

ABSTRACT

Title of Document: THE UNIVERSITY OF MARYLAND
CENTER FOR THE VISUAL ARTS

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Today the University of Maryland faces three different but related problems regarding management of its visual resources.

Currently the University owns an incredible visual collection with the potential of drawing scholars from around the world, but it is not available to the public because of lack of space. One of them is the David C. Driskell Collection, which contains the material produced by the Center for the Study of the African Diaspora. Another one is the Elizabeth D. Alley Visual Resources Collection of 385,000 images, which is the second largest collection of its kind in the United States.

At the same time, both Art and Architecture libraries are currently at capacity, and new acquisitions must be placed in storage, making the access of information material slow and difficult. Recently, the Architecture Library was forced to move “The National Trust for Historic Preservation Collection” to the Hornbake Library to provide additional

room and is once again nearing full capacity.

Also, the University of Maryland is one of the few major research universities in the country without a fine arts museum to display student, faculty and local artists work. There is also no major art museum in Prince Georges County or Southern Maryland.

For these reasons it is necessary to provide the University with a building that can efficiently accommodate its visual collections, manage the growing needs of both Art and Architecture libraries, and also create a cohesive centerpiece, a meeting point for the visual arts disciplines where both University and community art activities can occur. In this way a Center for the Visual Arts would greatly enrich the University, surrounding communities, and the State.

UNIVERSITY OF MARYLAND CENTER FOR THE VISUAL ARTS

By

Eduardo Soto-Medina

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
2006

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Introduction

Since its completion in 1972, the School of Architecture's Building at the University of Maryland has served well its purpose of providing a space for the development of several generations of new architects. However, thirty three years later, the building began to be affected by some problems, mostly related to the accommodation of contemporary requirements that were not considered in its original design.

These problems are more evident in the School's Library, where the amounts of books and other resources have far surpassed the capacity for been stored properly. This has caused that the amount of new books that can be acquired has decreased considerably. For the faculty and the students of the School (which benefit themselves with the influence of new precedents, materials and construction techniques) this situation constitutes a real problem. The same problem exists at the School's Visual Resources Library. This useful collection of images can't be accessed and handled in a proper way because the amount of space it needs to work is more than three times its current size. Moreover, studio space in the building is scarce, so as the number of classrooms for the amount of courses offered; and the list goes on. Due to the existing conditions, the only solution is a new addition that may help alleviate the problem of lack of space.

This growing need for space has also been identified in other buildings at the University. Less than a two hundred feet away from the Architecture Building, at the Art and Sociology Building, the Art Library also needs an addition to keep itself updated. Also, and not to far from there, at the Tawes Fine Arts Building, The Driskell Center, an organization dedicated to the studies of Black Culture and to the collection of African American works of art has grown enough for needing its own building. Of course, this situation of growing libraries and art collections doesn't necessarily means something bad has occurred, but the contrary. The purpose of the University is to continually pursue the advancement of knowledge in all its manifestations, and acquiring useful graphic resources is a way of accomplishing that. But the critical issue here is to recognize when the physical limits of storage have been surpassed, and by doing that, prevent the interruption of the flow of new information and resources to the Campus.

Note that all the problem-facing facilities mentioned before are: (1) located in a radius of 500 feet (2) libraries or resources collecting facilities and (3) related to art disciplines. These three conditions create a real opportunity to propose a concentrated solution that can meet the needs for all of these buildings at once. A facility like this can promote interaction between the various faculty members and students involved, creating a mutual beneficial influence.

However, the proposal for this new facility leads to the discussion of various fundamental factors, for example, location and identity. Where will be the best place for such facility? Who will it belong to? It will be an independent building or will be somehow attached to another one? At what extend its different programs will affect each other? Other important issues include the relation of the different users with the new

facility. Will they perceive that this facility acknowledges their different identities? Could the new structure respond in a different way to various groups, or its expression will be generic? How will be its relation with the immediate built environment, or its architectural expression compared to the rest of the Campus?

This thesis will address these issues while focusing its attention on the following question: How to achieve a new Addition Building that allows its permanent users to develop and maintain a sense of spatial property and identity while allowing visitors to experience the same facility as a public component of the Campus. The investigation will be directed on how these two different kinds of users can co-exists without interfering with each other. Moreover the investigation will be directed on how specific differentiation of public and private functions, indirect integration inside the building and multiple users could develop and maintain a strong individual sense of ownership.

Chapter 1: Site



Figure 1. Map of the United States showing the location of Maryland State. (Author's graphic)

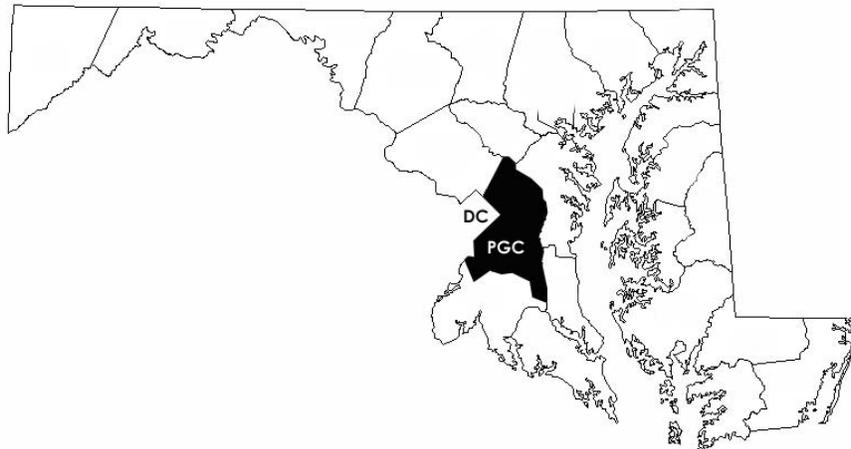


Figure 2. Map of Maryland State showing the location of Prince Georges County. (Author's graphic)

Prince Georges County is flanked by the Washington DC area to the left. To the east the Chesapeake Bay enters Maryland.

History:

The land where now stands the University of Maryland was purchased in 1858 by a descendant of the Barons Baltimore and future Congressman Charles Benedict Calvert. The University began operations two years later under the name of Maryland Agricultural College (MAC). Its first class, composed by 34 students, including four of Calvert's sons, graduated in 1862¹.

During the years of the Civil War, the campus was utilized in several occasions to provide camping for soldiers in their march to combat. Apparently problems related to the war and a decline of student enrollment send the Maryland Agricultural College to bankruptcy. In 1866, the Maryland Legislature helped the college getting out of bankruptcy by assuming half of the ownership of the school. In October of 1867, the school open again, but this time only 11 students enrolled. This situation changed in the next years, as the college reputation grew as a research facility, many more students made the Maryland Agricultural College their Alma Mater. By 1951, more than 10,000 students were enrolled, from which 4,000 were women². By 1985 the University reached an enrollment of 38,679, the highest in its history. In 1988, the school was designated as the flagship campus of the newly formed University System of Maryland and was formally named University of Maryland, College Park.

Today the University of Maryland is considered by many to be the fastest rising research university in the United States³. However, its physical facilities have not kept pace with this fast ascent. An inventory of facilities made by the University's Facilities

¹ University of Maryland, College Park, from Wikipedia, www.wikipedia.org

² Ibid.

³ University of Maryland, Facilities Master Plan, p.3

Master Plan Steering Committee reveals that according to the State of Maryland's Space Planning Guidelines, the University faces a current total deficit of approximately 1.2 million net assignable square feet.⁴

The University's President C. Daniel Mote Jr. appointed the Facilities Master Plan Steering Committee in fall of 2000. The Committee's purpose was to develop a plan that could address the current campus needs, and define the principles that will lay the foundation for further development and growth over the next twenty years. As part of their mission, the Committee published a document titled Facilities Master Plan 2001-2020, which presents an overview of the current facilities, propose possible new sites and buildings that could satisfy the space requirements of the campus, and establishes principles and guidelines for future development. The principles, guidelines and some building proposals will be studied in more detail further on.

Climate:

The state of Maryland is located in the eastern coast of the United States between longitudes 75° and 79° W. This area is affected with a semi permanent Atlantic High that due to its motion provokes prevailing winds from the northwest from October through June and southwest winds from July through September. These winds can show a speed of 9 mph in the summer and from 10 to 12 mph in winter and early spring.

Temperatures for the Maryland area range from about 48° F in the Garrett County area to 58° F in the lower Chesapeake Bay area. Average frost penetration ranges from about 5 inches or less in southern portions of Maryland to more than 18 inches on the

⁴ University of Maryland, Facilities Master Plan, p.3

Allegheny Plateau. Frost penetration may be double the average depth in conditions of severe cold winters. Average annual snowfall ranges from a minimum of 8 to 10 inches in areas near the Southern Eastern coast, and a maximum of over 80 inches in Garrett County. Summers on the contrary are considerably warm weather including several hot, humid periods. Extreme temperatures in Maryland range from 109° to minus 40° F.

The average annual precipitation ranges from as much as 48 inches at places in the Allegheny Plateau and southern Eastern Shore area, at extreme ends of the State, to as little as 37 inches in the Cumberland area located in the “rain shadow” to the east of the Allegheny Plateau. Elsewhere over the State, the annual precipitation generally ranges between 40 and 46 inches.

In comparison with areas such as the Great Plains, tornadoes’ occurrence in Maryland is considered infrequently. However, two strong tornadoes hit Central and Southern Maryland within an eight-month period in 2001-2002, causing loss of life. Most tornadoes in Maryland tend to travel in the usual southwest to northeast direction, but a few have been reported to travel southeastward or in a southerly direction⁵.

Site Location:

The University of Maryland is located in the city of College Park, within Prince George’s County. The campus is 30 miles west of Annapolis, 25 miles southwest of Baltimore, and 5 miles north of the border to Washington, D.C.⁶

⁵ Meteorologic information for the Maryland area taken from www.atmos.umd.edu

⁶ University of Maryland, Facilities Master Plan, p. 8



Figure 3. Map of Prince Georges County showing the location of College Park. (Author's graphic)



Figure 4. Aerial photo of College Park showing the University of Maryland. (www.earth.google.com)

Located approximately 3 miles north of the campus, interstates 495 and 95 provide direct regional access to the College Park community and to the institution via Baltimore Boulevard. This last, is a highly developed commercial corridor and a heavily traveled vehicular link between Baltimore and Washington⁷.

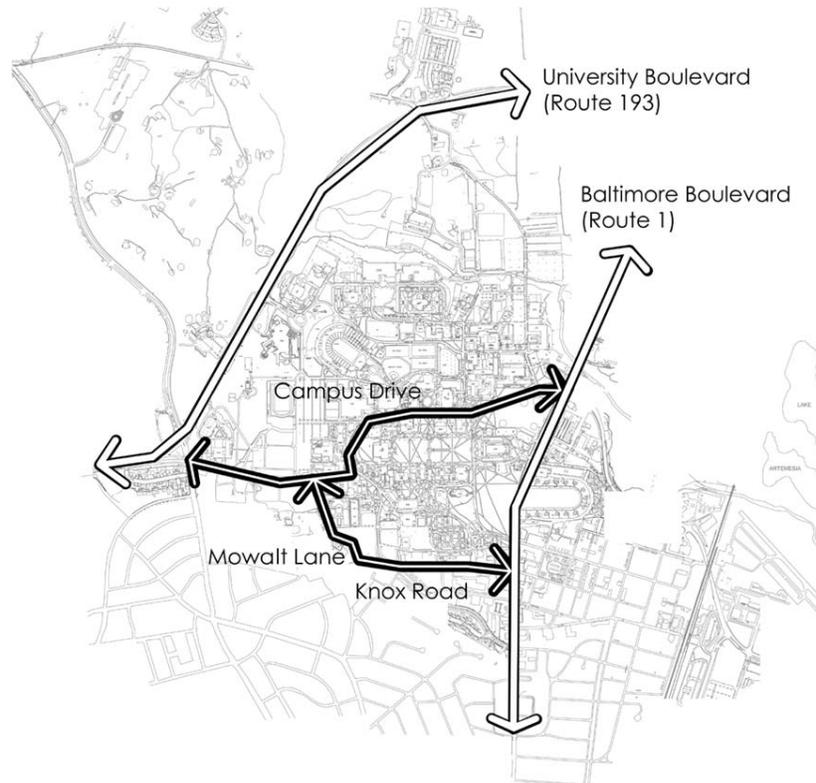


Figure 5. Map of the University of Maryland showing its relation to interstate highways. (Author's drawing)

The campus is flanked by University Boulevard and Baltimore Boulevard. Campus Drive crosses through the center of the campus and connects the University with these two highways.

The main campus is bordered by University Boulevard (Route 193), Campus Drive, Mowalt Lane, Knox Road, and Baltimore Boulevard (Route 1). A parcel of land east of Route 1 university-owned is primarily developed as student housing and service

⁷ Ibid p. 8

functions. The university Golf Course is located to the west of University Boulevard⁸.

The campus is composed of eight districts. Their names are based on their location in relation to the central Historical Core of the campus. Their size is defined by an approximately five to seven minutes walk radius. Each one of these districts display characteristics defined by different periods of development, topographic variations, natural features and either low or high-density building conditions.

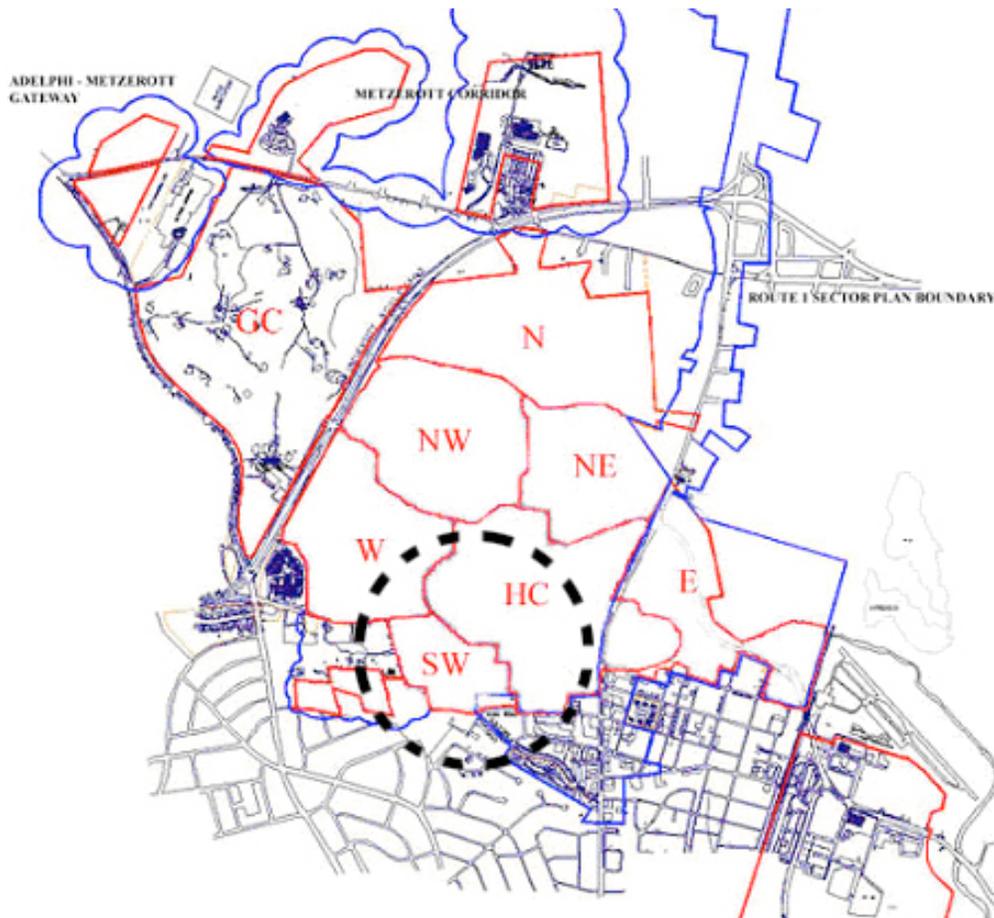


Figure 6. Map showing the University's eight District Boundaries. (University of Maryland Facility Master Plan 2001-2020)

The circle signs the location of the Southwest District and its relation to the Historic Core

⁸ University of Maryland, Facilities Master Plan, p. 8



Figure 7. Map of the University of Maryland showing the location of the proposed site. (Author's drawing)

The proposed site is located inside the Southwest District of the campus near the Historical Core and the McKelding Mall .



Figure 8. Map showing the proposed site area and its relation to campus internal roads. (Author's drawing)

Note that Campus Drive crosses through the proposed site.

The site selected for this thesis is located inside the Southwest District of campus. Bounded by the Historic Core to the north, Mowalt Lane to the west and privately owned properties to the west and south, the specific location of the site is in between the Art and

Sociology Building and the School of Architecture Building. This narrow and sloped piece of land is divided in two by Campus Drive, and also is partially covered with trees. The approximate area designated for the building is about 100,000 square feet. The highest elevation point of the site is located at the connection of Campus Drive with Preinkert Drive. From this point the site slopes in two directions, to the south and to the southwest. Its lowest point is located near the east entrance of the Architecture Building.

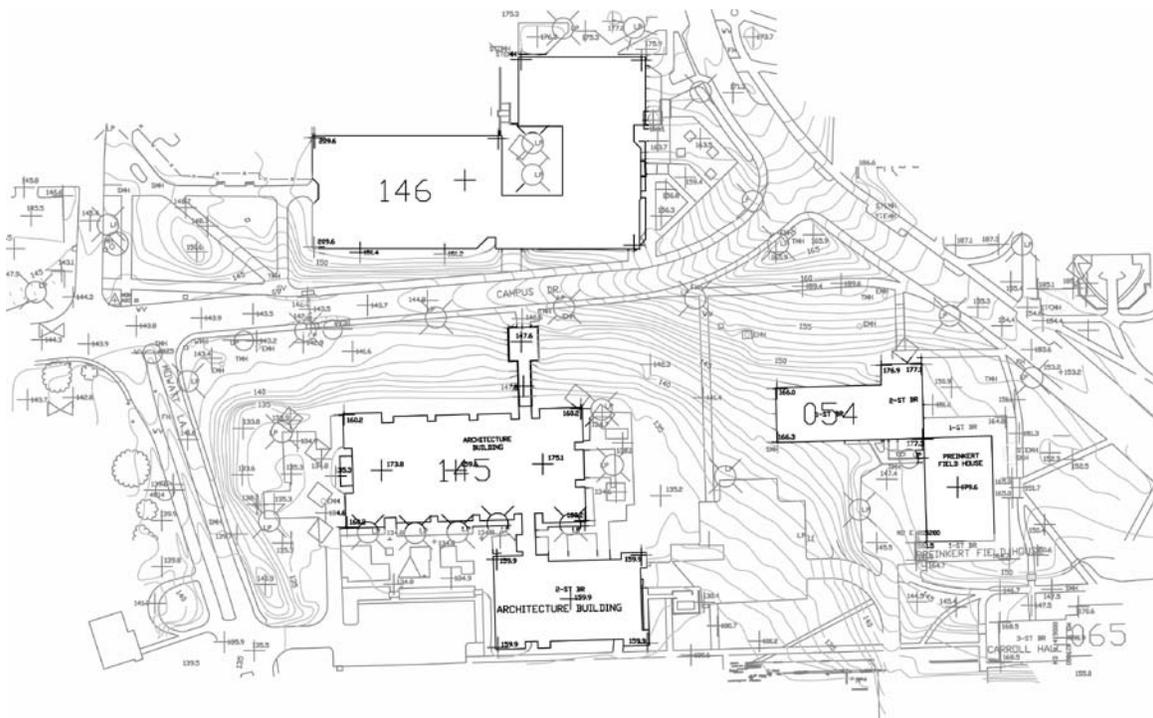


Figure 9. Location of Campus Drive inside the proposed site. (Author's graphic)

The area of the site is located in between the Art-Sociology Building (#146) and the Architecture Building (#145).

