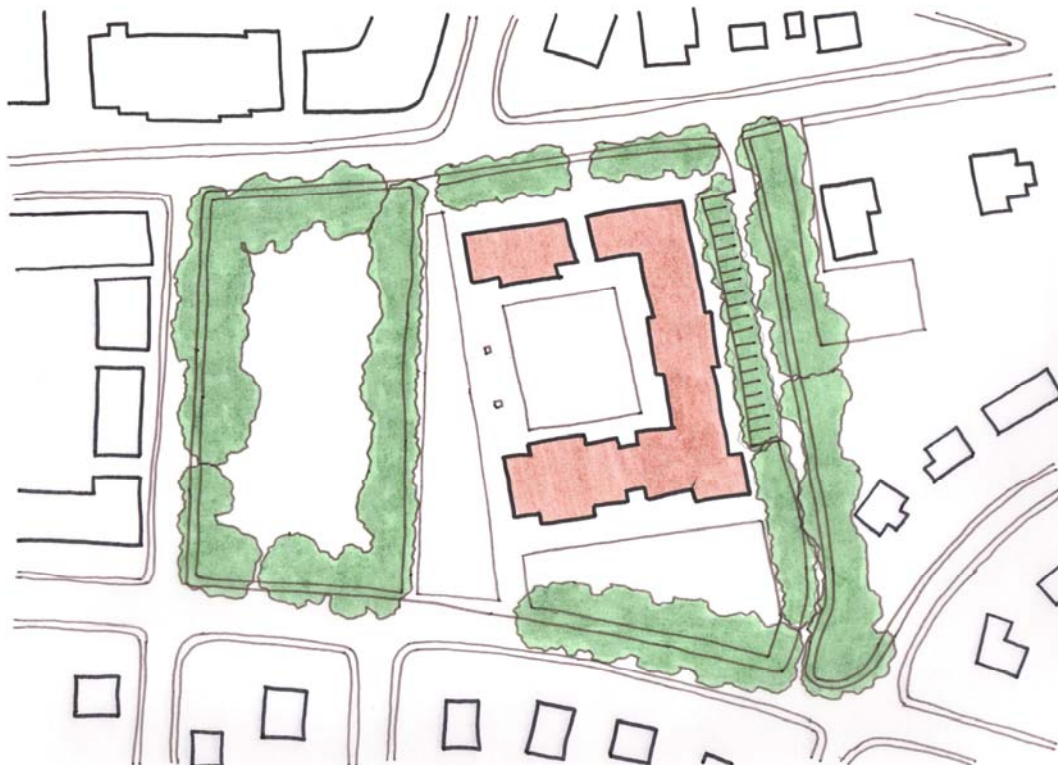


Figure 162: Schematic exploration of combined scheme (Author)

I believe that an iterative process of this type of exploration, based on the information gleaned from the development and analysis of the two original scheme proposals, would lead to a final design that is truly driven by and responsive to the needs and priorities of the community that it is intended to serve.

Bibliography

Advisory Council on Historic Preservation, "National Historic Preservation Act of 1966," <http://www.achp.gov/docs/nhpa%202008-final.pdf>. (accessed March 13, 2009)

Anacostia Trails Heritage Area, "College Park City Hall." The Historical Marker Database, <http://www.hmdb.org/marker.asp?marker=13161> (accessed November 14, 2009).

Buildings Energy Data Book: September 2008, 1.4.14, "1996 Construction and Demolition Debris Generated from Construction Activities and Debris Generation Rates," U.S. Department of Energy, <http://buildingsdatabook.eere.energy.gov/> (accessed March 13, 2009).

Buildings Energy Data Book: September 2008, "1.6.8: Embodied Energy of Column and Beam Assemblies in the U.S.," U.S. Department of Energy, <http://buildingsdatabook.eere.energy.gov/> (accessed March 13, 2009).

Chase, John Leighton. *LA 2000+: New Architecture in Los Angeles*. New York, NY: The Monacelli Press, Inc., 2006.

Cho Benn Holback + Assoc., "Rouse Visionary Center," <http://www.cbhassociates.com/projects/archive/cultural/museums/avam.htm> (accessed March 9, 2009).

Clark, David, "Adaptive Reuse," *APT DC Newsletter*, Summer 2006, http://apt.dc.org.googlepages.com/Newsletters/SUMMER2006_.pdf (accessed March 13, 2009).

Crane, Robin and Malcolm Dixon. *Indoor Sports Spaces*. New York, NY: Van Nostrand Reinhold, 1991.

Davis, Charles R. *The First Twenty-Five Years of the City of College Park*. (Publishing information not available – the booklet appears to be non-professionally published. A copy was obtained from the City of College Park Department of Planning.)

Design Cost Data E-News, "Preserving the Past: Historic Repair Requires Informed Approach", Structural Group, <http://www.structural.net/Article/tabid/434/contentid/176/Default.aspx> (accessed March 13, 2009).

Digital Sanborn Map Collection, "1939 Sanborn map," University of Maryland Libraries, <http://sanborn.umi.com.proxy-um.researchport.umd.edu/> (accessed March 13, 2009).

- East Campus Redevelopment Initiative. "Initial Development Concepts." University of Maryland Division of Administrative Affairs.
<http://www.eastcampus.umd.edu/InitConcept.cfm> (accessed March 5, 2009).
- Ehrenkrantz, Eckstut & Kuhn Architects. Email message to author, March 19, 2009.
- Fogarty, Kate Hensler. *Health Clubs: Architecture & Design*. Glen Cove, NY: PBC International, Inc, 1998.
- Google Maps. <http://maps.google.com/> (accessed March 9, 2009).
- Koning Eizenberg Architecture. *Architecture isn't just for special occasions*. New York, NY: The Monacelli Press, Inc, 2006.
- Live Search Maps. <http://maps.live.com/> (accessed March 9, 2009).
- Natural Resources Defense Council, "Forests,"
<http://www.nrdc.org/land/forests/default.asp> (accessed October 1, 2006).
- Natural Resources Defense Council, "How to Build a Better Home,"
<http://www.nrdc.org/cities/building/fwoodus.asp> (accessed March 13, 2009).
- Patkau Architects. *Patkau Architects*. Introduction by Kenneth Frampton. New York, NY: The Monacelli Press, Inc, 2006.
- Prince George's County Planning Board. "Central US 1 Corridor Sector Plan and Sectional Map Amendment." Prince George's County Planning Department.
http://mncppc.org/cpd/central_US1/ (accessed March 5, 2009).
- Rockcastle, Garth. "Subsequent Action," University of Maryland Exhibit Catalog,
<http://publications.ingagepublication.com/UMDSAEXHIBIT/digitalpublication.php> (March 9, 2009).
- Shepherd, J.C. and G.A. Jellicoe. *Italian Gardens of the Renaissance*. Princeton, NJ: Princeton International Press, 1986.
- Sierra Club v. Morton, 405 U.S. 727 (1972).
- U.S. Department of Energy, "Buildings Energy Data Book: September 2008,"
<http://buildingsdatabook.eere.energy.gov/> (accessed March 19, 2009).
- Wikipedia, "Adaptive Reuse," http://en.wikipedia.org/wiki/Adaptive_reuse (accessed March 13, 2009).