

A STUDENTS' REALM

A PLACE FOR STUDENTS TO BE AT
ROGER WILLIAMS UNIVERSITY.

INDEPENDENT PROJECT SUBMITTED TO
ROGER WILLIAMS UNIVERSITY, SCHOOL OF ARCHITECTURE,
ART AND HISTORIC PRESERVATION

IN FULFILLMENT OF THE REQUIREMENTS OF
THE B.ARCH DEGREE IN ARCHITECTURE



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A STUDENTS' REALM

EVAN CARROLL
AUGUST 2006

“Community cannot long feed on itself, it can only flourish with the coming of others from beyond: their unknown and undiscovered sisters and brothers.”

-Howard Thurman

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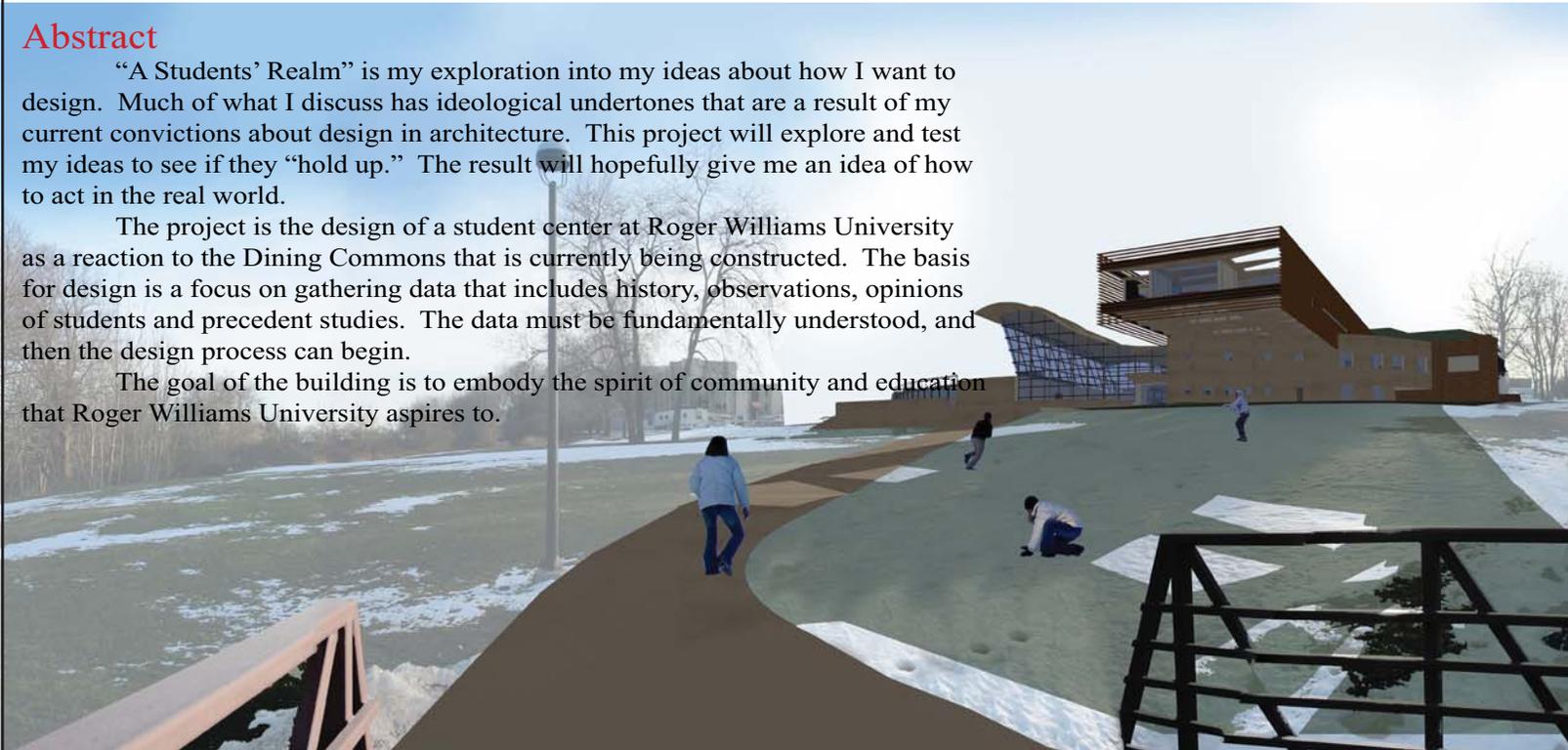


Abstract

“A Students’ Realm” is my exploration into my ideas about how I want to design. Much of what I discuss has ideological undertones that are a result of my current convictions about design in architecture. This project will explore and test my ideas to see if they “hold up.” The result will hopefully give me an idea of how to act in the real world.

The project is the design of a student center at Roger Williams University as a reaction to the Dining Commons that is currently being constructed. The basis for design is a focus on gathering data that includes history, observations, opinions of students and precedent studies. The data must be fundamentally understood, and then the design process can begin.

The goal of the building is to embody the spirit of community and education that Roger Williams University aspires to.



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ROGER WILLIAMS UNIVERSITY

BRISTOL, RHODE ISLAND

EVAN CARROLL 2006



Introduction	1
Site	2
Precedent Study	18
Design Process	30
Program	40
Final Design	52
Diagrams	53
Architectural Presentation Drawings	60
Space Details	69
Systems Drawings	90
Bibliography	95
Appendix	97

A STUDENTS' REALM

AN ALTERNATIVE STUDENT CENTER AT
ROGER WILLIAMS UNIVERSITY

BRISTOL, RHODE ISLAND

EVAN CARROLL 2006



Conclusive Introduction

There is one concept that will always hold true for any piece of architecture. When a building is looked at, used, examined, taken apart and lived in this concept will become clear, and unavoidable. Any built structure communicates values. These may be the values of the designer, the client, the user, the community or even the culture or the governing bodies. More often than not, these values are communicated unintentionally.

Throughout this project the idea of communicating and understanding values was ever present, but also never completely realized. There was always the desire to do make decisions with intention. There was a constant effort to gather information about the campus, the University, the Town of Bristol etc, but the information could not all be fully processed. The experience of trying to gather data about values, organizations and communities is telling, for in the real world it is the same: In the end, even an architect who may be interested in trying to understand “everything” about a project cannot do it. There is too much to learn, and not enough of the information can be used in an obvious way. With or without intention, architecture will continue to communicate values. And for this reason an architect must try to work with an open mind that is ready encounter new ideas or new interpretations of new ideas.

For example, during the course of this project much was learned about what it takes to building architecture “sustainably” but the knowledge came too late. The values of sustainable architecture are progressive and forward thinking; very appropriate for any campus building, but the values and ideas must be implemented from the earliest design stages. This project never had a written statement declaring the intentions of sustainability, but it is still unfortunate that such values could not have been more incorporated into the project. This is not a failure but a lesson: architecture communicates values, intended or unintended. Most often it is the unintended values, like thrift of time and money, that are communicated the strongest.

The Student Center designed for this project strives to communicate values that are beneficial to a campus in a way that will be perceived. The materials are local, responsive to both the campus and the community. The ways of circulating are layered and open to the functions they serve to encourage curiosity and chance encounters. The organization acknowledges the need for public and private space, but also recognizes that “private” does not mean “alone.” Human scale is always made important and spaces are large or small for specific reasons. A quiet space for prayer and meditation was included and given prominence, recognizing the need for a rounded lifestyle. The location of the Center is central, along the route between dorms as well as being close to most of the academic buildings. The location of the Center required the movement of the main road on campus, but this illustrates the importance of pedestrian movement over vehicular.

With so much intended to be communicated there are still things that resulted unintentionally. The form was derived mostly from site conditions but the result was emotive, evoking feelings of adventure, vision, and security. For each student the feelings derived from the form could be different.

The writings at the beginning of the Design Process section of this document represent the culmination of the research phase of the project. These were written before the “design process” officially began. The focus of the writings is visionary, trying to achieve an understanding of the role of an architect. The architect is seen as a person who can be a proponent for change in an organization. While these ideas are important, they were not demonstrated by the execution of this project. This project still only leaves social change as an open ended possibility.

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AN ALTERNATIVE STUDENT CENTER AT
ROGER WILLIAMS UNIVERSITY

BRISTOL, RHODE ISLAND

EVAN CARROLL 2006

REVISED
PROJECT STATEMENT

INTRODUCTION



The Site



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AN ALTERNATIVE STUDENT CENTER AT
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BRISTOL, RHODE ISLAND

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SITE



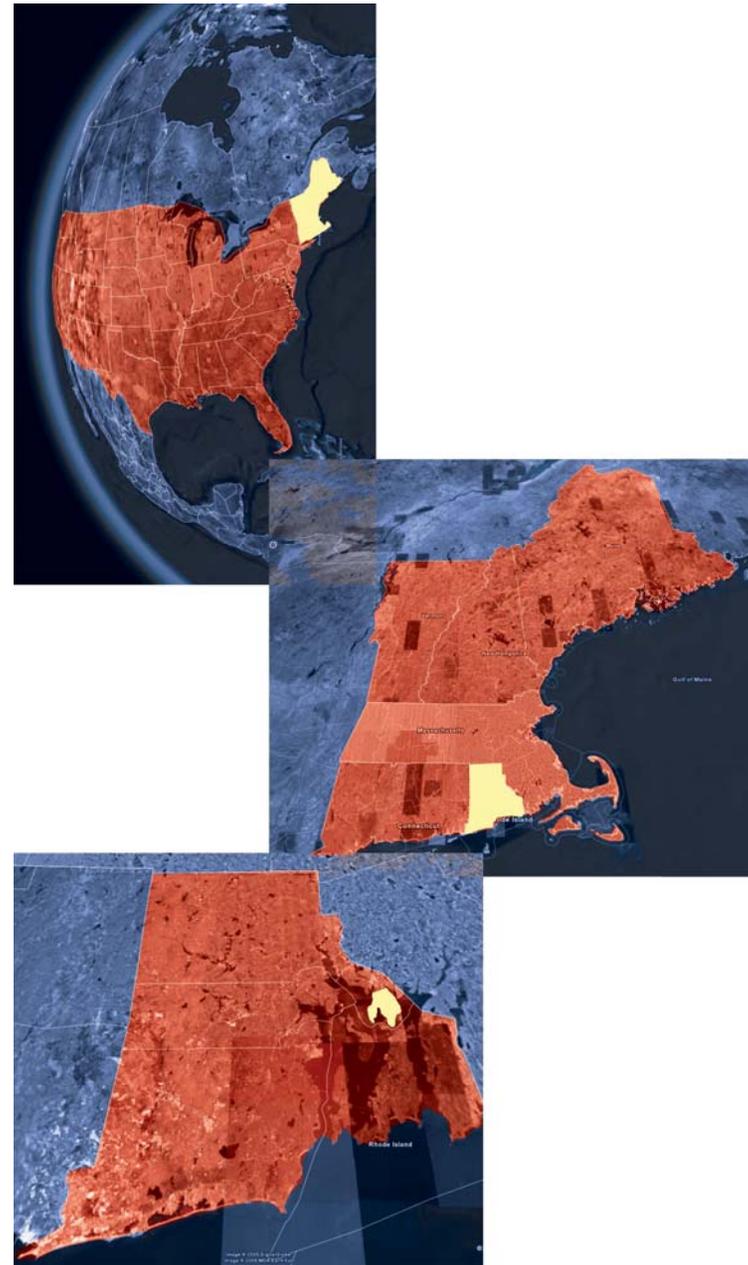
Site Introduction

This project, any project, has two major elements. Two elements that the architect brings together with concepts, designs, intentions and themes. Up to this point I have dealt with my themes and intentions in relation to my choice of the client: Roger Williams University. Now it is time to step back a bit, see things in a new

*light, and examine **The Site.***

The Site is **The United States of America**. The Site is **New England**. The Site is **Rhode Island**. Saying “The United States of American” is not likely to make all people think the same thing these days, but whatever a person thinks about this country they make that judgement in reference to an ideal, a vision. These are the same kinds of hopeful ideals and visions that are used to judge and shape a university. The phrase “New England” is more likely to paint pictures of towns and landscapes than conjure political ideologies. But aesthetic and nostalgia are also an important part of the Roger Williams site. An idea or ideal about Rhode Island may be less clear to many people. They may think of Roger Williams, who founded the state in the name of religious freedom, vacationing, the mafia, or even just the physically small size of the state.

To be part of these larger settings is not as much a physical manifestation as it is an **existence within a set of preconceived ideas** and an existence within a time-line that is locked with that location. The University of Roger Williams is so much a part of The United States, New England and Rhode Island that the ideas attached with these places are very much an integrated part of the school’s set of ideals. The University sees increasing global connections as an opportunity to broaden educational opportunities. The University hopes to create a comfortable atmosphere by being a beautiful campus in a beautiful location. The University supports and encourages religious freedoms and the rights of free speech in civil discourse.



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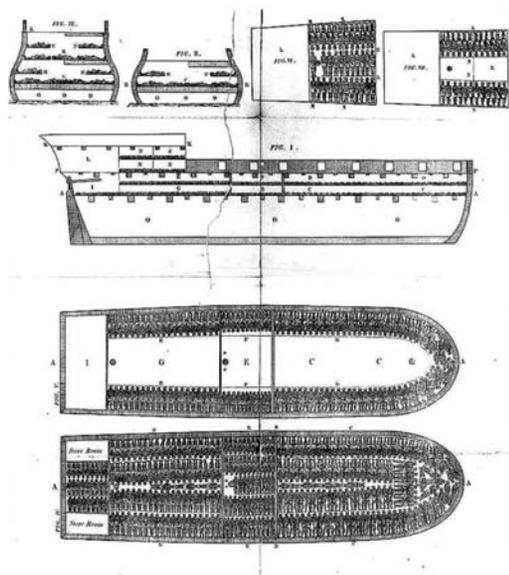
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SITE INTRODUCTION

SITE



The way that The University fits into the historic town of **Bristol** is less clear. First, there is the **duality of the town** itself: nostalgia and historical realities. Bristol now boasts the oldest continuous Fourth of July celebration and patriotism is a defining characteristic of the town. In the past however, the town has had ups and downs. The founding of Bristol is basically synonymous with the conquest of the Wampanoag during King Philip's War. Bristol was the seat of King Philip who led other tribes in the area in a war against the settlers, and the founding of Bristol definitively marked the end of Native American control in the region. Later on, in the 1800s, Bristol was one of the three points in the slave trade triangle. Bristol imported molasses from the Caribbean and made it into rum to be exported to Africa. The rum was traded for slaves and the slaves for molasses. Bristol has since been made a home for Irish, Italian, and Portuguese immigrants and has developed a rich cultural heritage.



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ROGER WILLIAMS UNIVERSITY

BRISTOL, RHODE ISLAND

EVAN CARROLL 2006

SITE INTRODUCTION

SITE



Historical Setting

Bristol has a rich history that reflects many of the major events that have shaped our country. The significance of these events is not something to be overlooked in the shaping of a design project. Here are outlined some of the major events in the history of Bristol.¹

1620: Pilgrims settled in Plymouth. Bristol was not a town yet, but the Mount Hope area was the home to the Wampanoag who had Massasoit as their sachem.

1675 (June): King Philip's war broke out when King Philip (son of Massasoit) attacked Swansea. He did so because some of the members of his tribe were executed for murder without sufficient evidence. King Philip was killed at Mount Hope in August 1676. In this war and in other wars the Indians fought on both sides, as some thought that allying with the English would save them. It did not.

1680: Bristol is formed by purchasing "Mount Hope Neck" from the Plymouth Colony. The colony had owned it by right of conquest of King Philip. The town was planned by Sir Christopher Wren.

1747: Bristol became a town of the colony of Rhode Island rather than Massachusetts.

1778: The Revolutionary War. In this year Bristol was burned by British troops. Britain attacked Bristol specifically because of its high port activity. Marquis Lafayette had been appointed to guard Bristol and the surrounding area.

1800s: Bristol was one of the "points" in the "Slaving Triangle." Bristol's ships left Bristol full of rum and traded the rum for slaves on the coasts of Africa. The slaves were then brought to the West Indies and traded for molasses. The molasses was brought back to Bristol and made into Rum.

1850s: Many Irish immigrated from Ireland

and the Potato Famine.

1855: Trains began running from Providence. Gas for lighting and telegraphs became part of the municipality.

1860s: Bristol was never fought over in the Civil War, but about 100 Bristolians were in the war.

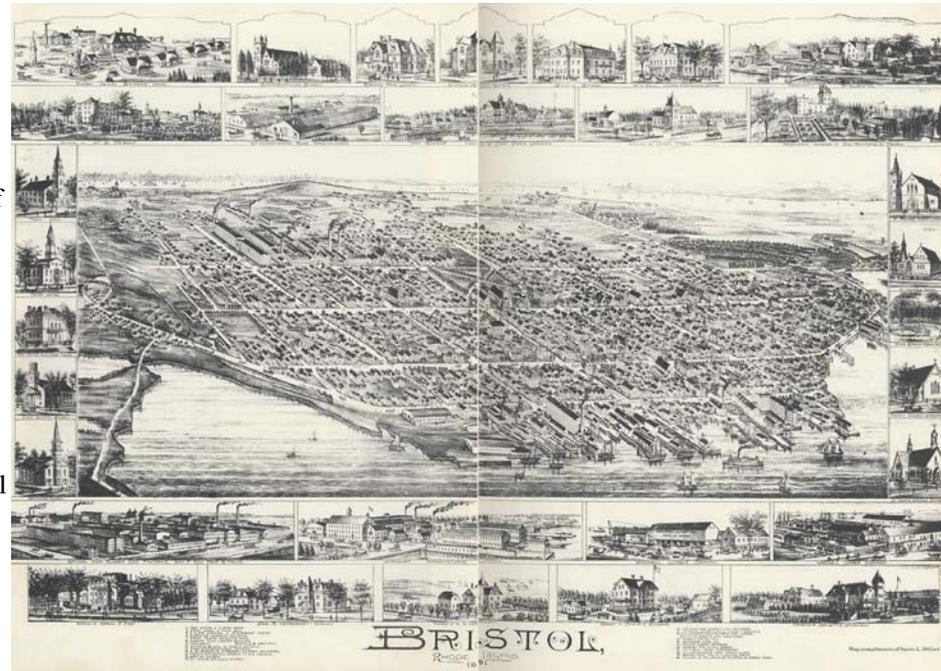
1880s: Italian immigrants came to Bristol to work in the rubber factory.

1888: Bristol gets electricity.

1890s: Bristol became more of a tourism and manufacturing town than a shipping town.

1895: Bristol gets public water.

The rest of the history of Bristol is about smaller events or ones that it was not directly involved in. Bristol was once a town that was integral in the development of our nation, and it **has become a town that is deeply rooted in its old historic traditions.**



¹ Susan E. Cirillo ed., *Bristol: Three Hundred Years* (Providence: Franklin Graphics, 1980), 10-27.



Campus History

The land that Roger Williams University occupies has **never been a part of down-town Bristol**. As the title for the Old ferry Road suggests though, the campus has been along a way of passage since man has occupied the area.

1903 (circa): The way to cross to Portsmouth was by horsescow. This was a horse powered paddle boat.¹

1929: Mount Hope Bridge was completed with a large parade and celebration.²

1956: Construction of the Nike Ajax Missile Complex is begun by the U.S. Army.³

1969: Feinstein Hall, Fine Arts Building, School of Business, School of Engineering and Administration Building are all built, opening the new commuter campus.

1970: Maple Hall completed.

1972: Cedar Hall completed.

1973: Student Union completed.

1982: Willow Hall completed. (I am born.)

1983: Recreation center completed.

1986: School of Architecture completed.

1991: Library completed.

1993: School of Law completed.

1994: Center for Student Development complete.

1995: Old Ferry Farm Purchased.

1996: Marine and Natural Sciences Center completed. Bayside Residence Built.

2001: Stonewall Terrace completed. (I was the first person to live in my room in Stonewall 4.)

2003: Recreation Center Addition completed.

2004: New Facilities Building Completed.⁴

2005: Parking structure completed. Old facilities building demolished. Architecture building expansion completed.

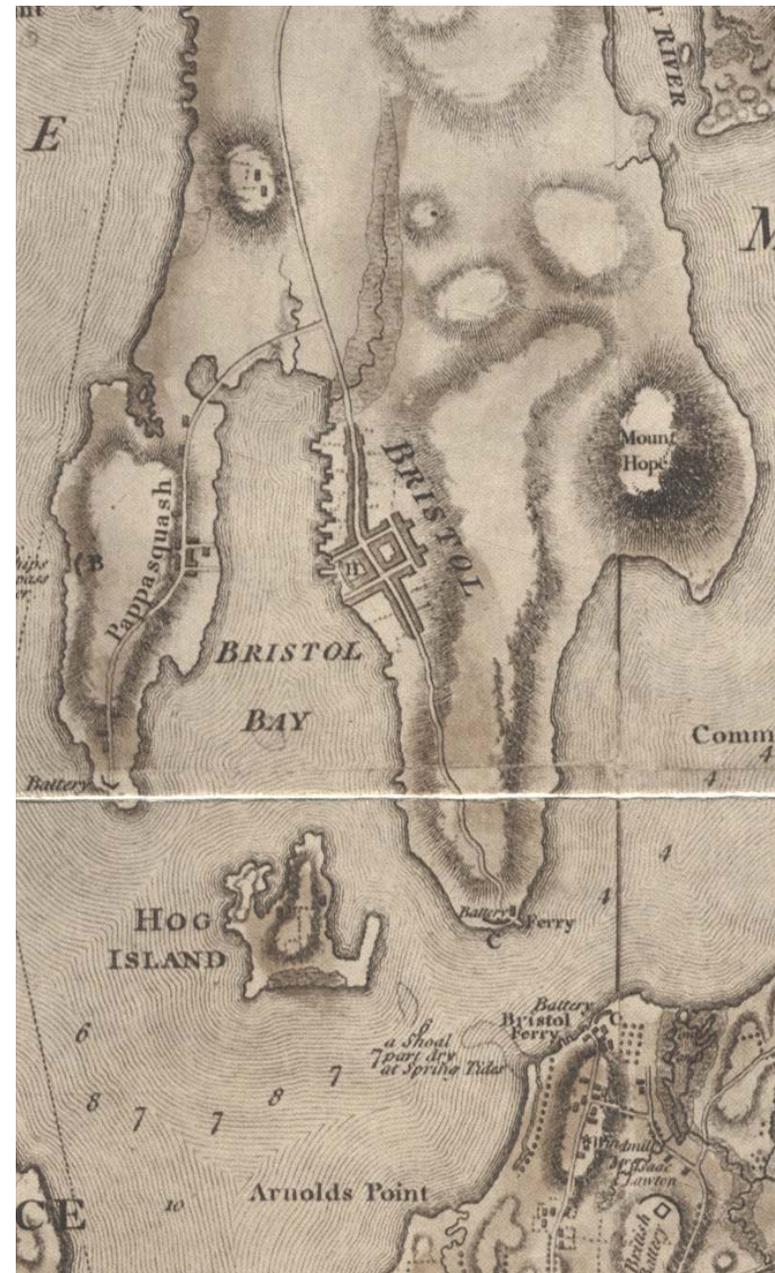
2006: New Dining Hall projected to be finished.

1 Susan E. Cirillo ed., Bristol: Three Hundred Years (Providence: Franklin Graphics, 1980), 10-27.

2 Ibid.

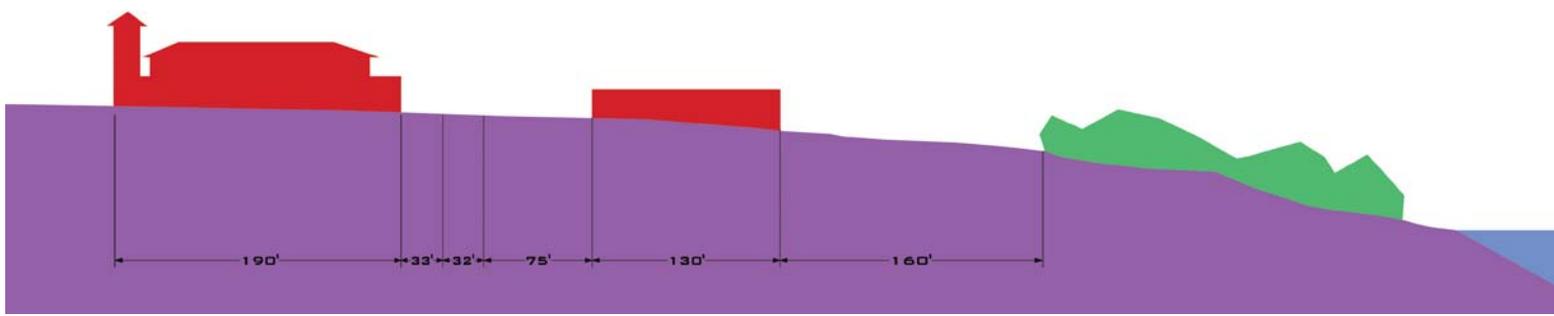
3 Available from <http://www.frontiernet.net/~w2hyn51/page4.html>

4 Roger Williams University Campus Construction History.



When this project began there were three site possibilities under consideration: The area around the current **Art Center**, the area around the current **Admissions Building**, and the existing site for the current **Student Union**. The site on the existing Student Union site was chosen, and the reasons for this will be explained during the site analysis.





A STUDENTS' REALM
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 ROGER WILLIAMS UNIVERSITY
 BRISTOL, RHODE ISLAND EVAN CARROLL 2006

CHOSEN SITE INFORMATION

SITE



Analysis of Site elements on the Roger Williams Campus

The Perimeter:

Boundaries: The shape of the Roger Williams Campus is defined by the Mount Hope Bay on the east and the Old Ferry Road and Metacom Avenue on the west. These boundaries converge in the south at the Mount Hope Bridge and on the north end of campus the property ends as the forest begins.

Accesses: There are three entrances to the campus by road. The Old Ferry Road at the south end of campus is still a public road and gives access to parking lots as well as the beach beneath the Mount Hope Bridge. The main entrance to campus occurs at the intersection of Old Ferry and Metacom and due to the nature of the one way roads all cars must make a pass by the campus going north before entering The University. The north entrance to campus is on Metacom Avenue and enters directly into the parking lots and athletics fields. The chosen site would not be very close to any of these entrances, but this is okay because it is a building that is intended to be visited on foot.