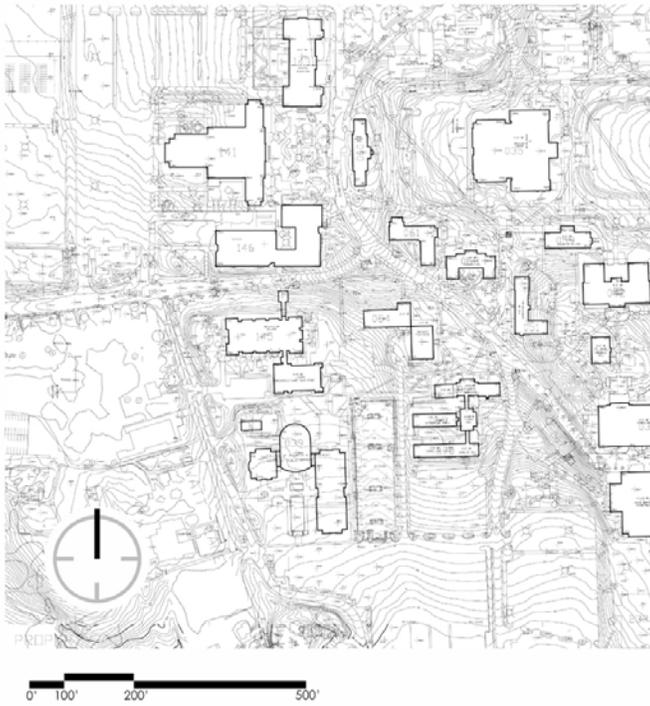


Figure 10. Map showing the surrounding areas of the site. (Author's drawing)

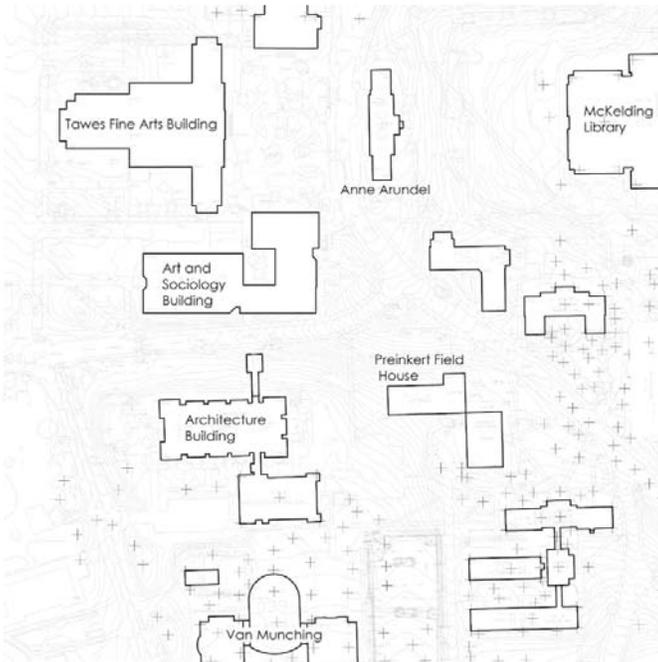


Figure 11. Map identifying the buildings near the site area. (Author's drawing)

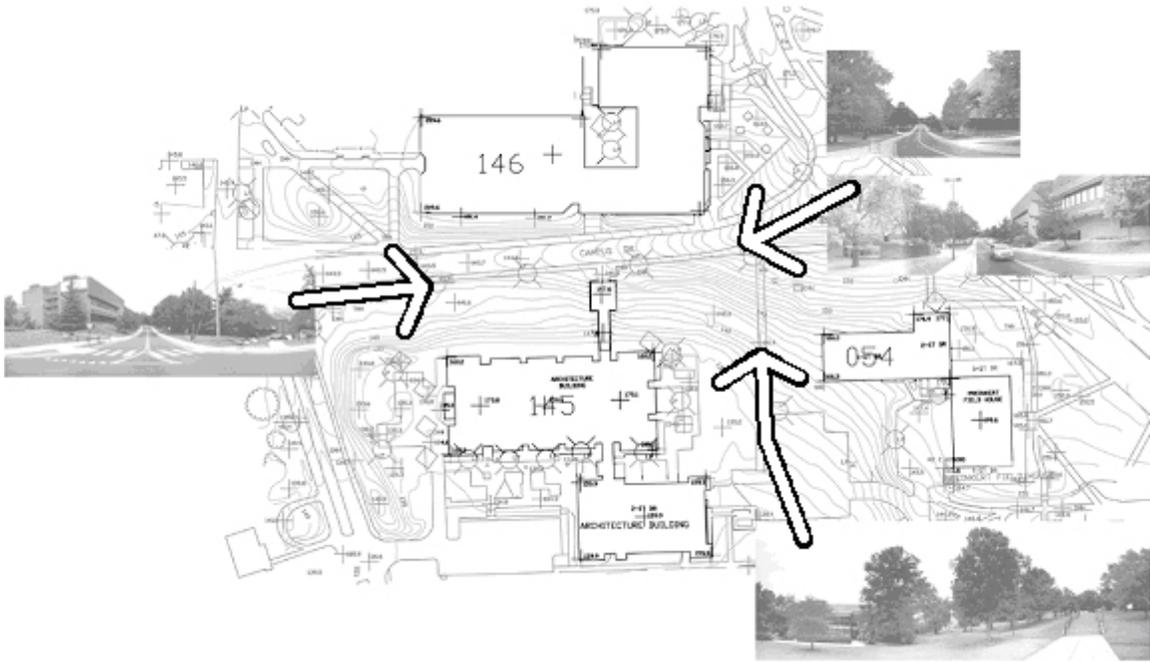


Figure 12. Map of the site views. (Author's graphic)

The purpose of this image is to help orient the reader into the use of the following images of the site.



Figure 13. View of the site coming from the west. (Author's photo)

The enormous Art-Sociology Building at the left dominates the view, in comparison to the almost invisible Architecture Building to the right, covered by trees.



Figure 14. View of the site from the east. (Author's photo)



Figure 15. View of the site from the southeast. (Author's photo)

Site Analysis:

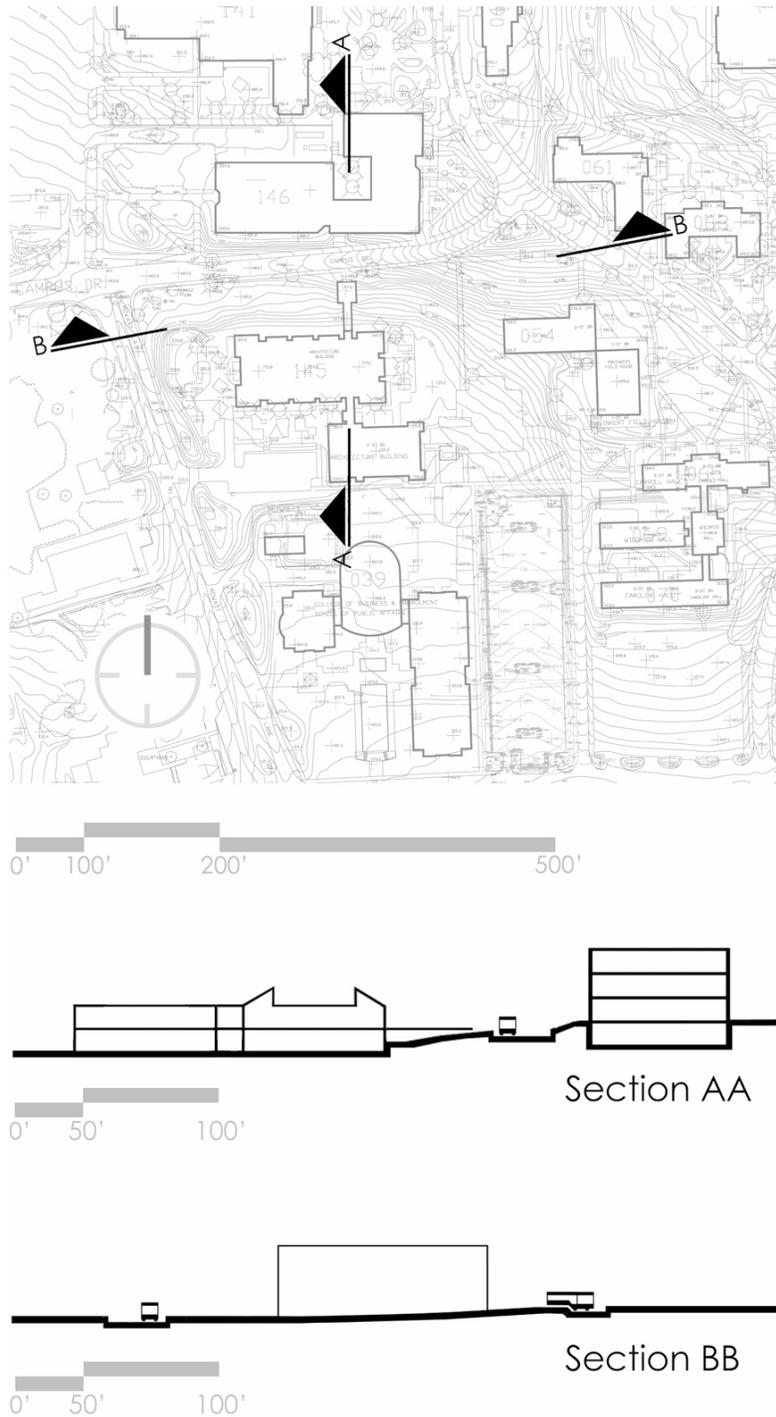


Figure 16. Map showing topographical information of the site. (Author's drawing)

Section AA makes a perpendicular cut through Campus Drive and the existing buildings. Section BB cuts parallel to Campus Drive, showing the Art-Sociology Building in elevation.



Figure 17. Site's east elevation. (Author's drawing)

The change in elevation shown is approximately 30 feet.



Figure 18. Site's south elevation. (Author's drawing)

The change in elevation in this image is approximately 20 feet.



Figure 19. Site's west elevation. (Author's drawing)

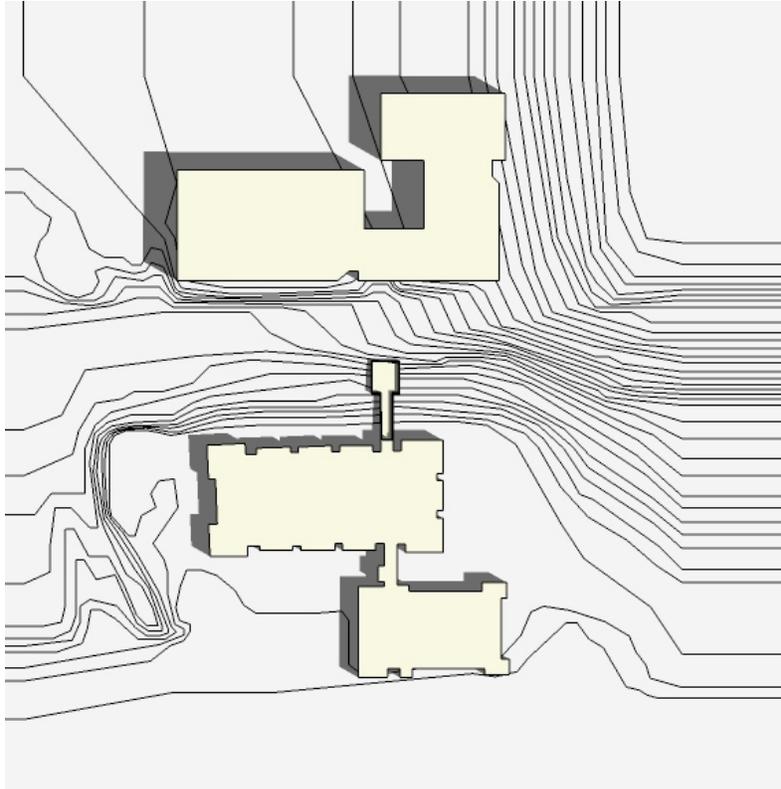


Figure 20. Site plan showing topographic levels. (Author's drawing)

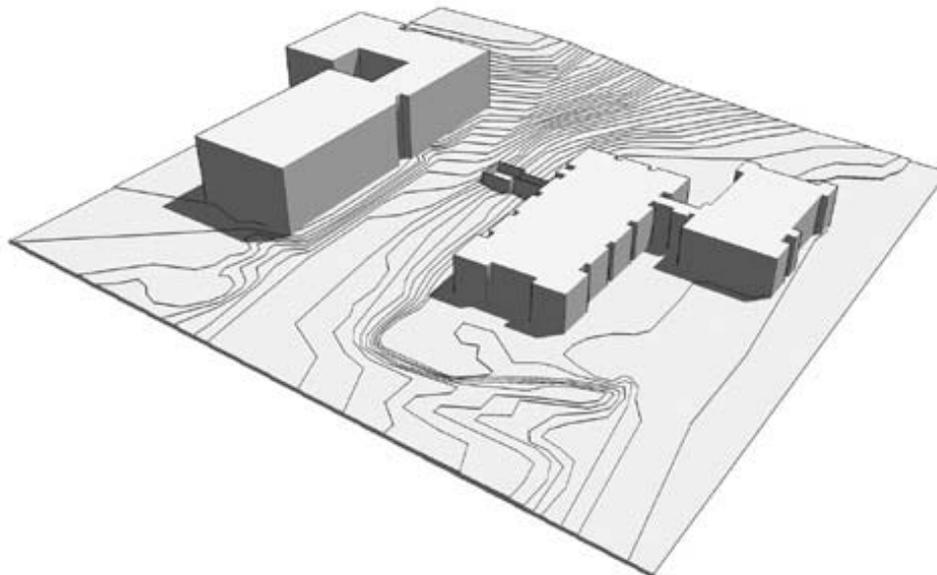


Figure 21. Site perspective showing the volume of the existing buildings. (Author's drawing)

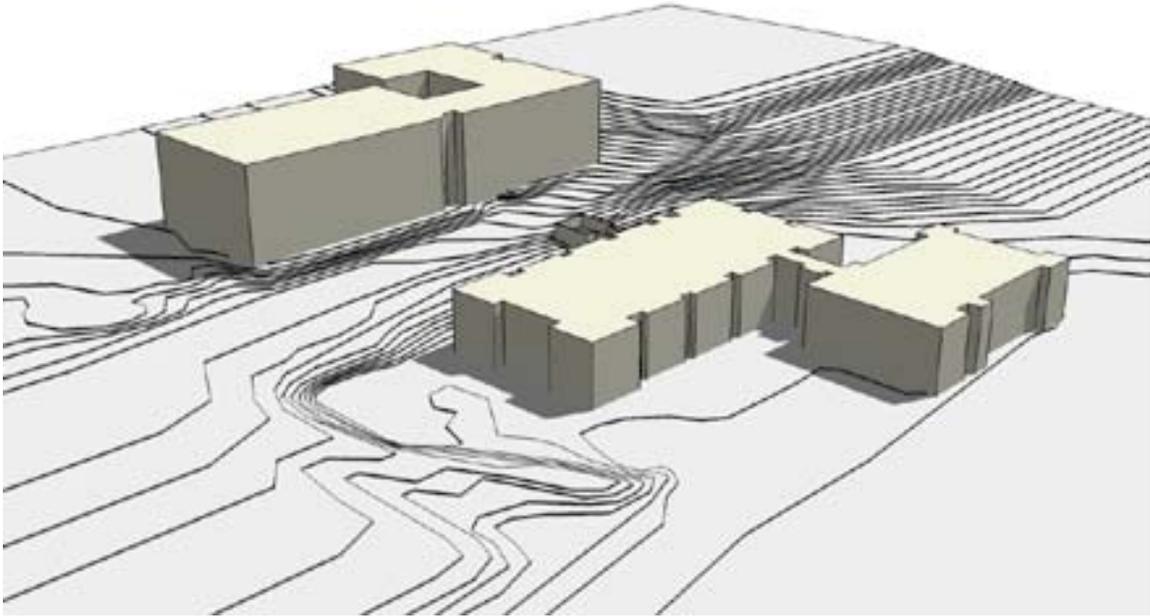


Figure 22. Site perspective. (Author's drawing)

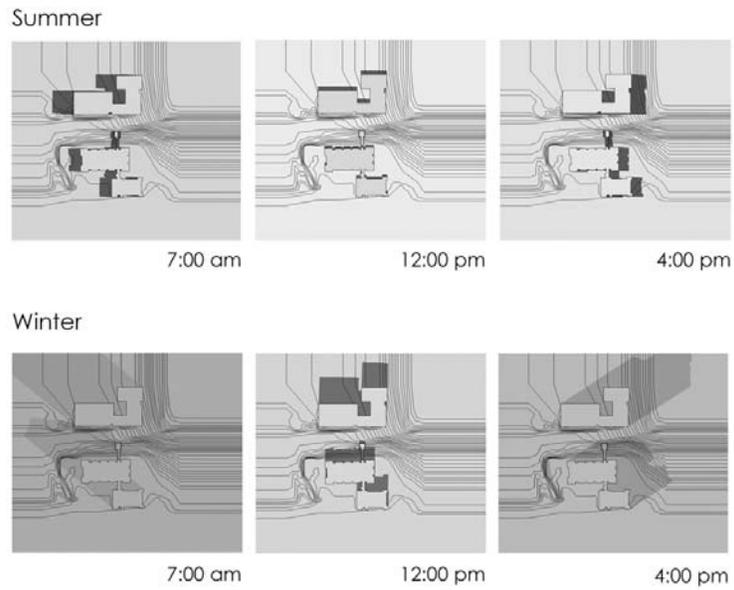


Figure 23. Shade diagram showing shade variations related to the seasons. (Author's drawing)

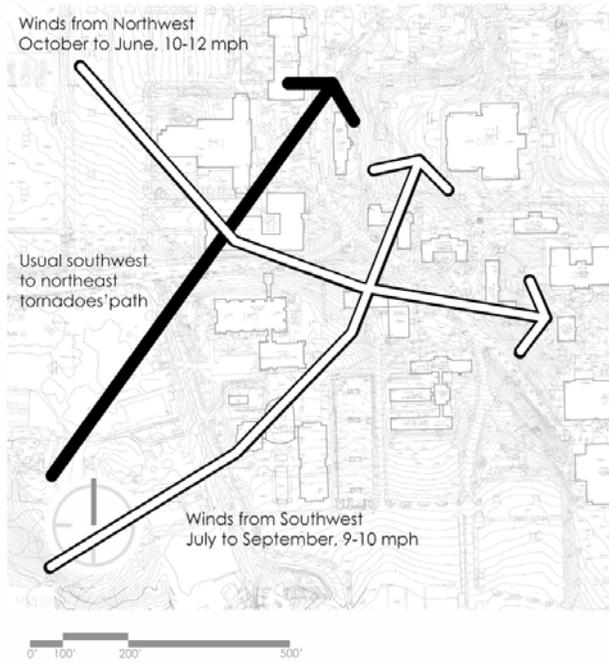


Figure 24. Map showing the directions of prevailing winds and tornadoes path. (Author's drawing)

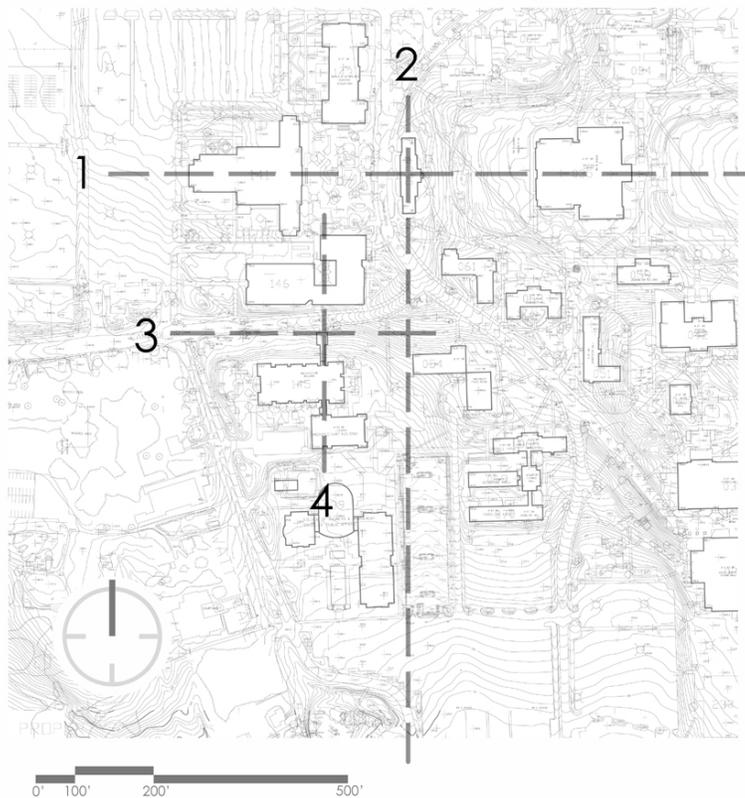


Figure 25. Map showing axial relations of the site and its surrounding areas. (Author's drawing)

Axis #1 corresponds to the Historic Core District.

Axis #2 marks the direction of a new mall proposed by a University's Master Plan.

Axis #3 relates to Campus Drive

Axis #4 marks possible connection of existing buildings using their own internal circulation.

Chapter 2: Program

The Center for the Visual Arts primordial mission will be to accommodate some distinct but related functions related to the management of visual resources, art and architecture documents and university's art collections. In order to manage each resource in its appropriate way, the Center will provide a new Visual Resources Library, an Art and Architecture Library, a Fine Arts Museum, and will also contain the David C. Driskell Center for the study of the African Diaspora. As support for these functions, the Center will also provide space for student and faculty study, research and social interaction.

This program has been based on the needs expressed in the 2000 Facility Master Plan Unit Assessment produced by the faculty of University of Maryland School of Architecture Planning and Preservation.

1- The Visual Resources Library

Total Area: 3,300 s.f.

About the Elizabeth D. Alley Visual Resources Collection

The Elizabeth D. Alley Visual Resources Collection, founded in 1967, contains over 330,000 slides and more than 300 videotapes devoted to topics ranging from art, architecture, landscape architecture, and urban design to culture and historic preservation. The collection has fast growth rate, about 10,000 slides per year, being one of the largest

in the country in its genre⁹.

The following is a list of the needs for the new Visual Resources Library:

Curator's Office.....	200 s.f.
Assistant Curator.....	200 s.f.
Light Tables/Slide Drawers.....	1,000 s.f.
Equipment Room.....	500 s.f.
Projection Room.....	400 s.f.
DVD/VCR Database.....	200 s.f.
Computer Workstations.....	500 s.f.
Staff Workroom.....	300 s.f.



Figure 26. Elizabeth D. Alley Visual Resources Library. Samples of images provided by the library. (www.arch.umd.edu/inside/facilities/vrc/)

⁹ www.arch.umd.edu/inside/facilities/vrc/

2-The Art and Architecture Library

Total Area: 42,075 s.f.

This new Library will be the common ground for art, architecture students and faculty to meet. Since it is composed by the book collections of the two existing schools, the Library should be located in an area nearby both buildings and at an accessible location. If possible, this library should be perceived as an extension of the two buildings involved.

The program is divided in three categories: general user areas, specialized user areas and staff areas.

General user areas:

Sub-Total.....21,150 s.f

Art and Architecture Books and Periodicals:.....15,000 s.f.

Current Periodicals/New books/Informal reading area:150 s.f.

General Reading areas (for 160 people):3,200 s.f.

Reference/Index Books (for 10-12 people):.....350 s.f.

Oversized Folios:.....300 s.f.

Entrance/Control/Display:.....200 s.f.

Catalog area:.....200 s.f.

Photo Copy area:.....150 s.f.

Virtual Library:.....800 s.f.

Study Rooms (4):.....800 s.f.

Specialized user Areas:

Sub-Total.....19,575 s.f.

National Trust for Historic Preservation Collection (Workspace):.....2,500 s.f.

National Trust for Historic Preservation Collection (Stacks):..... 4,375 s.f.

World Columbian Exposition Collection:.....350 s.f.

Rare Books Room:.....1,200 s.f.

Special Collection Reading Room:.....450 s.f.

Seminar/Media Rooms (2 rooms):.....700 s.f.

Art and Architecture Gallery:.....8,000 s.f.

AIA Drawing Archive:.....2,000 s.f.

Staff Areas:

Sub-Total.....1,350 s.f

Branch Librarian's Office:.....150 s.f.

Staff Work Room:.....400 s.f.

Receiving and Miscellaneous Storage:.....100 s.f.

Circulation Desk/Staff Work Stations:.....400 s.f.

Reserve Book Shelving:.....300 s.f.

3-Student and Faculty Lounge/Café:

Total area: 1,000 s.f.

Neither the Art School or the Architecture School currently have a cafeteria, café or real lounge area where students and professors can sit, talk, have an informal critic or

any other kind of social interaction.

A café area should be somehow related to the Art and Architecture Library and work in the same way as the Borders' library concept, where people can have a reading or a discussion while enjoying a cup of coffee. The lounge should be in a more distant position in order to allow talking without interrupting the library functions.

4-Lockers and showers area

Total area: 1,000 s.f.

This area of the building will be physically related to the Student and Faculty Lounge. Its purpose is to provide students and faculty with the opportunity of taking a shower or putting some fresh clothes before presenting for a jury, or after an exercise session.

5- The Fine Arts Museum:

Total Area: 34,000 s.f.

Currently the University of Maryland doesn't have a Fine Arts Museum. With the exception of the Art Gallery, located at the Art-Sociology Building, there is not any appropriate space in campus in which to held large exhibitions and display the works of students, faculty or visitors. Without a large museum space, the University's permanent art collections have to remain stored to allow current exhibitions to take place.

Temporary Gallery:.....	5,000 s.f.
Permanent Gallery:.....	15,000 s.f.
Reception Space.....	3,000 s.f.
Administrative Space.....	1,000 s.f

Prep-Room.....	3,000 s.f
Storage.....	6,000 s.f
Auditorium.....	1,000 s.f.

6-The David C. Driskell Center for the Study of the African Diaspora

Total Area: 11,200 s.f.

About David C. Driskell:

Born in Eatonton, Georgia in 1931, and educated in the public schools of North Carolina, David C. Driskell received his undergraduate degree in art at Howard University in 1955 and a Master of Fine Arts degree from The Catholic University of America in 1962. He then pursued post-graduate study in art history at The Netherlands Institute for the History of Art in the Hague.

Prof. Driskell began his teaching career at Talladega College in 1955. He taught at Howard and Fisk Universities and served as Visiting Professor of Art at Bowdoin College, The University of Michigan, Queens College, and Obafemi Awolowo University in Ile-Ife, Nigeria. He joined the faculty of the Department of Art at the University of Maryland in 1977, served as its Chairperson from 1978-1983 and taught until his retirement in 1998. In 1995 he was named Distinguished University Professor of Art. The recipient of numerous fellowships, awards, and prizes, including, three Rockefeller Foundation Fellowships and a Harmon Foundation Fellowship, Prof. Driskell has also received nine honorary doctoral degrees in art. In 2000, Prof. Driskell received the National Humanities Medal from President Clinton for his invaluable contribution to scholarship in the history of art and the role of the Black artist in American society.



Figure 27. President Bill Clinton presents David Driskell with the President’s medal from the National Endowments of Humanities. (Photo courtesy of www.thehistorymakers.com)

The Driskell Center mission statement¹⁰:

“The David C. Driskell Center at the University of Maryland celebrates the legacy of Prof. David Driskell, Distinguished University Professor Emeritus of Art, Artist, Art Historian, Collector and Curator, by preserving the rich heritage of African American visual art and culture”¹¹.

“Established in 2001, the Center provides an intellectual home for artist, arts administrators, museum professionals, and scholars of color, broadening the field of African diasporic studies. By bringing together the visual arts and the field of diasporic

¹⁰ As stated in the

¹¹ Ibid

studies in fluid and dynamic ways, the Center offers creative and curricular programming to the University and the greater Maryland and Washington, DC communities, while serving as a national leader in the field of African American art and culture”¹².

This thesis proposes the re-localization of the Driskell Center, currently located in the 2114 Tawes Fine Arts Building, to the proposed site area. A possibility of merging the program of the Center with the Fine Arts Museum is also a possibility.

Director’s Office:.....	200 s.f.
Administrative Assistant (3 offices @ 100 s.f. each):.....	300 s.f.
Receptionist and Waiting Area:.....	300 s.f.
Records/Archives:.....	300 s.f.
Storage:.....	500 s.f.
Photocopy Area:.....	50 s.f.
Mail Room:.....	50 s.f.
Driskell Art Collection exhibition space:.....	8,000 s.f.
Auditorium.....	1,500 s.f.

¹²

Program Tabulations:

Space	Quantity	Square Feet
Visual Resources Library		
Curator's Office.....		200
Assistant Curator.....		200
Light Tables/Slide Drawers.....		1,000
Equipment Room.....		500
Projection Room.....		400
DVD/VCR Database.....		200
Computer Workstations.....		500
Staff Workroom.....		300
The Art and Architecture Library		
Art and Architecture Books and Periodicals:.....		15,000
Current Periodicals/New books/Informal reading area:		150
General Reading areas (for 160 people):		3,200
Reference/Index Books (for 10-12 people):.....		350
Oversized Folios:.....		300
Entrance/Control/Display:.....		200
Catalog area:.....		200
Photo Copy area:.....		150
Virtual Library:.....		800
Study Rooms (4):.....		800

National Trust for Historic Preservation Collection (Workspace):.....	2,500
National Trust for Historic Preservation Collection (Stacks):.....	4,375
World Columbian Exposition Collection:.....	350
Rare Books Room:.....	1,200
Special Collection Reading Room:.....	450
Seminar/Media Rooms (2 rooms):.....	700
Art and Architecture Gallery:.....	8,000
AIA Drawing Archive:.....	2,000
Branch Librarian's Office:.....	150
Staff Work Room:.....	400
Receiving and Miscellaneous Storage:.....	100
Circulation Desk/Staff Work Stations:.....	400
Reserve Book Shelving:.....	300

Support Areas

Student and Faculty Lounge/Café	1,000
Lockers and showers area.....	1,000

The Fine Arts Museum:

Temporary Gallery:.....	5,000
Permanent Gallery:.....	15,000
Reception Space.....	3,000
Administrative Space.....	1,000

Prep-Room.....	3,000
Storage.....	6,000
Auditorium.....	1,000

The David C. Driskell Center

Director's Office:.....	200
Administrative Assistant (3 offices @ 100 s.f. each):.....	300
Receptionist and Waiting Area:.....	300
Records/Archives:.....	300
Storage:.....	500
Photocopy Area:.....	50
Mail Room:.....	50
Driskell Art Collection exhibition space:.....	8,000
Auditorium.....	1,500

Sub-total.....92,575

Mechanical/Circulation/Service.....15% of sub-total.....13,886

Total.....106,461

Chapter 3: Design Issues and Objectives

This chapter will discuss two different design issues to be explored by this thesis and will establish some objectives as responses to these issues as guidelines for the next phase of design. These design issues are:

1. The symbolic integration of the building with its site as a way of extending its **physical presence** into the rest of the campus.
2. The technical integration of the building with the other two existing buildings in the site as a way of extending its **space** into them.

The new building and its site:

Recognizing that the project explores the integration of a new building into the University campus, special attention should be paid to the observance of the University's planning guidelines in order to deliver a project that is synchronized with the campus needs and aspirations.

In Fall 2002 a Facilities Master Plan Steering Committee was appointed by the University's President C. Daniel Mote Jr. to develop a plan that could address the current campus needs, and define the principles for directing further development and growth over the next twenty years. As part of their mission, the Committee published a document titled "Facilities Master Plan 2001-2020", that presented an overview of the current facilities, proposed new buildings that could satisfy the space requirements of the campus, and established principles and guidelines for future development. Some of the general principles include:

1. To plan the built and the natural environment in a way that preserves the beauty of the campus and protects the environment.
2. Reduce the number of automobiles on campus and eliminate vehicular congestion to the extent possible while promoting unimpeded movement across the campus.
3. Preserve the architectural heritage of the campus and enhance it through open spaces, gathering spaces, vistas of green lawns and trees, and groupings of buildings that promote a sense of community.

In regards to the site chosen for this thesis, the Document specifically proposes “existing buildings renovations and new infill development focused in the creation of well-defined open spaces between buildings that will create stronger links to the core of the campus”. Two points stand out about this initiative:

1. The creation of a new mall or lineal green space that will scenically tie this district, by channeling pedestrian movement patterns, to the Historic Core of the campus. This new mall terminates to a view of the cupola of the Anne Arundel Hall Building.
2. The closing of Campus Drive to automobiles in order to establish an internal campus loop shuttle throughout the center of the campus that will reduce internal auto travel.

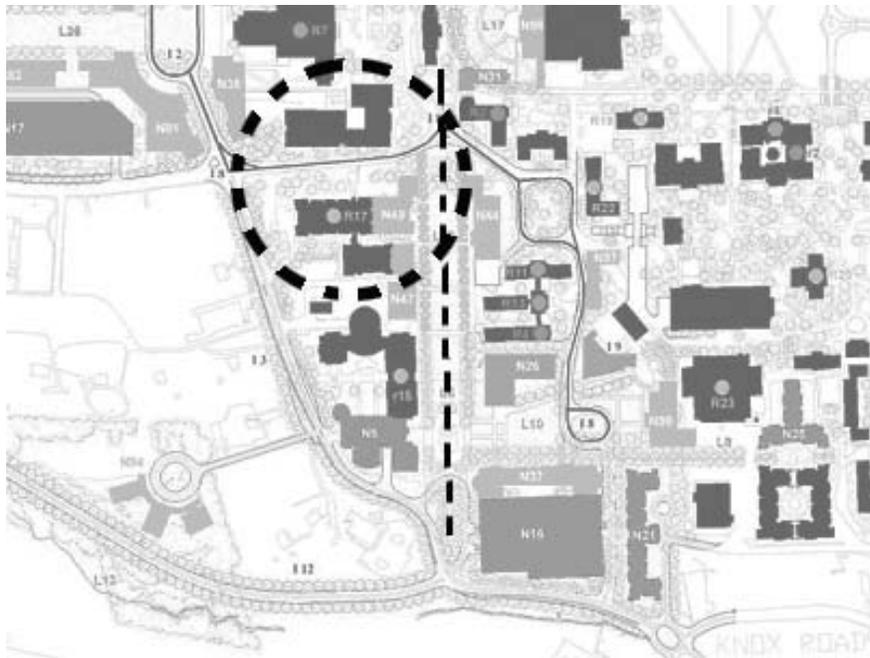


Figure 28. Map of the Southwest District showing the relation of site with the proposed new mall. (image adapted from the Facilities Master Plan 2001-2020)

The site area is affected tangentially by the proposed new mall.

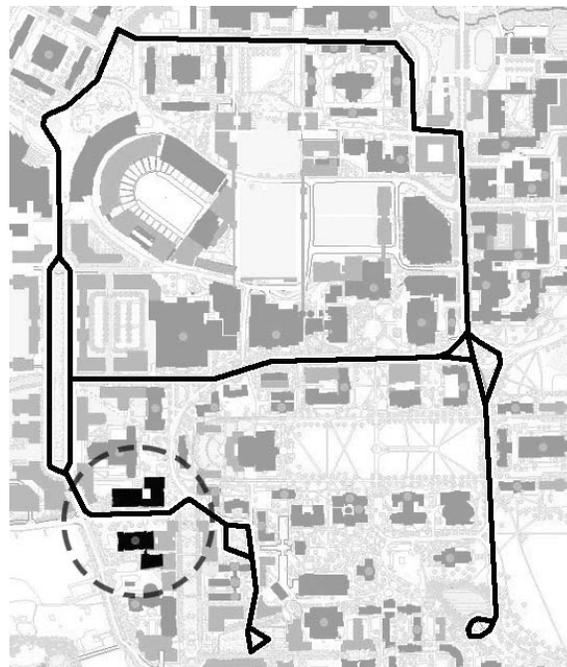


Figure 29. Map of the campus showing proposed internal bus loop. (image adapted from the Facilities Master Plan 2001-2020)

Note the role of Campus Drive in connecting the Southwest District to the proposed bus loop.

The proposed building and the existing buildings in the site:

The external integration of the new building to the site is as important as its internal connection with its neighbors, the Art-Sociology Building and the Architecture Building. The proposal should provide both technical and spatial integration between these two structures.

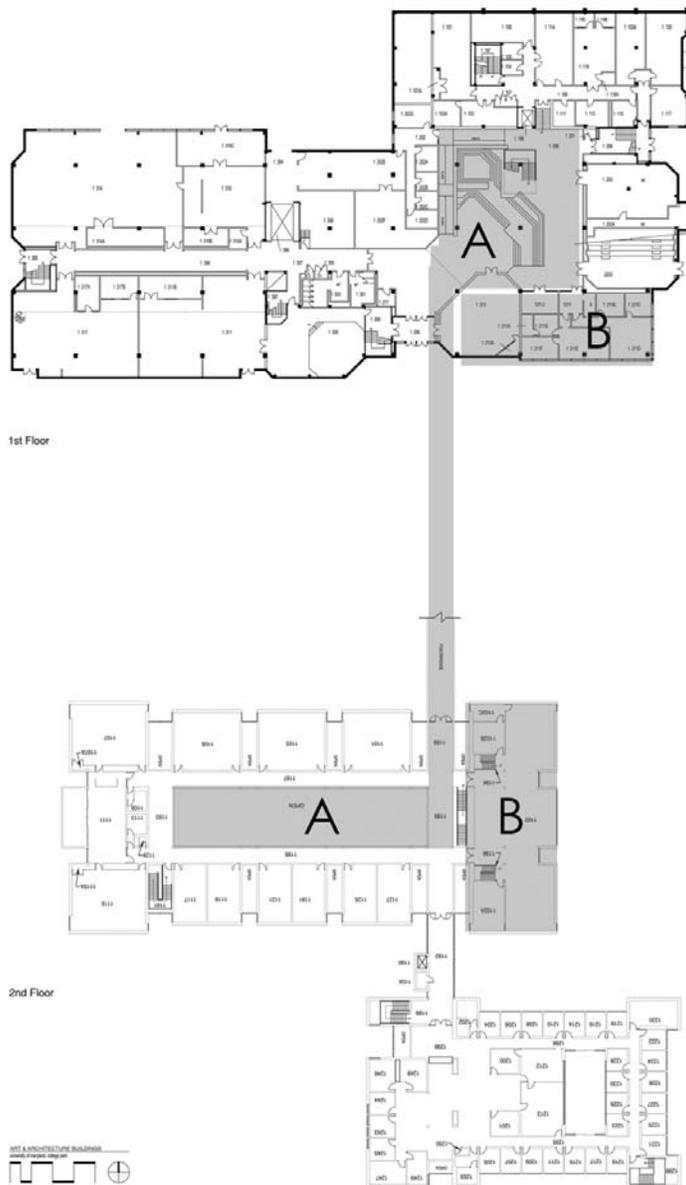


Figure 30. Existing buildings plan. (Author's image)

The gray areas mark similar areas and functions in both buildings and the shortest distance between them.

The A's mark the central open spaces and the B's their existing libraries.



Figure 31. Entrances to the existing buildings. (Author's photo, www.arch.umd.edu)

The upper photo shows the south entrance to the Art-Sociology Building; the windows above the entrance are from the art library.

The lower photo shows the north entrance of the Architecture Building; the volume at the left is the architecture library



Large scale objectives:

- To integrate the new building to the new mall recognizing its importance as the second most important axis of the campus.
- To take advantage of the west area of the site as an opportunity of providing the users of Campus Drive with a new façade, helping give identity to an area characterized by parking lots.
- To maintain Campus Drive as a Bus and a pedestrian route in order to help the campus stay connected.
- To protect and enhance the existing natural features of the site.
- To create a physical connection between the Art-Sociology Building and the Architecture Building that effectively allows the flow of people without been interrupted by the presence of Campus Drive.

Small scale objectives:

- Libraries: To deliver a design solution that acknowledges the need continuous growing and/or development into the new technologies related to the information management.
- Art and Architecture connection: To create a structure that could balance the relation between interactive spaces and private spaces in order to promote sharing but also a sense of spatial ownership; this latter in regards to the different studio cultures.
- Art spaces: To pay particular attention to issues of controlled natural illumination for aesthetic, technical and sustainable reasons.

Chapter 4: Precedents

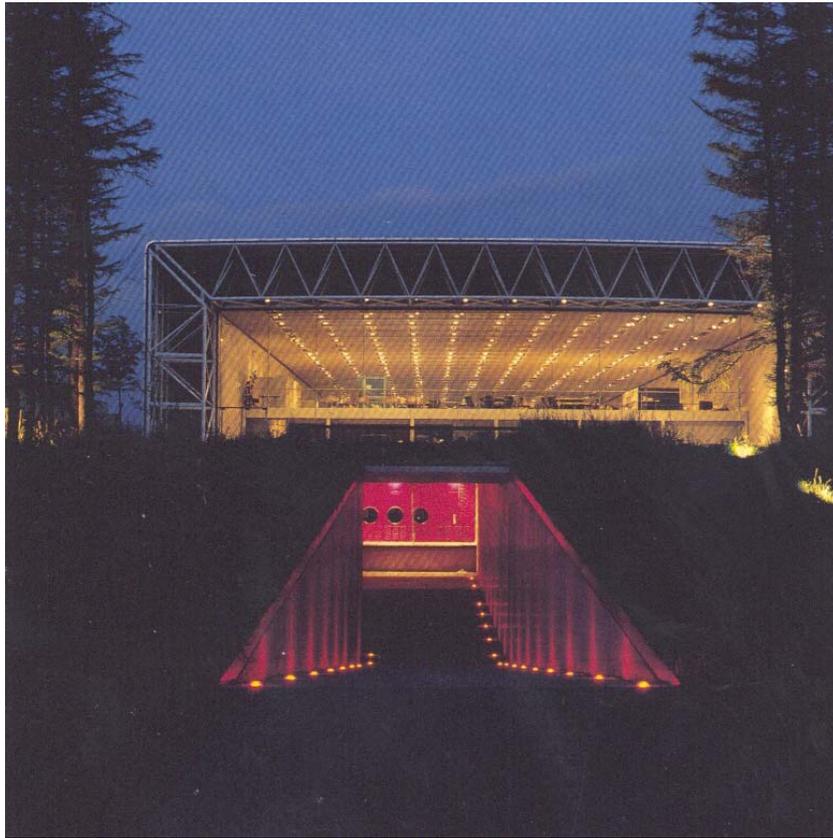


Figure 32. The Sainsbury Centre for the Visual Arts. (Foster, p.37)

Project: The Sainsbury Centre for Visual Arts.

Architect: Norman Foster and Partners

Location: Norwich, England

Date: 1974-1978

This large scale pavilion was constructed to house the art collection of Sir Robert and Lady Sainsbury. Instead of giving Foster list of requirements on form or program, the owners asked Foster for a building that questioned the conception of the museum as a building type. In their request there was an inherent intention of showing their art

collection in an informal way.

The building was conceived as one big and continuous space that lacked of a formal procession to direct the flux of people through the collection. The space was enclosed by a light “U” shaped roof that allowed indirect light to enter the building. In order to achieve this, all the mechanical equipment was located on the walls and the floor. The result was a substantial saving of energy and an effective illumination of the space.