Coastline: The coastline itself is also worthy of note. In some areas it is a pebbly beach and in other areas it has small jagged cliffs. The coastline is currently fenced off from access near the underclassmen dorms, but the whole beach-line has huge potential for development of a network of paths. The chosen site is the closest one to the water and in a location to be a departure point for such a network of paths. The University does not have a water "entrance" but boats leave and return to campus by way of a dock halfway up the campus.



A STUDENTS' REALM

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BRISTOL, RHODE ISLAND

EVAN CARROLL 2006

ANALYSIS OF SITE ELEMENTS

ON THE

ROGER WILLIAMS CAMPUS

SITE



Planning of the land:

Campus Roads: The campus can be divided into the academic half to the south and the athletics and parking half to the north by the **road that leads into campus from the main entrance**. This road from the main entrance does not lead directly anywhere except to the Bayside Dorms but it gives access to the north end of campus and the **main road on the south end of campus**. This main road is the only road on the academic half of campus and it allows car access to dorms. This road may be closed to regular traffic in the future and only opened on moving days. If this is the case its identity as a road could be greatly reduced between the chosen site and the existing main quad in front of the library. Other options would be to re-route the road to the water-side of the Student Center or beneath it.

Quads: There are five academic quads on the campus and four residential quads. A quad in this case is defined as a public outdoor space that is given shape by the buildings around it. Four of the academic quads are closely interconnected with D'Angelo Common in front of the library as the main space. The chosen site for the Student Center is also on D'Angelo common so as to **reinforce the area that is felt as the "center" of campus**. The Student Center can also potentially block or create a viewing corridor from the Common to the Mount Hope Bay.



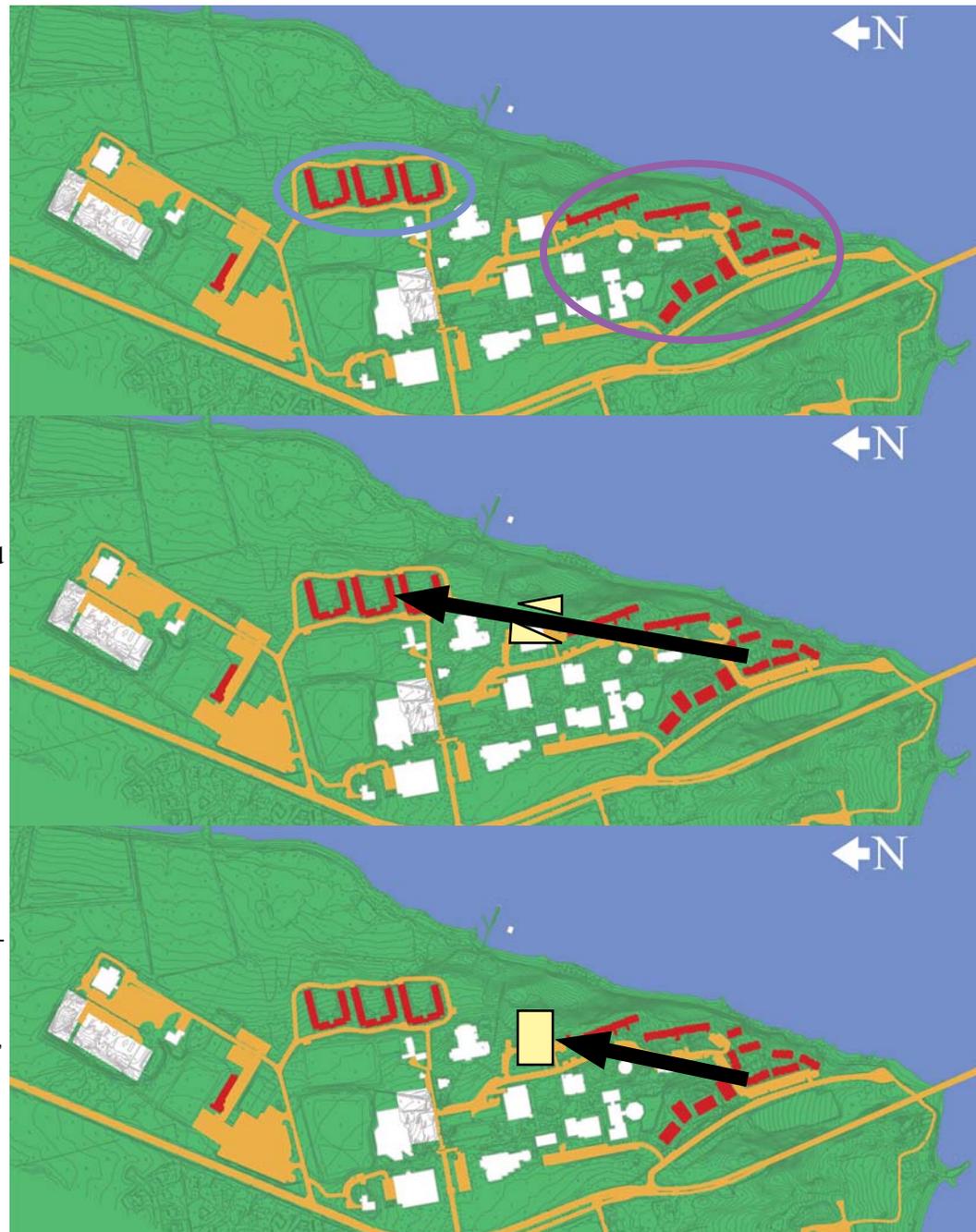
Campus Buildings:

Housing: There are two kinds of on-campus housing: There is **Bayside**, which is for upperclassmen and is apartment-style housing with kitchens. Then there are the **southern campus dorms** which are for underclassmen and are dependent on the Dining Hall. On the weekends there is a **mass movement** from the southern dorms to the Bayside Apartments where all the “best parties” occur.

With respect to dining it may be advantageous for the Chosen Site to be closer to the southern dorms. The chosen site is very central to the academic buildings and student service buildings however, so the location should be a good compromise. The location of the Chosen Site is also directly in the path of travel between the southern dorms and the Bayside Apartments. This creates the opportunity to respond to this movement in some way rather than ignore it. The new Student Center could open up a pathway for this travel or act more as a gate.

The chance to respond to this phenomenon, this migration for drinking and partying, is extremely important to this project.

Alcohol consumption is the kind of issue that is not comfortable to address, but one that shapes the entire student social structure of the university.



Academic Buildings: As mentioned earlier the academic buildings are all located on the southern side of campus. While the chosen site is not in the center of the academic buildings it is in relatively close proximity to all of them. This is important because during the day students will want to be dropping in to do errands between classes.



Buildings Related to the Arts: Roger Williams University does not currently put a large emphasis on the arts, but this is bound to change as the quality of the education improves. The new Student Center will be adding more space for the arts, but the distance from the Performing Arts Center specifically could be problematic.



A STUDENTS' REALM

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BRISTOL, RHODE ISLAND

EVAN CARROLL 2006

ANALYSIS OF SITE ELEMENTS

ON THE

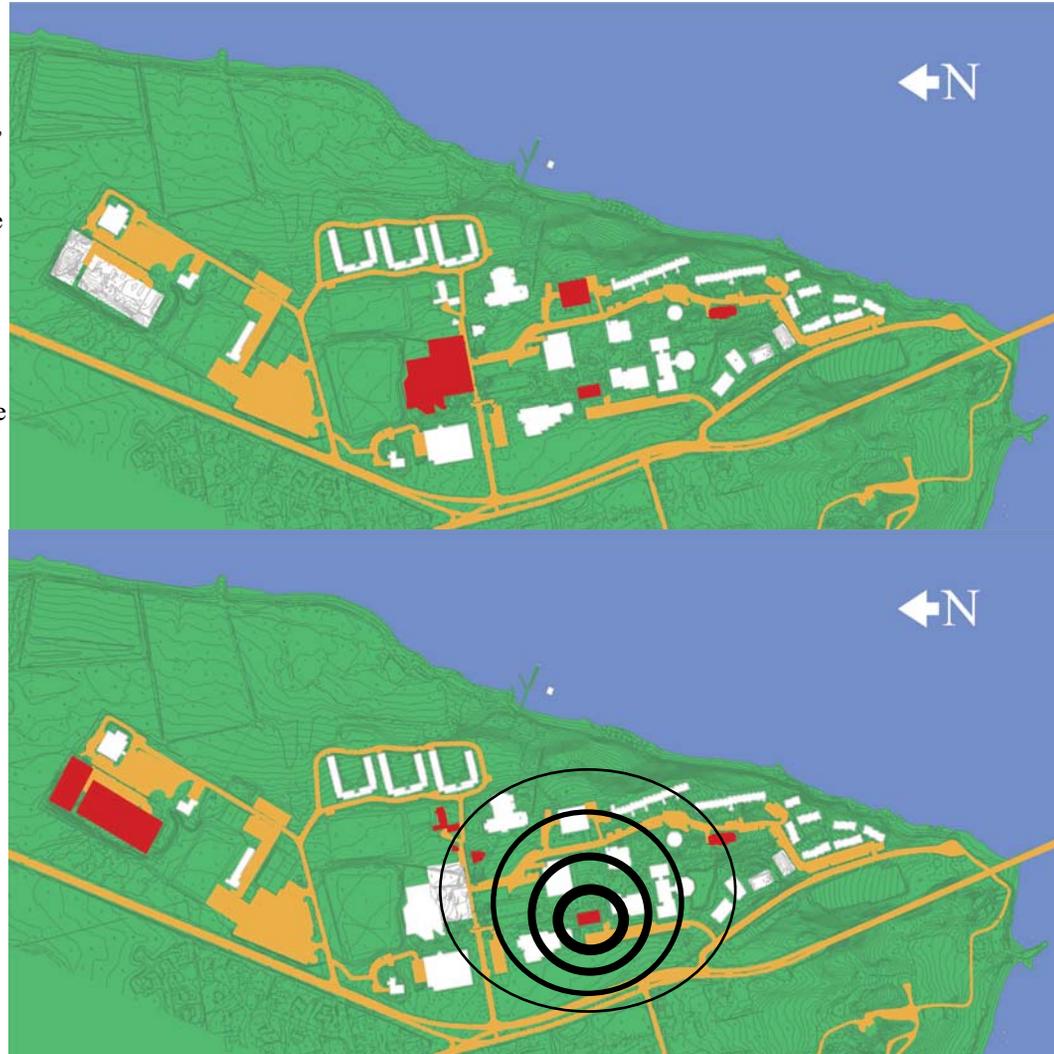
ROGER WILLIAMS CAMPUS

SITE



Student Service Buildings: Including the Student Center being proposed, there will be four primary student service buildings. These will be the Recreation Center, the Center for Student Development, the Administration Building and the Student Center itself. Some of the functions in the recreation center would serve the students better if moved to the Student Center, but this is not as true for the functions in the Center for Student Development. The Administration Building, with its location on D'Angelo Common has no need to lose its current functions.

Administration and Facilities Buildings: The location of these buildings that are less essential to the students' lives suggests that the University really does have the intentions of putting the students first. The Administration Building is right in the center of campus to encourage candid, civil dialogue, and the Facilities buildings are in out of the way locations.



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EVAN CARROLL 2006

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ON THE

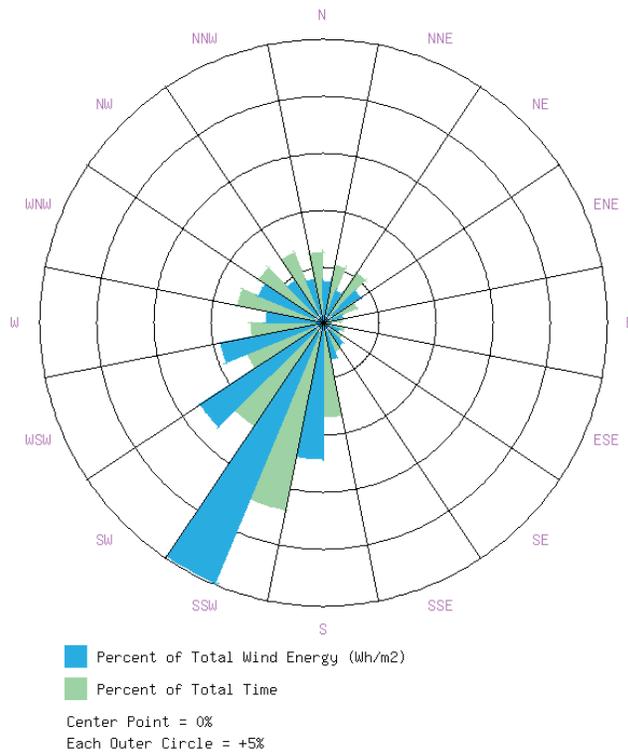
ROGER WILLIAMS CAMPUS

SITE



Natural Phenomena

The Roger Williams Campus is located on Mount Hope Bay so **wind speeds** will be an important factor. Here is a wind rose for the Bristol Area measured at a height of thirty meters.¹



¹ True Wind Solutions; available from <http://truewind.team-camelot.com/bin/TrueWind.dll?WindRose?Rec=2578&Area=NE>

There are **three soil designations** in and near the area of the site.

CeC, Canton and Charlton fine sandy loams:² This soil is rock, gravel, and loam. The soil is not an extreme puddling soil. It makes for solid foundations, but excavation of the rocks is difficult and finding ledge is common. Erosion must also be carefully prevented.

NeC, Newport silt loam:³ The surface runoff for this soil is rapid, but the water penetrates the sub-soils less quickly. Because the water can be held under the soil frost heaves can be a major issue in construction of surfaces. Again erosion must be carefully prevented.

NoC, Newport very stony silt loam:⁴ The surface runoff for this soil is rapid, but the water penetrates the sub-soils less quickly. Because the water can be held under the soil frost heaves can be a major issue in construction of surfaces. Excavating boulders can be difficult, and again erosion must be carefully prevented.



² United States Department of Agriculture Soil Conservation Service in cooperation with Rhode Island Agricultural Experiment Station, Soil Survey of Rhode Island (National Cooperative Soil Survey, 1981), map79 p5-46.

³ Ibid.

⁴ Ibid.



Detailed Climate Information

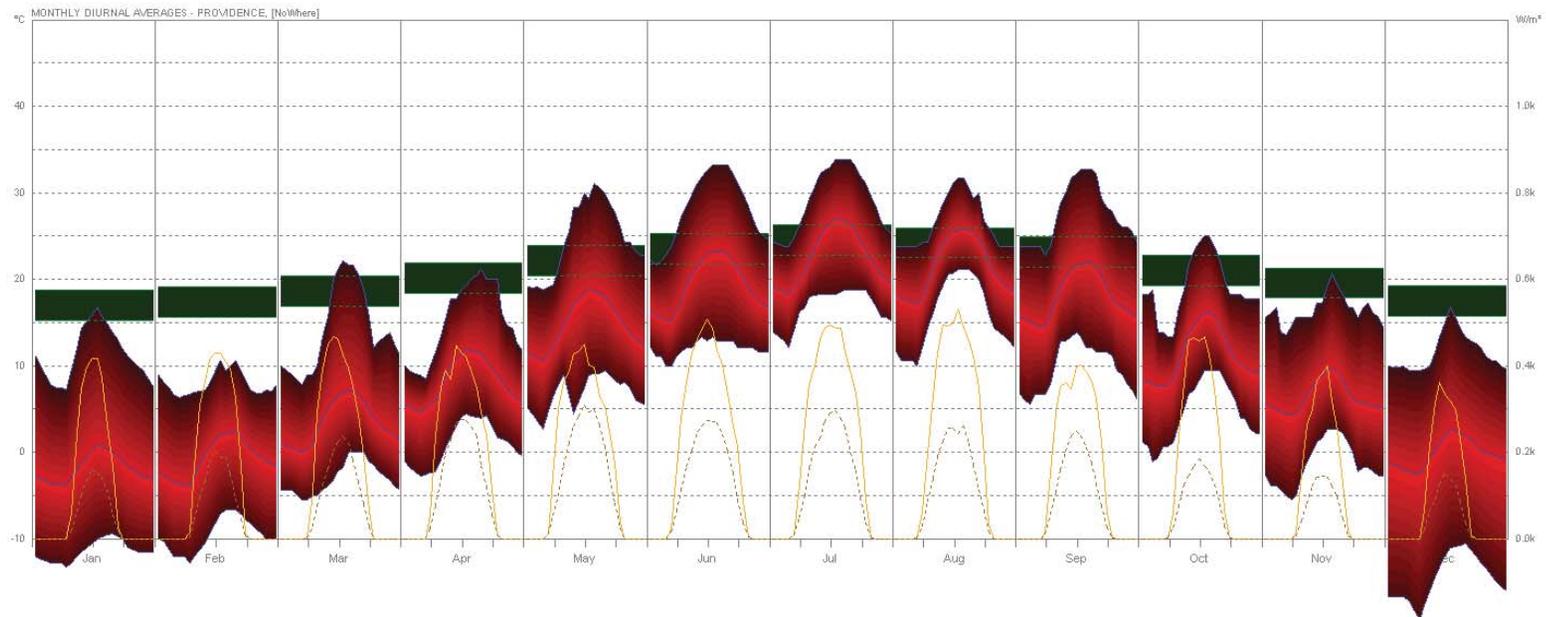
Rhode Island as a Temperate Climate¹

As the chart below shows, **daily temperature swings** can be as much as 10 degrees centigrade. This means that in the summer months a building could be significantly cooled simply by naturally ventilating the spaces at night.

The chart also shows that the **seasonal temperature swing** is almost 25 degrees centigrade. This means that the ground and the ocean will be warmer than the air in the winter months and colder than the air in the summer months. The temperature difference makes it possible to use either the ground or Mount Hope Bay as thermal masses to heat the building in the winter and cool it in the summer.

The yellow lines on the chart show that the **direct solar radiation** from the sun is fairly consistent year round. This means that the sun has good potential for solar heating in the winter months and should be allowed. In the summer months, however, the sun could cause over heating in a building and should be blocked as much as possible.

¹ Square One Software, "The Weather Tool." The weather data file used with this program was found at: http://rredc.nrel.gov/solar/old_data/nsrdb/tmy2/State.html



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BRISTOL, RHODE ISLAND

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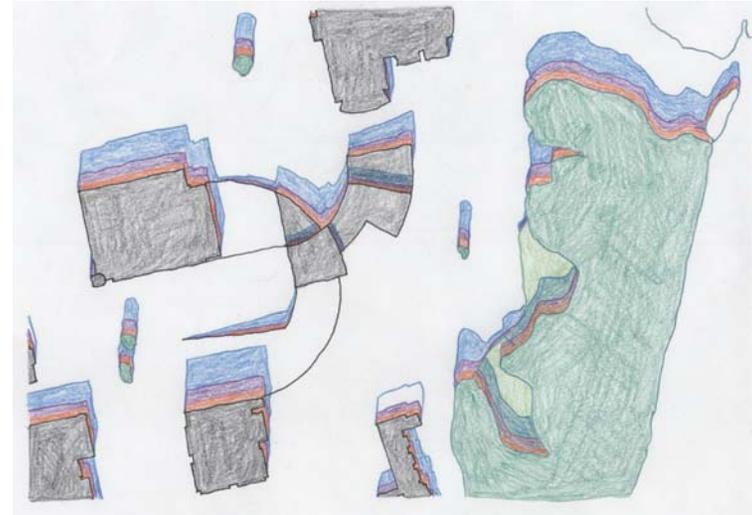
NATURAL PHENOMENA

SITE





9am sun on the solstices and equinoxes



noon sun on the solstices and equinoxes

3pm sun on the solstices and equinoxes



Shadow Study

Shown in these diagrams is a preliminary design. The south facade of the building is almost never shaded by its surroundings. In general the new building will not receive shade, but will cast its own shade.

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ROGER WILLIAMS UNIVERSITY

BRISTOL, RHODE ISLAND

EVAN CARROLL 2006

NATURAL PHENOMENA

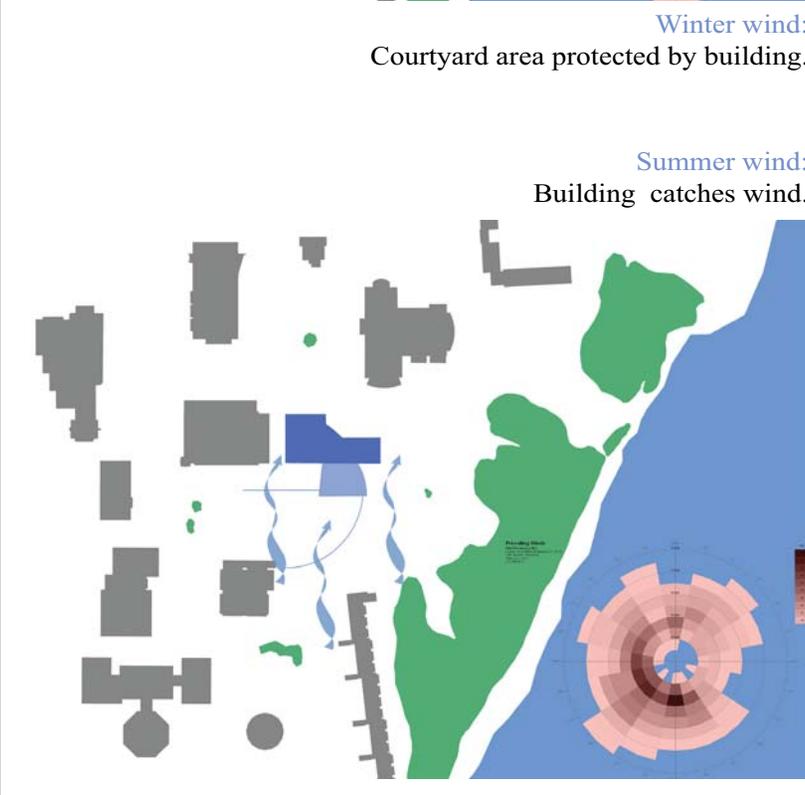




Winter wind:
Courtyard area protected by building.



Spring wind:



Summer wind:
Building catches wind.



Autumn Wind:

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BRISTOL, RHODE ISLAND
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Precedent Study



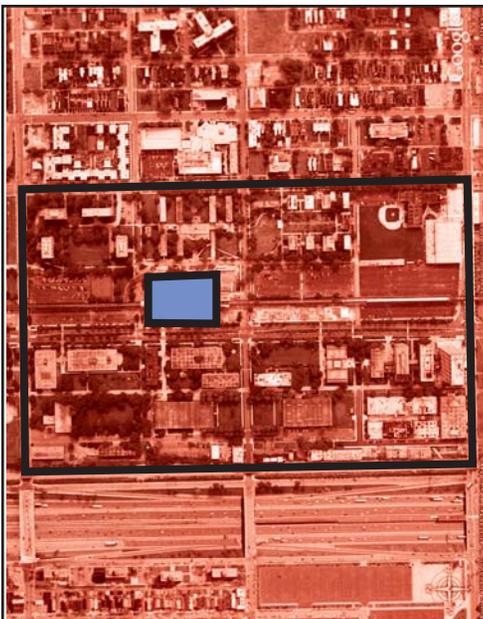
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EVAN CARROLL 2006

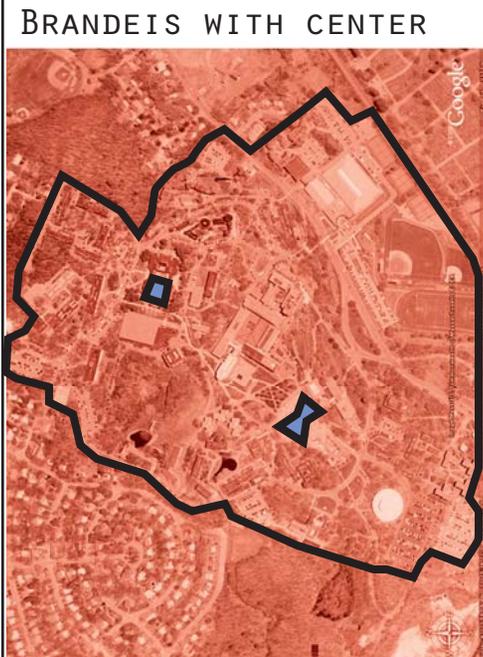




IIT WITH CENTER



BROWN WITH CENTER



BRANDEIS WITH CENTER



RISD WITH CENTER



RWU AND CENTER

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AN ALTERNATIVE STUDENT CENTER AT
ROGER WILLIAMS UNIVERSITY
BRISTOL, RHODE ISLAND
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SCALED COMPARISON OF
CAMPUSES AND CAMPUS CENTERS



THE MCCORMICK TRIBUNE CAMPUS CENTER
AT ILLINOIS INSTITUTE OF TECHNOLOGY¹
OMA/REM KOOLHAAS



The importance of studying this precedent is two-fold: One, for the **intentions and values of the school**, and two, for the way the **architectural response by Rem Koolhaas** creates a strong design within these parameters. The Tribune Campus Center by Rem Koolhaas is a competition winner. The IIT competition panels put forth specific objectives and set up a dialogue with the competition participants to ensure the execution of their visions. This precedent is both the study of an architectural solution and how the architectural problem was created.

“In order to attract and retain the best students, every campus needs a stimulating gathering place, one that fosters interactions among all students of our community, offers broader horizons for technically oriented students, and locates key services and

¹ Kevin Pierce, “IIT at a Crossroads: A new Student Center for Mies’ Campus.” *Competitions*, Summer 1998, 4-23. (This source was used for all written information in this section.)

programs centrally and conveniently.” Rem Koolhaas.²



This statement made by Koolhaas is a reflection of his understanding of IIT’s mission. IIT formulated its mission in the context of a number of existing conditions. “First is the simple fact of Mies.”³ The IIT campus basically consisted of buildings by Mies and buildings done in the spirit of Mies until the decision was made to create a new master plan in 1996. Another major factor was the drop in the number of students enrolled at IIT. In 1994 the average density of students was “25 students per acre.”⁴ The last major existing condition was that the campus had been sheared in half by an elevated train, a major road, and a strip of parking lots. These conditions, along with IIT’s aspirations as an educational institution, shaped the criteria for the 1996 master plan and Student Center competition.