Figure 33. The Sainsbury Centre for the Visual Arts, Site Plan. (Foster, p.50)

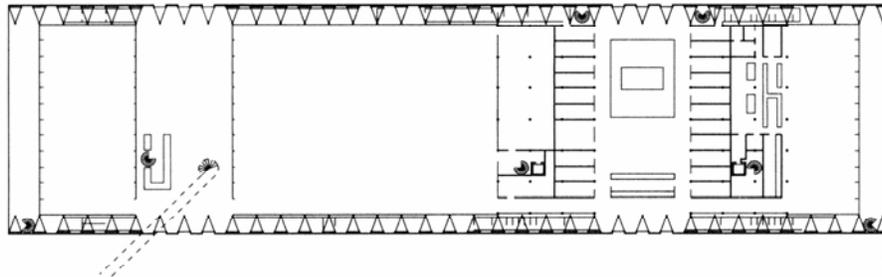


Figure 34. The Sainsbury Centre for the Visual Arts, plan. (Foster, p.51)



Figure 35. The Sainsbury Centre for the Visual Arts, interior space. (Foster, p.52)

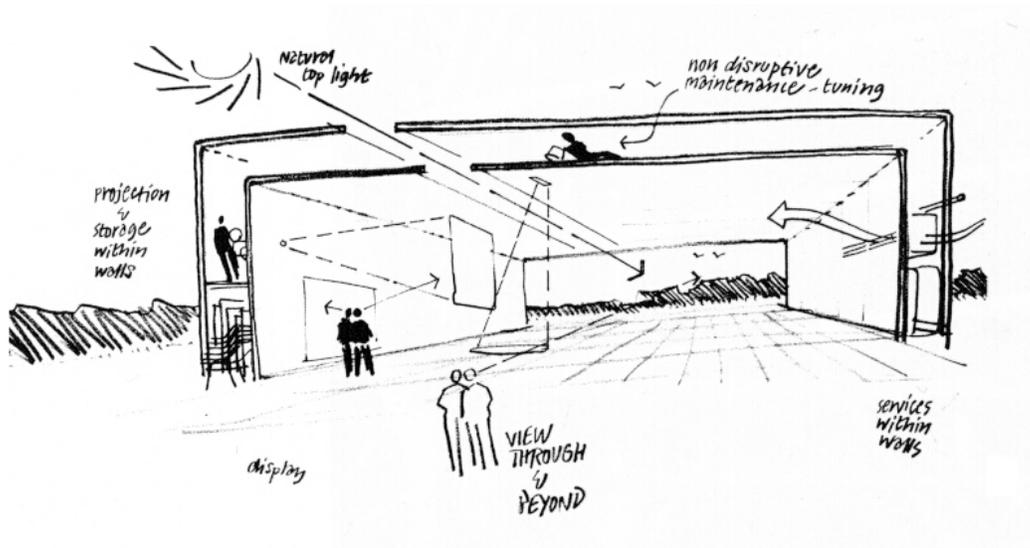


Figure 36. The Sainsbury Centre for the Visual Arts, diagram. (Foster, p.56)

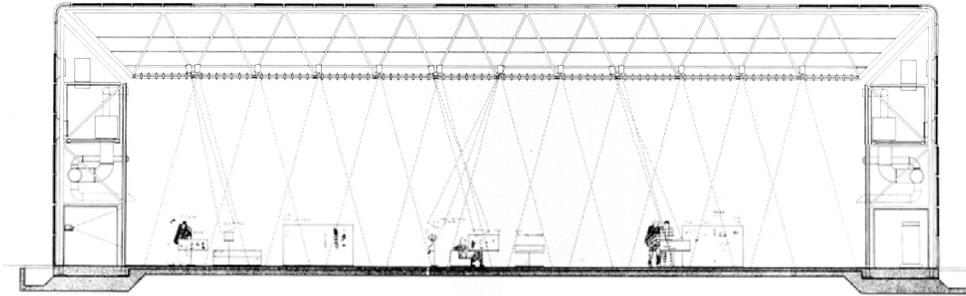


Figure 37. The Sainsbury Centre for the Visual Arts, section. (Foster, p.58)

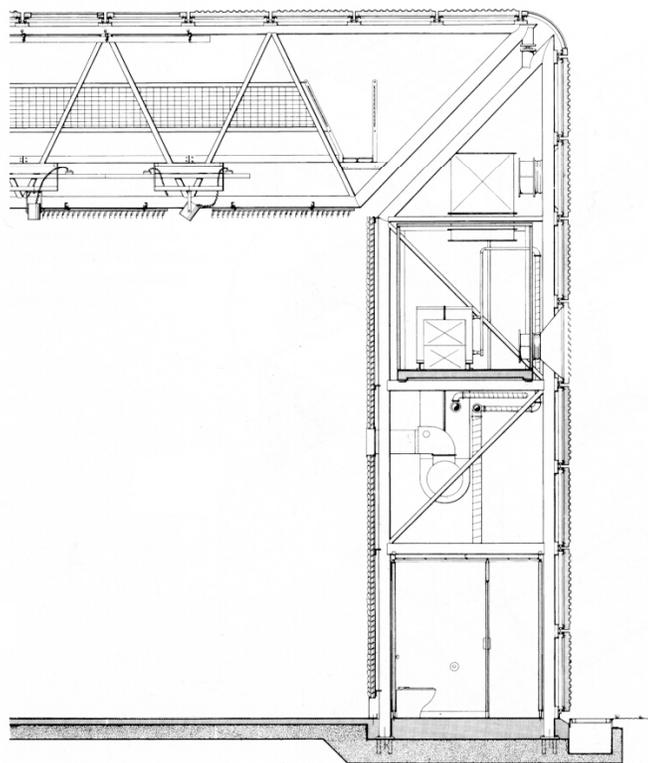


Figure 38. The Sainsbury Centre for the Visual Arts, wall section. (Foster, p.60)

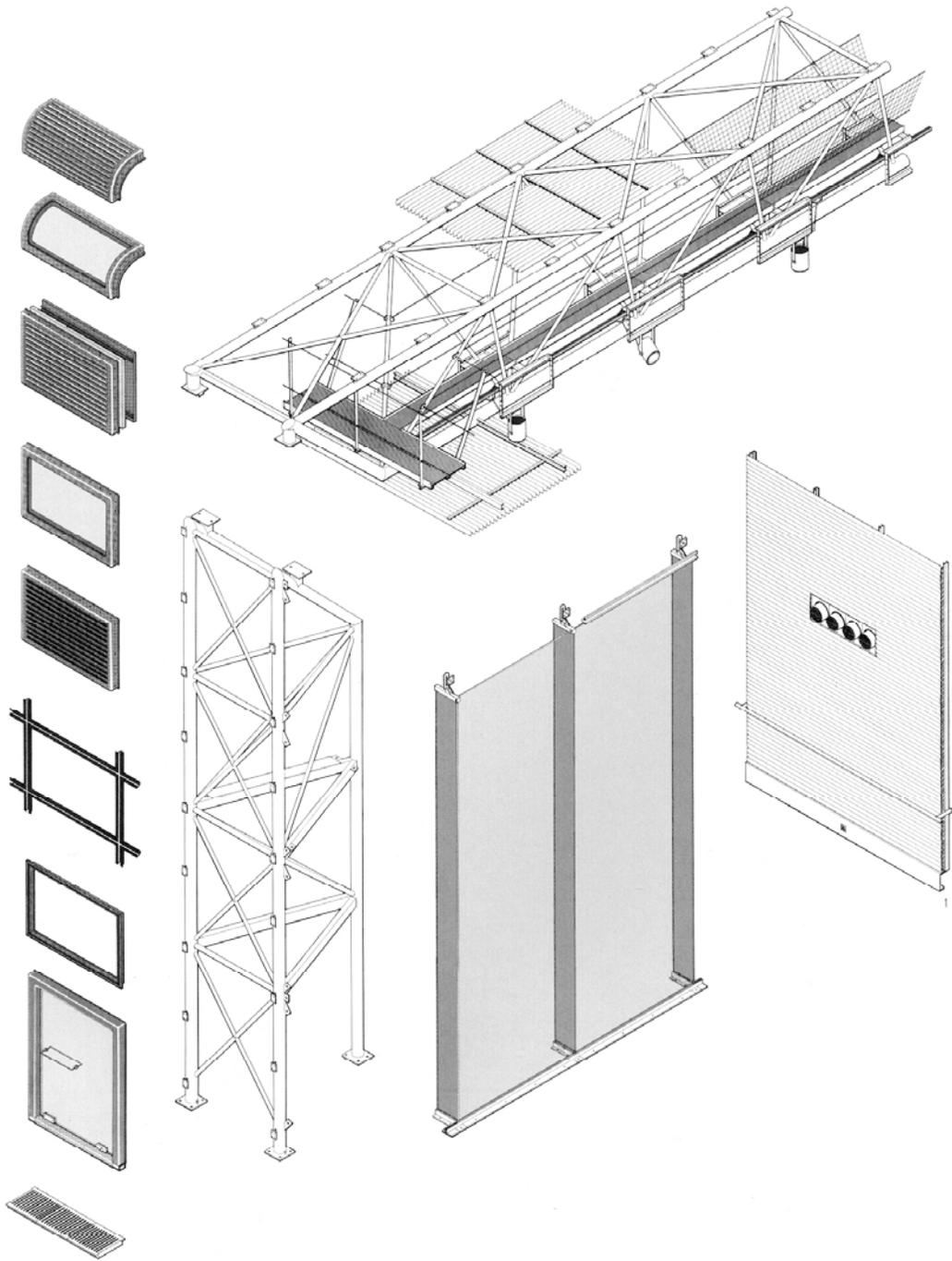


Figure 39. The Sainsbury Centre for the Visual Arts, axon showing assemblage. (Foster, p.61)



Figure 40. The Sainsbury Centre for the Visual Arts, roof structure being insulated. (Foster, p.62)

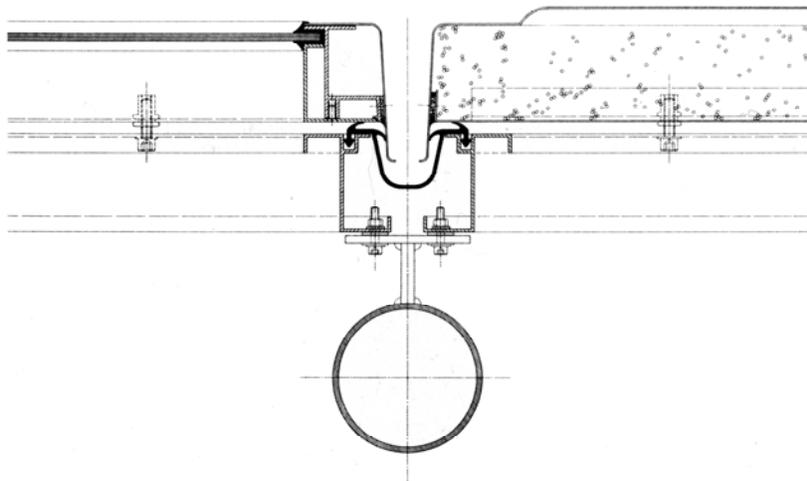


Figure 41. The Sainsbury Centre for the Visual Arts, detail of roof structure. (Foster, p.63)

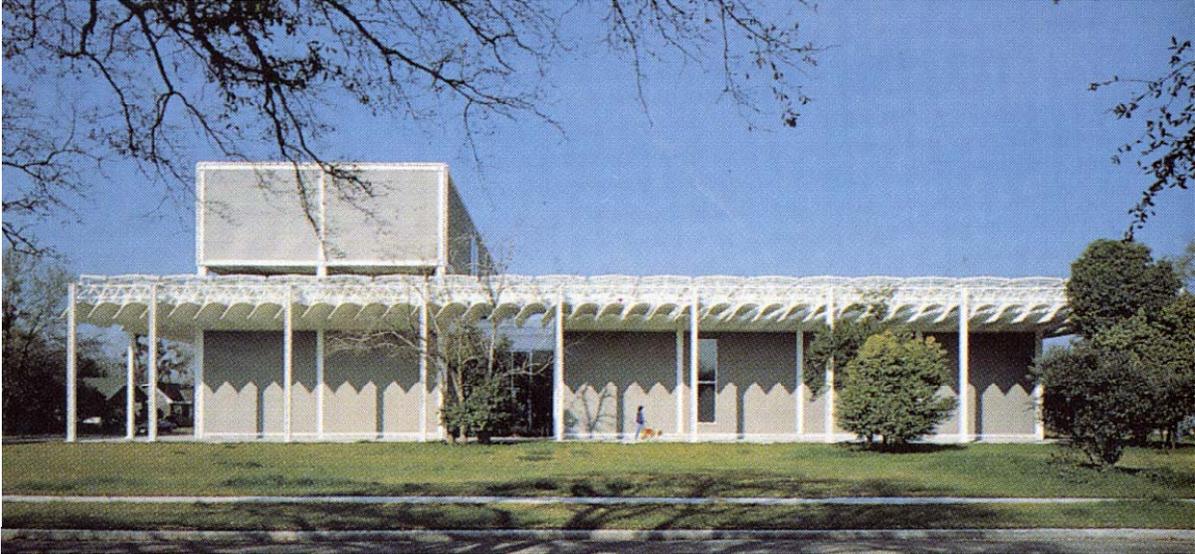


Figure 42. Menil Museum. (Piano, p.15)

Project: Menil Museum
 Architect: Renzo Piano
 Location: Houston, Texas, USA
 Date: 1980

The Menil Museum is Renzo Piano’s first American commission. It is also, as he has said, his most modern and innovative building yet. In it, the architect provided shelter for the vast art collection of oil heiress, Dominique de Menil.

Its roof of glass, steel, and concrete louvers is designed to filter sunlight, transforming the strong Texas sun into a subtle glow.

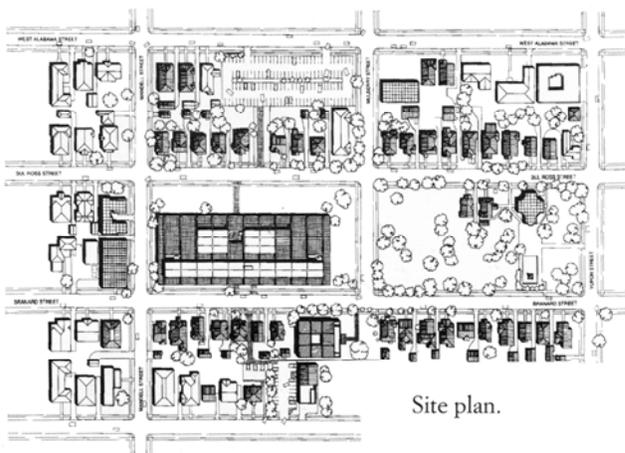


Figure 43. Menil Museum, Site Plan. (Piano, p.15)

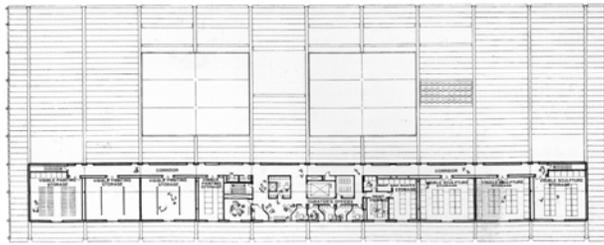


Figure 44. Menil Museum, Plans.
(Piano, p.16)

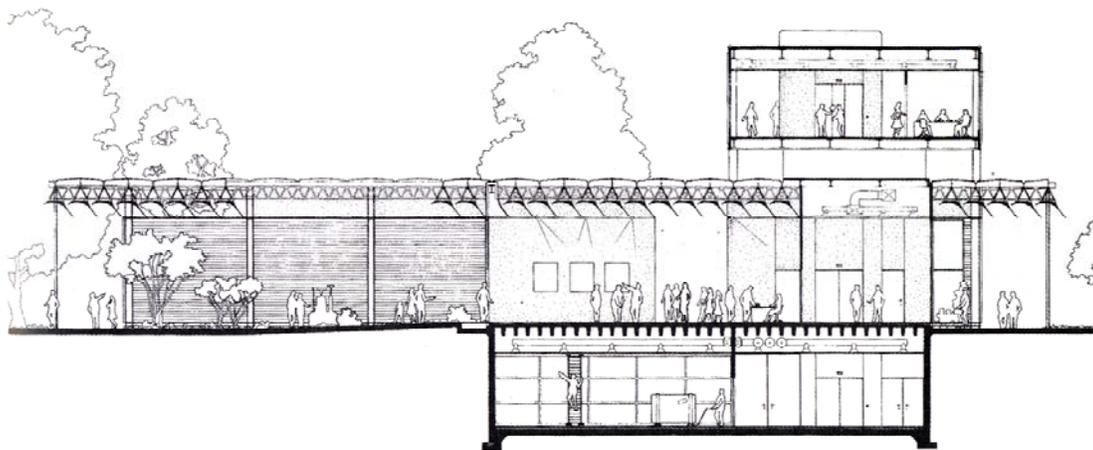
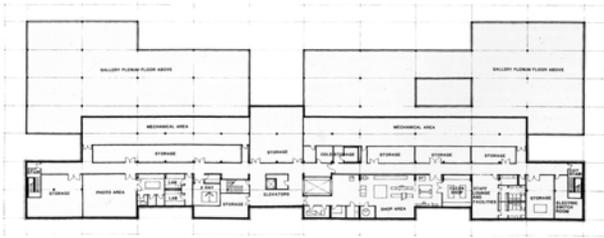
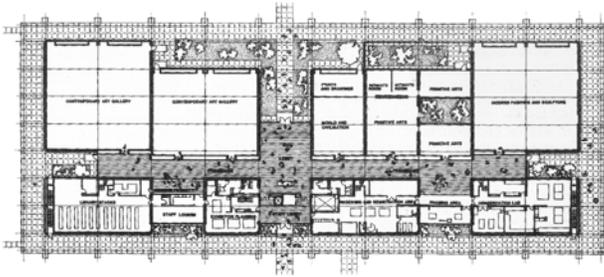


Figure 45. Menil Museum, Section. (Piano, p.17)

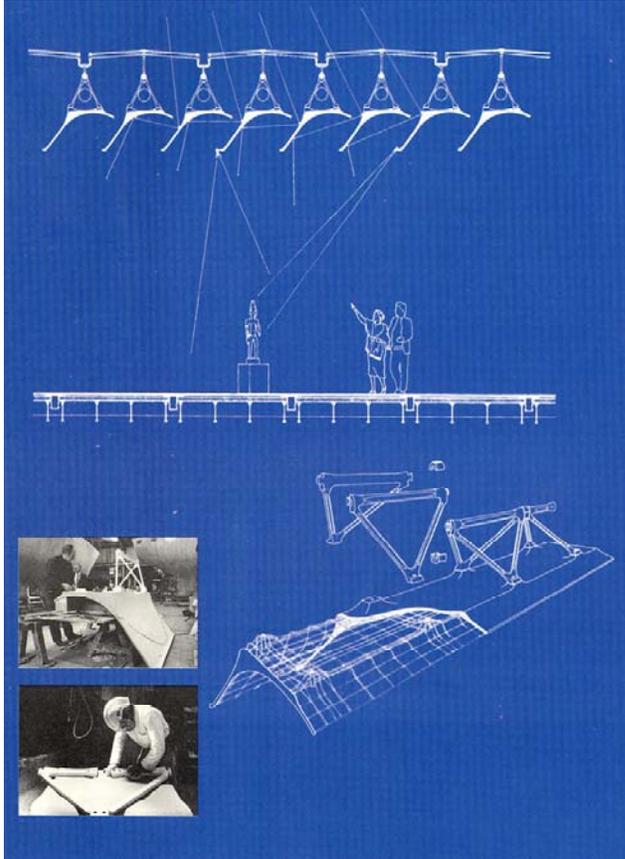


Figure 46. Menil Museum, roof section and diagram. (Piano, p.18)



Figure 47. Menil Museum, interior spaces showing natural light conditions. (Piano, p.20)



Figure 48. Nasher Sculpture Center, aerial photo depicting site (photo by Michael Denance, www.renzopiano.it)

Project: Nasher Sculpture Center
Architect: Renzo Piano
Location: Dallas, Texas, USA
Date: 2003

Renzo Piano's art oasis in the center of Dallas, was designed to contain more than 300 works comprised in the Nasher Collection, one of the most important collections of modern sculpture in private or public hands. The collection, which includes works of Picasso, Rodin, Matisse, Calder, de Kooning and Giacometti, among many others, is distributed among the 54,000 square foot building and two acre sculpture garden designed by landscape architect Peter Walker.

The basic parti of this building is a row of travertine marble walls, in parallel

configuration, supporting a light aluminum sunscreen devices that filters the sunlight as in the Menil Museum (fig.). The difference of this sunscreen roof in comparison with the one in Menil Museum is that the perforations made to the aluminum were precisely cast at the correct angle to exclude the direct rays of the sun while maximizing daylight as the sun tracks across the sky during the day.

The mechanical systems of the building are enclosed in the walls and the floor.