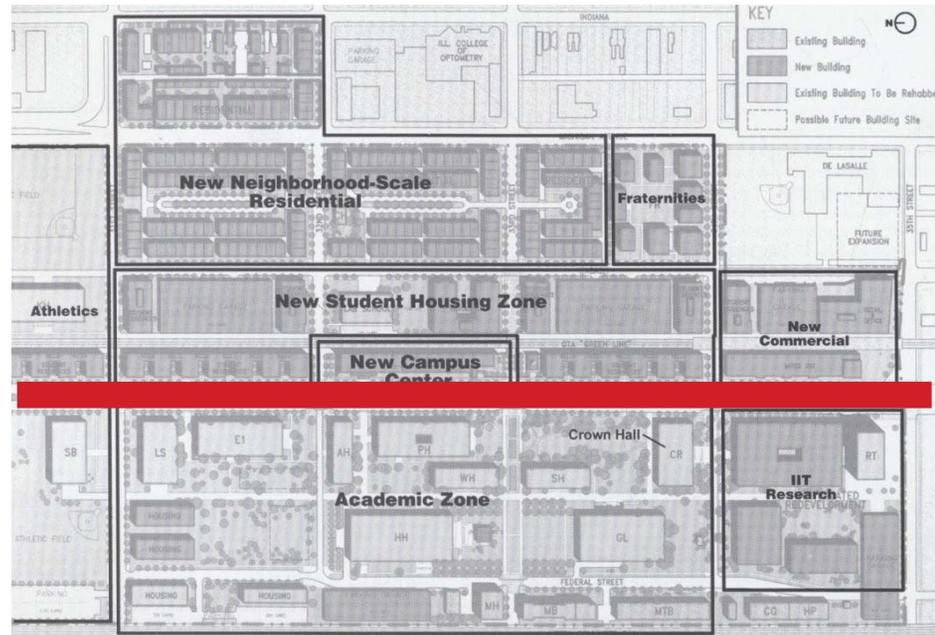
² Ibid.

³ Ibid.

⁴ Ibid.



The 1996 Main Campus Master Plan was made by IIT faculty, staff and trustees as a response to the growing sentiment that Mies' campus should be abandoned. "The . . . Plan proposes at its essence to reinstitute Mies' original version of the campus in a park . . ."⁵ The plan had several goals. First, the size of campus would virtually be cut in half by moving the student housing from the east side of the campus to the edge of the west side of campus. The vacated land would be given back to the city. The rest of the existing campus would be renovated and restored, and most importantly, ". . . the two existing student centers would be combined into one new building in the highly visible site at the geographical center of the campus."⁶ It was this reactionary plan made by community members that sealed the continued occupation of the Mies campus.



As important as the campus conditions were, the method of executing the design competition also became integral in the outcome of the student center project. IIT realized that the competition could be used to show the institution's values for education, community, and architectural discourse. Three groups were formed by IIT to be involved with the process. First, there was the **Jury** consisting of architectural and academic professionals who would pick five finalists from 40 submissions and then a winner. Next there was the **Trustees' Competition Advisory**

5 Ibid.

6 Ibid.

Committee to "represent the . . . University."⁷ Last there was **University Program Panel**. This panel was made up of staff and students, and "provided general and technical information and feedback."⁸ The five finalists were "Zaha Hadid, Peter Eisenman, Helmut Jahn with Werner Sobek, Kasuyo Sejima/Ryue Nishizawa and Rem Koolhaas/OMA."⁹ The University

went as far as to group architecture students with these firms to give the students the opportunity to help and learn.

The final competition requirements stressed the connection of the two sides of campus and meeting the needs of the program and budget. It could be said the program and budget are two standard requests, but the program had already been worked over and perfected due to the universities commitment to student life.

This allowed the Jury to set the level of judgment that much higher. "We envision a quality building equal in stature to Mies van der Rohe's S.R. Crown Hall."¹⁰ After the five presentations of the firms it was OMA that came out on top.

Design submitted by Helmut Jahn/Werner Sobek

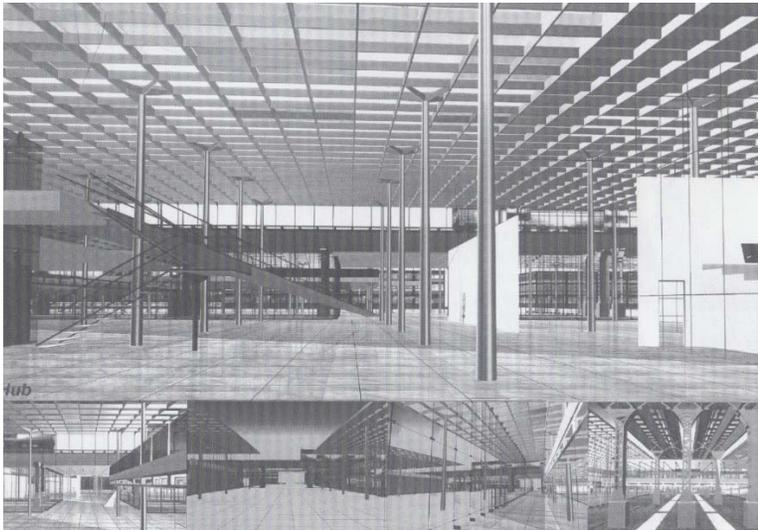
7 Ibid.

8 Ibid.

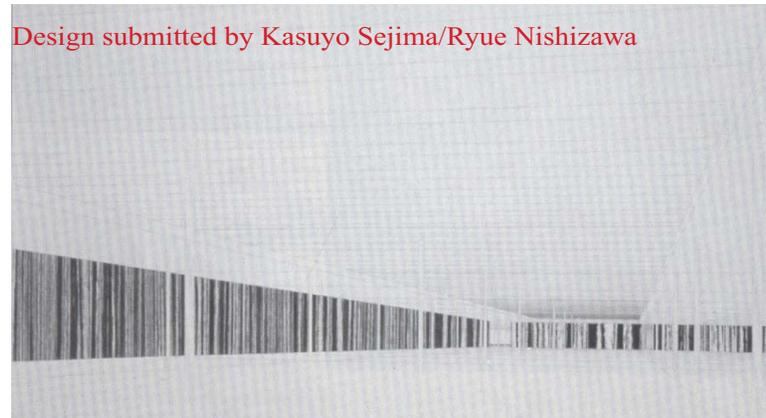
9 Ibid.

10 Ibid.

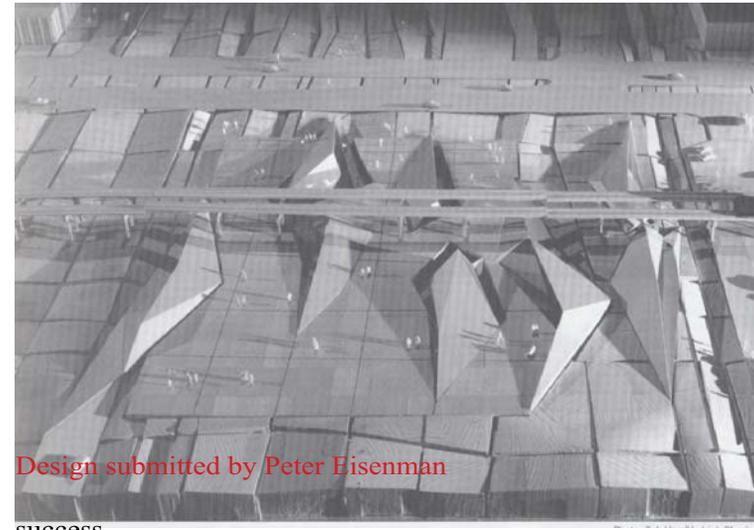




Simply put, it seems that OMA won because its design was in the spirit of IIT's aspirations. The presentations of the other firms are clean, and leave out the human, community aspect that was the ultimate goal of IIT. OMA's drawings are busy, full of pictures, furniture, and icons. They are crowded and almost overwhelming, but this manages to convey a liveliness that looks "natural." The built project is the same way: busy, full of textures, colors and choices. One could argue that these elements are superficial and two-dimensional, and this is basically true, but the elements are deliberately chosen for an effect of dynamism and excitement. The elements succeed in being both. Koolhaas wields what one may scornfully call "style" with



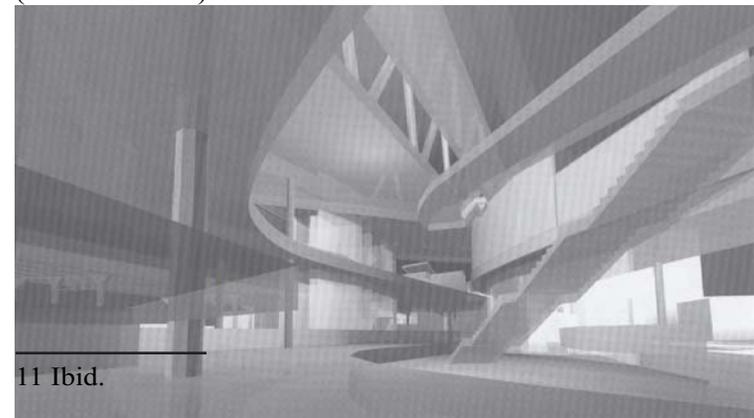
Design submitted by Kasuyo Sejima/Ryue Nishizawa



Design submitted by Peter Eisenman

success.

The plan for the Student Center is based on the overlay of the two systems of the Miesian Grid and the "paths of student desire." These paths simply cut through the building as if it were not there and serve to organize the spaces. The Center then "grasps" the existing Commons building and melts it into the overall floor plan incorporating outdoor courtyards in the process. The paths also divide the building into "urban islands" that each hold different function clusters and the entire program is spread on to one level so as to ". . . (Re)urbanize the largest possible area with the least amount of built substance" (Rem Koolhaas).¹¹



11 Ibid.

A STUDENTS' REALM
AN ALTERNATIVE STUDENT CENTER AT
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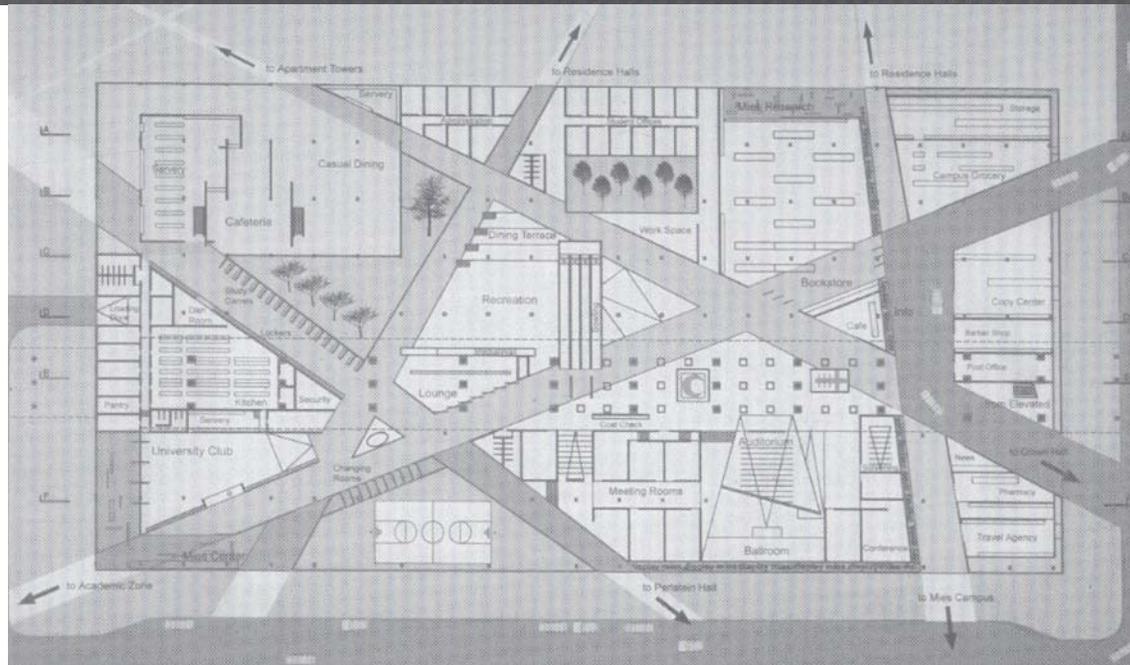
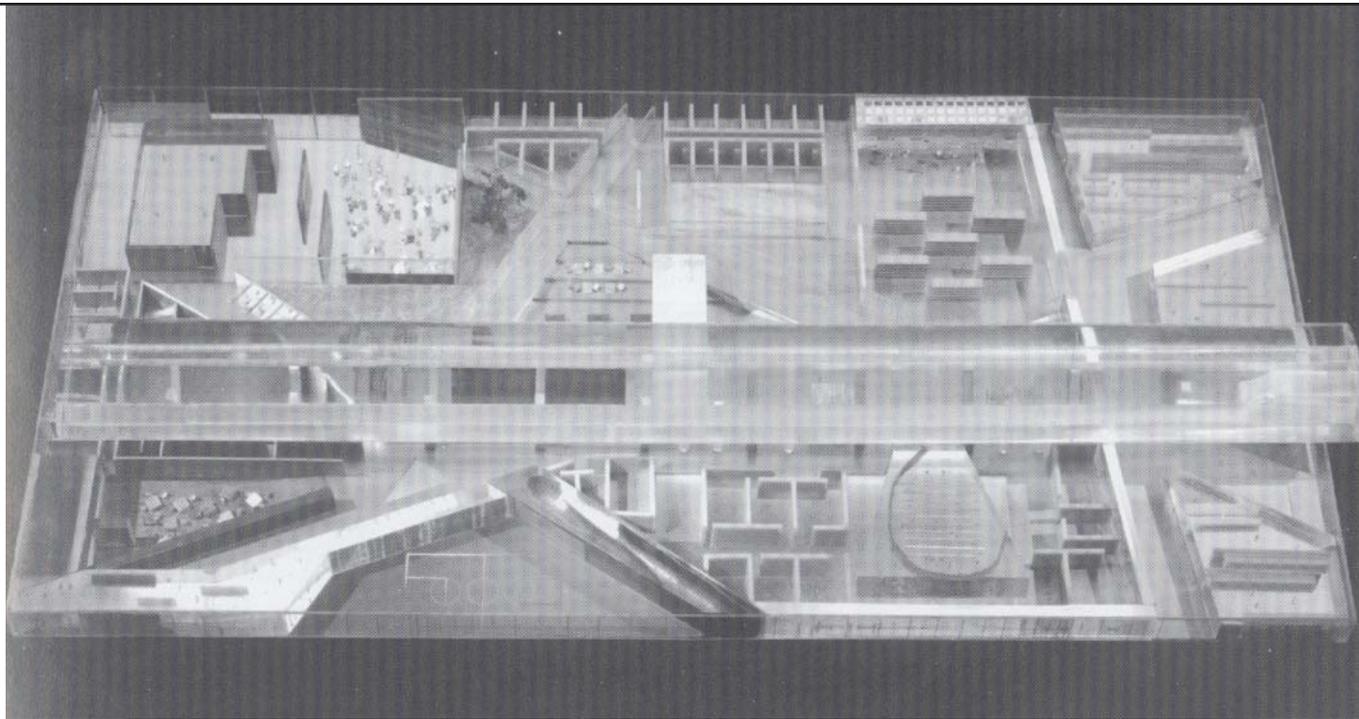
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EVAN CARROLL 2006

THE MCCORMICK TRIBUNE CAMPUS CENTER
AT ILLINOIS INSTITUTE OF TECHNOLOGY

OMA/REM KOOLHAAS



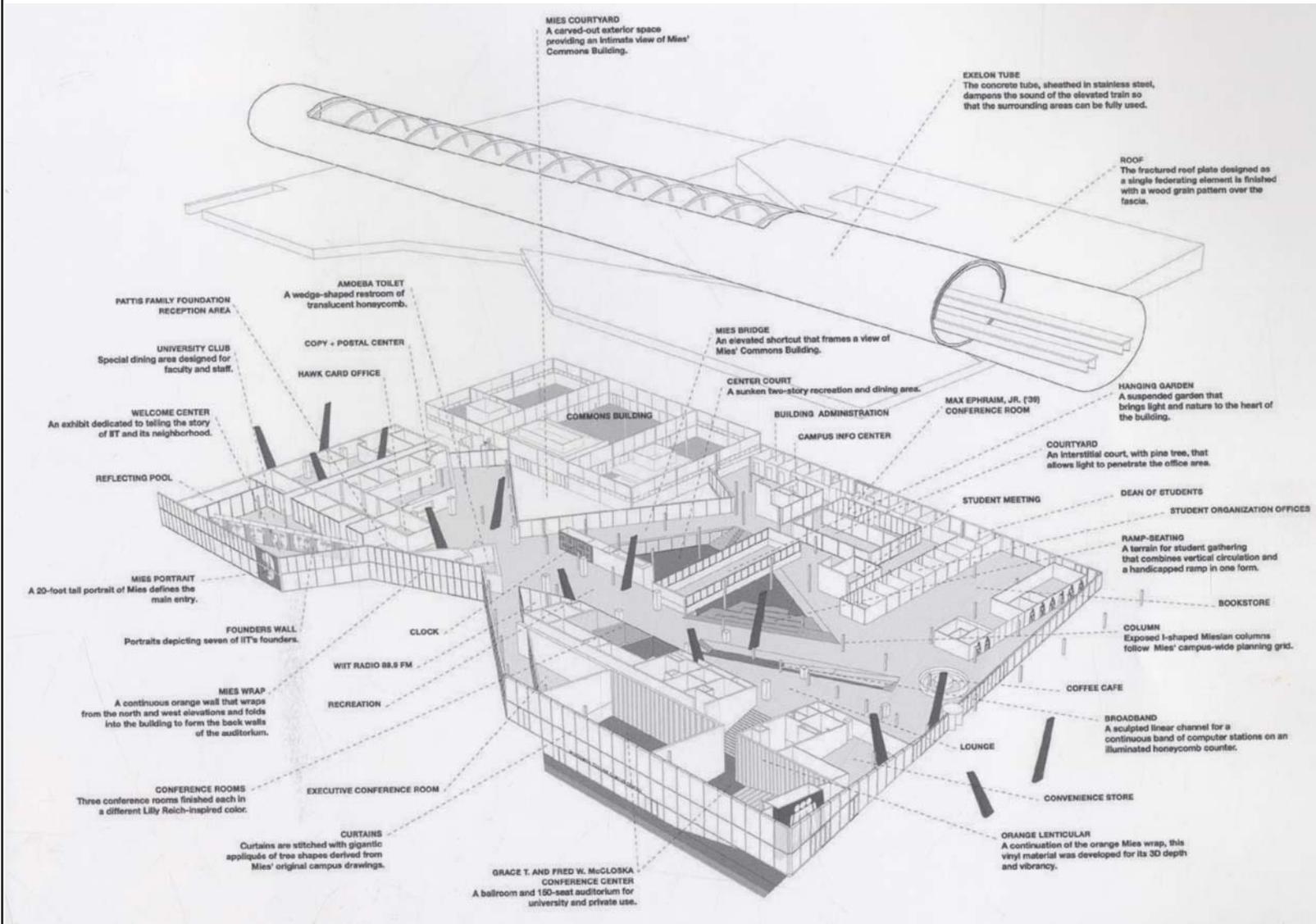


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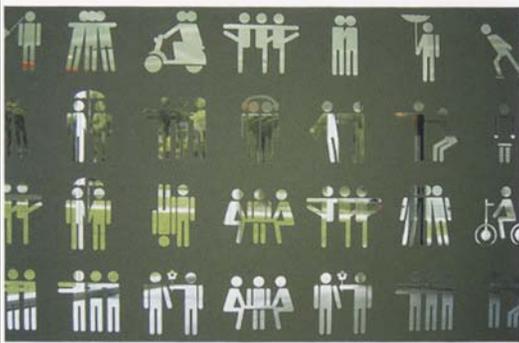




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THE MCCORMICK TRIBUNE CAMPUS CENTER
AT ILLINOIS INSTITUTE OF TECHNOLOGY

OMA/REM KOOLHAAS



Precedents in the Site

The McCormick Tribune Campus Center at Illinois Institute of Technology

One of the great things about this building is the way that it really embraces the urban street-scape. It is a building that is meant to be walked next to and touched. It encourages peering in through the windows. One can imagine the new Student Center approaching main street on campus in the same way.

The most obvious feature of the IIT Center is the tube for the elevated train. This is a fantastic gesture, and the new Student Center has an opportunity to make a large gesture to the bay.



A STUDENTS' REALM

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PRECEDENTS
PLACED IN THE SITE



Shapiro Student Center at Brandeis University

The Shapiro Center stands out from the other campus buildings because of its materiality. It is the only building on campus that is clad in either travertine or copper. In this way it becomes an object in a garden. It is a building that can not have a “back” because of its location on campus and does not try to have a back.

The chosen site for the new Center is different in that one side faces the D’Angelo Common and the other side faces Mount Hope Bay. Even so, campus buildings tend to be objects in space and it is likely that that will happen in the new Center.



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PRECEDENTS
PLACED IN THE SITE



The Design Process

Graphic and Intellectual Progressions

A STUDENTS' REALM

AN ALTERNATIVE STUDENT CENTER AT
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BRISTOL, RHODE ISLAND

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DESIGN PROCESS



When you think of Roger Williams

University *what comes to mind?* Maybe you think of the new agenda: the fast track for improvement, the new president and the global aspirations. Maybe you think of the evidence showing that the work at Roger Williams is far from complete: lack of student involvement, alcoholism, and the gap between academic intentions and their realizations. Whether a person's glass of RWU is half full or half empty it is certainly safe to say that it is **NOT A FULL GLASS**.

Whether or not one sees this as a criticism, it is easy to understand how the not-full-glass must be a reality for almost all organizations. **Every organization has room for improvement** and every organization has aspirations that cannot be realized without perseverance and determination.

This is a project about an organization: Roger Williams University.

It is a project about the **university organization** itself, the **students** who attend, and the **land** that is its **campus**.

The **organization** that has now become **Roger Williams University** began in 1919 when Northeastern University began giving classes in Providence.¹ It became part of the Providence YMCA programs for a number of years and by 1956 it was Roger Williams Junior College.² In 1967 the junior college opened the current campus in Bristol³ and finally in 1992 the organization changed its name to Roger Williams University.⁴ The current administration leading the

¹ Greg Stone, "New College: Where there's a will, and new ways," Sunday Standard Times, 4 April 1971, sec. "Directions in Education."

² Ibid.

³ Ibid.

⁴ Roger Williams University, 2005-2006 Undergraduate Catalog (Bristol: Roger Williams University, 2005), 3-27.



organization is both driven and forward thinking.

Roger Williams University currently has about **3600 full-time undergraduate students**, and "the majority live on campus."⁵ The male/female ratio is about fifty-fifty and there is an ever-increasing emphasis enrolling students from diverse backgrounds.⁶ It should also be noted that Roger Williams University is as expensive as most private schools while academically it is more competitive with most public schools. This factor certainly contributes to an understanding of the students who are able to enroll at Roger Williams.

The Roger Williams University **campus** is one of the major selling points for students attending the university.⁷ With a **location overlooking Mount Hope Bay** and in full view of the Mount Hope Bridge it is easy to see why so many people are impressed. The majority of the land for the university belonged to the old Ferrycliff Farm⁸ and the buildings from the farm are still in use by the university now.

The goal of Roger Williams University should be to bring together these three elements: the **organization**, the **students**, and the **campus** to create the best community possible.

⁵ Ibid.

⁶ Ibid.

⁷ Student at Roger Williams University, Written Questionnaires, (15 November, 2005).

⁸ "Roger Williams Junior College Picks Mount Hope Bay Shore Location," Special to the Herald News, Herald News, 28 May, 1965, sec. E.



How then, does this relate to an architectural thesis?

Well, as I see it, when an organization such as Roger Williams decides to construct a new building this can be the perfect chance for those involved to evaluate their situation, their not-full-glass, their vision about the future.

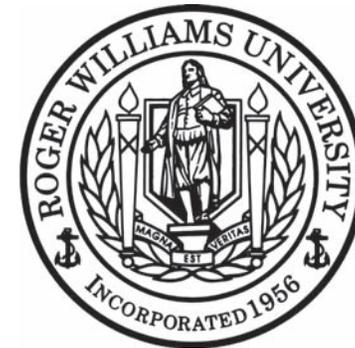
A new building, to be a valued home to a group of people with a goal, must embody the spirit of aspiration to be something better.

This implies two possibilities: First, an individual, group, community or organization with genuine goals should be able to realize the construction of a genuinely successful building. Second, an individual, group, community, or organization may have goals that are counter productive or just not being actualized. In this second case, it can be very easy to create buildings that are not completely successful and not reflective of the organization's actual needs. **I believe that Roger Williams University is not understanding and actualizing its goals in relation to architecture.**

The architect has a huge responsibility in this process of evaluation and creation because he or she must understand the organizations goals in order to be able to realize them in built form. If the organization has a strong sense of direction and integrity the architect will be able to take a passive role, simply taking careful notes of what is desired. If an organization has integrity but little or no sense of direction the architect must act as a counselor. He or she must help the organization understand how a building will end up reflecting the effort that gets put into its planning. The architect must know how to ask the right questions, and point in the right directions so that all the necessary people are consulted. If an organization has discrepancies in its integrity then the architect must decide for him or herself if the project is worth doing, and under what circumstances. **In the case of Roger Williams University, I feel that there is integrity but not a strong sense of direction.**

The architect is not a person who simply takes a program as input and creates a building.

The architect is a filter, a processor, even a judge, who must evaluate the situation that he or she is in before taking action.



Roger Williams University
Learning to Bridge the World

A STUDENTS' REALM
AN ALTERNATIVE STUDENT CENTER AT
ROGER WILLIAMS UNIVERSITY

BRISTOL, RHODE ISLAND

EVAN CARROLL 2006

INTRODUCTORY THOUGHTS



Statement of Project

Now, let us talk more about Roger Williams

University. Currently being built on campus is the new “Dining Commons.” This building will contain “faculty dining, private meeting spaces, a doubling of the bookstore and a contemporary approach to food,” according to the president of the university, **Dr. Roy Nirschel**. The current Dining Hall will be renovated and turned into a new academic building. Neither of these buildings is being conceived of as the “student hub” for the university. Instead major student activities will be split between the new Dining Commons, the Recreation Center and the new academic building. At this time none of these buildings are intended to be kept open late into the night for student activity.

The following outline is taken from the 2005-2006 Undergraduate Catalog of Roger Williams University:¹

The Roger Williams University Education

The University strives to educate all students to become productive citizens of the social and professional communities in which they will live and build their careers. To participate in a lifetime of such citizenship, it is the goal of Roger Williams University to prepare our students to:

- Communicate clearly in a variety of formats*
- Appreciate the ability of the humanities to stir the soul*
- Advocate effectively through civil discourse*
- Acquire new information and perspectives through traditional research techniques and the use of information technology*
- Contribute productively in team projects through leadership and cooperative efforts*
- Understand how different cultures, philosophies and historical experiences affect the perspectives of others.*

The Dining Commons that is currently being constructed does not communicate or reinforce the values above. Because the Commons only contains a limited number of functions it per-

¹ Roger Williams University, 2005-2006 Undergraduate Catalog (Bristol: Roger Williams University, 2005), 3-27.

petuates the decentralized campus. A campus with centralized student functions would encourage civil discourse, reinforce campus community and cause more chances for exposure to the humanities and unfamiliar perspectives.

I am proposing a Student Center to be built instead of the Dining Commons.

My proposal for the “Students’ Realm” will be located in the same location as the current Student Union and will bring together a number of function that are currently spread throughout the campus. The Students’ Realm will have the following facilities:

- Center for Global and International Programs (currently in the Student Union)
- Snack bar (currently in the Student Union)
- WQRI Radio Station (currently in the Rec. Center)
- Club offices, meeting places and storage facilities (currently all over campus)
- Large Auditorium (there is none on campus)
- Small Retail Center (there is none on campus)
- Numerous other student spaces (see “Program” section)

The Students’ Realm will be **open twenty-four hours a day** to provide students with a place to congregate outside of the dorms at night. It will be placed in the location of the current Student Union to reinforce the campus center already established by the library, the administration building, main quad and the view to the bay. It will be the departure point for a system of bay-side pathways that connect with the dorms.

The intention of the Students’ Realm is to create an atmosphere that is a catalyst for student interaction. It will be a clustering of student functions that encourages chance meetings and interactions while establishing the presence necessary to have a 24-hour-use space.

A STUDENTS’ REALM
AN ALTERNATIVE STUDENT CENTER AT
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BRISTOL, RHODE ISLAND

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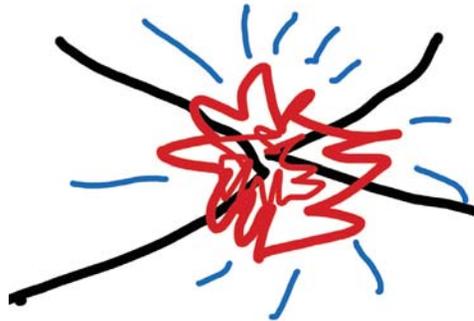
STATEMENT OF PROJECT



Architectural Themes

Before moving into more depth with this project I should discuss the architectural themes and ideas that are underlying this argument.

First and foremost is my interest in **architecture as a medium that clashes art with reality**. I do not question whether architecture is an art; every architect and student of architecture knows the thrill of using intuition and gut feelings to make architectural decisions. We often realize after the fact that our intuitions about a design have seemingly intentional or logical outcomes, but the satisfaction comes from the fact that we didn't have to "think" about the moves we made. **Architecture is definitely an art, but it is an art grounded in reality.**



Thus far I have studied architecture in an academic setting. This is potentially problematic because while the academic setting is well suited for dealing with the arts it is intended specifically to be removed from reality. I am addressing this conflict by doing an academic project that responds to and critiques issues of a real organization, place and time. **I am using primary sources where possible so that the division between academia and reality is knocked down.**

The **second** theme that will be important to this project is that **architecture communicates**. I am not talking about architecture as it relates experientially to metaphors or other forms of art. That is another subject. I am talking about the ways that a built building reflects the values (intentional or not intentional) of the group of people that designed and built it. The organization of the program in a building can determine the hierarchy of spaces and thus the hierarchy of the people using the spaces. The level and quality of detail in a space can make evident how important that space was when it was conceived by the owner, designed by the architect, and built by the contractor. The scale and detailing of a façade can tell whether it is meant to be experienced from close up or from a distance. The attention to detail on the inside of a building compared to the attention to detail on the outside can communicate whether publicity or comfort is more important. **These kinds of "communication" are not lost on the general public, and that is precisely why they are so important.**

The third and **last** theme that I will be addressing in this project is **"architectural style."** The "style" of a building can suggest certain values or sentiments, especially to those who are "not educated in architecture." Modernism suggests intellectual aloofness to many people, while post-modernism suggests familiarity and nostalgia. The issue of style is a controversial one, but one that is faced by any architect who goes before a suburban planning board. **Roger Williams University attempts to have a unifying style and I will have to decide to reject it, work with it, or pave my own way.**

A STUDENTS' REALM

AN ALTERNATIVE STUDENT CENTER AT
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BRISTOL, RHODE ISLAND

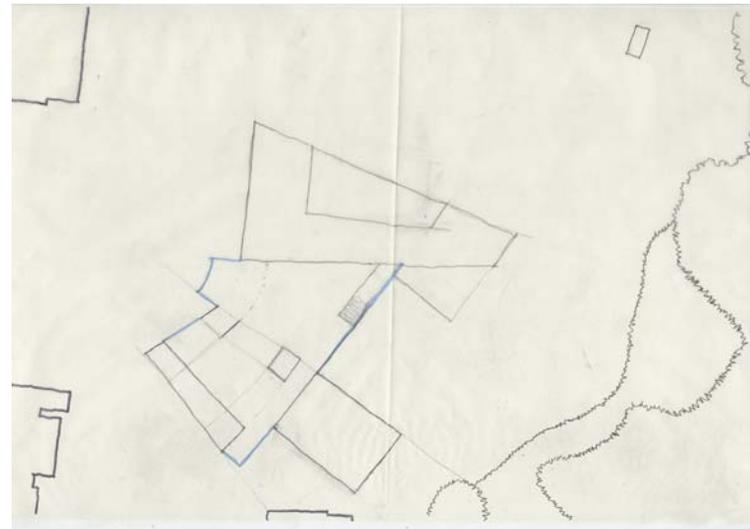
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ARCHITECTURAL THEMES

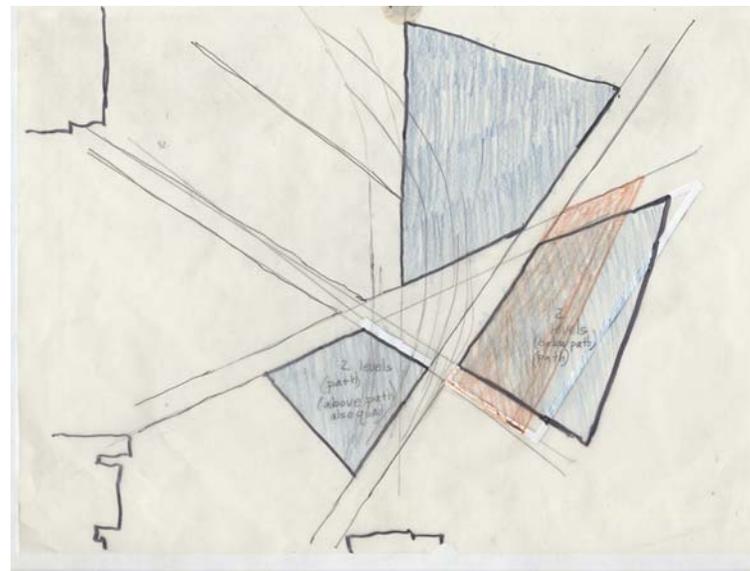




Site Analysis



Massing Study



Massing Study

A STUDENTS' REALM

AN ALTERNATIVE STUDENT CENTER AT
ROGER WILLIAMS UNIVERSITY

BRISTOL, RHODE ISLAND

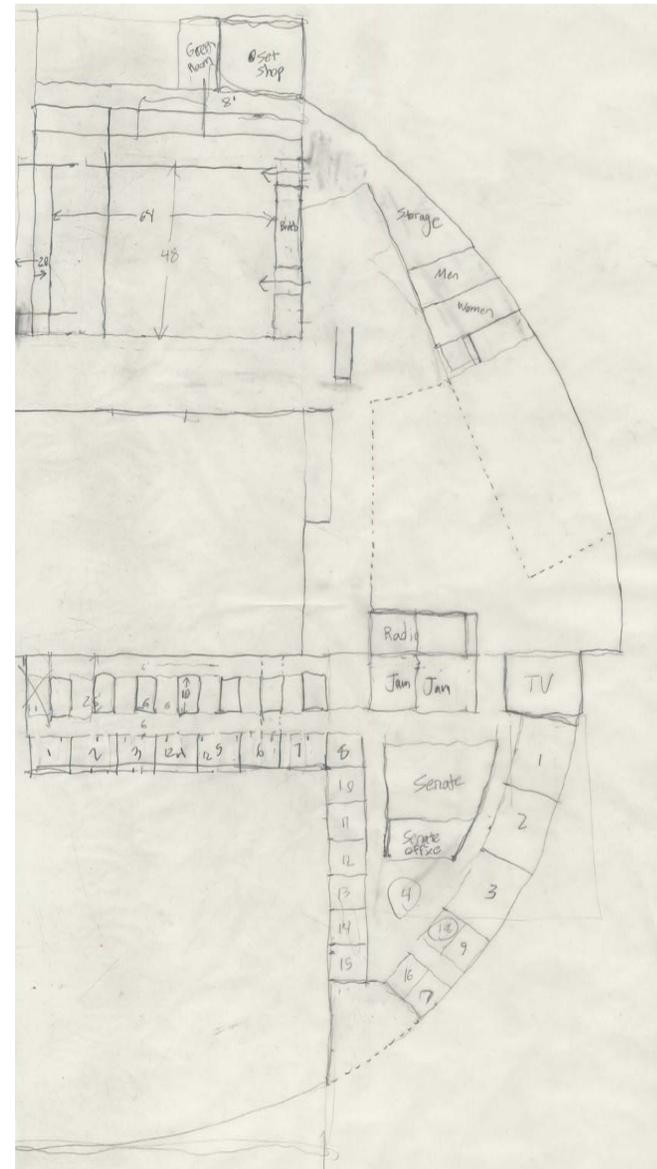
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EARLY DESIGN WORK





Early Scheme



Early Scheme

A STUDENTS' REALM

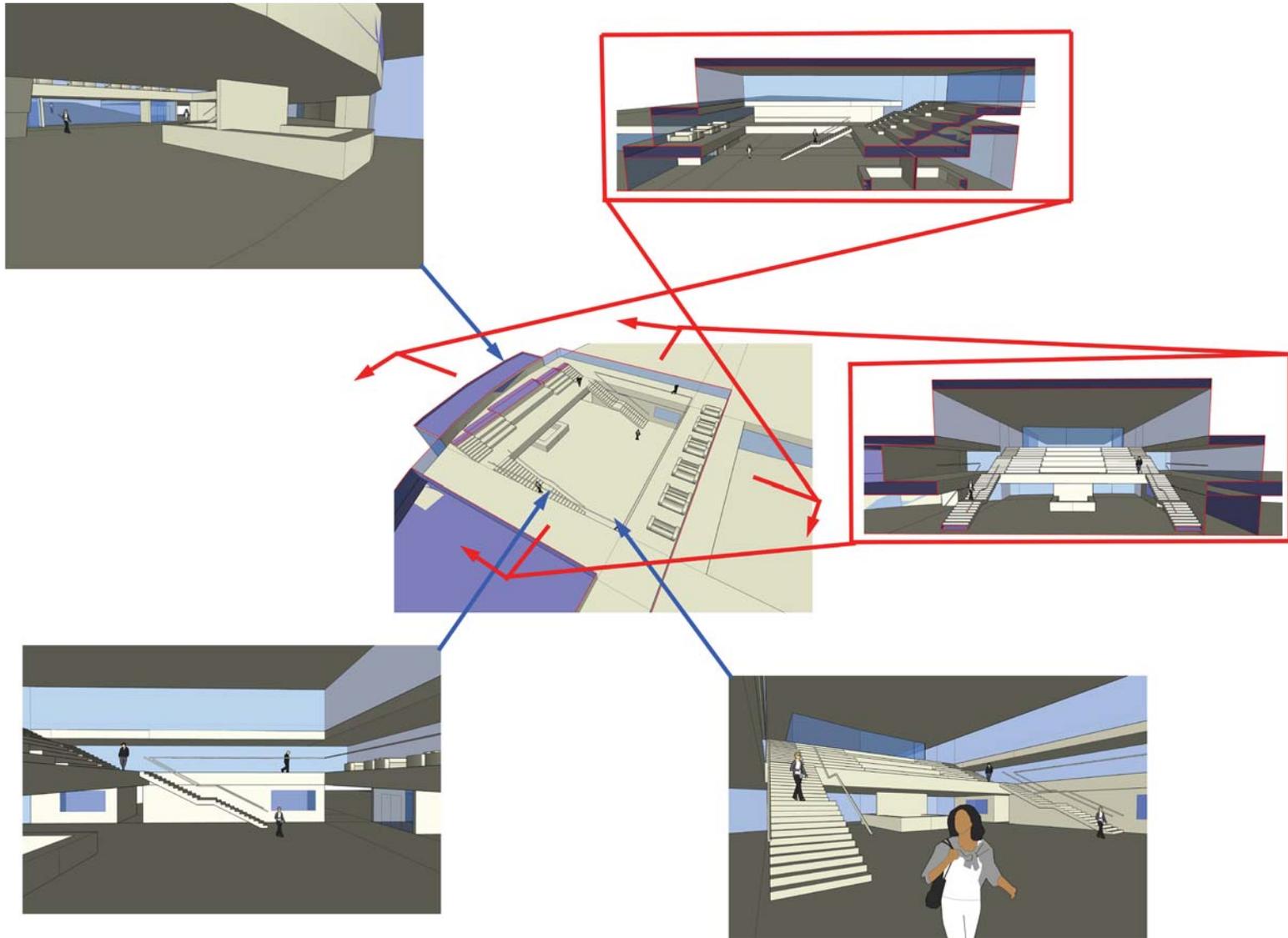
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EARLY DESIGN WORK





Early Spatial Study

A STUDENTS' REALM
 AN ALTERNATIVE STUDENT CENTER AT
 ROGER WILLIAMS UNIVERSITY
 BRISTOL, RHODE ISLAND EVAN CARROLL 2006

EARLY DESIGN WORK



This statement accompanied the following drawings at the “Gate Review:”

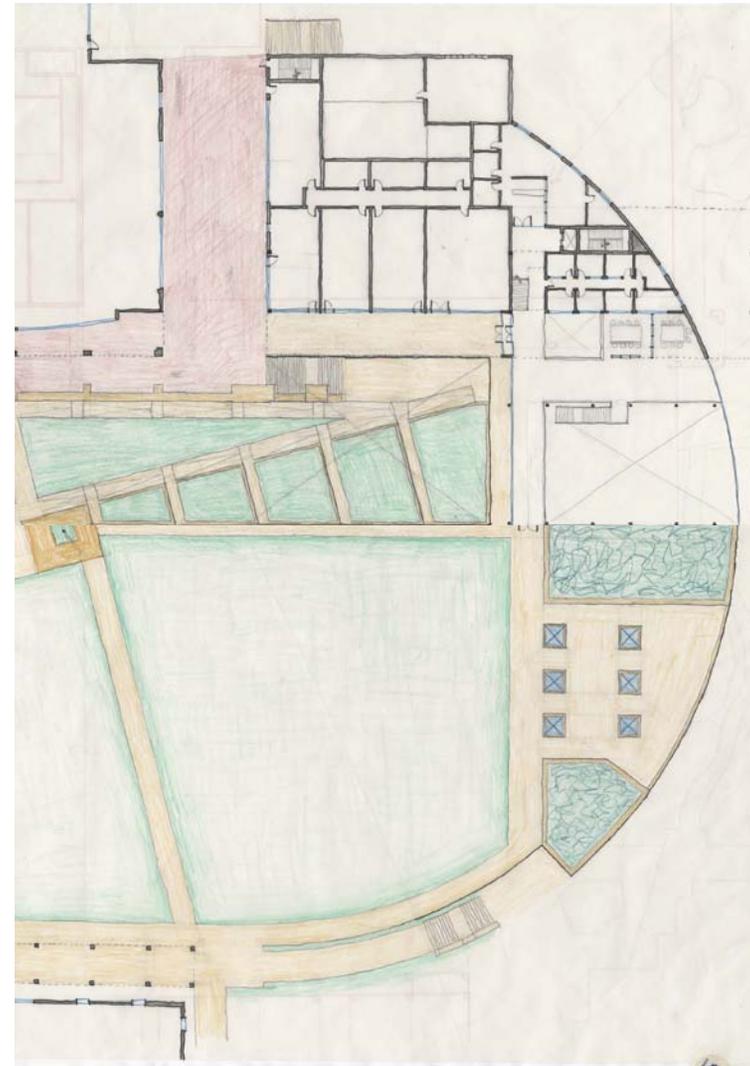
This project has always been about making a better community at Roger Williams University, and that is still the case. As the project has developed, however, the necessity for the architecture to be coherent and resolved in its own right has been emphasized.

The Student’s Center is cited to create a view corridor to the Mount Hope Bay. It is also part of a site strategy that creates a larger, uncut Quad. In order to do both of these things part of the building is under the quad and the road was moved away from the academic building.

The lowest part of the student center has become the pedestal or base for the quad and the rest of the building. The highest part of the student center has a direct massing relationship with the library, and this continuation creates the viewing corridor to the bay. The remaining design element is the roof to the multi-use-space. This roof is intended to have light but firm hold on space that is in the direct path of the “avenue.”

The circulation brings the traveler in direct contact with the various elements of the building’s program. The circulation is seen in an urban way where there is no open space between the traveler and the building, as opposed to a rural or suburban way where there are green buffer zones. In the design the green areas are design elements like spaces or rooms rather than no-man’s-lands

The design of the spaces and special details has the human scale and experience as the central experience. The detailing of walls, windows and partitions is conceived to provide privacy where needed while still allowing the spaces to be a connected as possible. The connection both creates interest in the activities as well as making the environment in the 24-hour building safer.



A STUDENTS' REALM

AN ALTERNATIVE STUDENT CENTER AT
ROGER WILLIAMS UNIVERSITY

BRISTOL, RHODE ISLAND

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WORK FOR
GATE REVIEW

DESIGN PROCESS



Evan Carroll

A Students' Realm a student center for Roger Williams University

Thesis Advisor
Hasan Kahn

Consultants
Patrick Charles
Metu Turan
Franco Pisani
Julian Bonder

"Community cannot long feed on itself, it can only flourish with the coming of others from beyond: their unknown and undiscovered sisters and brothers."

-Howard Thurman

Architecture communicates.

The Students' Realm communicates values of the community and the student. The siting of the building communicates the value of open space, the value of Mount Hope Bay and the subordination of vehicular traffic. The typology of the building is pedestrian, and this communicates interconnection. The layout of the spaces is **open and visually connected**. This communicates safety. The Students' Realm if for students is intended to communicate to the students.



A STUDENTS' REALM

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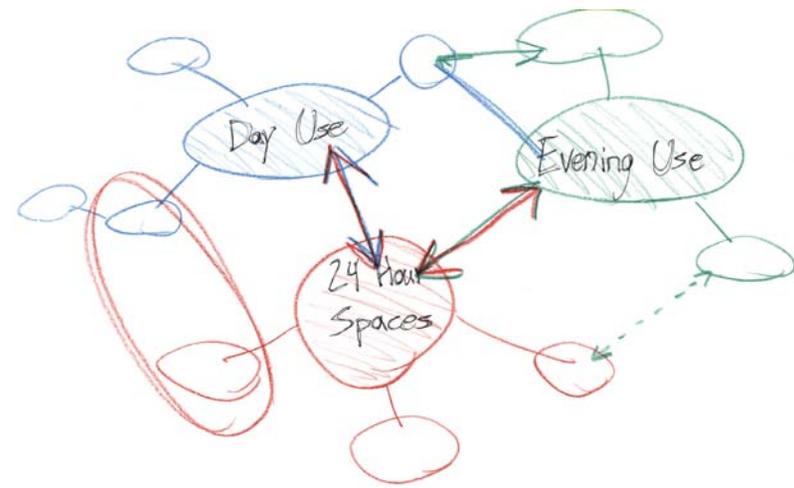
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PAGE MADE FOR
"THIS IS YEARBOOK"



The Program



A STUDENTS' REALM

AN ALTERNATIVE STUDENT CENTER AT
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PROGRAM



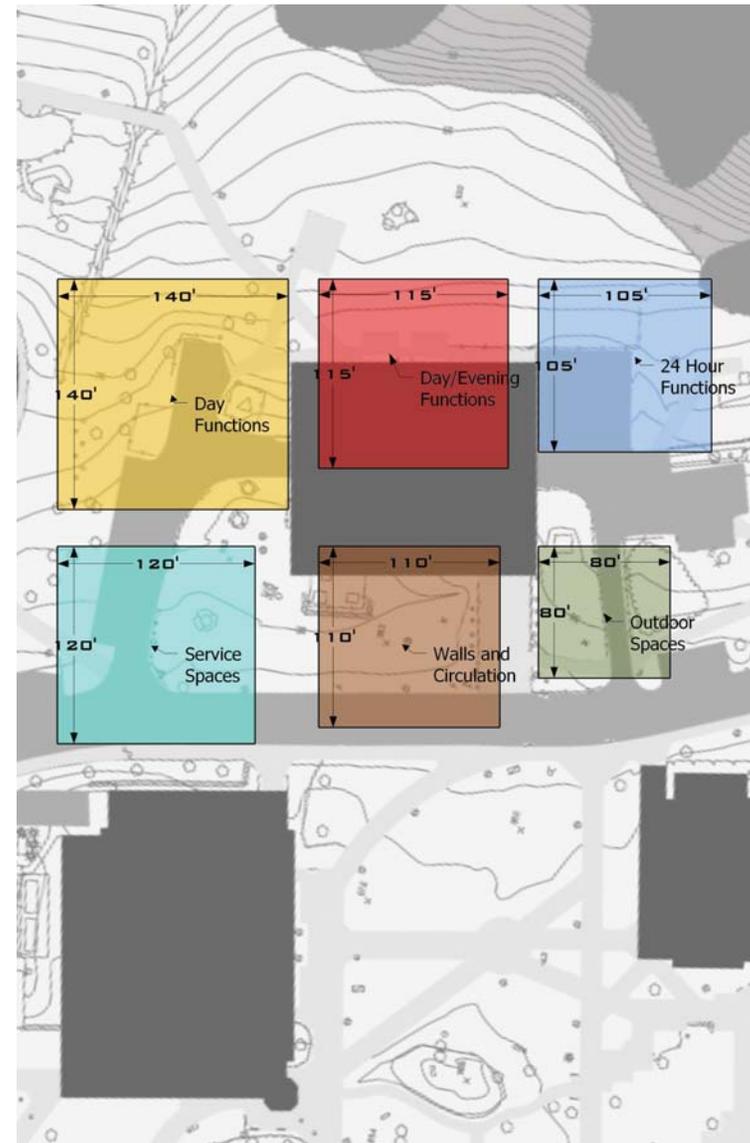
Brief Program Narrative

The Student Center will be a 24 hour destination. A place where students can expect to find people they know even when they're not looking for them. **A place to go for stimulation.** A place where something is always going on. Clubs meet there, and store things there. The more established clubs even have offices. The musicians hang out outside the jam rooms. Students make requests to the radio DJs who are right there where everyone can see them. Students can go to check their e-mail there 24 hours a day. The football game is playing perhaps, and the news is on. Some spaces are open to each other, and many of them have visual connections. Walking through the building, **one can get a sense of most of the activities going on.**

This spectrum of activity could hopefully happen any time of day or night. The busiest hours for the Center would be from after dinner until after quiet hours begin each night. The early evening would be dominated by club meetings, discussions and performances and then later the center would be a space for those who were not ready to be quiet in the dorms to go and "do whatever." In the morning the building might have the students who get up early to study. During the day the Center would have a quick turnover of students constantly "stopping in" to eat, meet and shop. On the weekends The Center will be a place that provides an **alternative to partying and drinking:** a more inquisitive, engaging atmosphere.

The [Detailed Program Outline](#) will be divided into three major sections based on when the programmatic elements will be used most during the period of a day. Three other sections of the program are determined by other classifications, making a total of six sections. In some cases, as with the twenty-four hour functions, it will be important for the elements to have adjacencies. But with the day and evening programmatic elements adjacencies will be determined by more functional needs.

Preceding the Detailed Program Outline will be the results of a small Student Interview Analysis. This was conducted to begin to get a sense of where students prefer to do certain activities.



This diagram shows the total areas of the six major program classifications in the Center. They are shown to scale with the site.



Student Interview Analysis

Interviews conducted Tuesday, November 15th, 2005

On the above mentioned date I went to the Snack Bar on the lower floor of the current Student Union, and asked students to fill out questionnaires. During the course of an hour I handed out thirty-three surveys and received thirty-one back (see Appendix I for Questionnaire Results Table). The students were all sitting either eating food or waiting for their food to be ready. There were twenty freshman, three juniors, one fifth-year student, and seven students who did not give their class. The main purpose of the questionnaires was to discover where students did certain activities and for how long (for Questionnaire Form see Appendix II). Due to the poorly worded questions however, the times for which students performed certain activities are not useful for comparison. This said, the data does serve to support some pre-existing notions (see fig. 1).

First of all, students spend most of their time in their rooms. The room is the top choice for alone time, using a computer, relaxing, watching TV and listening to music. The room also tied for top choice with the library for reading and studying. This means that most students spent the majority of their time in their rooms, and

according to the survey, they do not mind this (see Appendix I). This suggests that the students either have no better place to go, or are not easily convinced to leave their rooms.

One could easily assume that students like to be in their respective rooms for doing solitary activities, and the activities in the previous paragraph are all solitary. This begs the question, "Where do students spend time with their peers?" According to the questionnaire, students prefer to be with friends and party in their own rooms or their friends rooms. Again this could be simply out of preference, but it seems that if there were a good place besides the dorms for student to get together it would at least be mentioned a couple of times. The other places mentioned are "the gym," mentioned once, and "off campus." This small survey reinforces the idea that students do not have a place to be social on campus besides their dorms.

The other easily discerned results of the survey are not too profound: Students go to the library mostly to read and work, and they go to the student union to eat. What would happen if eating, working and being social were mixed, and then clubs were added as well? Based on this campus, this question cannot be answered. At RWU these activities are separated.

Occurrences of places	be alone	group work	use computer	read	study	relax	eat	watch tv	make music	listen to music	be with friends	party	Class											
room	20	1	25	16	16	21	5	24	5	18	7	3												
dorm	1	3	2			5		3		3	6	8	Freshman											
campus	1	1		1	3					6	17	17	20											
library	3	17	6	17	15					1			Sophmores											
business school		1	1		1								0											
school of engineering		3											Juniors											
café							16						3											
snack bar							11						Seniors											
gym						1				2	1		0											
outside	2						3						Fifthyears											
other	3		2	1	1	1	4	2	4	1		2	1											
	room	20/30	library	17/26	room	25/36	room	16/35	room	16/36	room	21/31	student union	27/31	room	24/29	9	room	18/31	campus	17/31	campus	17/27	7



Detailed Program Outline

Twenty-four Hour Functions: 13427

Lobby: 40x40 1600

Information Desk	1	8x15	(120)
ATM	1	4x6	(24)
Pay Phones	2	3x4	(24)
Bulletin boards	1	1x20	(20)

The Lobby is the grand entrance space for the Center. The Lobby has the potential to be a great hall that cuts through the building with the hall oriented to a major campus axis. It will always be open as a congregation and circulation space for students. It should be very visible to the outside so that at night it displays the interior of the building. It is possible that the area for the lobby and the Multi-Use Space could be combined or made to overlap.