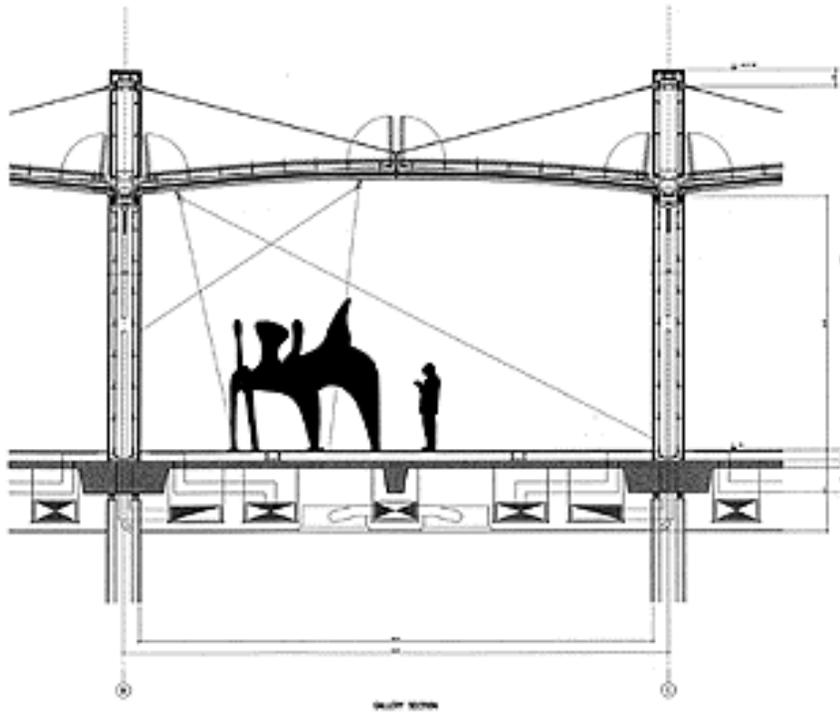


Figure 49. Nasher Sculpture Center, section (www.renzopiano.it)

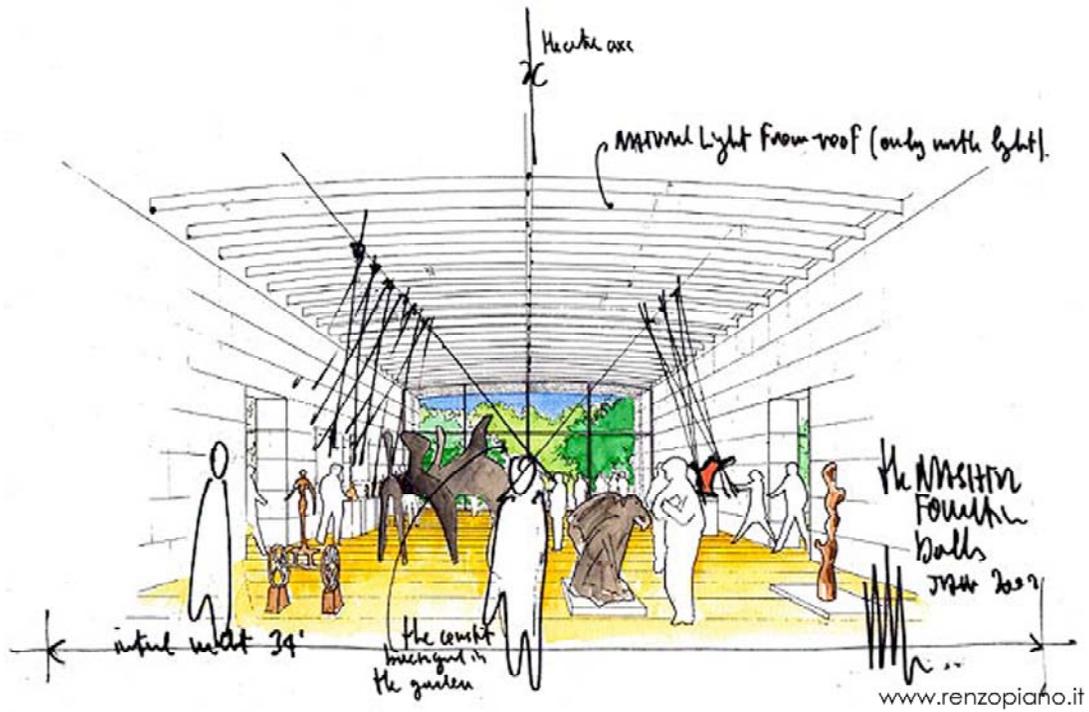


Figure 50. Nasher Sculpture Center, conceptual drawing. (www.renzopiano.it)



Figure 51. Nasher Sculpture Center, section (photo by Michael Denance, www.renzopiano.it)



Figure 52. Nasher Sculpture Center, during construction. (photo by Tim Hursley)

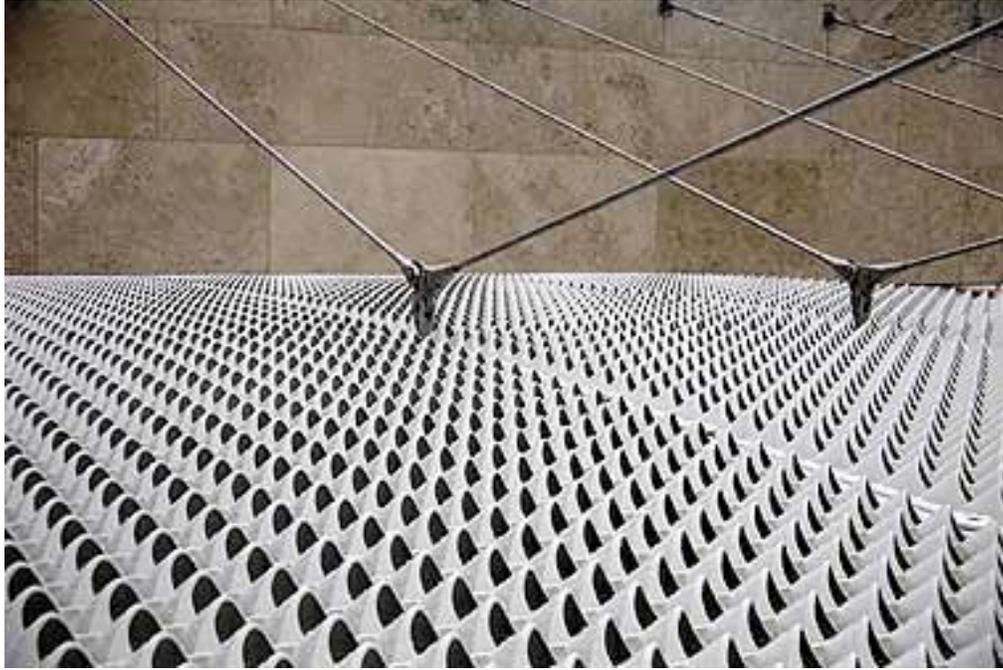


Figure 53. Nasher Sculpture Center, cast aluminum roof panels (photo by Brett Terpeluk/RPBW)



Figure 54. Nasher Sculpture Center, roof detail. (photo by Michael Denance, www.renzopiano.it)

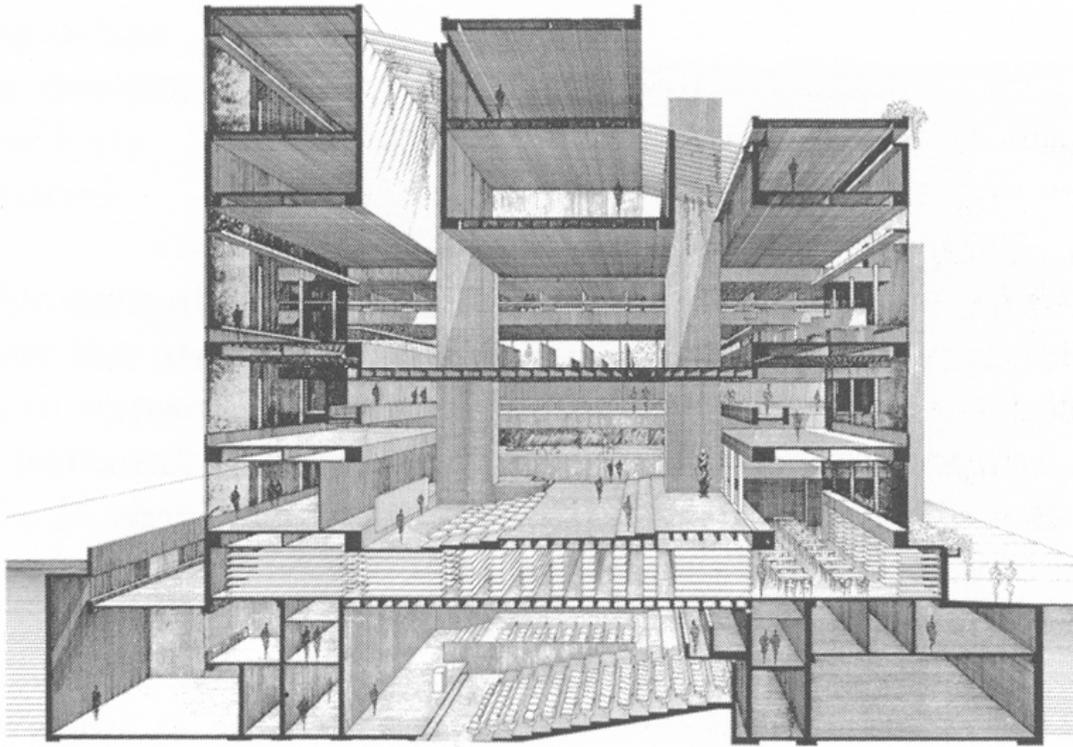


Figure 55. Yale Art and Architecture School. section. (Foster, p.41)

Paul Rudolph's characteristic drawing style, depicts not only the project's program but also its phenomenal space.

Project: Yale Art and Architecture School

Architect: Paul Rudolph

Location: Yale University, Connecticut, USA

Date: 1958

The monumental building created by architect Paul Rudolph has the function of combining the disciplines of both Art and Architecture schools in a single building. The building was born of the desire to consolidate and expand the space available to the University's art, architecture, graphic design and city planning programs which in the late

50's and early 60's were housed in the Art Gallery¹³. It was the hope that the placing of these disciplines under one roof could help restore them to a sense of unity¹⁴.

One of the most attractive aspects of this building is its spatial complexity. In its interior, 36 levels revolve in a pinwheel-like pattern around two central unifying open spaces. The four inner pillars that frame the central spaces contain the mechanical systems of the building, while the towers at the corners of the building contain stairs and other functional components.

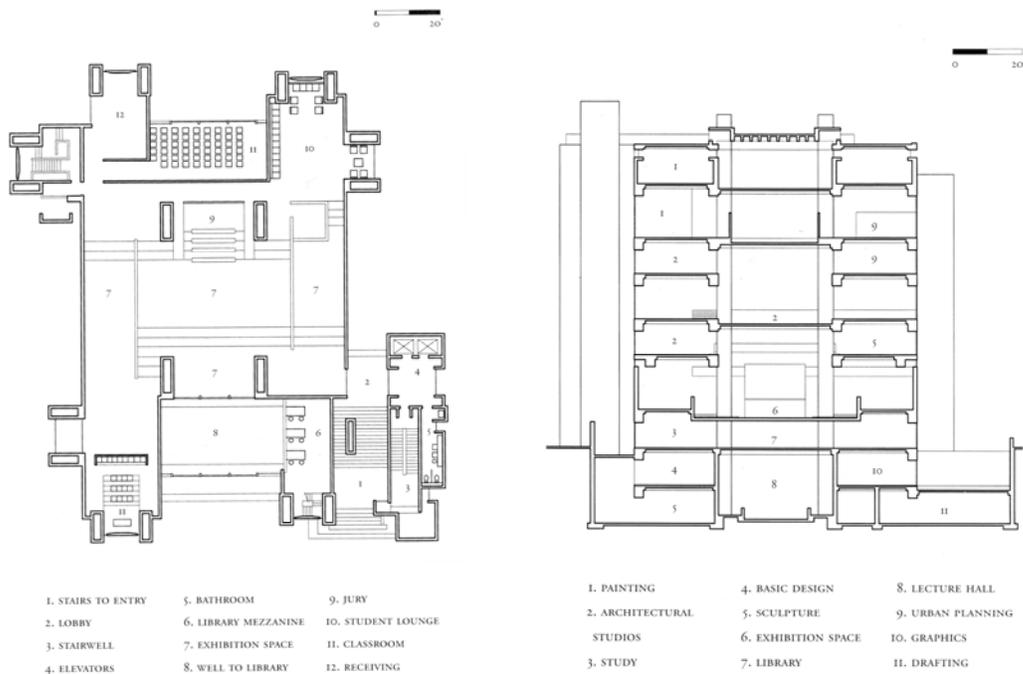


Figure 56. Yale Art and Architecture School. plan and section. (Stoller, p.23)

¹³ Mark Alden Branch. The building that won't go away. Yale Alumni Magazine, Yale University. 1998

¹⁴ Ibid.



Figure 57. Yale Art and Architecture School. exterior view. (photo from The Kidder Smith Slide Archives, Massachusetts Institute of Technology)



Figure 58. Yale Art and Architecture School. detail, hammered concrete. (photo from The Kidder Smith Slide Archives, Massachusetts Institute of Technology)

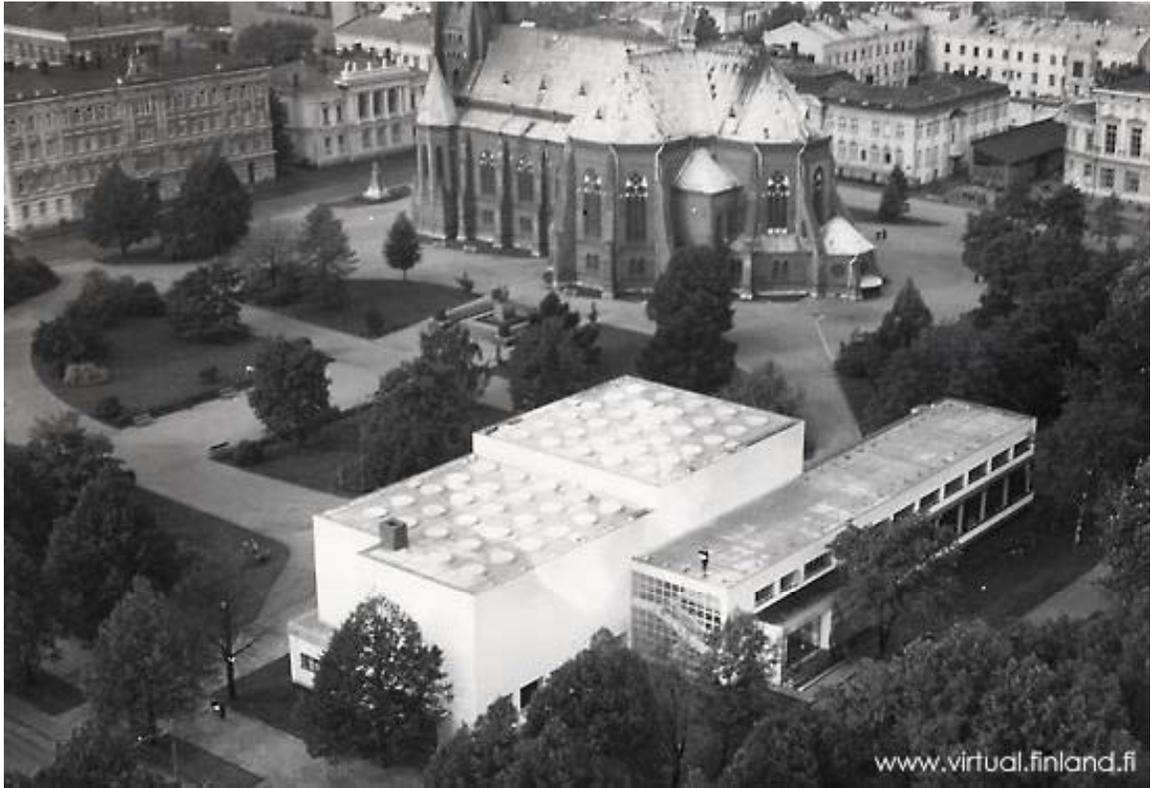


Figure 59. Viipuri Library, aerial photo. (www.virtual.finland.fi)

Project: Viipuri Library

Architect: Alvar Aalto

Location: Viipuri (now Vyborg), Russia

Date: 1927-1935

This public library designed by Alvar Aalto is an extraordinary example of balance between the functional and humanist requirements of the library as a building type. Its solution handles issues of site and context, circulation, spatial clarity and programmatic differentiation, transparency, natural illumination, acoustics and even furniture.

The building is composed of two main adjacent white volumes, one containing the library per se and the other one the administrative offices and a lecture room. The volumes' sizes also seem to respond to different context scales, to a park and a gothic church on one side and to a nearby street on the other side.

One of the most important elements of this building is the natural light feature. The reading room is divided in two levels surrounded completely with bookshelves. A central stair that conduces to the front desk, from where the librarian can observe both spaces without moving, connects both levels. This room is bathed in sunlight by 57 conic (for reflection) light wells that fill the roof as “multiple suns”. The conical section of these light wells allows light to reflect into the building, creating a diffuse glow that prevents shadows. Also this system of zenithal light helps the building save wall surface for book shelving instead of windows openings.

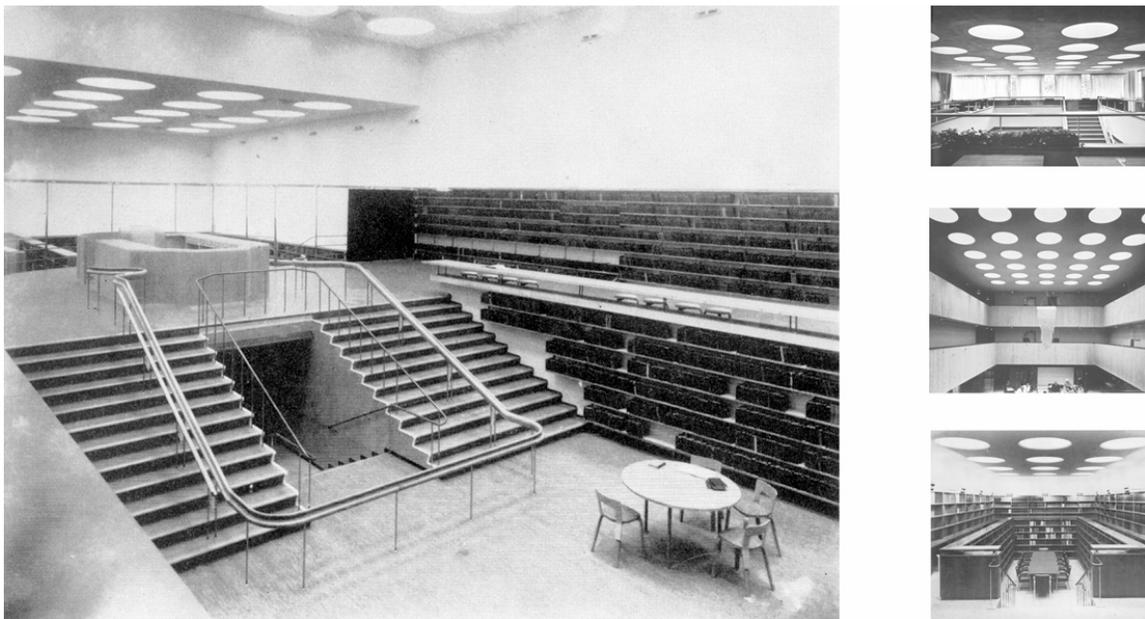


Figure 60. Viipuri Library, interior view (left) and similar lighting system in other Aalto's projects (right). (www.virtual.finland.fi)

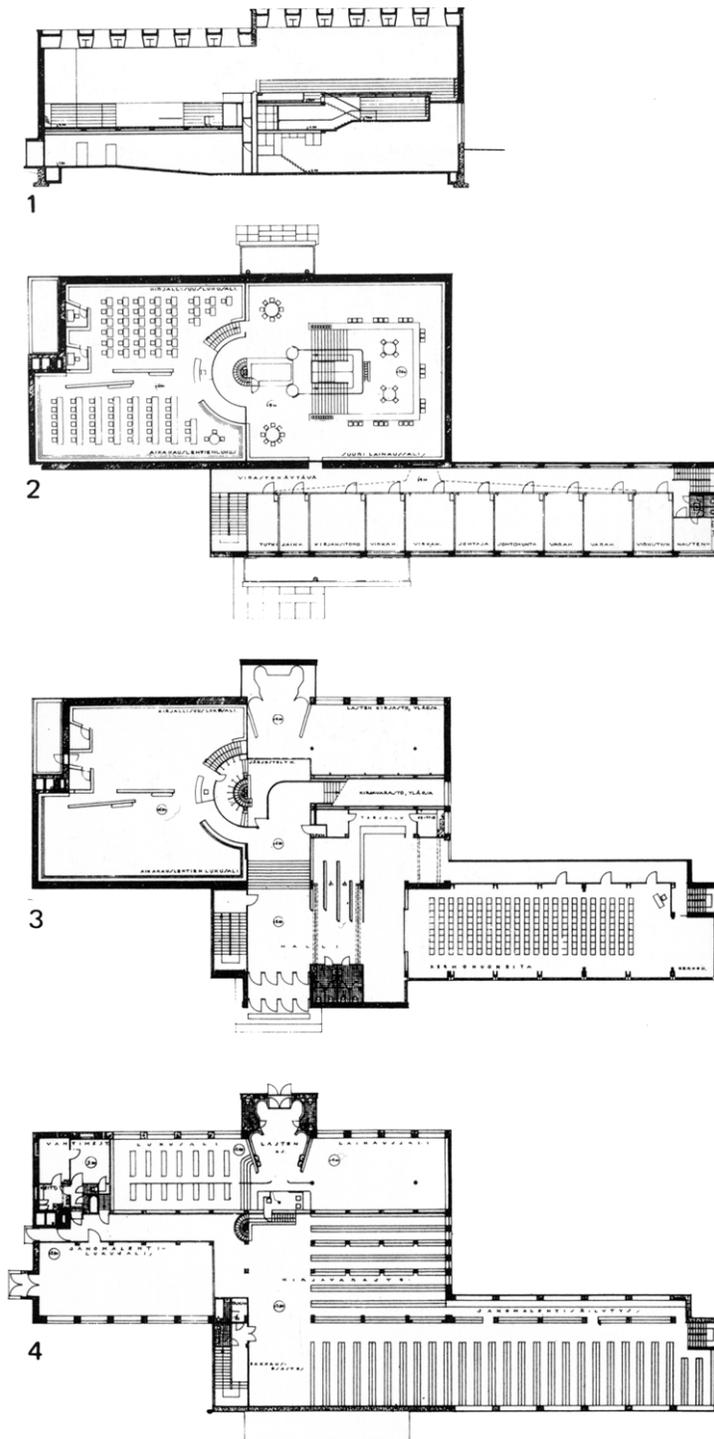


Figure 61. Viipuri Library, plans. (Hassan, p.35)



Figure 62. Torgersen Hall, framed view of Virginia Tech’s mall. (<http://www.architectureweek.com>)

Project: Torgersen Hall

Architect: SFCS, Inc and Esocoff and Associates Architects

Location: Virginia Polytechnic Institute. Blacksburg, Virginia, USA

Date: 2001

Torgersen Hall is Virginia Tech’s Advanced Communications & Information Technology Center. Its purpose is to provide spaces for experimental new technologies related electronic information and digital media handling. This electronic library is actually an addition to the more traditional main Newman Library. The connection

between these two buildings is through a bridge that crosses above the Alumni Hall. The two libraries and the existent War memorial now form a defined space that ends the long mall. The connecting bridge is the library's electronic reading room.