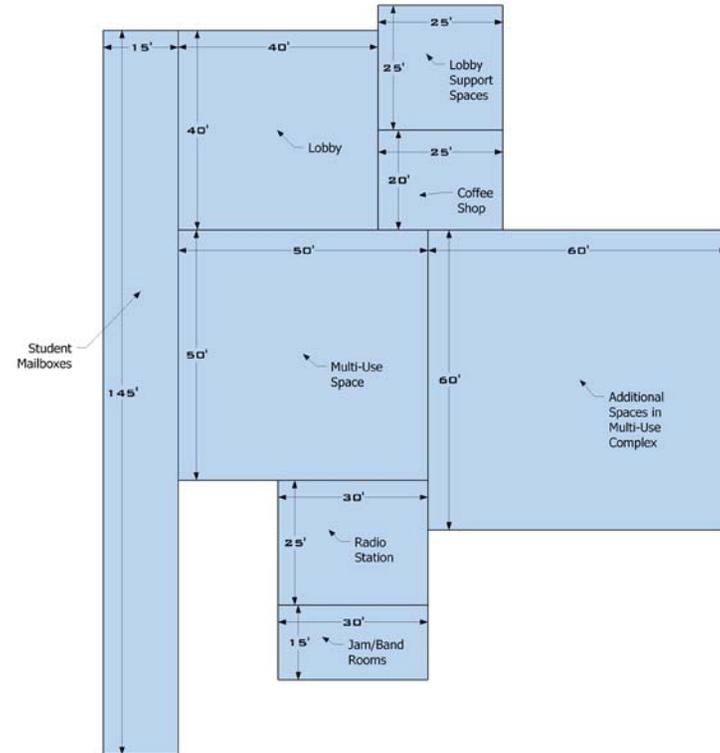
Lobby Support Spaces: 648

Rest rooms	4	10x15	(600)
Elevator (passenger)	1	6x8	(48)

The Rest rooms may be positioned and made large enough to serve all public spaces that open on the lobby. The elevator will hopefully be the only passenger elevator needed for the Center. The Center is intended to be traversed by stairs primarily.

Lobby Adjacencies/Accesses:

Multi-Use Space, Retail Area, Snack Bar, Auditorium.



This diagram shows the relative areas for the 24-hour spaces and a basic organization based on adjacencies.



Multi-Use Space: 2400

Storage	1	10x40	(400)
Seating (as audience)	100	3.5x4	(1400)
Lounge Space	1		(1400)
Performance Space	1	20x30	(600)

The Multi-Use Space is the heart of the Center. The primary function of the Student Center Board will be to determine how students will run and use this space. The areas for the seating and the lounge spaces are the same because they are for the same space. The large amount of storage is to contain the seats or seat structures and other pieces of movable architecture that will shape the Multi-Use Space at different times. This space may turn out to be one-in-the-same with the Lobby, and like the lobby, it should be highly visible from the outside. The Multi-Use-Space could be used for coffee-house sessions, comedians, music and dance performances, movies and maybe even dance practices. The Multi-Use Space would be visually connected to the WQRI radio booth which would create constant presence in the space.

Other functions in Multi-Use Space Complex: 3822

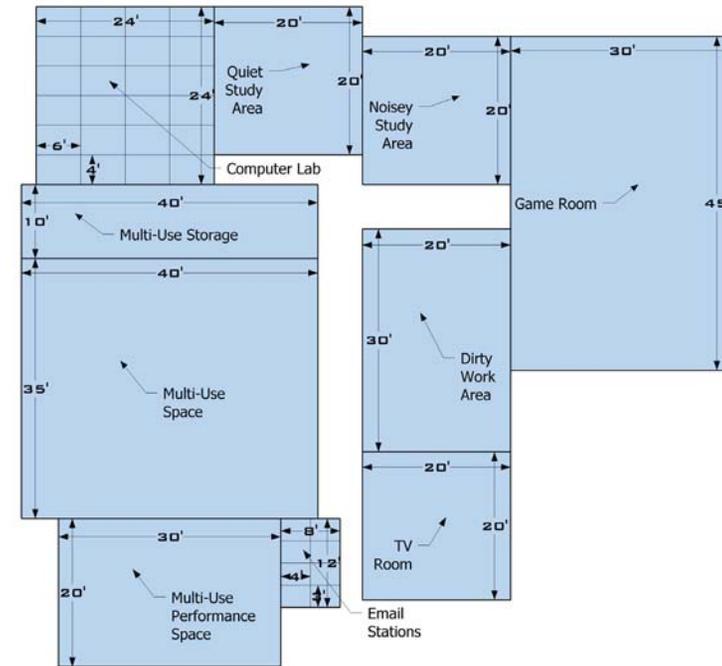
E-mail Stations	8	3x4	(96)
Study Areas (clean)			
Quiet (work alone)	1	20x20	(400)
Noisy (group work)	1	20x20	(400)
Study Area (dirty)	1	20x30	(600)
TV Room	1	20x20	(400)
Computer Lab	24	4x6	(576)
Games Room	1	45x30	(1350)

(2 pool, 2 ping-pong)

These other functions are the other 24 spaces that will be open to all students. Their presence is intended to contribute to the "business" of the center at night. The E-mail Stations are standing computer stations. There are three study areas: The "clean" areas are for more traditional school work: papers, posters, presentations etc. The "dirty" area is for messy projects, and the finishes in this area are durable and washable. The dirty area could be for art, architecture or biology projects. The TV Room could have scheduled events like games or news shows and open times when anything could be played. The TV room could be equipped for students to bring their own DVDs. The Games Room is currently planned to contain two billiards tables, two ping-pong tables and a number of arcade games.

Multi-Use Space Adjacencies/Accesses:

Lobby, Radio Station, Coffee Shop, Student Organizations.



This diagram shows the relative areas for the Multi-Use functions and a basic organization based on adjacencies.



Radio Station (WQRI): 770

Broadcast Room	1	10x10	(100)
Office	1	10x12	(120)
Prep Room	1	10x10	(100)

The Radio Station, as mentioned above will function as the constant presence for the Center. It should be located as to also serve as a sound recording studio for the Multi-Use Space and hopefully the Auditorium. In this way the radio organization could become one that dealt with live, pre-recorded and self-recorded audio.

Radio Station Adjacencies/Accesses:

Multi-Use Space, Student Organizations, Auditorium.

Music Rooms: 738

Jam/Band Rooms :	2	15x15	(450)
Practice Rooms:	6	6x8	(288)

The Jam/Band Rooms would provide a 24-hour playing spot for musicians to go to. As part of the Multi-Use Space complex these rooms would provide a strong point of interest for participating as well as being a spectator. The practice rooms would provide students with private spaces for developing their musical interests. These rooms could also be connected to the recording equipment in the Radio station.

Music Rooms Adjacencies/Accesses:

Multi-Use Space, Radio Station, Student Organizations, Auditorium.

Campus Television Station: 750

Broadcast Room :	1	25x30	(450)
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The Television Station would be a new organization on campus, but with the success of WQRI it is likely that a Television station would be a healthy addition. The club/organization would likely draw Communication, Law, Art Writing Majors.

Television Station Adjacencies/Accesses:

Multi-Use Space, Student Organizations, Auditorium, Radio Station.

Coffee Shop: 524

Seating	20	14	(280)
Service	1	9x20	(180)
Storage	1	8x8	(64)

The Coffee Shop would be much like the current "Jazzmans" that is on campus, except that it would be the only place for food and refreshment that was open 24 hours-a-day. It will contribute to the sense that there is always something happening in the Multi-Use Space complex.

Coffee Shop Adjacencies/Accesses:

Lobby, Multi-Use Space.

Student Mail Boxes: 1 15x145 2175

The Student Mail Boxes do not have to be all together, nor do they have to be in a specific place, as long as they are available 24 hours-a-day.

Student Mail Box Adjacencies/Accesses:

Loading Dock or service corridor.



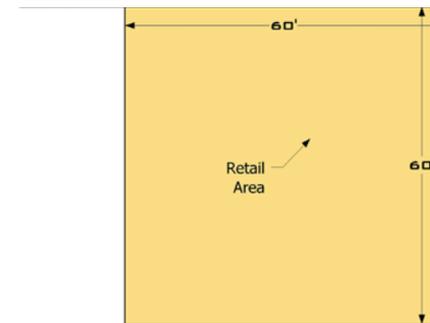
Day Functions:**2100****Retail Area:****2100**

Copy Center	1	20x20	(400)
Grocery	1	30x30	(900)
Art Supply Store	1	20x20	(400)
Barber Shop and Salon	1	20x20	(400)

The Retail Area is designed to be integral as an element to create spaces for students to meet and meet needs. It contains a few small shops, but ones that are essential to a student's everyday life. The Retail Area should be located in a very public place.

Retail Area Adjacencies/Accesses:

Lobby, Loading Dock, Snack Bar.



This diagram shows the relative areas for the Day functions and a basic organization based on adjacencies.



Day/Evening Functions: 13530

Student Organizations: 3680

Student Center Board	3	10x12	(360)
Senate			
Chambers	1	20x25	(500)
Offices	2	10x10	(200)
Newspaper Offices	5	10x10	(500)
Other Clubs			
Offices	8	10x10	(800)
Storage Lockers	30	2x2	(120)
Meeting Rooms	4	15x20	(1200)

The Student Organizations may not make up the largest part of the program, but they are at the heart of the reason for having a Student Center. That said, most clubs and organizations can only meet at night due to classes. The Student Organizations, in combination with the Multi-Use Space create a huge shift in building use from the Dining and Retail Areas to the student run and organized areas. The organization of the center should reflect this shift. The Student Center Board Offices should be near the Information Desk if possible, but the rest of the offices should be grouped together. The Senate Chambers should be located to be expandable when controversial issues come up.

Student Organizations Adjacencies/Accesses:

Lobby, Multi-Use Space.

Prayer/Meditation Space: 1 20x30 600

The Prayer/Meditation Space needs to be a calm, sacred space for reflection, meditation and prayer. It needs to be able to be found easily, but it may not need to be connected visually with many of the other spaces. It may or may not be visually discernible from the outside of the center.

Interfaith Chapel Adjacencies/Accesses:

Lobby, Student Organizations.

Snack Bar: 5250

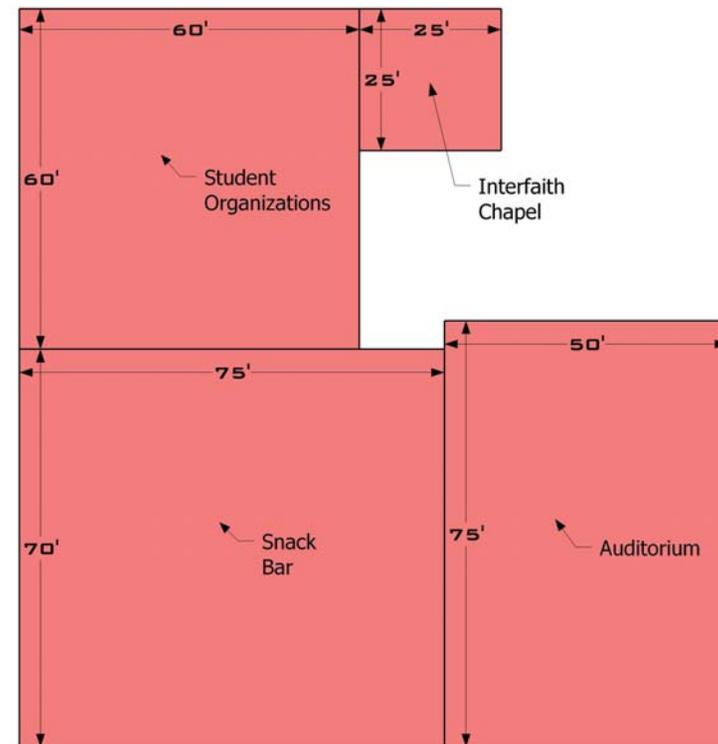
Seating	200	14	(2800)
Serving	1	20x40	(800)
Kitchen	1	30x50	(1500)
Storage	1	10x15	(150)

The Snack Bar will be the evening meeting spot for food on

campus as well as the concession area for the events in the Multi-Use Space and the Auditorium. During the day it will be the primary eating place for commuters and faculty, and in the morning it could be the place to get a hot breakfast. This means that the snack bar could be the space with the most use during the waking hours. The Snack Bar should be located so that food can easily be taken outside.

Snack Bar Adjacencies/Accesses:

Multi-Use Space, Loading Dock, Retail Area, Outdoors.



This diagram shows the relative areas for the Day/Evening functions and a basic organization based on adjacencies.

A STUDENTS' REALM

AN ALTERNATIVE STUDENT CENTER AT
ROGER WILLIAMS UNIVERSITY

BRISTOL, RHODE ISLAND

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DETAILED PROGRAM OUTLINE
DAY/EVENING FUNCTIONS



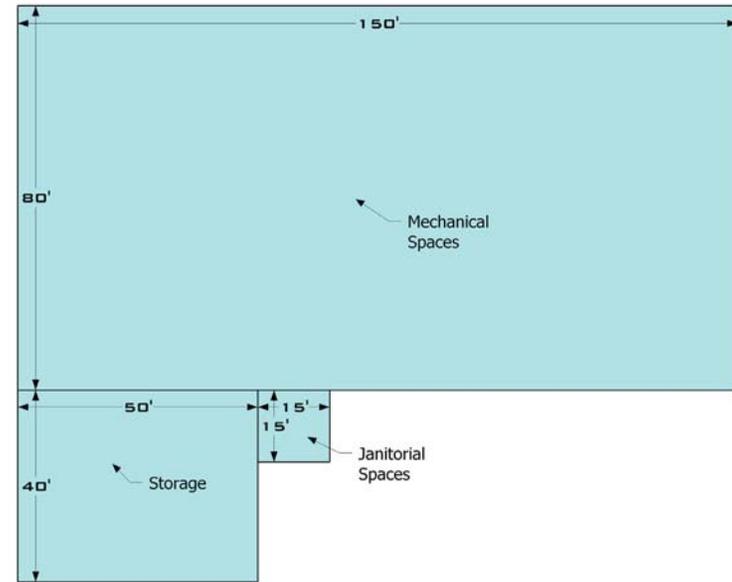
Auditorium: 4000

Seating	200	3.5x4	(2800)
Stage	1	20x35	(700)
Green Room	2	6x10	(120)
Projection Booth	1	8x10	(80)
Set Shop	1	15x20	(300)

The Auditorium is a much needed amenity on this campus. It can be used for the guest lecturers that draw the larger crowds, plays, dance and music performances. The Auditorium location in the Center will make it difficult for the drama department to use it, and this issue still needs to be addressed. The Auditorium should be seen as a place that has a little more class than other parts of the Center. If the lobby and the Multi-Use Space are combined then Auditorium and the Multi-Use Space will not be able to hold events at the same time.

Auditorium Adjacencies/Accesses:

Lobby, Rest rooms, Loading Dock.

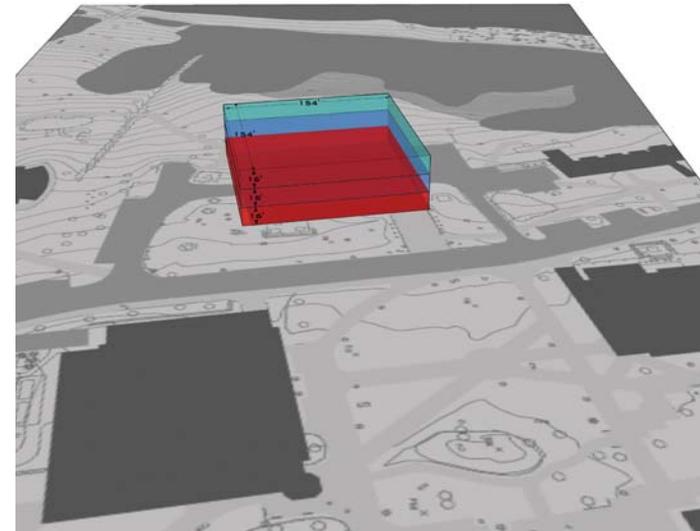


This diagram shows the relative areas for the Service functions.

Service Spaces 6192

Janitorial Spaces	4	6x8	(192)
Mechanical Spaces	1	80x50	(4000)
Storage	1	40x50	(2000)

The Janitorial Spaces will need to be spread evenly through the building, mostly near rest rooms. The Mechanical and storage spaces will most likely end up in the basement. The type of HVAC system may be a determining factor in its location.



This diagram shows the full massing of the indoor program in the context of the site.

Total Program Size: 35249

Circulation and Walls (20%)	29057x0.20	7050
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Total Center Size (Approx.)

3 Levels	120x120	42300
Center Footprint	14100	

A STUDENTS' REALM

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BRISTOL, RHODE ISLAND

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DETAILED PROGRAM OUTLINE
PROGRAM OUTLINE TOTAL

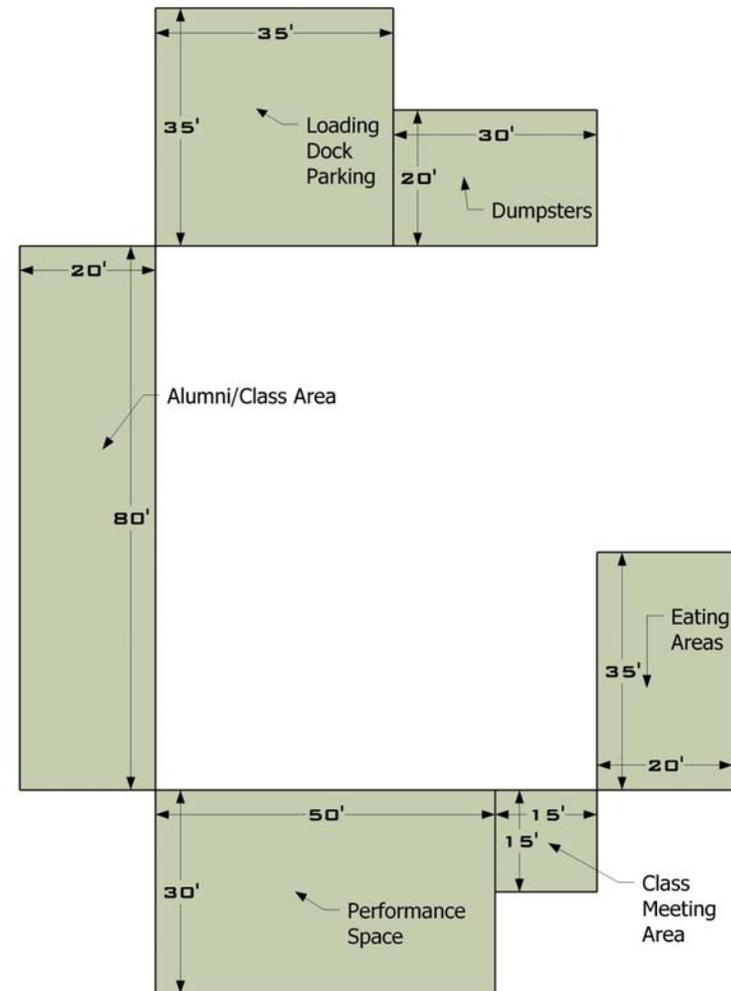


Outdoors:

6050

Loading Dock			
Docking Spaces	3	10x40	(1200)
Dumpsters	3	8x25	(600)
Eating Area Seating	50	14	(700)
Alum/Class Area	1	20x80	(1600)
Outdoor meeting areas			
Classes	2	15x15	(450)
Performances	1	30x50	(1500)

The Eating Areas will need to be near the Snack Bar and the Lobby. The Alum/Class will be an area for each class to physically leave something on campus marking their graduation. The details of this area are not yet determined. The Outdoor Meeting Areas will simply be areas that facilitate sitting in a group.



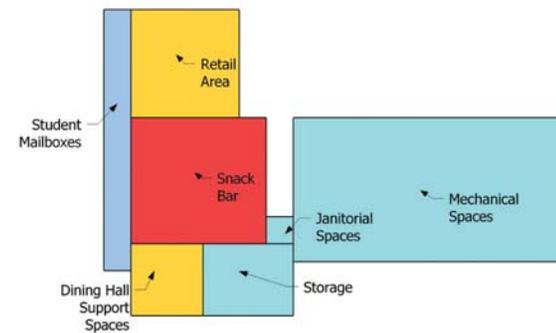
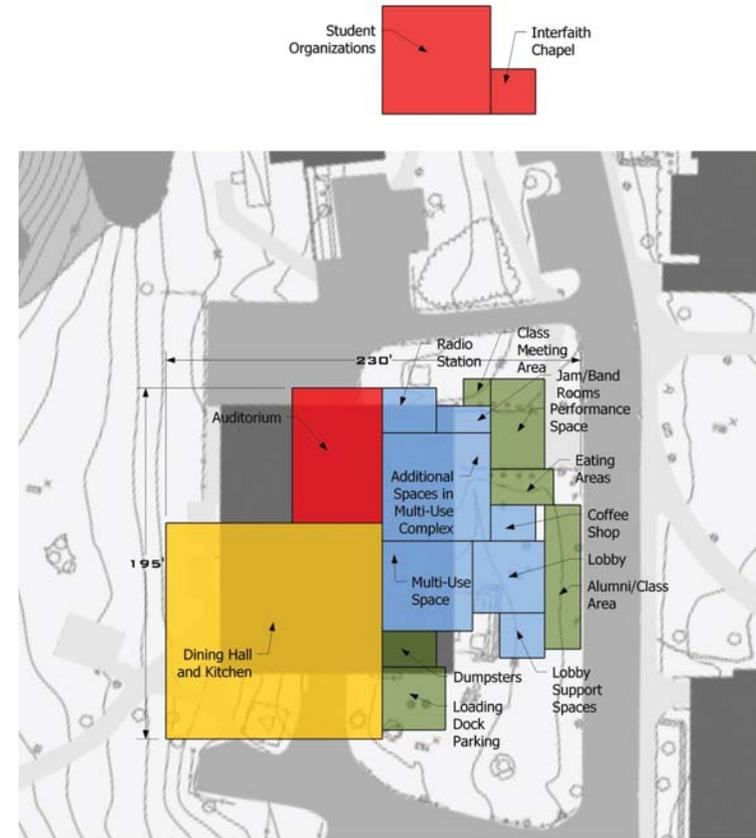
This diagram shows the relative areas for the outdoor spaces.



Preliminary Program Layout

One

This preliminary program layout is close to the layout of the existing Student Union. The public axis runs from D'Angelo Common through the Lobby, the Multi-Use Space, the Dining Hall and out to the other side. The student spaces for recreation and meeting are grouped with the auditorium, and this chunk of spaces makes up the new program. Otherwise, the Center is much like the original Student Union.



PROGRAM



Preliminary Program Layout

Two

This preliminary program layout begins to work with the path of travel between the upperclassmen and underclassmen dorms. The lobby is more sheltered from the street, and instead opens to the underclassmen dorms. The Chapel also faces the quad in this layout, giving it a possibly spiritually prominent position. Opening to the Upperclassmen dorms is the Retail Area, which could connect upwards towards the Lobby side of the building. In this layout the auditorium gets to be next to the loading dock which is advantageous.



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PRELIMINARY
PROGRAM LAYOUT

PROGRAM



The Final Design



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BRISTOL, RHODE ISLAND

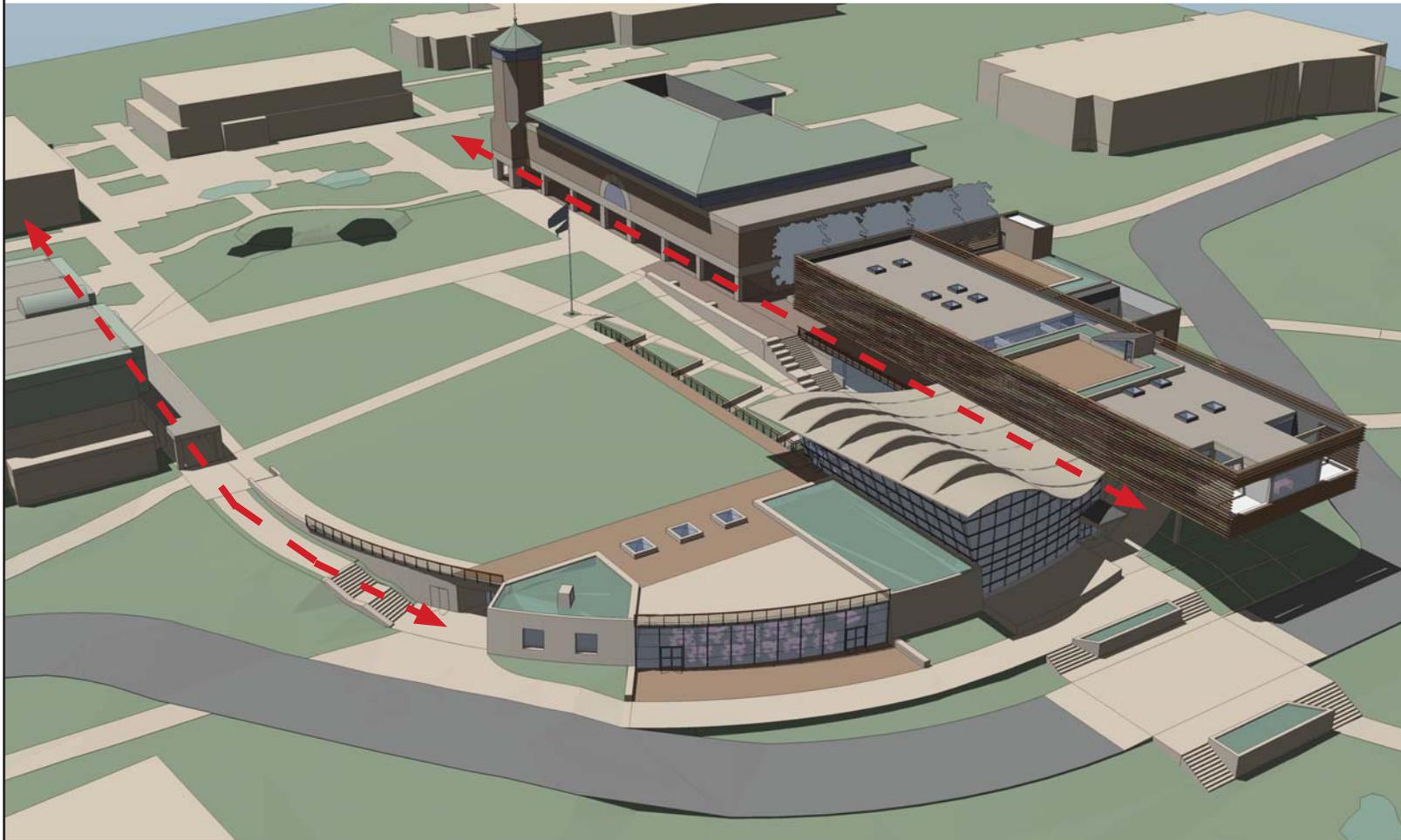
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FINAL DESIGN



Connection to Existing Arcades

The existing Library and Business buildings on D'Angelo common both have arcades to offer shelter and meeting places for students. The proposed Student Center continues the library arcade with a new arcade that provides shelter to shop entrances. The response to the Business Building arcade is to create a grand stair down to the south entrance of the Student Center.



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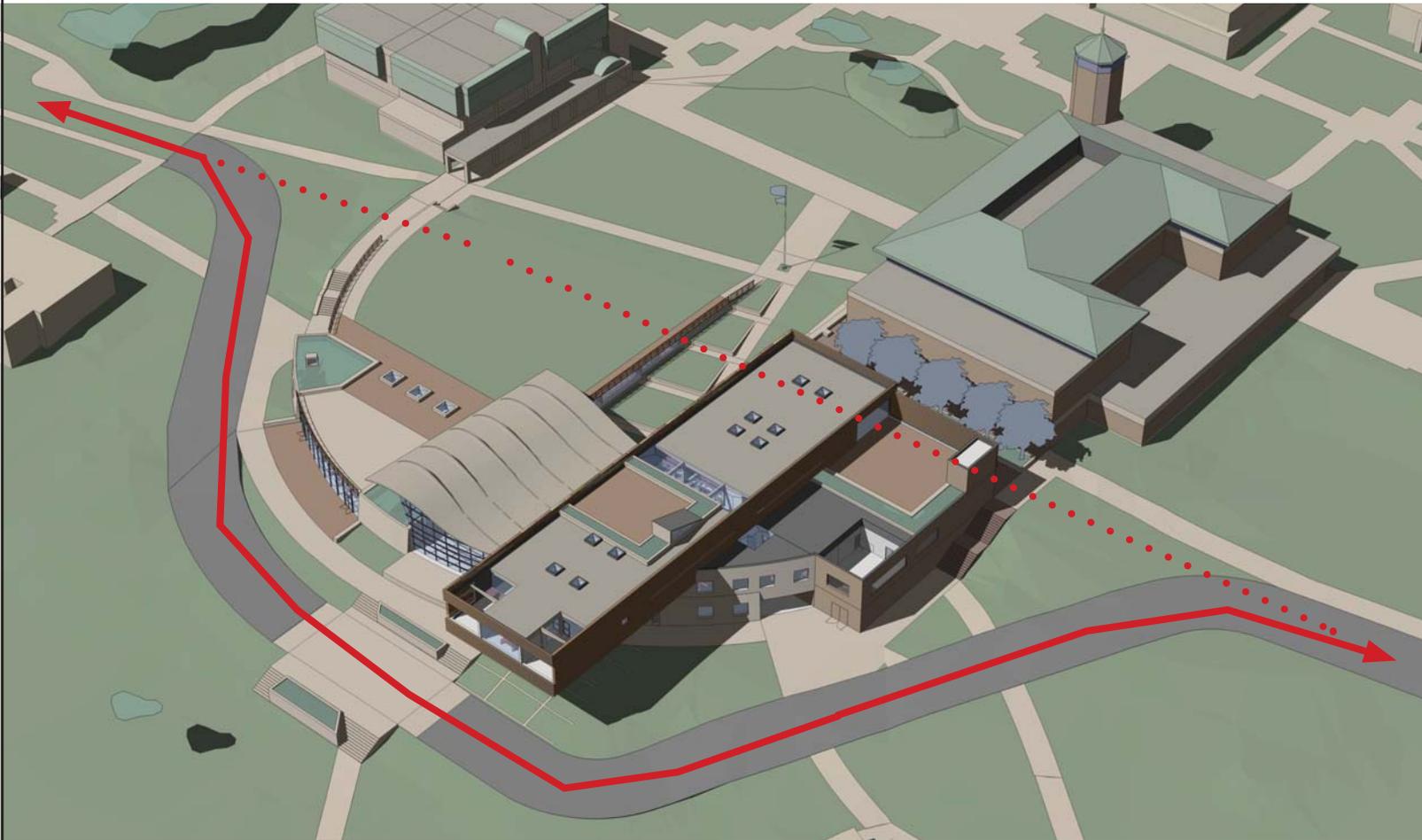
FORM SITING DIAGRAMS

FINAL DESIGN



Road Moved: Enlarged Quad

The dotted line represents the old location of the road. The road was moved to allow the quad to be larger. The result is that where the quad ends there is an overlook to Mount Hope Bay. The road activates the bay side of the Student center, while the D'Angelo Common activates the land side of the Student Center. If the road were to run between the Student Center and the Quad the bay side of the Center would become more isolated.



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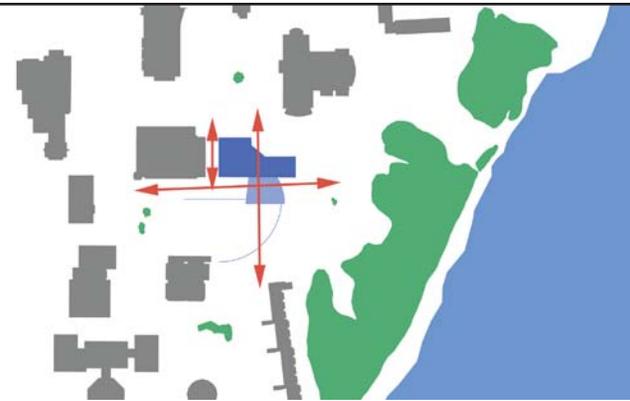
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FORM SITING DIAGRAMS

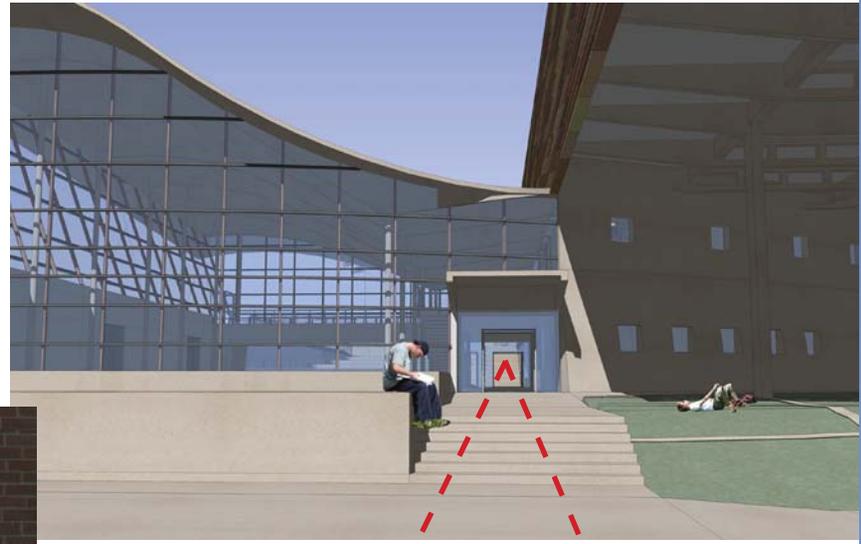


Circulation Allows for Pedestrian Pass-Through

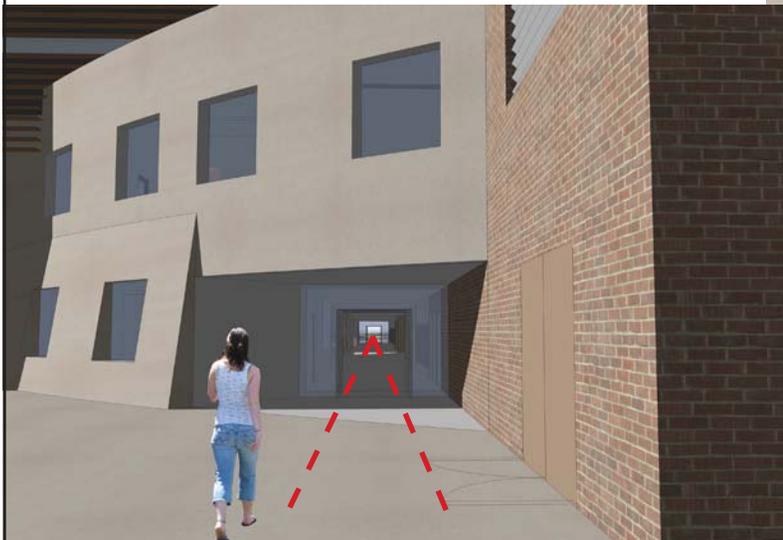
While the road and cars are diverted around the Student Center, students are encouraged to pass straight through it on the way to their destinations. This minimizes inconvenience to the students while also creating more activity within the Center.



North Entrance



East Entrance



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BRISTOL, RHODE ISLAND

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FORM SITING DIAGRAMS

FINAL DESIGN



Quad as a Pedestal

Conceptually the enlarged quad can be thought of as a pedestal. The walls that support the quad on the road level are canted back to visually express this idea. When these walls are in view the quad appears to be a massive, stable element.



A STUDENTS' REALM

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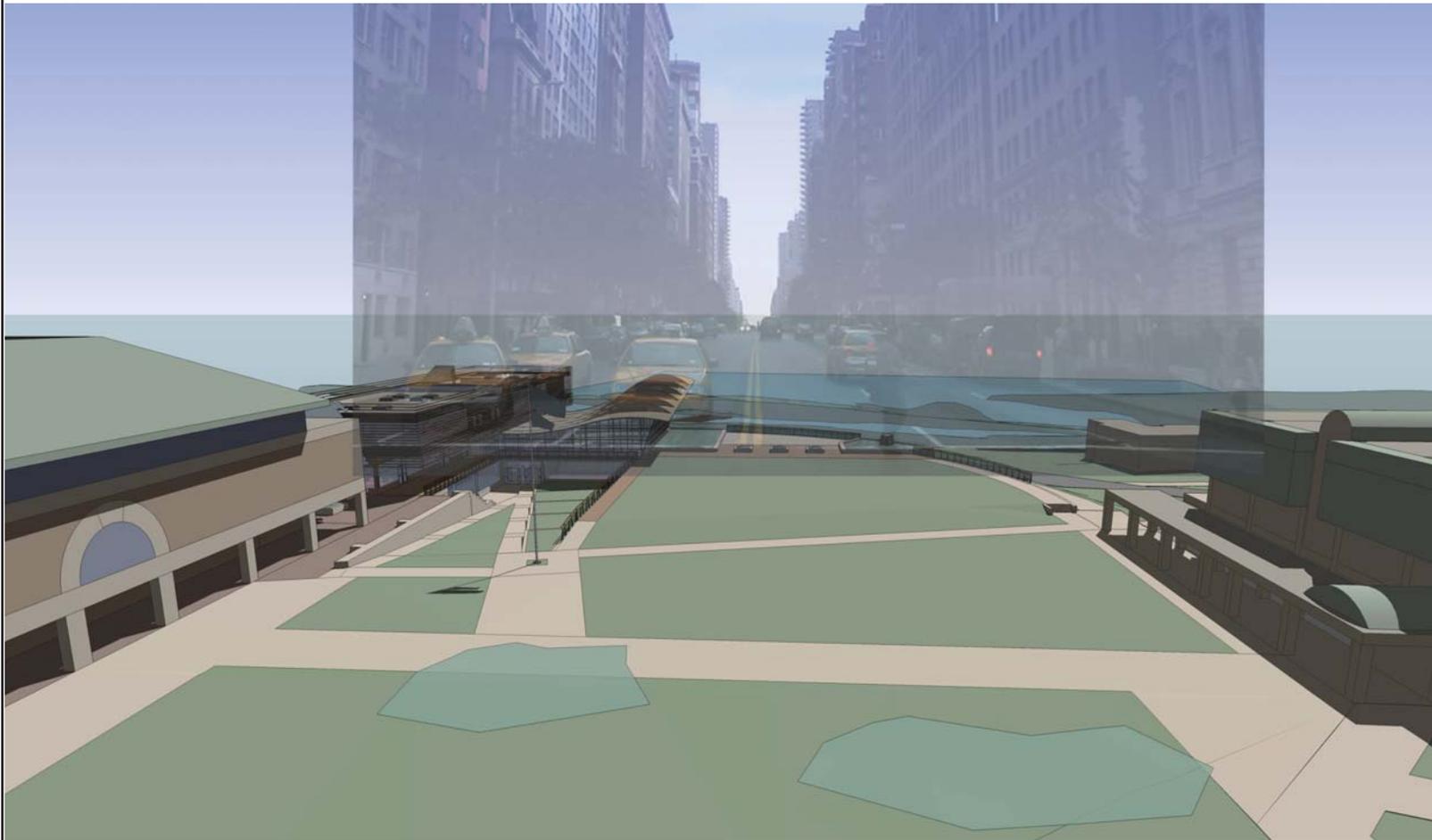
FORM CONCEPT DIAGRAMS

FINAL DESIGN



Quad as an Avenue

The space of the quad can be seen as an avenue. The horizontality of the second level of the library is emphasized by the upper level cantilever of the Student Center. This establishes a line of sight that goes straight to Mount Hope Bay. One could imagine the next building on campus going on the east side of the Business Building to continue the pattern.



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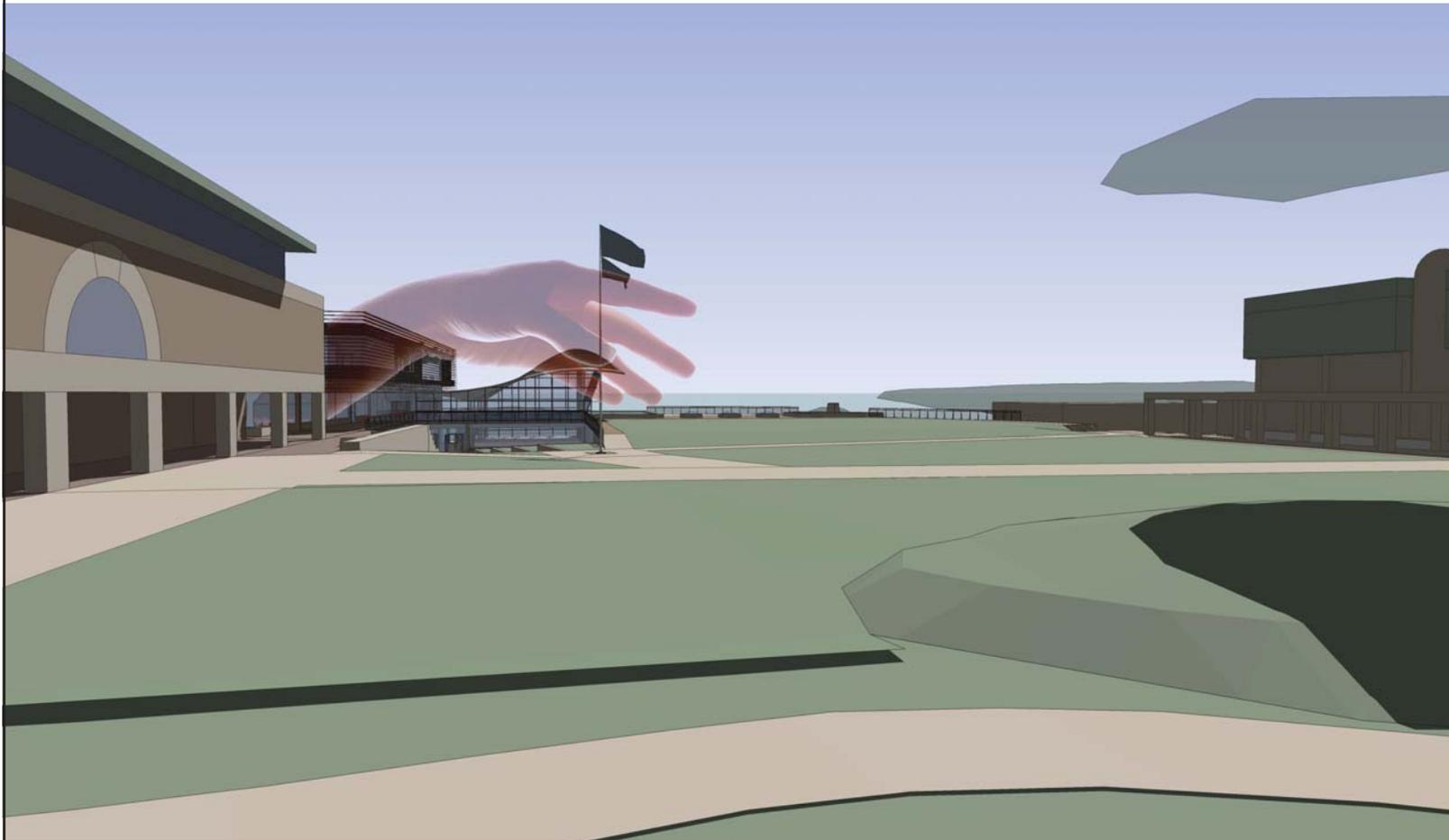
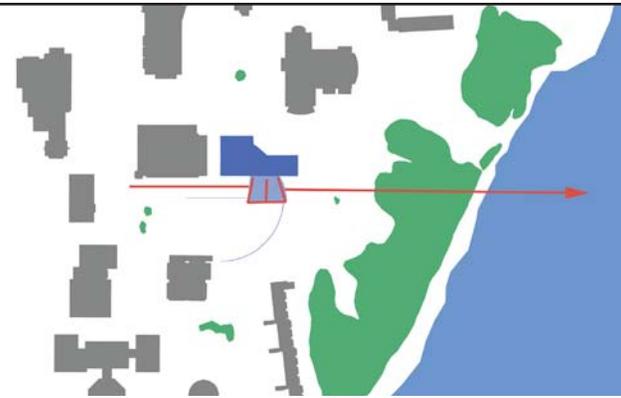
FORM CONCEPT DIAGRAMS

FINAL DESIGN



Multi-Use Space Roof as a Protecting Hand

The Multi-Use Space roof appears from the outside to be supported by the glass curtain wall. The roof shades the glass so that it can be seen through even during the day. The result is that the roof seems to holding the view so that it will always be there.



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FORM CONCEPT DIAGRAMS

FINAL DESIGN



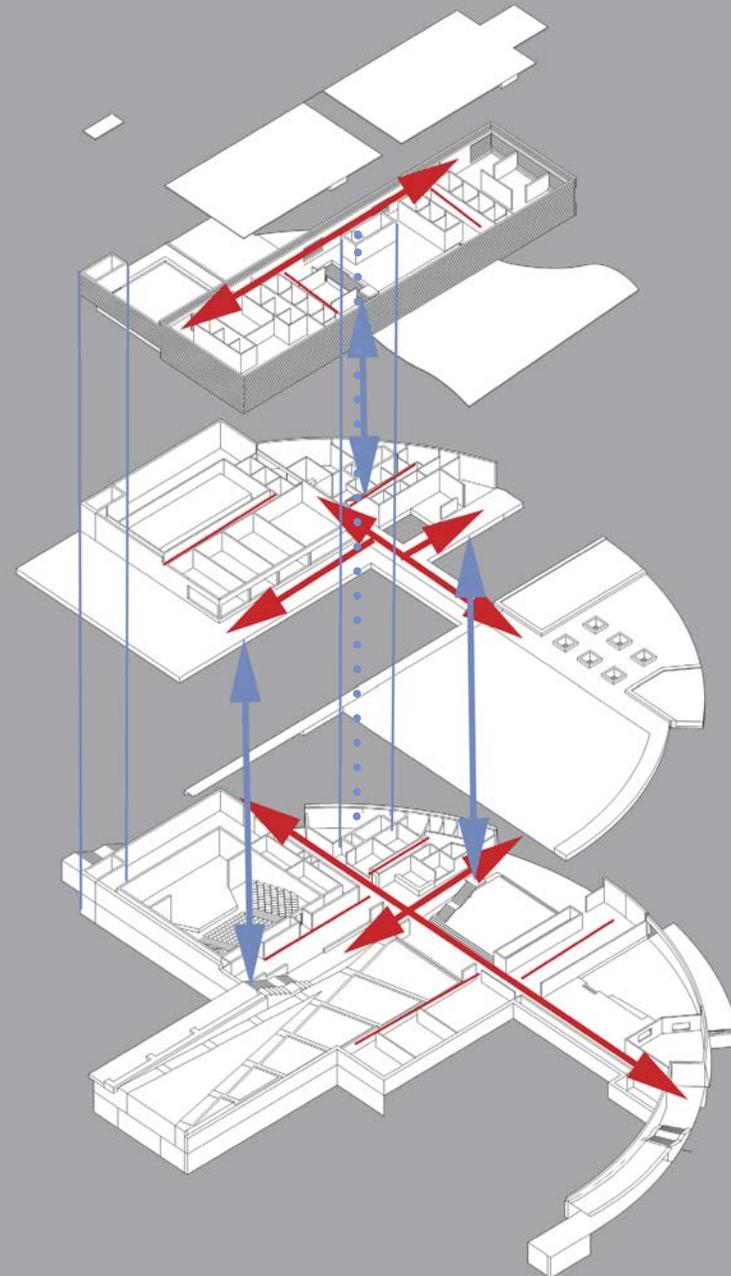
Circulation

The **red lines** show horizontal circulation, and the **blue lines** show the vertical. The lines with arrows show the major circulation routes, while the lines without show the minor routes and egress stairs. The **dotted blue line** is the elevator

The Main (road) Level of the Student Center has two primary axis. One runs north-south between the corresponding entrances, and the other runs east-west, likewise. The main interior stair to the next level is at the intersection of these two axis where they pass through the Multi-Use space.

The Quad Level is much smaller than the Road Level but still contains remnants of the two axis.

The Upper Level has one primary east-west axis. This axis is a hallway that is loaded only on the south side.



A STUDENTS' REALM

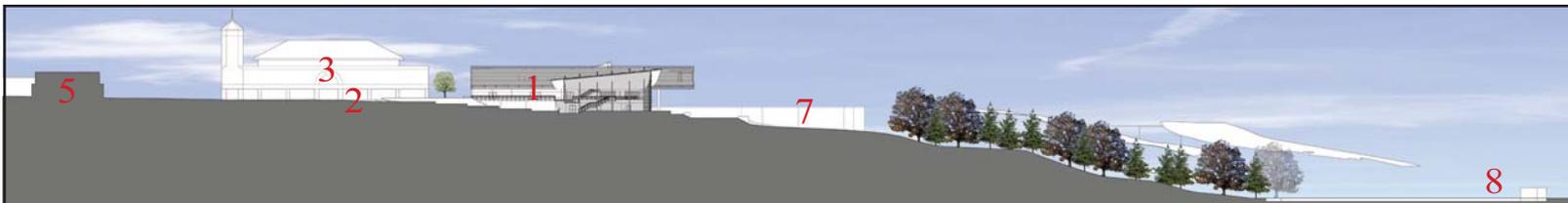
AN ALTERNATIVE STUDENT CENTER AT
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BRISTOL, RHODE ISLAND

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CIRCULATION DIAGRAM





1. Proposed Student Center
2. D'Angelo Common
3. Library
4. Business Building
5. Administration Building
6. New Dining Commons

7. Marine and Natural Sciences Building
8. Boat Dock
9. Mount Hope Bay
10. Maple Dorms
11. College of Arts and Sciences
12. Engineering Building



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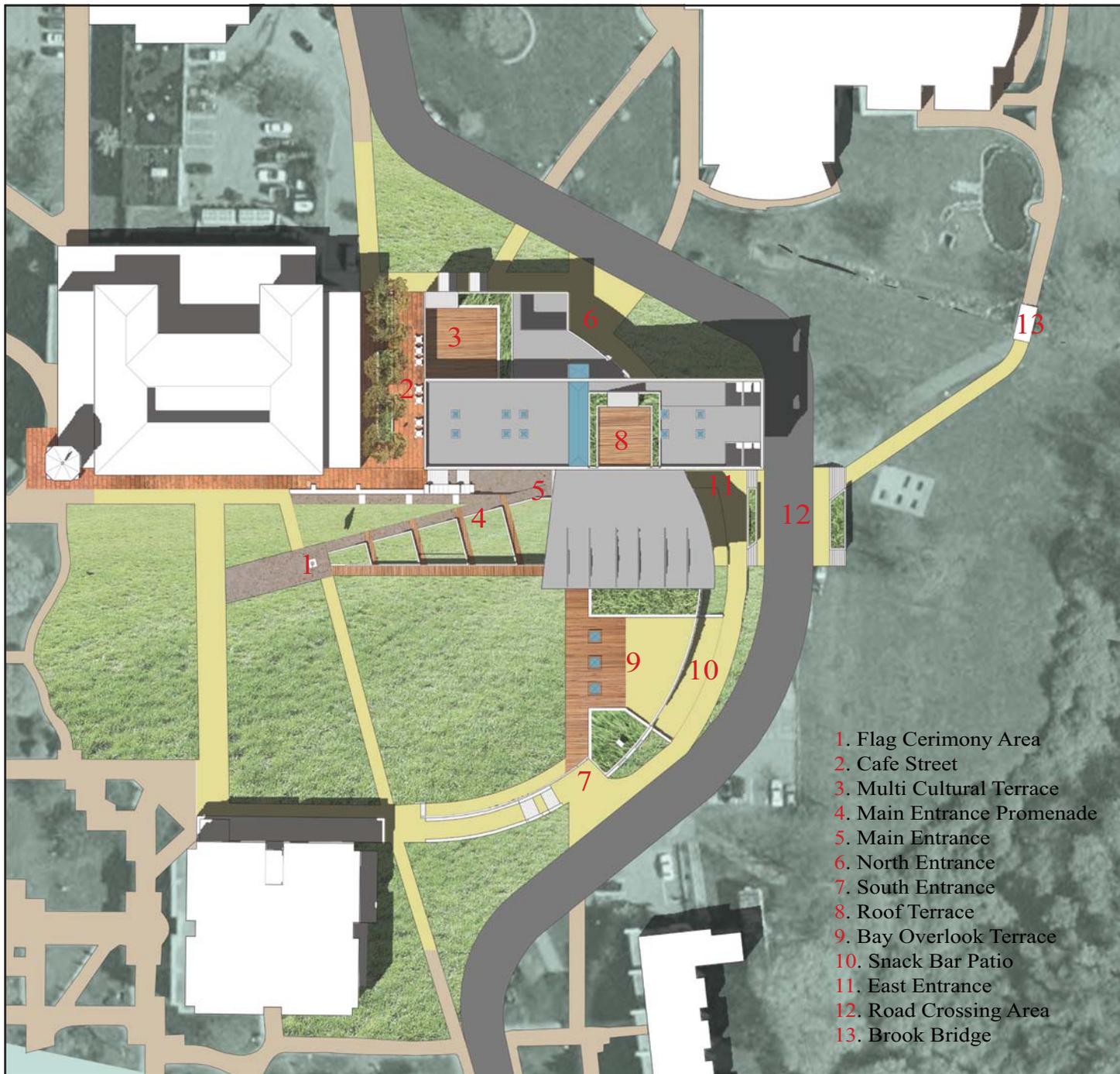
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PLANS
CAMPUS PLAN AND SECTION