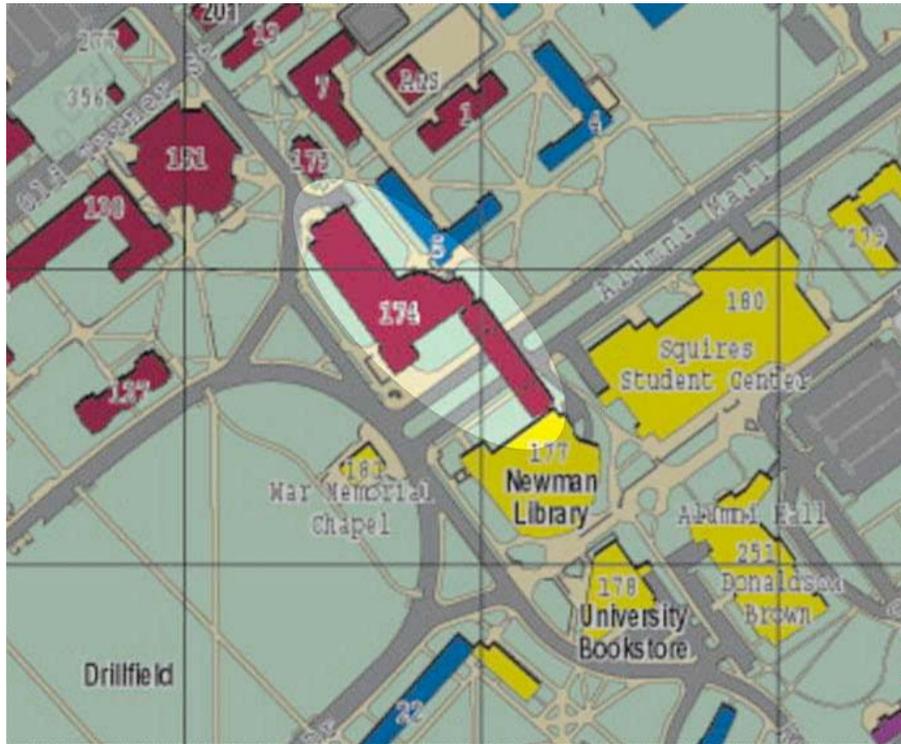


Figure 63. Torgersen Hall, drawing showing the building's connection with the Newman Library. (www.unirel.vt.edu)



Figure 64. Torgersen Hall, exterior view. (www.unirel.vt.edu)



Figure 65. Carpenter Center for the Visual Arts, exterior view showing the access ramp. (photo by Anthony Provenzano)

Project: Carpenter Center for the Visual Arts
Architect: Le Corbusier
Location: Harvard University, Cambridge, Massachusetts, USA
Date: 1963

The Carpenter Center is the only building in North America designed by Le Corbusier. Also, it was one of the last projects that he was able to complete before his death. In this building, Le Corbusier, shows a collection of many of his design principles and devices from earlier works, such as his the *brise soleils*, the *ondulatories*, the *pilotis* and the ramp.

What makes this project characteristic is its access sequence. By using a ramp that cuts through the center of the building, Le Corbusier solved both the access to the building and the connection of both sides of its narrow site. In the upper level of the ramp

there is a reception area, where the building divides itself in two. These two volumes held studio and exhibition spaces and offices in a free plan disposition.



Figure 66. Carpenter Center for the Visual Arts, interior view showing the ramp. (photo by Anthony Provenzano)

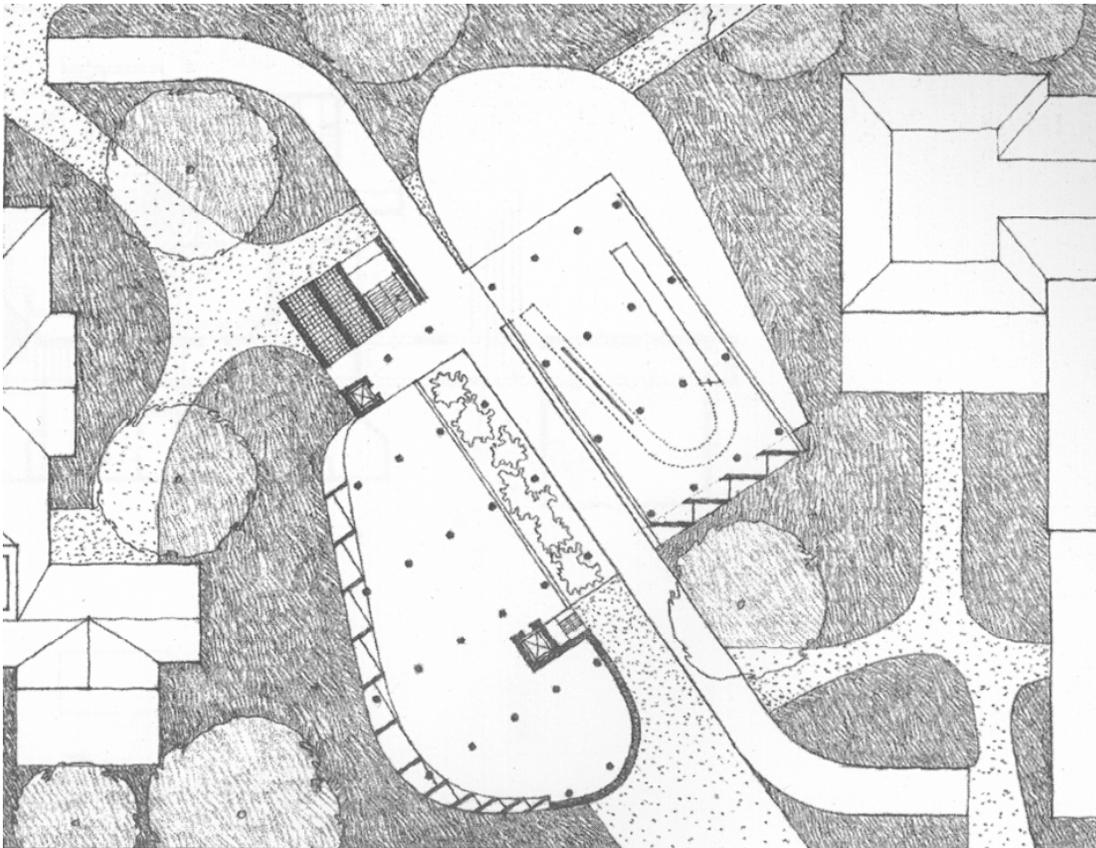


Figure 67. Carpenter Center for the Visual Arts, drawing of the site connection made by the ramp. (Ching, p.)



Figure 68. Bayamón City Hall, exterior view. (www.municipiodebayamon.com)

Project: Bayamón City Hall
Architect: R. Mediavilla & Sons
Location: Bayamón, Puerto Rico
Date: 1980

This modern City Hall Building floats over one of Puerto Rico's principal routes, PR. # 2. It is known to be the first aerial building of the Caribbean. All the program of the building (it weights about 230 tons) is contained inside a steel frame that rests in the four pilasters located at both

extremes of the highway. These pilasters not only offer support, but also contain stairs and elevators. The building makes an efficient use of the site and provides a floating pedestrian access, connecting both sides of the highway¹⁵.

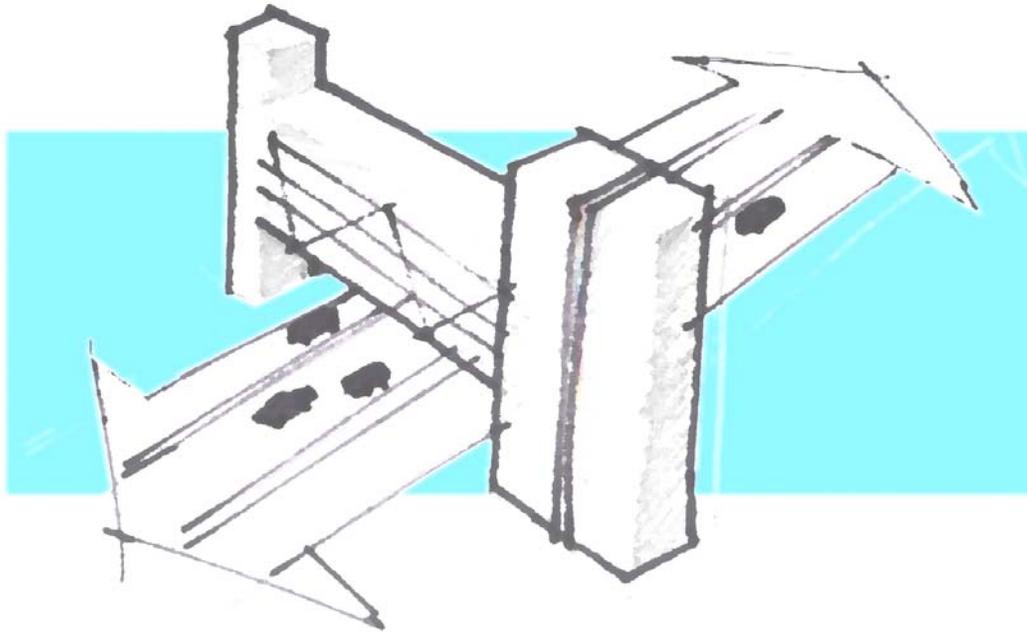


Figure 69. Bayamón City Hall, diagram showing vehicular movement under the building. (Author's drawing)

¹⁵ <http://www.municipiodebayamon.com>



Figure 70. University of Maryland Student Union Building. (images courtesy of Colleen Grove)

Project: University of Maryland Student Union Building (Competition entry)
 Student: Colleen Grove
 Site: University of Maryland, Maryland, USA
 Date: 2005

This competition entry for the 2005 ACSA/AISC Steel Building competition deals with the same sloping site of this thesis document. The basic part of this building is a combination of a floating glass bar and a “U” shaped steel volume forming a central open courtyard. The “U” shaped volume adheres itself to the ground and gives an impression of stability while the glass box prefers to touch the ground lightly, relying on pilotis. This site strategy recognizes and handles effectively the different slopes of the site. It also acknowledges an existing pedestrian path, embracing it as part of the scheme, helping bond the project to the campus.

Chapter 5: Design Strategies

This thesis investigation is about designing a structure that can effectively connect two different buildings while connecting itself to the rest of the campus. In order to define the course of action to follow into designing this new Center for the Visual Arts, it is important to establish the primary factors that will affect directly the direction of the project. These primary factors are:

1. **The role of the new building as a physical connecting element.** The new structure will provide effective connection between the Art and Sociology Building and the Architecture Building, allowing movement from one structure to the other, while recognize the existence of different functional programs and activities within the involved schools. This connection will be more than just a mere bridge between the two buildings. The purpose of this connection will be to attach the inside space of each building and merge it with the other one by sharing some common program.
2. **The role of the building as a symbolic connecting element.** The relation of the new building with the upcoming green mall from the Van Munching Building will provide the project with the opportunity of become part of the landmarks of the campus. By acknowledging this important new axis, the building will become an ordering factor for the Southwest District, visually associated with the Historic Core of the campus.

3. **The permanence of Campus Drive inside the site:** allowing the transit of busses through the project, will help the campus to stay connected and making the project an integral part of the transportation system of the University. Although this could arise some technical difficulties, the proper treatment of this transit link will make a stronger case for this building as a provider of connections for the campus.

4. **The new building as a new façade for campus:** this will help receiving visitors from outside the campus when arriving from the Campus Drive. This section of the building will help define the boundaries of the campus and give identity to an entry area characterized by immense parking lots.

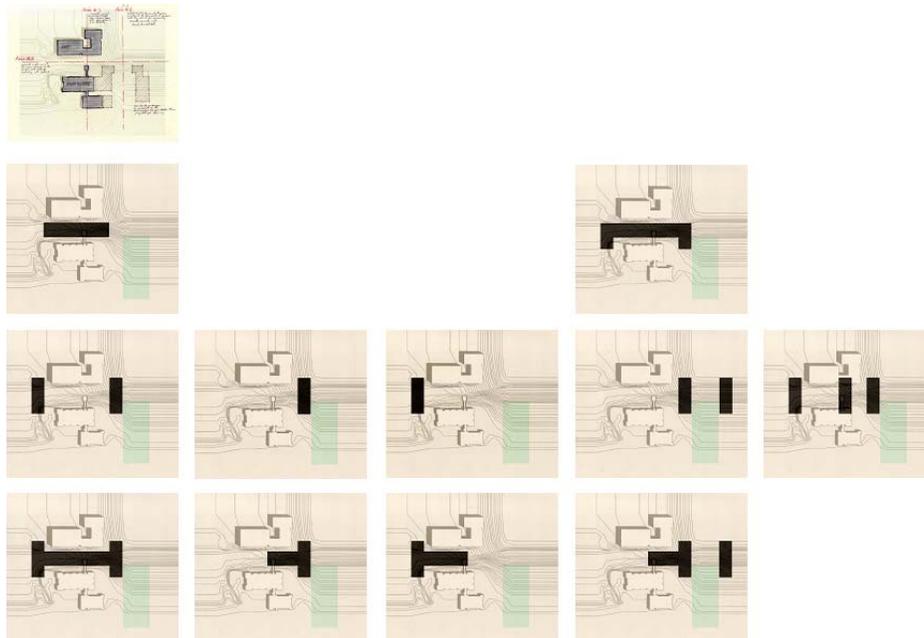


Figure 71. Diagram of different parti options based on a study of the site. (Author's drawings)

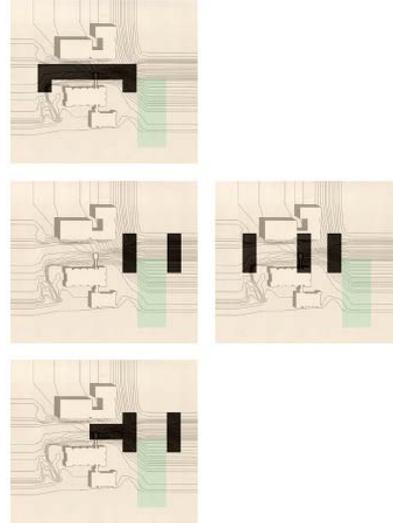
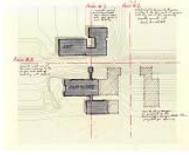


Figure 72. Diagram of selected parti options from previous analysis. (Author's drawings)

Based on program requirements and guided by the analysis of the area and axial relations of the site, a series of basic partis were developed. These basic partis identify three different way of occupying the site which are:

1. **A bar in between the two existing buildings:** this proposition presents the idea of one single volume occupying the entire space in between the two existing buildings.

2. **Two bars at the edges of the site:** this presents a way of framing the interior space in between the existing buildings and also creating defined edges outside the site.

3. **A combination of the two:** by combining the advantages of the first two partis, the result is an “I” shape volume that gives edge to the outer space of the site and also provides a central volume that can allow connection between the existing buildings.

These three basic partis can be reconfigured into a series of other combinations that articulate the site in different ways. From the eleven combinations considered, four were varied enough to be chosen for further development into schemes.

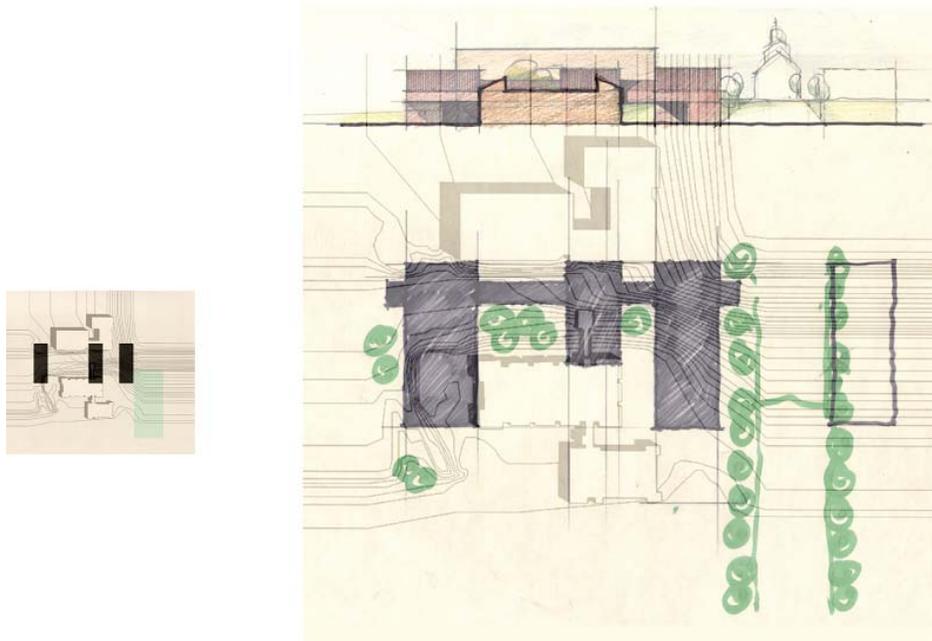


Figure 73. Scheme A. (Author's drawings)

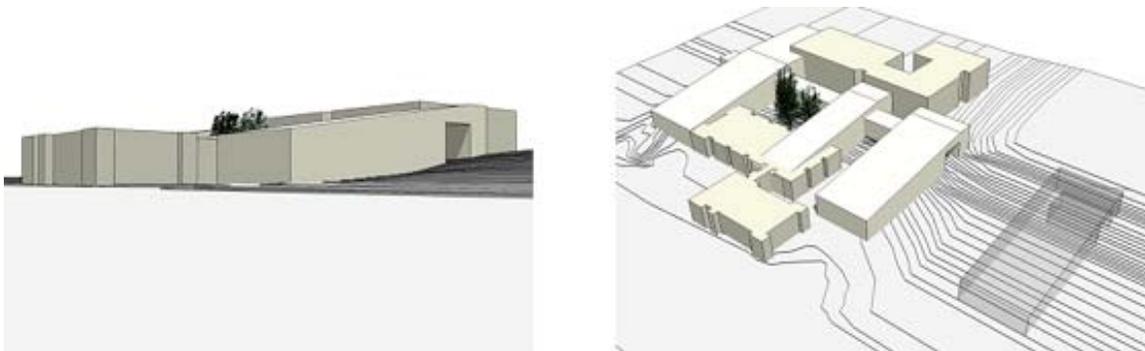


Figure 74. Scheme A, perspectives. (Author's drawings)

Scheme A: this configuration takes the advantage of having two solid bars at the extremes of the site in order to define its exterior edges, while allowing a third bar to serve as the connector between the existing buildings. This scheme intends to preserve some open space inside itself creating courtyards or promoting an inward oriented

experience. As shown in figure 75 the scheme seems to ask for a fourth bar to frame the view of the Ann Arundel Building and receive the new green mall. This led to the next scheme.

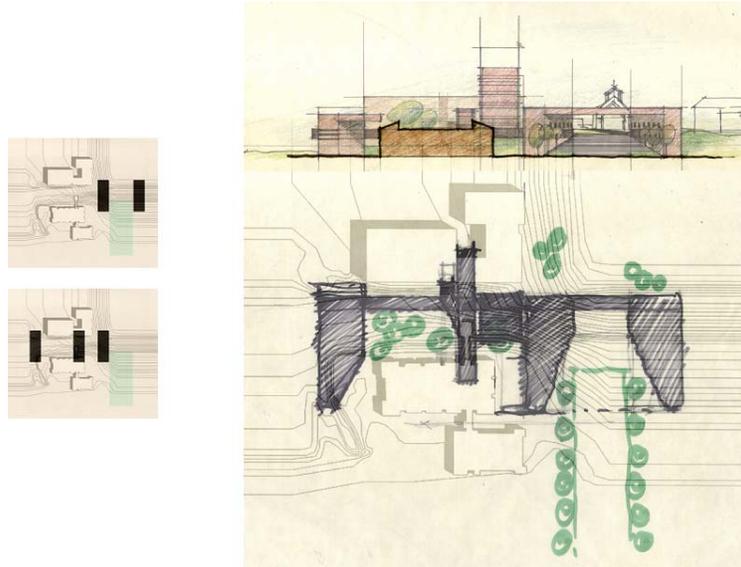


Figure 75. Scheme B. (Author's drawings)

Scheme B: This variation from the first scheme adds a fourth bar in order to frame the view of Ann Arundel Building and to create a funnel that receives the new green mall. This scheme also proposes a tower that could help solve the continuously growing needs of the libraries proposed in the program.