FINAL DESIGN





1. Flag Cerimony Area
2. Cafe Street
3. Multi Cultural Terrace
4. Main Entrance Promenade
5. Main Entrance
6. North Entrance
7. South Entrance
8. Roof Terrace
9. Bay Overlook Terrace
10. Snack Bar Patio
11. East Entrance
12. Road Crossing Area
13. Brook Bridge

A STUDENTS' REALM

AN ALTERNATIVE STUDENT CENTER AT
ROGER WILLIAMS UNIVERSITY

BRISTOL, RHODE ISLAND

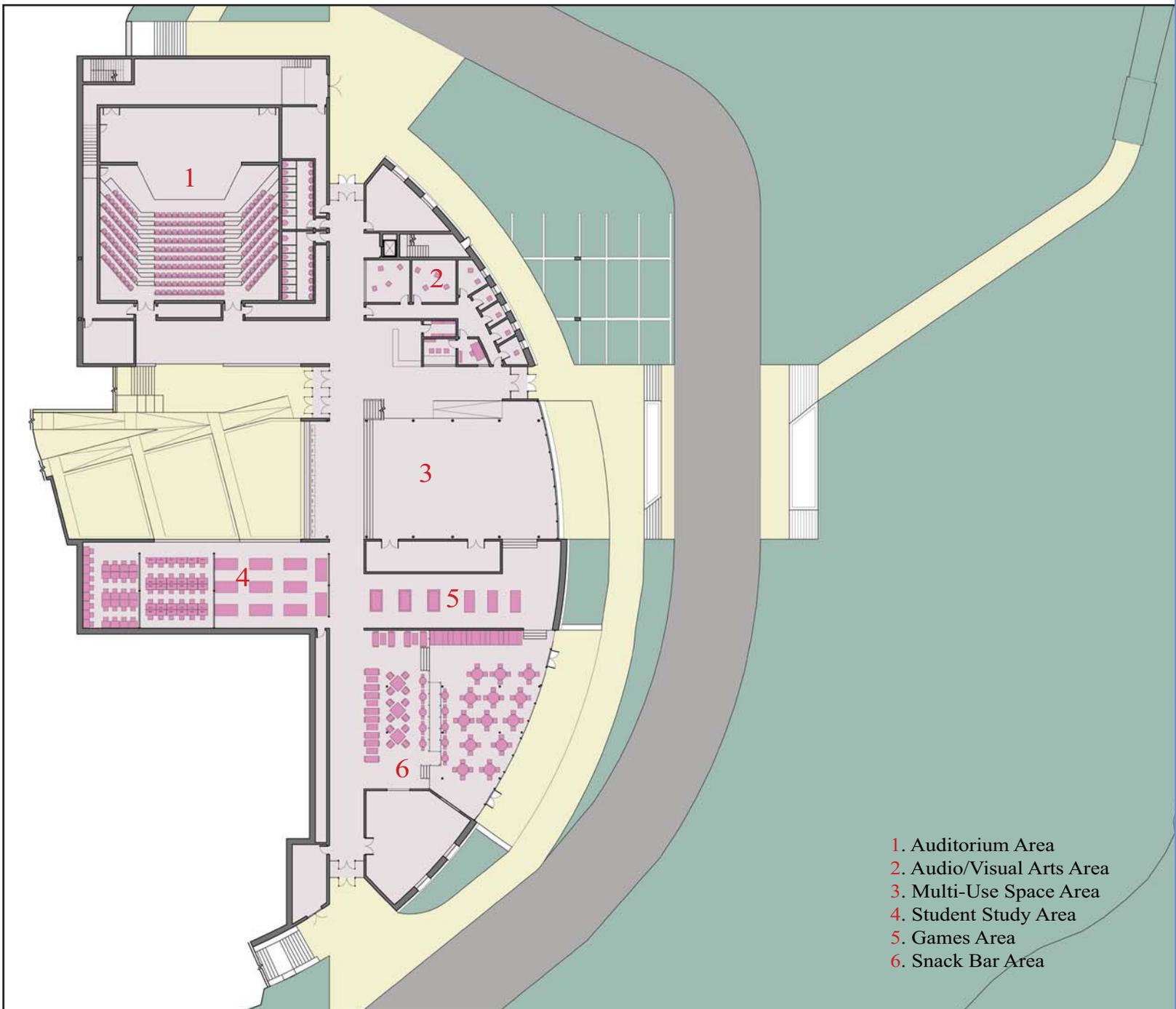
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PLANS

DETAIL SITE PLAN

FINAL DESIGN





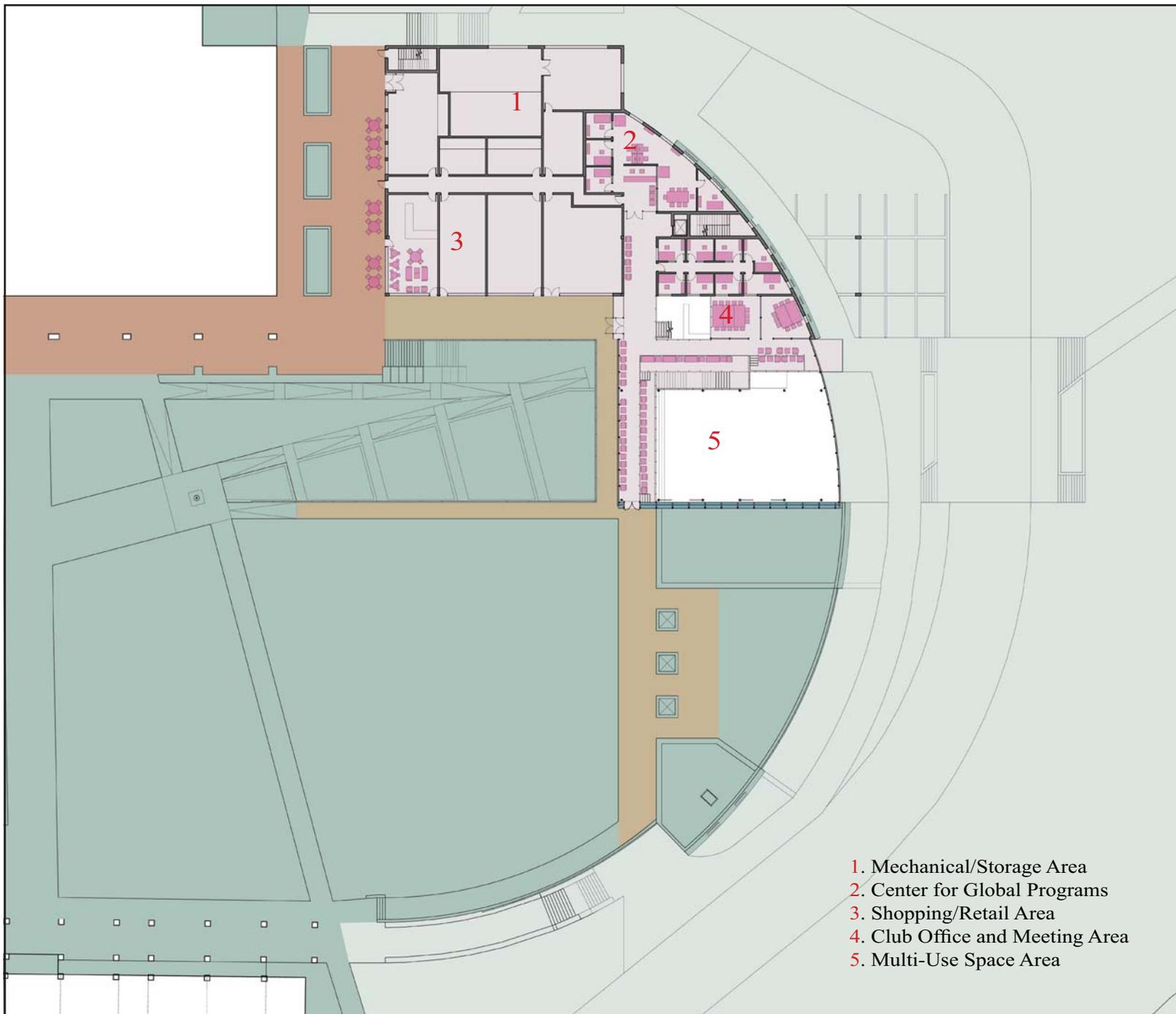
- 1. Auditorium Area
- 2. Audio/Visual Arts Area
- 3. Multi-Use Space Area
- 4. Student Study Area
- 5. Games Area
- 6. Snack Bar Area

A STUDENTS' REALM
 AN ALTERNATIVE STUDENT CENTER AT
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 BRISTOL, RHODE ISLAND
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PLANS
 ROAD LEVEL PLAN

FINAL DESIGN





1. Mechanical/Storage Area
2. Center for Global Programs
3. Shopping/Retail Area
4. Club Office and Meeting Area
5. Multi-Use Space Area

A STUDENTS' REALM

AN ALTERNATIVE STUDENT CENTER AT
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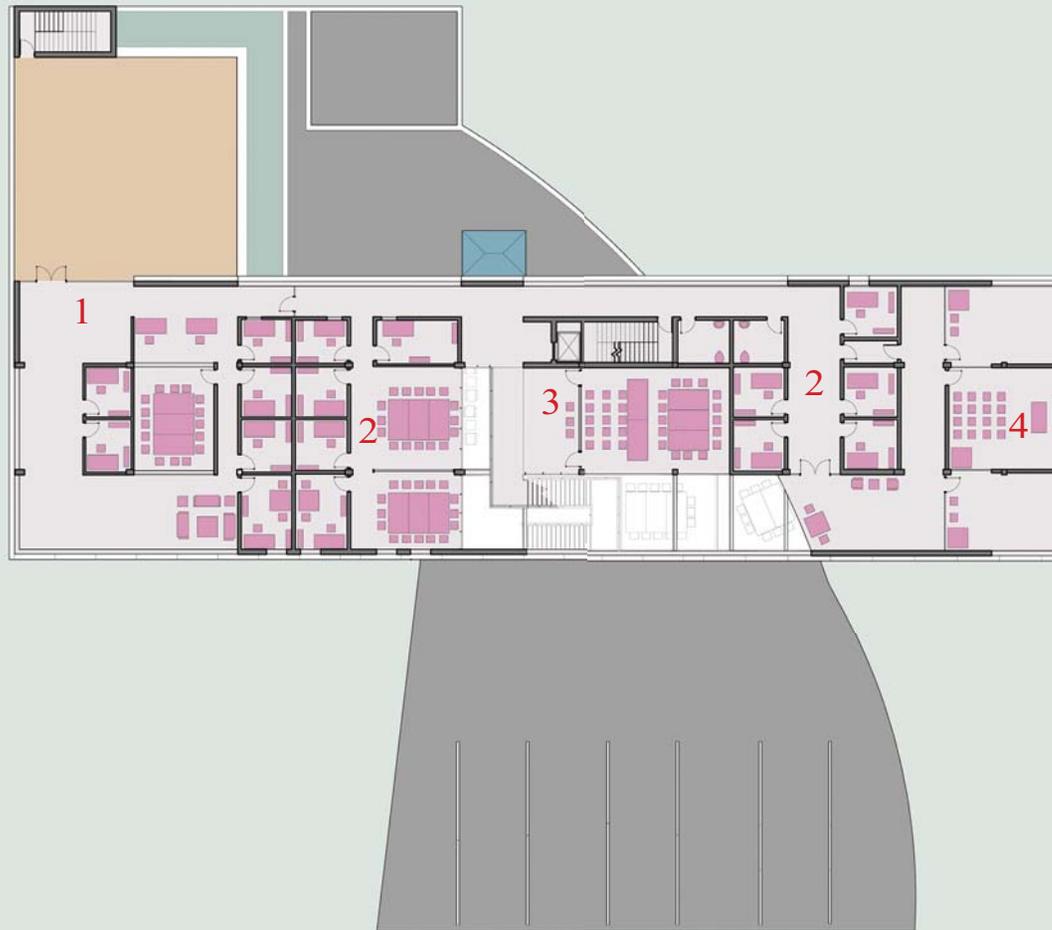
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PLANS
ROAD LEVEL PLAN

FINAL DESIGN





1. Multi-Cultural Center
2. Club Office and Meeting Area
3. Senate Area
4. Prayer and Meditation Area

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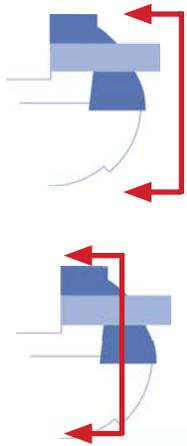
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PLANS
UPPER LEVEL PLAN

FINAL DESIGN





- 1. Snack Bar Area
- 2. Multi-Use Space Area
- 3. Lobby Area
- 4. Senate Area
- 5. Club Meeting and Office Area
- 6. Audio/Visual Arts Area
- 7. Egress Stair
- 8. Center for Global Programs



A STUDENTS' REALM

AN ALTERNATIVE STUDENT CENTER AT
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BRISTOL, RHODE ISLAND

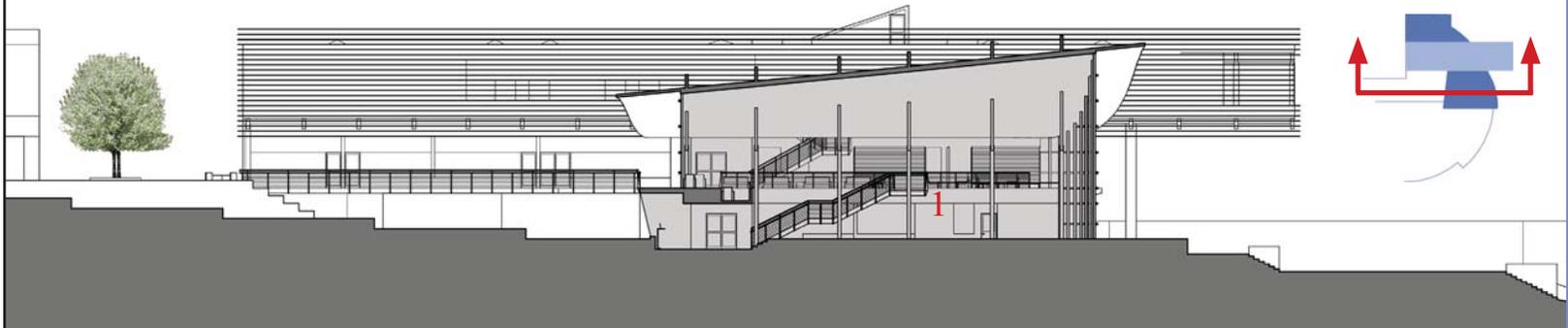
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EAST ELEVATION
WEST FACING SECTION





- 1. Multi-Use Space Area
- 2. Multi Cultural Center
- 3. Club Meeting and Office Area
- 4. Senate Area
- 5. Prayer and Meditation Area
- 6. Shopping/Retail Area
- 7. Auditorium
- 8. Audio/Visual Arts Area



A STUDENTS' REALM
 AN ALTERNATIVE STUDENT CENTER AT
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 BRISTOL, RHODE ISLAND
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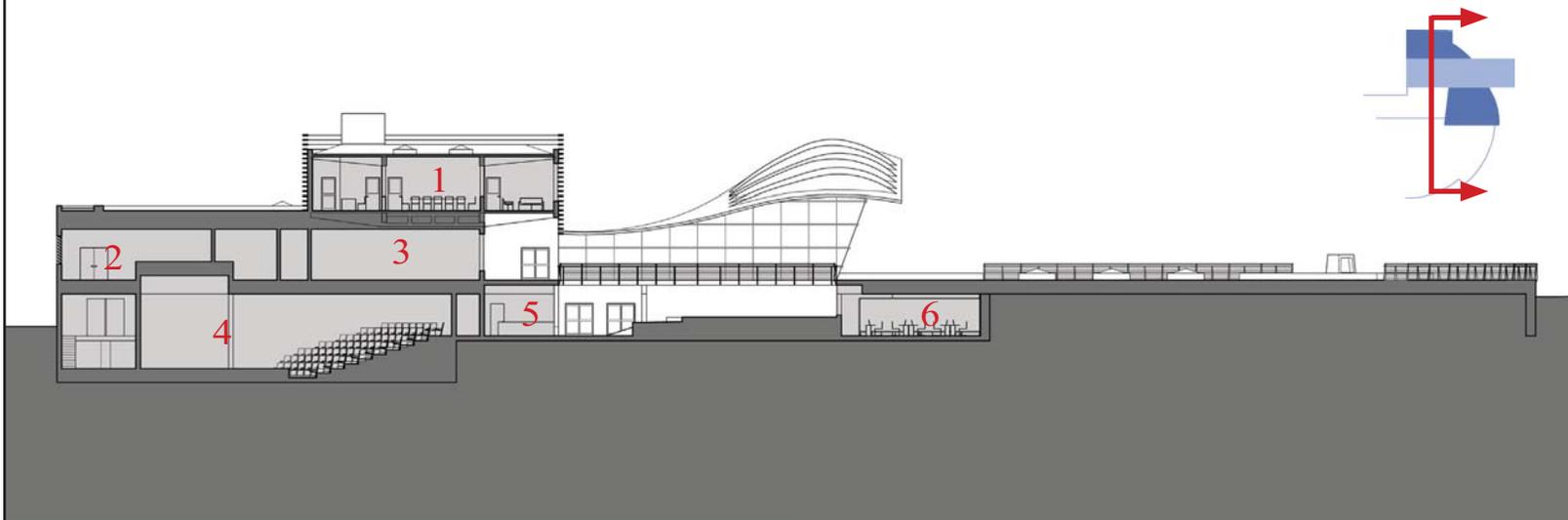
SOUTH ELEVATION
 NORTH FACING SECTIONS

FINAL DESIGN





1. Multi Cultural Center
2. Mechanical/Storage Area
3. Shopping/Retail Area
4. Auditorium
5. Lobby Area
6. Student Study Area



A STUDENTS' REALM

AN ALTERNATIVE STUDENT CENTER AT
ROGER WILLIAMS UNIVERSITY

BRISTOL, RHODE ISLAND

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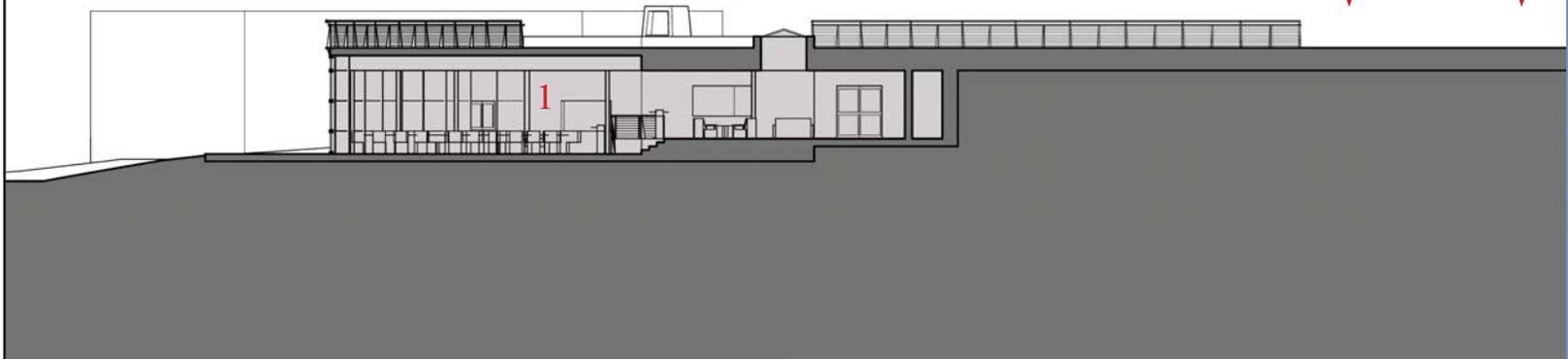
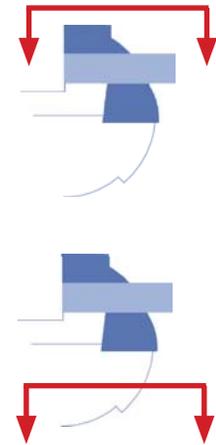
WEST ELEVATION
EAST FACING SECTION

FINAL DESIGN





1. Snack Bar Area

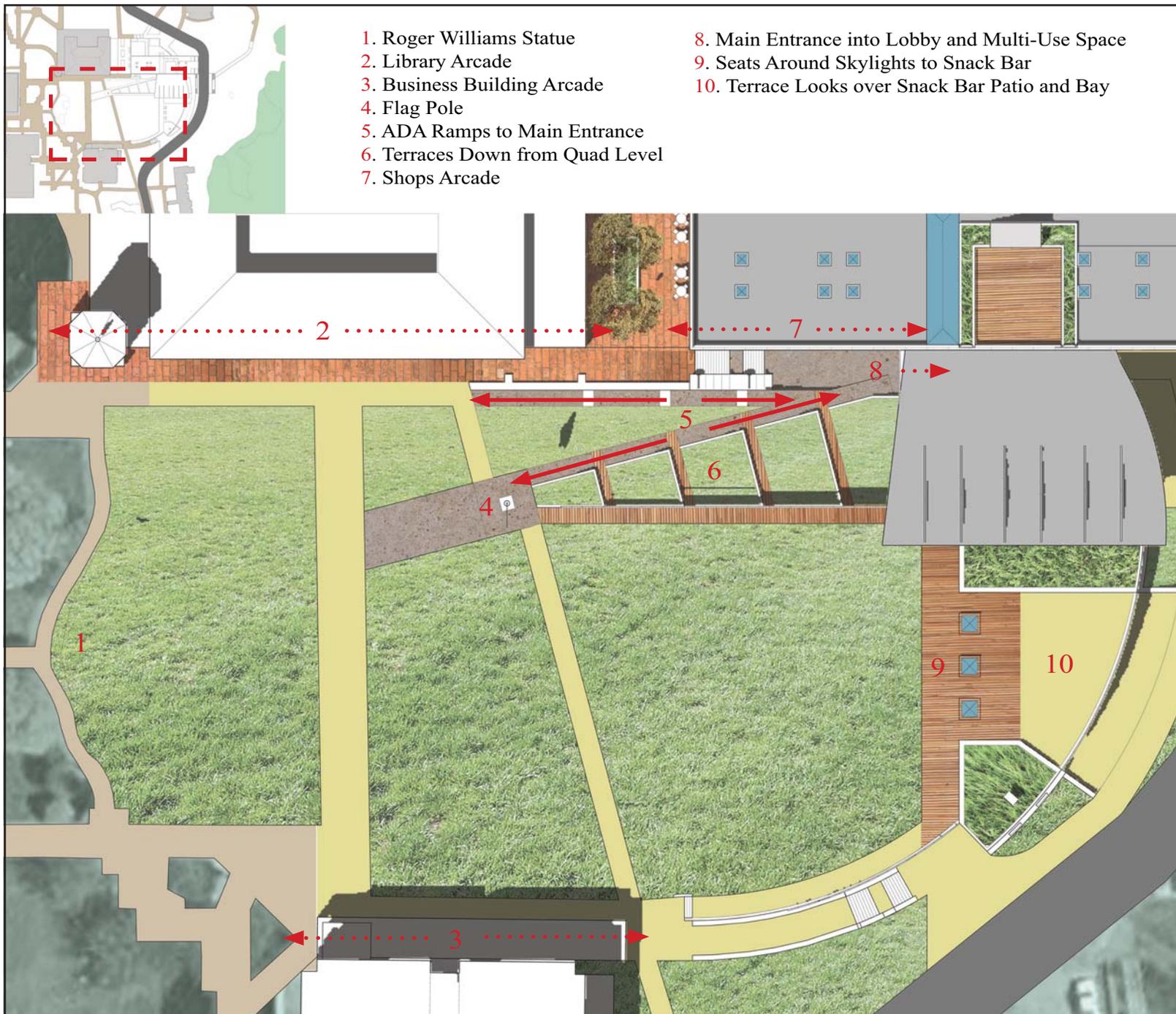


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 AN ALTERNATIVE STUDENT CENTER AT
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NORTH ELEVATION
 SOUTH FACING SECTION

FINAL DESIGN





A STUDENTS' REALM

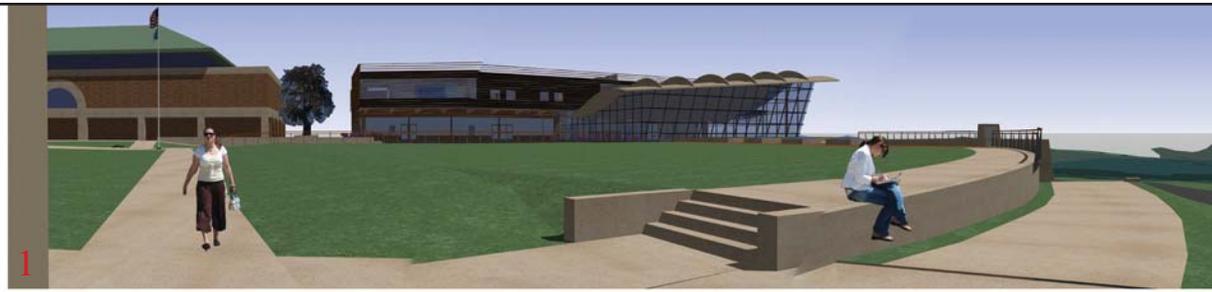
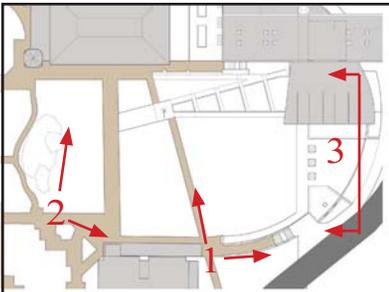
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 ROGER WILLIAMS UNIVERSITY