Figure 76. Scheme B, perspective. (Author's drawing)

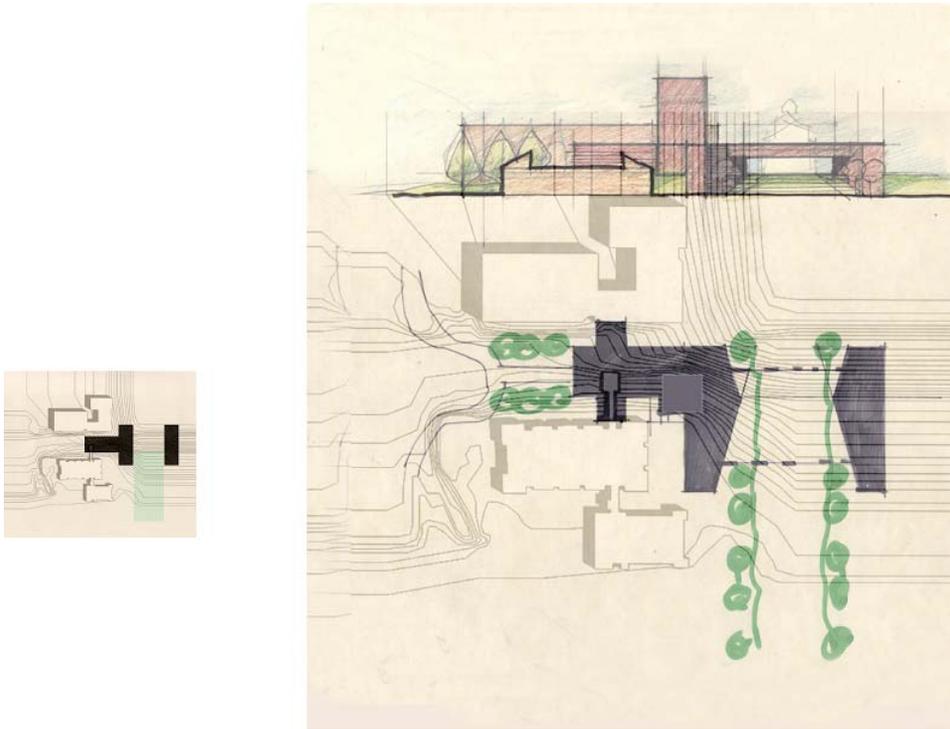


Figure 77. Scheme C. (Author's drawings)

Scheme C: This scheme allows the program to be concentrated in the new mall area, while the other side of the site becomes a car drop-off. This is the only scheme that foresees the closing of Campus Drive. A variation of this scheme can concentrate the building as just the funnel and the tower, taking out the connector between the two existing buildings (see figure 78)

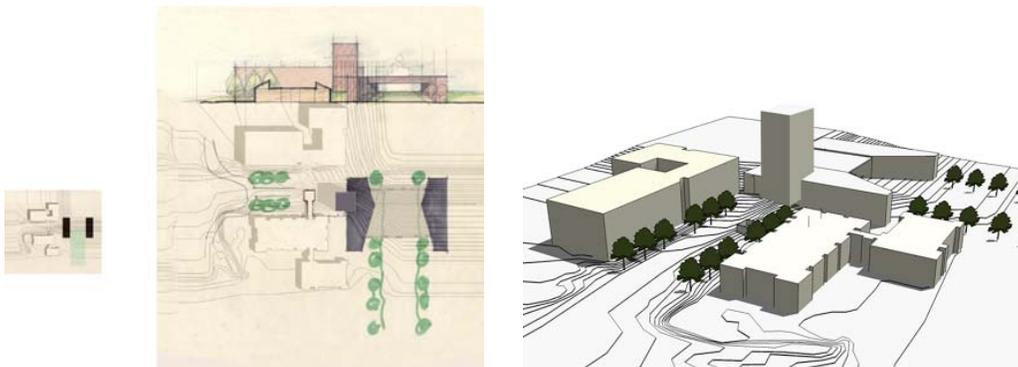


Figure 78. Scheme C, variation. (Author's drawing)

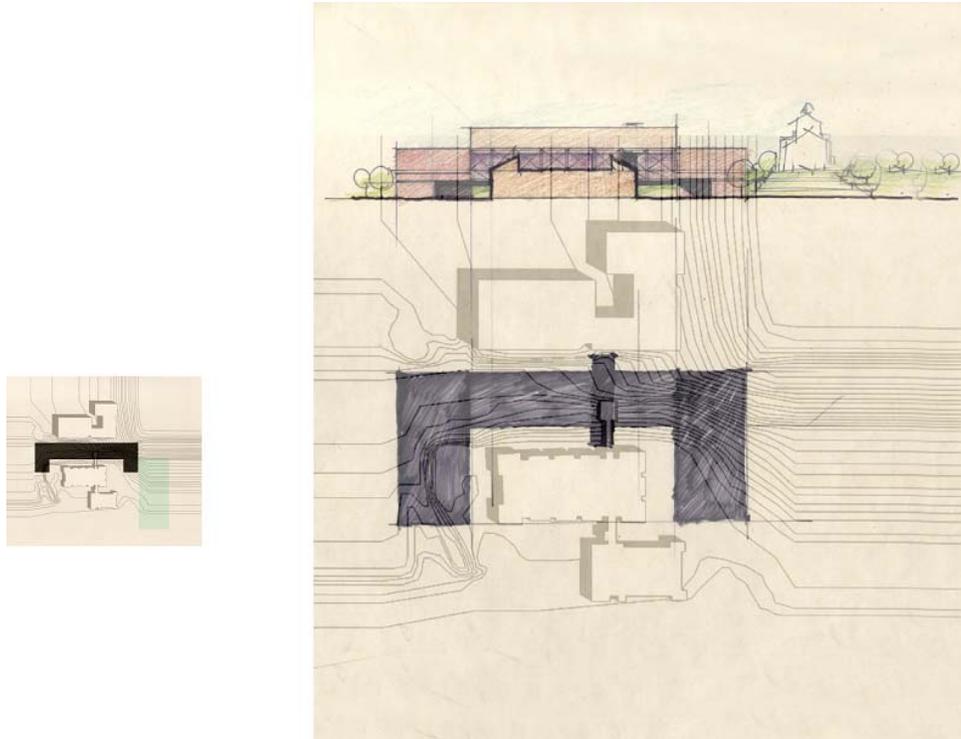


Figure 79. Scheme D. (Author's drawing)

Scheme D: This scheme proposes two massive bars at the edges of the site as in the previous schemes, supporting a light volume that works as the connector between them and the existing buildings. The building floats over the site allowing Campus Drive to connect both sides.

This light volume can become a glass box and surrounded by trees from the site. The space inside this volume could be a combination of the communal spaces that the building aims to provide. It could also be used as long reading rooms, filled with natural light and green views.

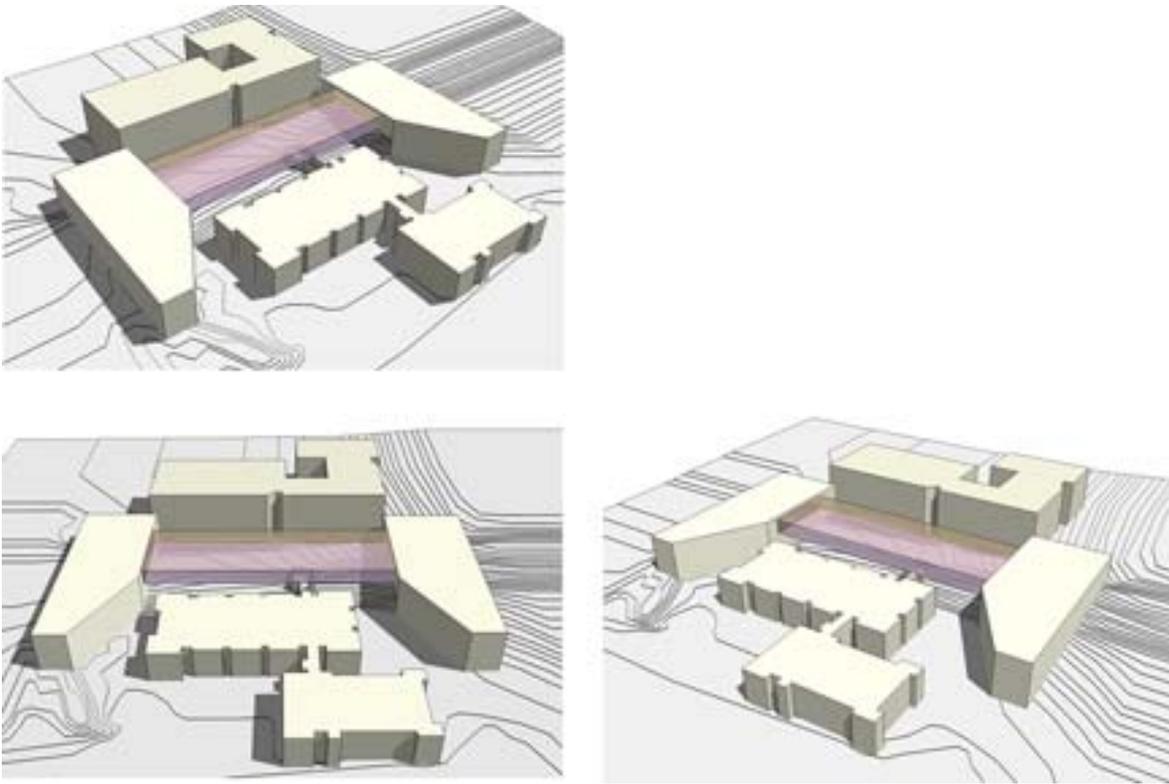


Figure 80. Scheme D, perspectives. (Author's drawings)

A variation of this scheme (figures 81-84) allows the glass box to continue through the massive bars and extending outside to help fragment the west façade and present some kind of attention to the new mall. Also this variation adds the tower as a hierarchical element to the composition. This scheme is not contemplating framing the new mall, instead it proposes a large stair at the east facade that adapts to the slope and serves as an entrance.

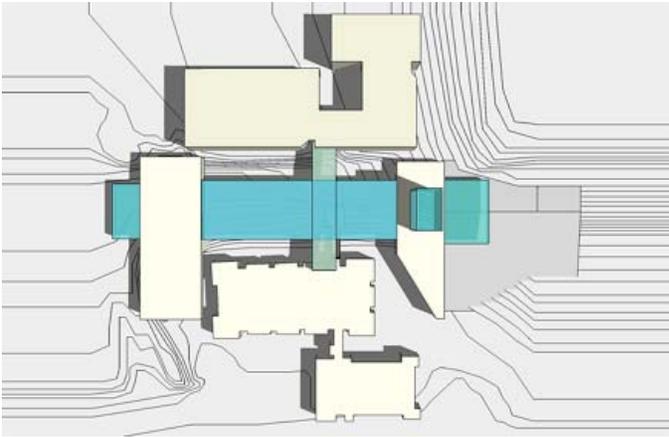


Figure 81. Scheme D, variation, plan.
(Author's drawing)

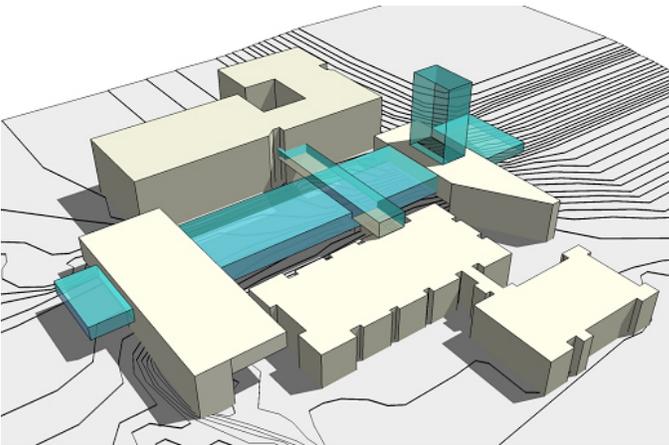


Figure 82. Scheme D, variation,
perspective. (Author's drawing)

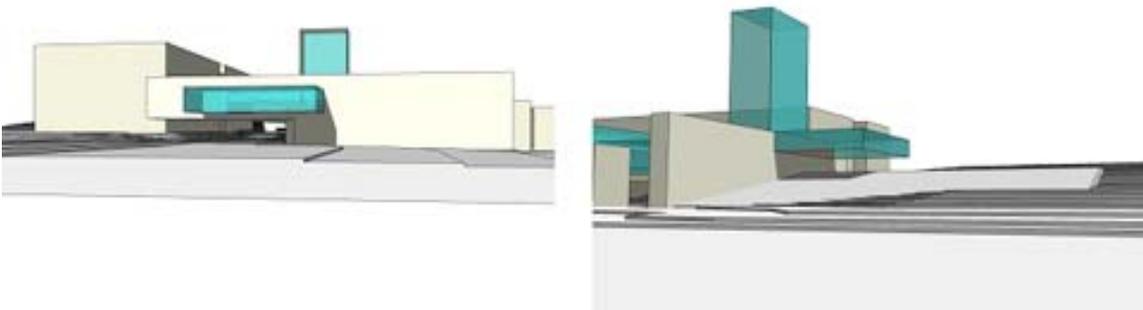


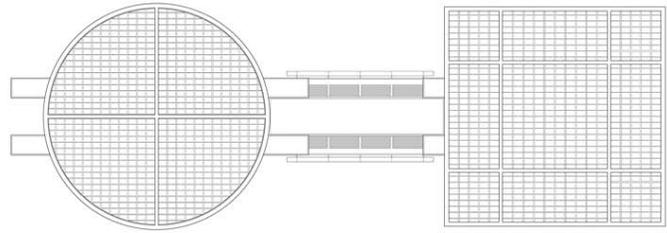
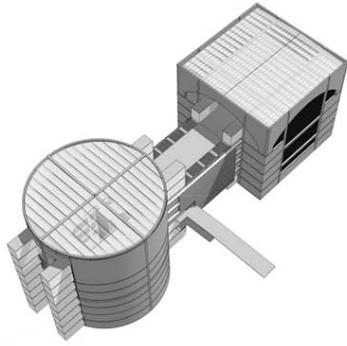
Figure 83. Scheme D, perspectives. (Author's drawings)

Chapter 6: Conclusion

As expected, the final product of this investigation has been a completely different proposal than the original idea that the author had in mind at the beginning of his design process. The main reason for this has been the consideration that the section of Campus Drive that crosses the site could be closed in order to provide the project with a site free from vehicular traffic. This does not affect the internal traffic of the campus since the University Campus Planning Office has already identified the area to be served by a bus loop for which that section of the road is not integral. In consequence, the building does not have to lose any space in dealing with an existing street, also allowing the area to become more pedestrian friendly. Since the building does not have to interact with any street, it can become very compact, using as little of the site as possible and even extending itself underground in order to control its height.

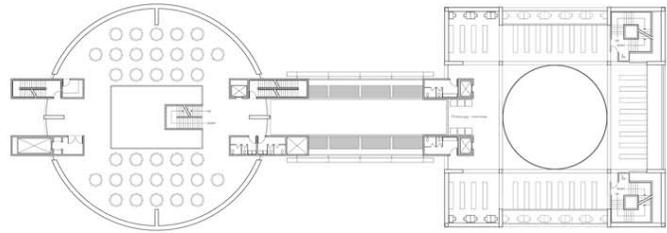
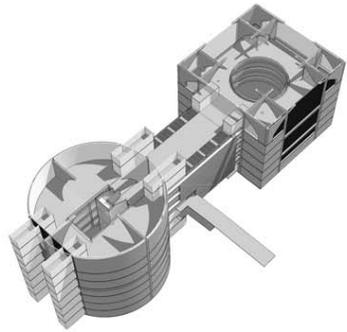
The final project proposes a tripartite building composed of an eight stories high (three of them underground) brick drum, which constitutes the museum, facing west; a seven stories high (two of them underground) brick cube, which houses the library, facing east; and a three stories high concrete bridge that connects these two volumes and contains the computer labs and the student lounge.

The building offers an imposing public entrance as the museum to the west entrance of campus, a solid and iconic presence into the new mall to the east, and a private connection between the existing schools at the center. It creates an internal connection and merges the existing structures while allows the flow of students to move freely through and around the building.



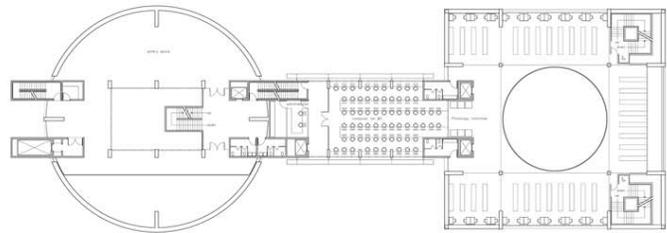
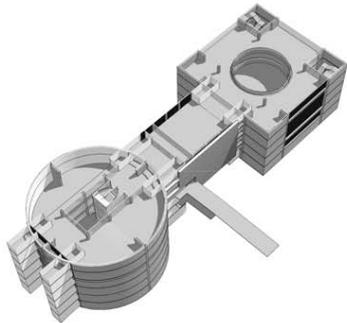
ROOF PLAN

SCALE: 1/16"=1'-0"



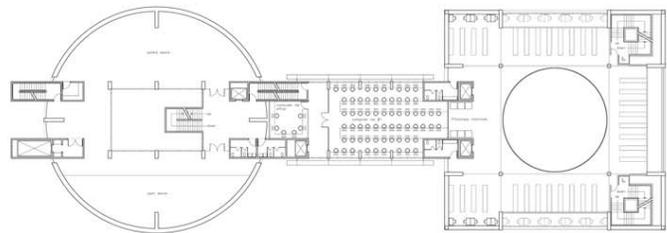
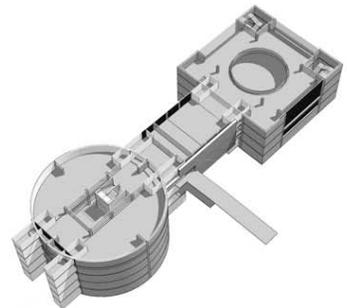
FOURTH FLOOR PLAN

SCALE: 1/16"=1'-0"



THIRD FLOOR PLAN

SCALE: 1/16"=1'-0"



SECOND FLOOR PLAN

SCALE: 1/16"=1'-0"

Figure 84. Plans from second floor to roof plan. (Author's drawing)

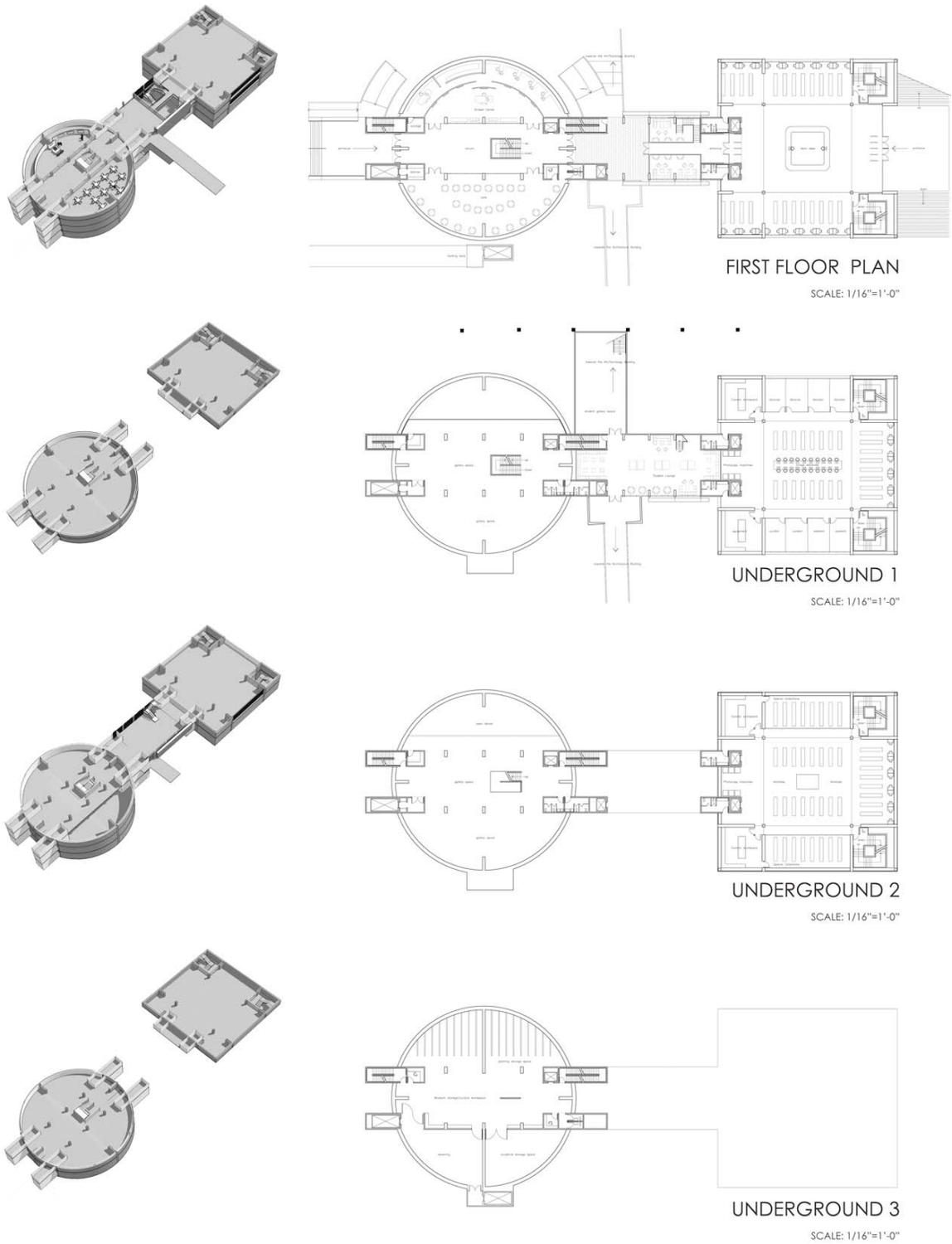


Figure 85. Plans from first floor plan to underground #3. (Author's drawing)

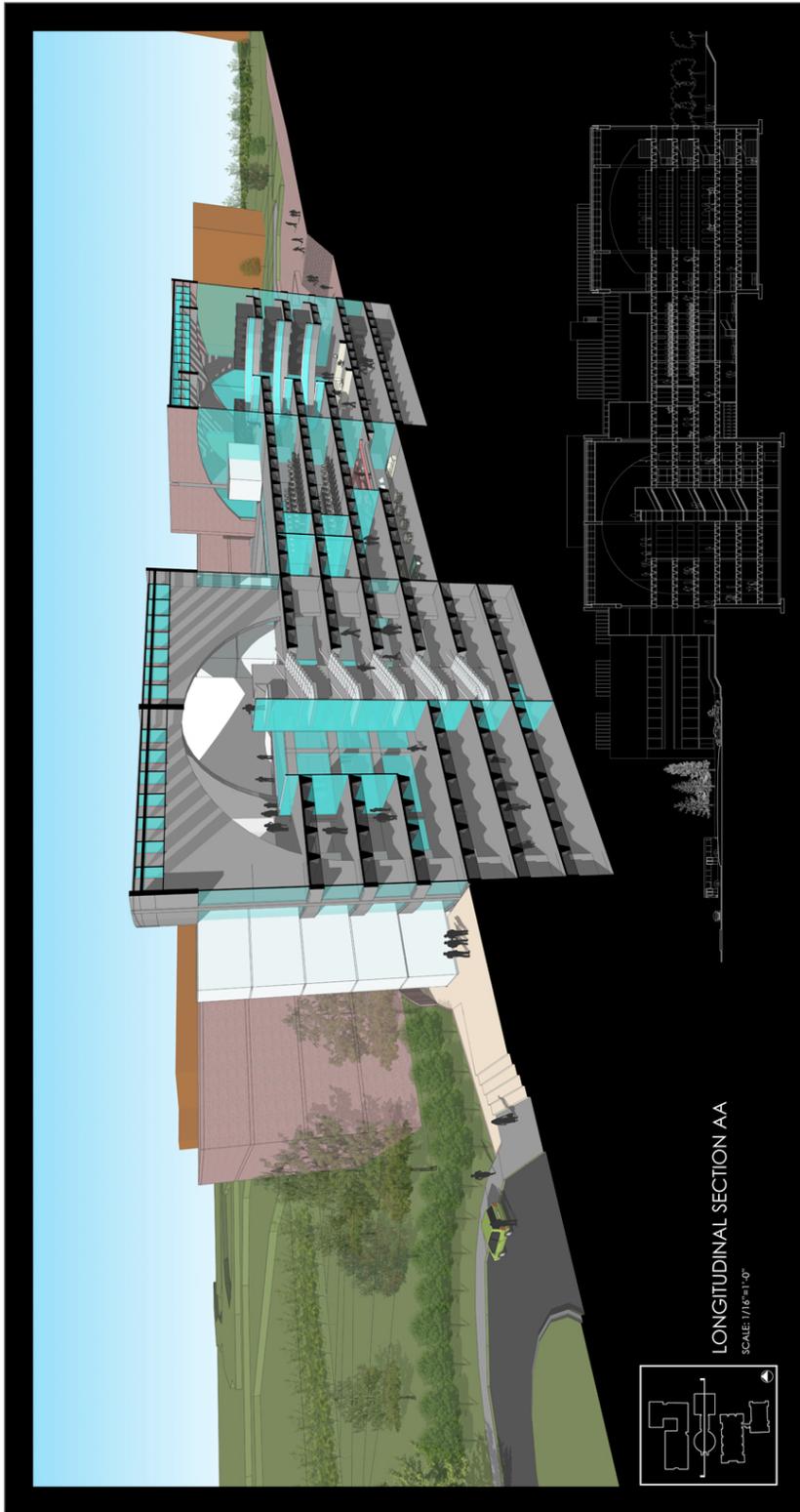


Figure 86. Longitudinal section #1. (Author's drawing)



Figure 87. Longitudinal section #2. (Author's drawing)

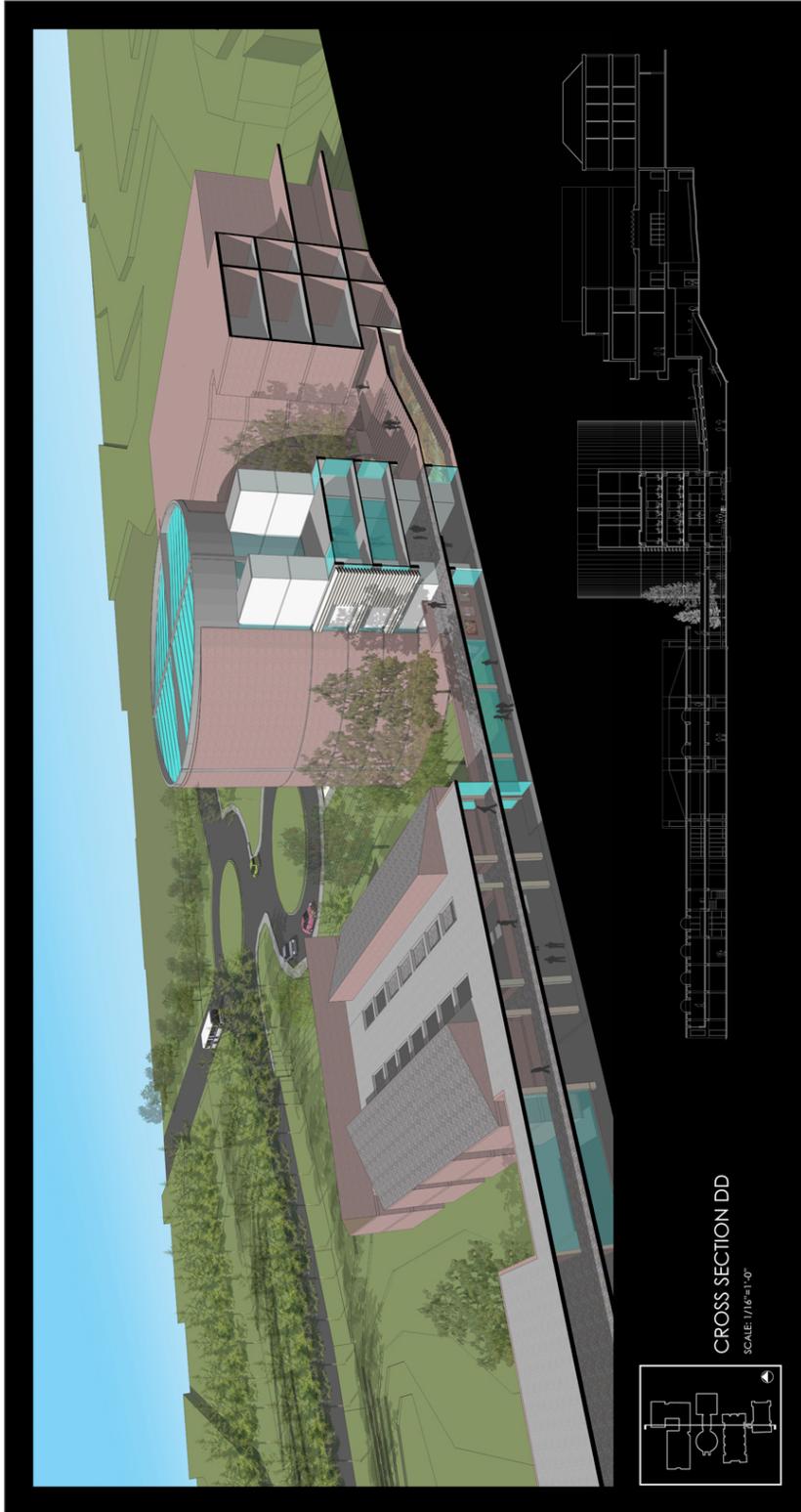


Figure 88. Transversal section #1. (Author's drawing)



Figure 89. Perspective showing the museum at the west Campus entrance. (Author's drawing)



Figure 90. Perspective showing the library. (Author's drawing)



Figure 91. Perspective showing the bridge that connects the Museum and the Library.

(Author's drawing)

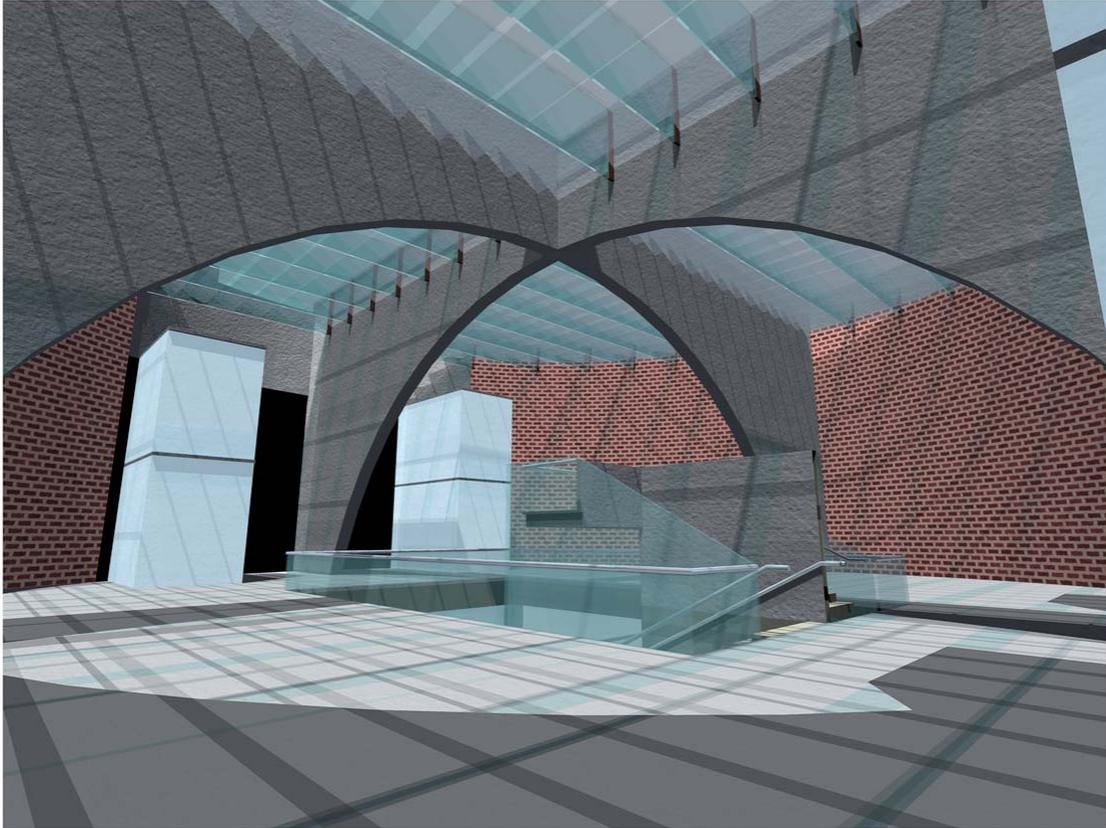


Figure 92. Interior view of the museum. (Author's drawing)

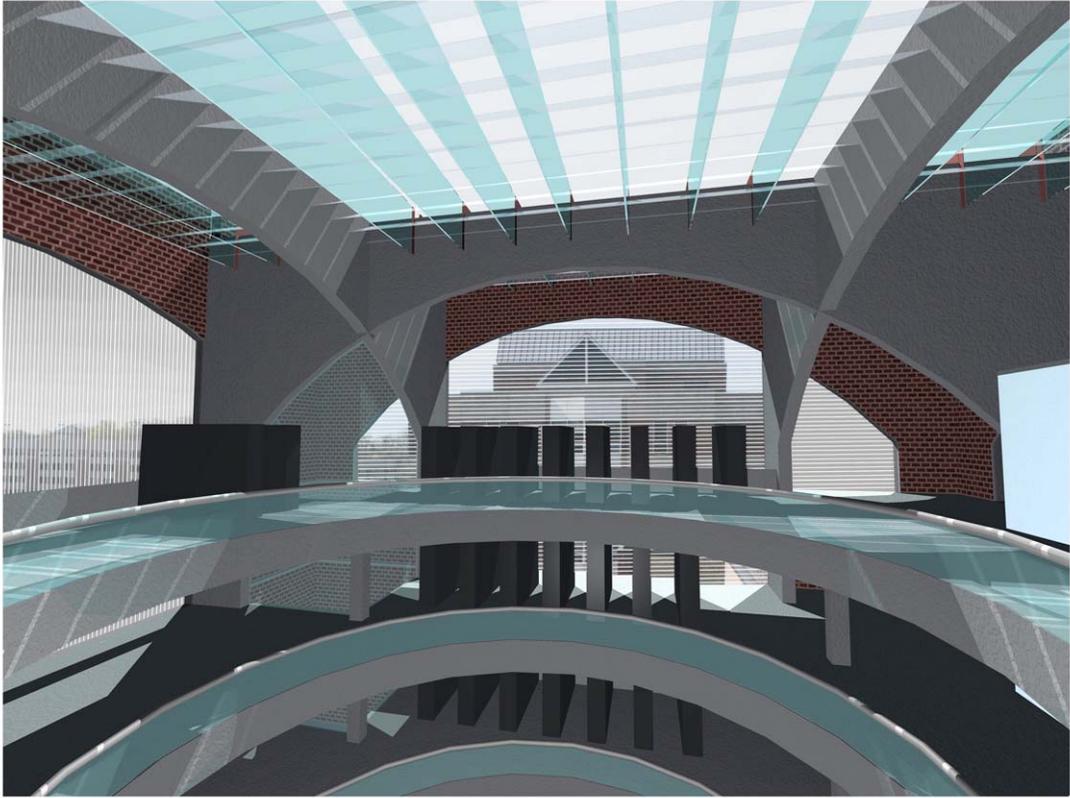


Figure 93. Interior view of the library. (Author's drawing)



Figure 94. Interior view of the student lounge. (Author's drawing)



Figure 95. Interior view of the Driskell Center offices and the cafe. (Author's drawing)



Figure 96. Interior views of some of the galleries. (Author's drawings)

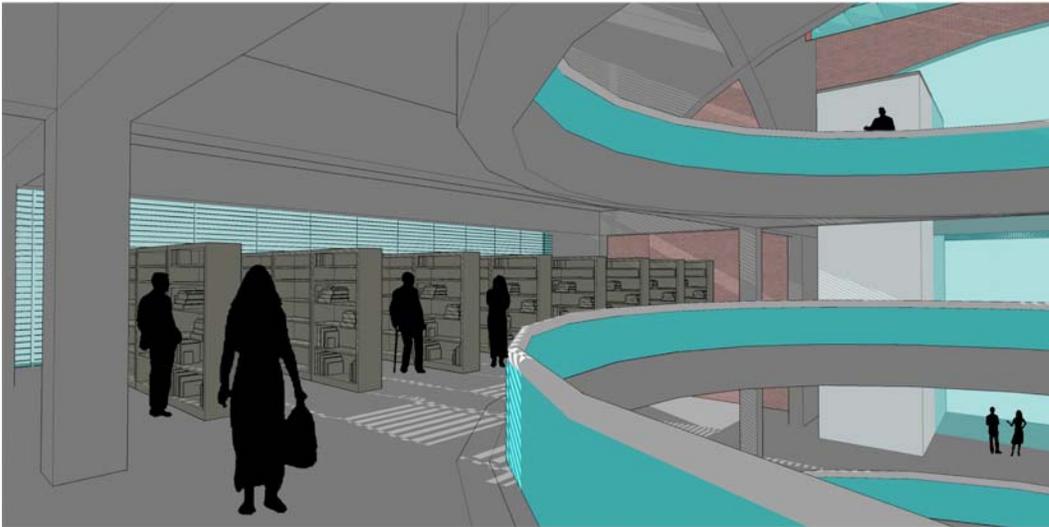
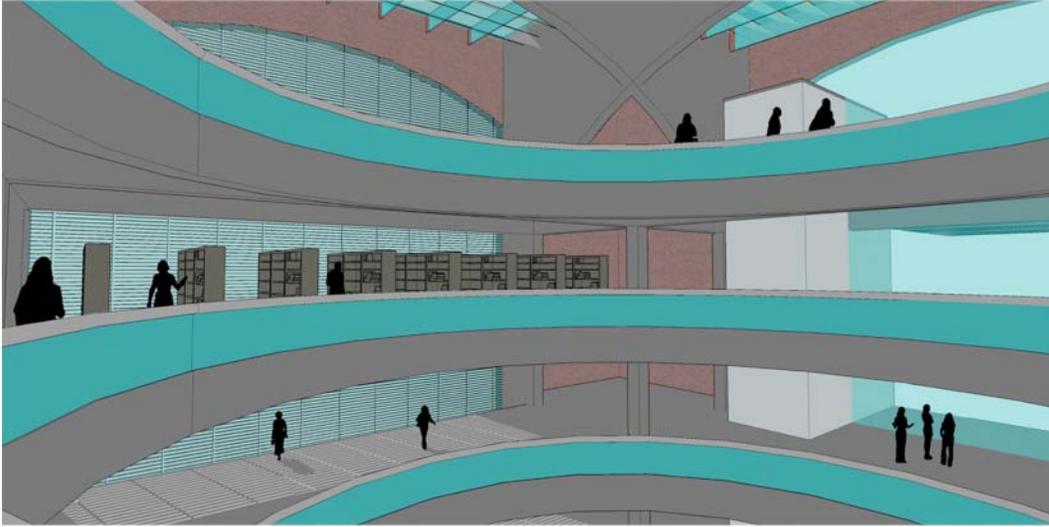


Figure 97. Interior views of the library. (Author's drawings)

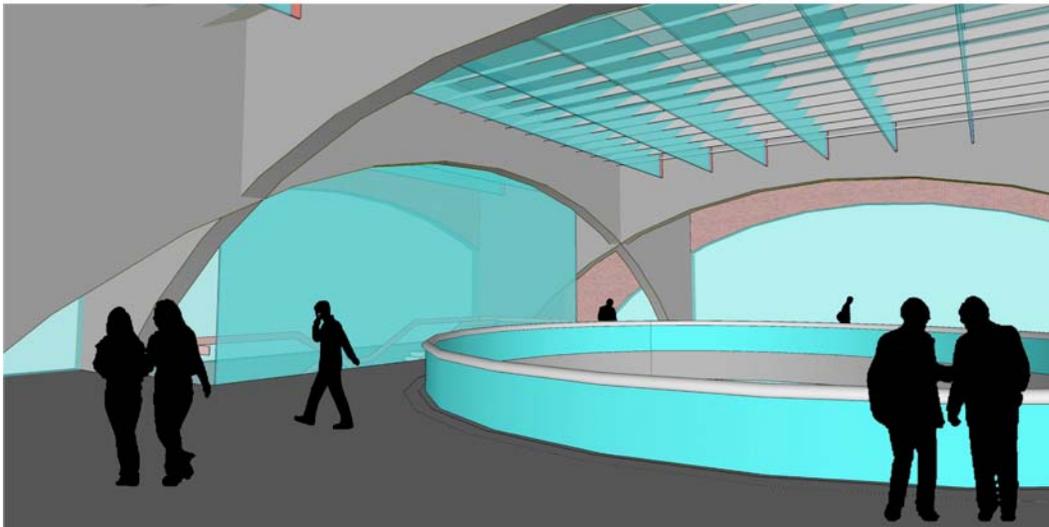
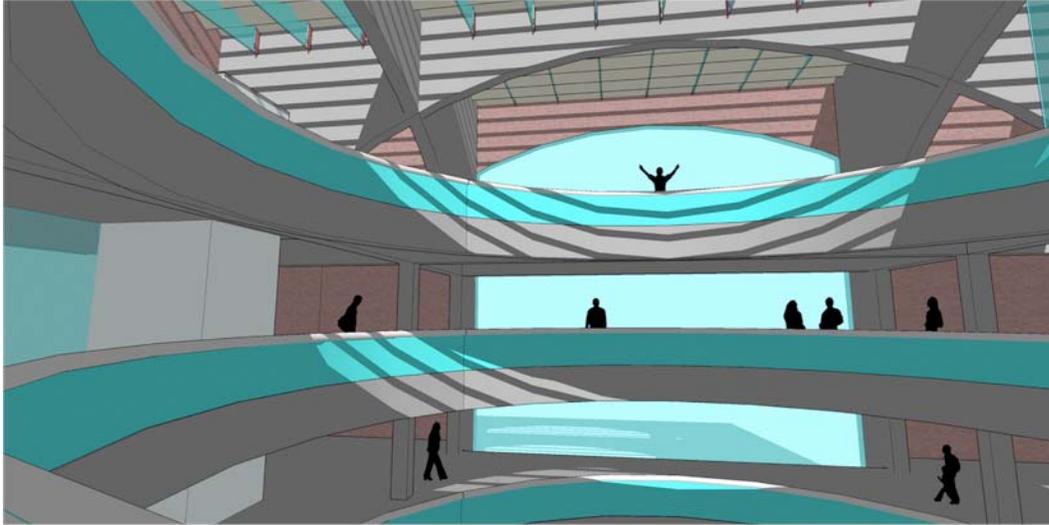


Figure 98. Interior views of the library. (Author's drawings)

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