BRISTOL, RHODE ISLAND

EVAN CARROLL 2006

AREA DETAILS
 D'ANGELO COMMON
 PLAN



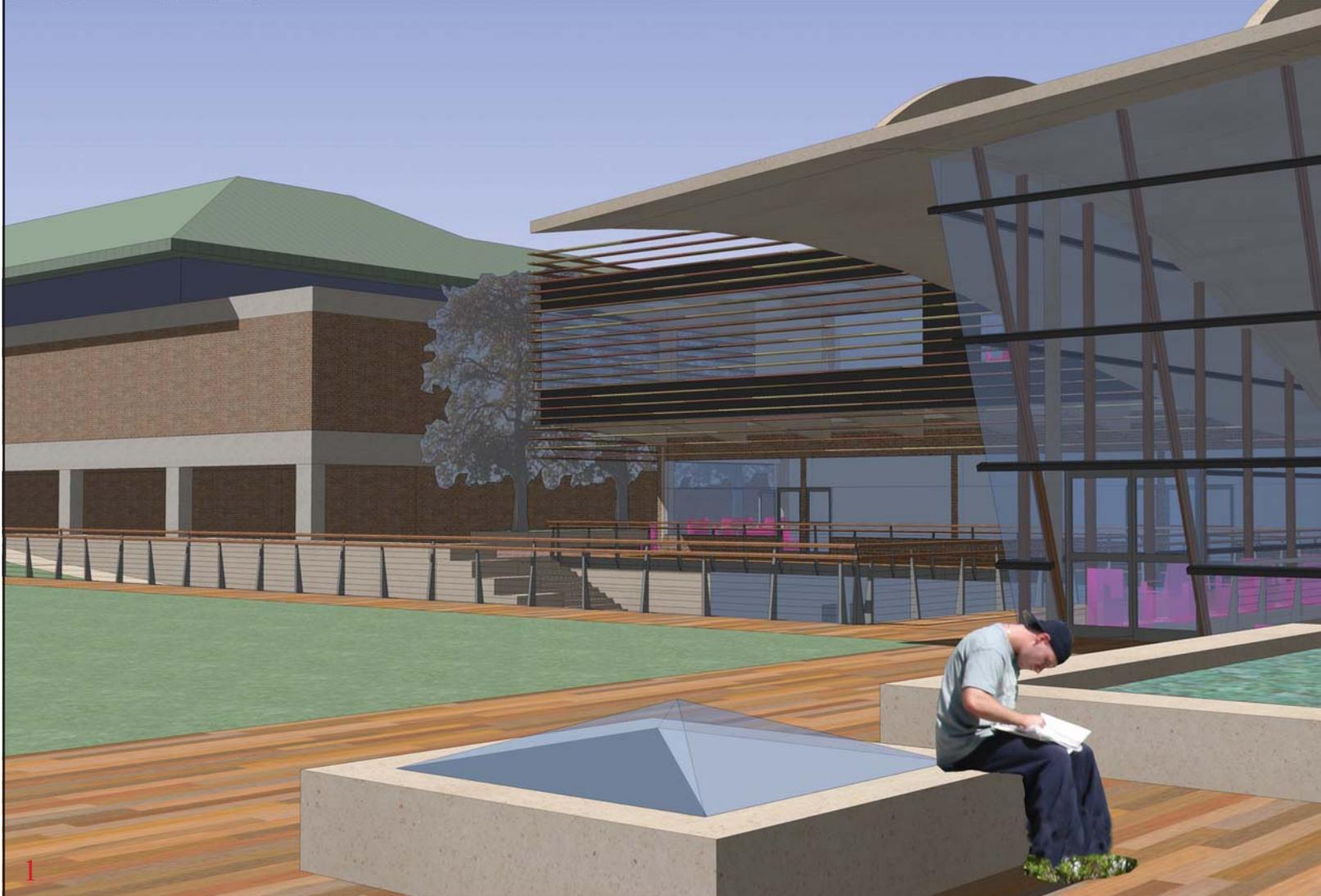
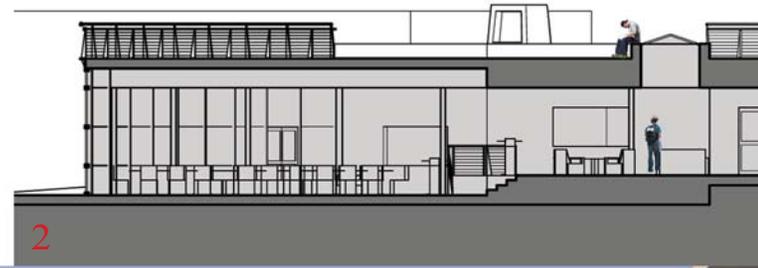
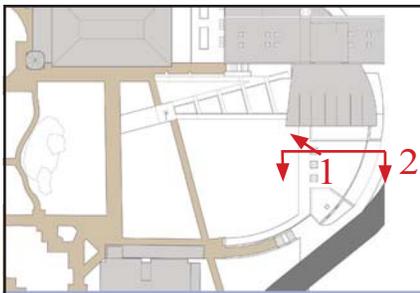


A STUDENTS' REALM
 AN ALTERNATIVE STUDENT CENTER AT
 ROGER WILLIAMS UNIVERSITY
 BRISTOL, RHODE ISLAND
 EVAN CARROLL 2006

AREA DETAILS
D'ANGELO COMMON
 SECTION AND PANORAMICS

FINAL DESIGN



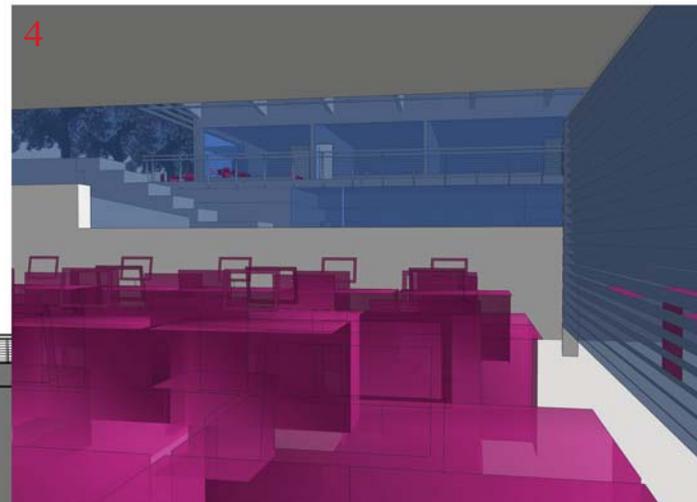
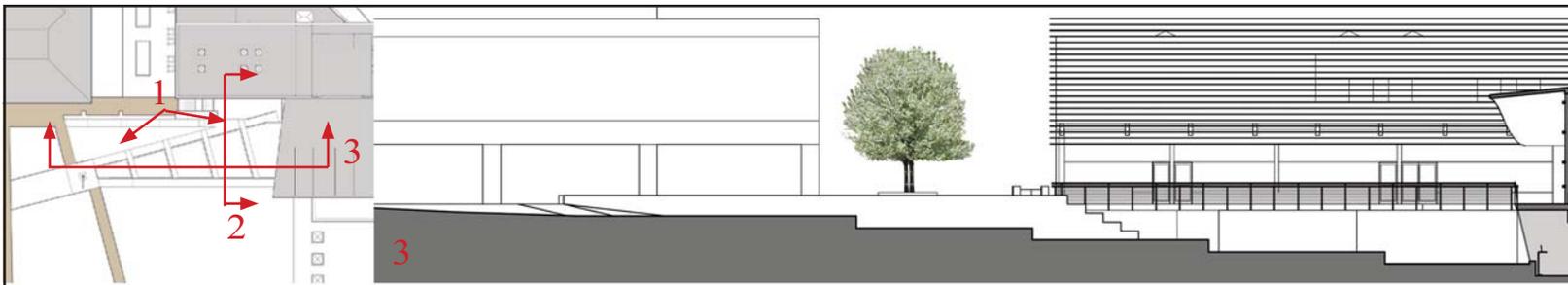


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 BRISTOL, RHODE ISLAND
 EVAN CARROLL 2006

AREA DETAILS
D'ANGELO COMMON
 SECTION AND PERSPECTIVE

FINAL DESIGN



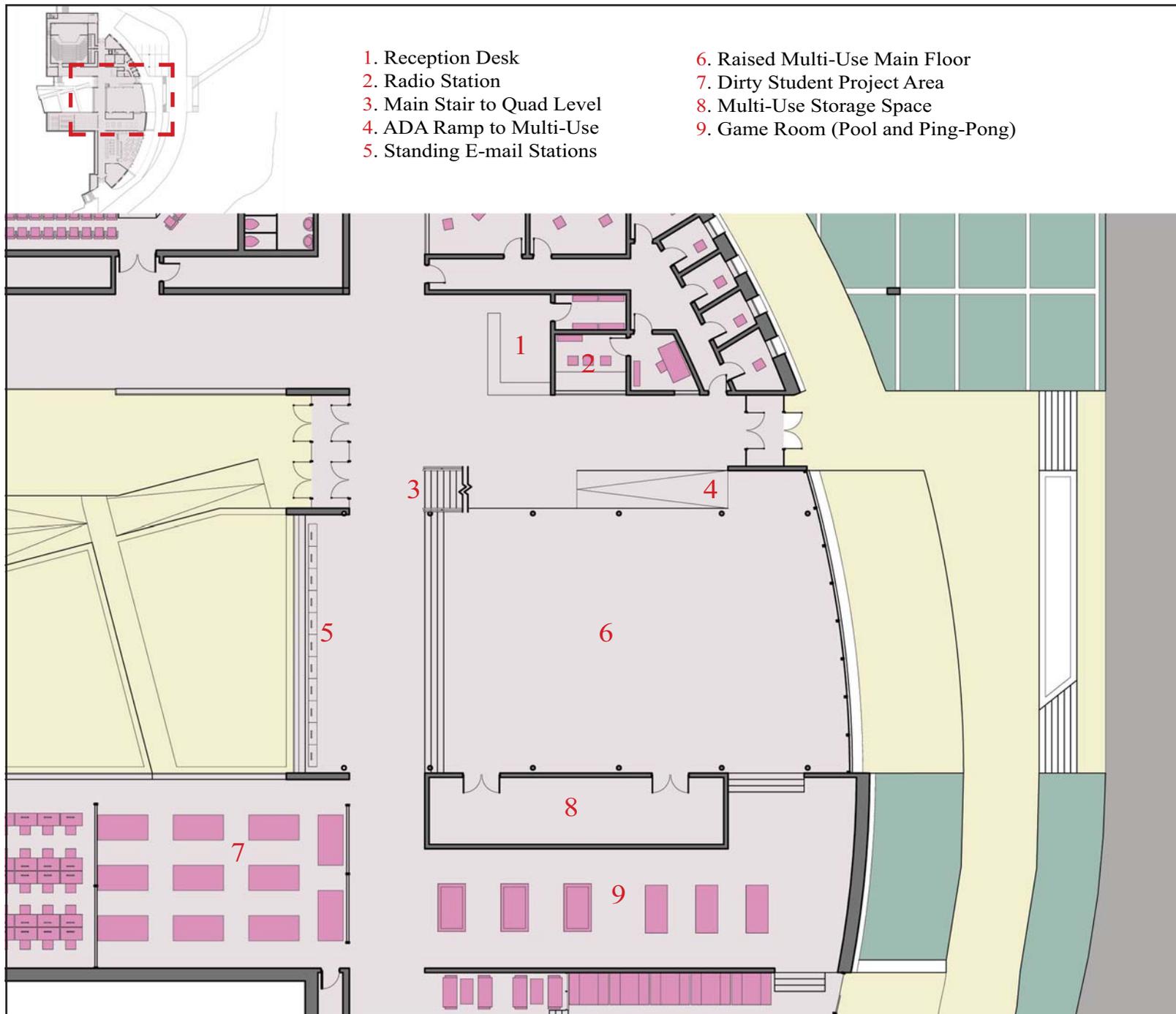


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 AN ALTERNATIVE STUDENT CENTER AT
 ROGER WILLIAMS UNIVERSITY
 BRISTOL, RHODE ISLAND
 EVAN CARROLL 2006

AREA DETAILS
MAIN ENTRANCE RAMP
 SECTIONS AND PERSPECTIVES

FINAL DESIGN





1. Reception Desk
2. Radio Station
3. Main Stair to Quad Level
4. ADA Ramp to Multi-Use
5. Standing E-mail Stations

6. Raised Multi-Use Main Floor
7. Dirty Student Project Area
8. Multi-Use Storage Space
9. Game Room (Pool and Ping-Pong)

A STUDENTS' REALM

AN ALTERNATIVE STUDENT CENTER AT
ROGER WILLIAMS UNIVERSITY

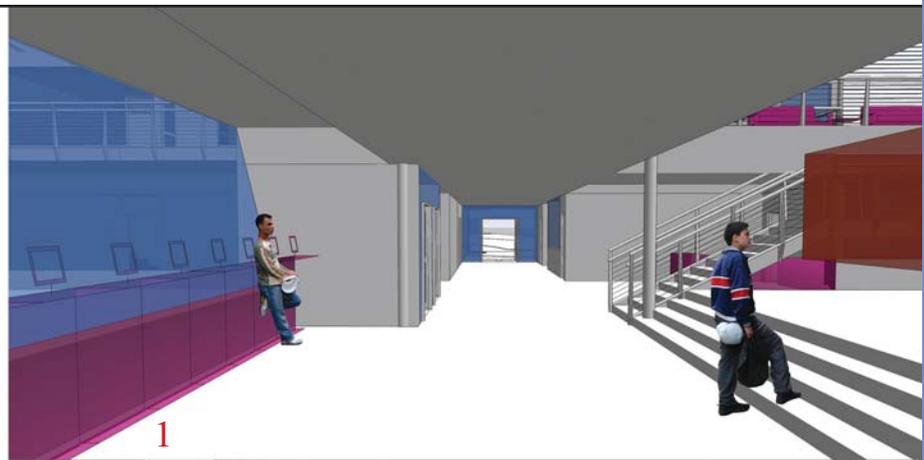
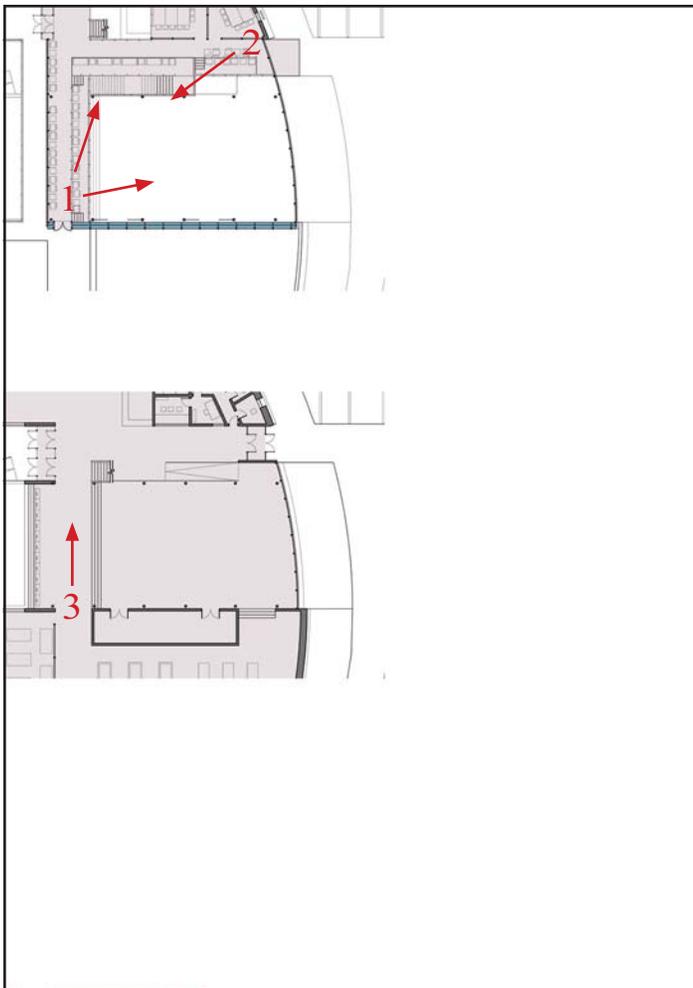
BRISTOL, RHODE ISLAND

EVAN CARROLL 2006

AREA DETAILS
MULTI-USE SPACE
PLAN

FINAL DESIGN



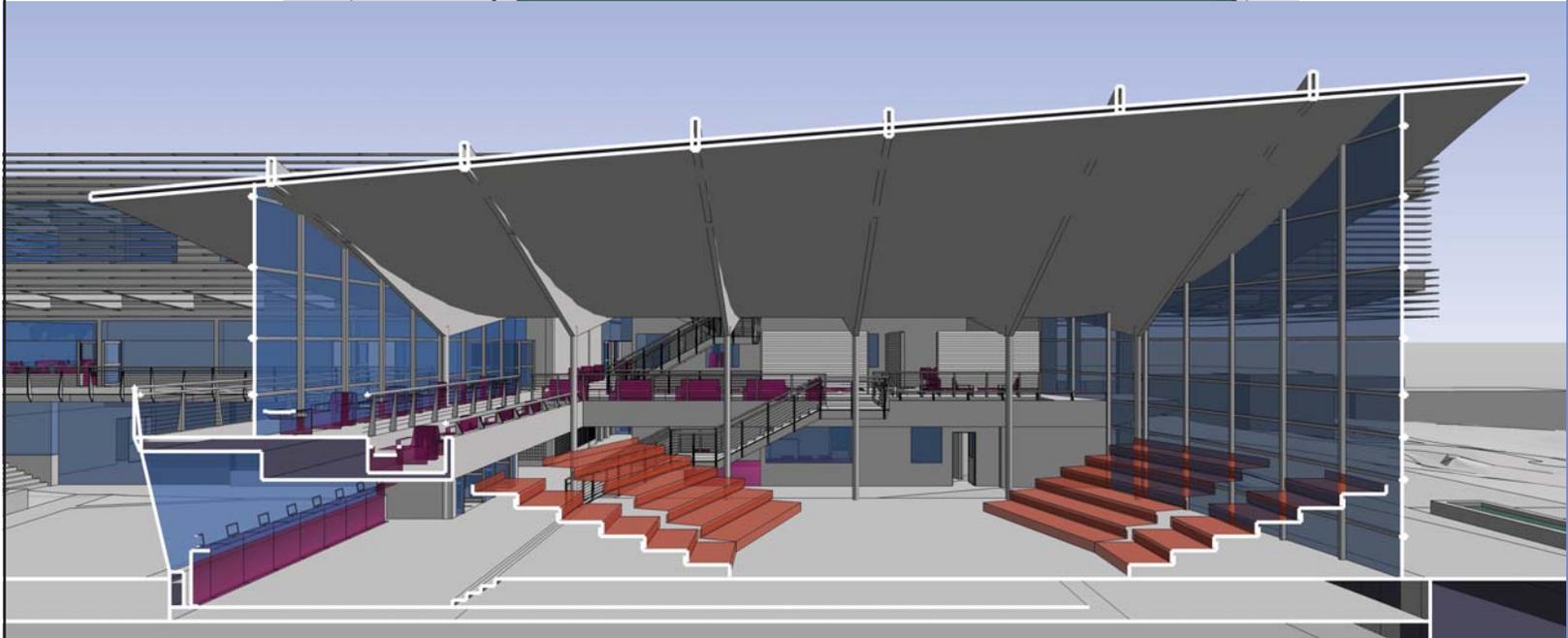


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 AN ALTERNATIVE STUDENT CENTER AT
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 BRISTOL, RHODE ISLAND
 EVAN CARROLL 2006

AREA DETAILS
 MULTI-USE SPACE
 PERSPECTIVES

FINAL DESIGN



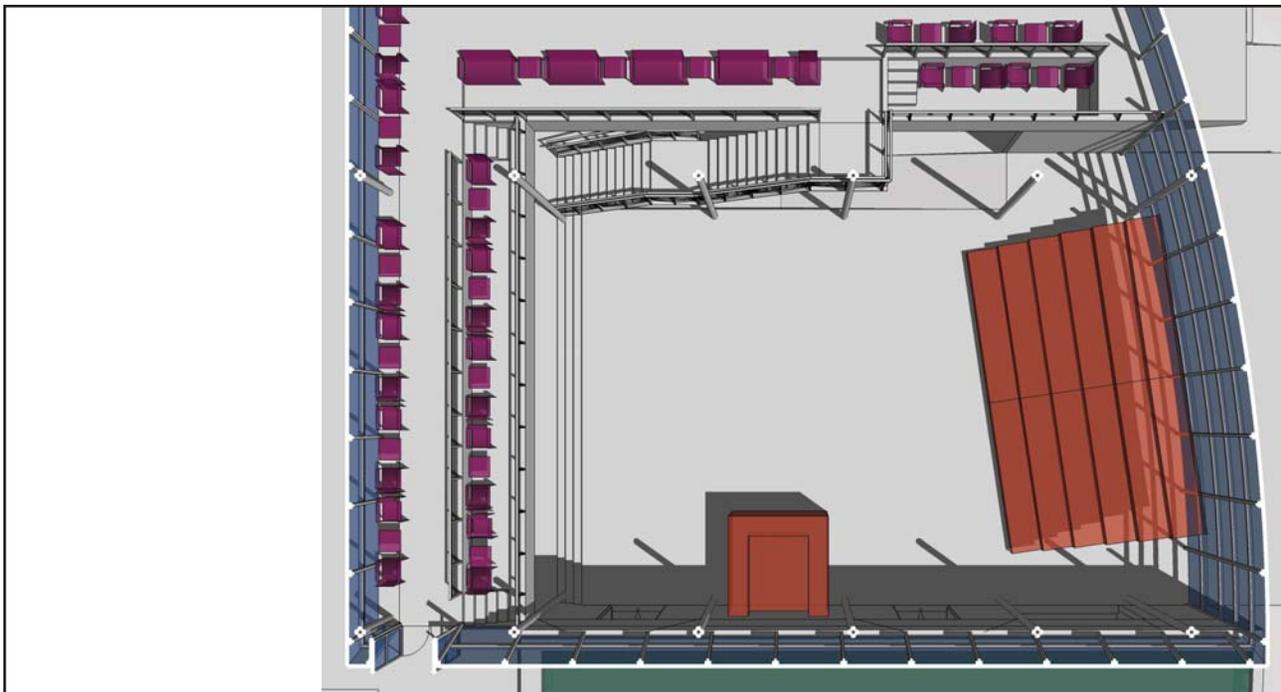


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 ROGER WILLIAMS UNIVERSITY
 BRISTOL, RHODE ISLAND
 EVAN CARROLL 2006

AREA DETAILS
MULTI-USE SPACE
 DANCE OR THEATER PERFORMANCE

FINAL DESIGN



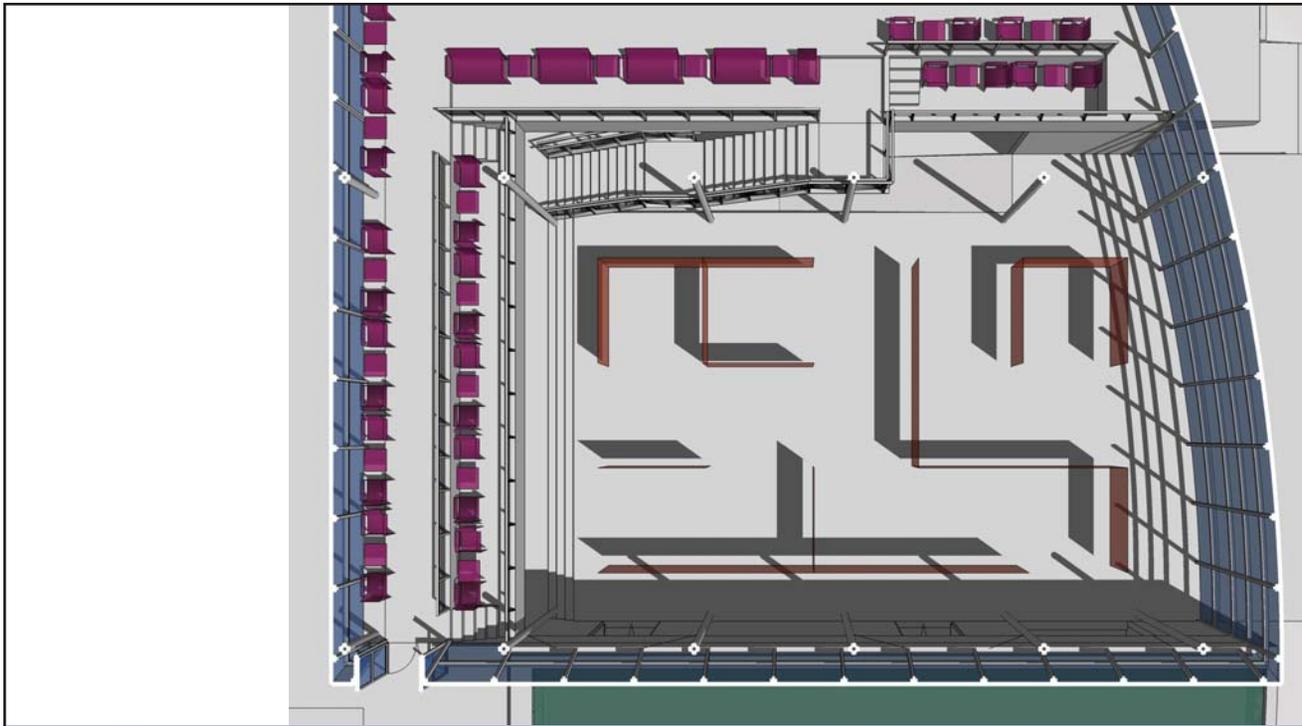


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 AN ALTERNATIVE STUDENT CENTER AT
 ROGER WILLIAMS UNIVERSITY
 BRISTOL, RHODE ISLAND
 EVAN CARROLL 2006

AREA DETAILS
 MULTI-USE SPACE
 DANCE WITH DJ

FINAL DESIGN



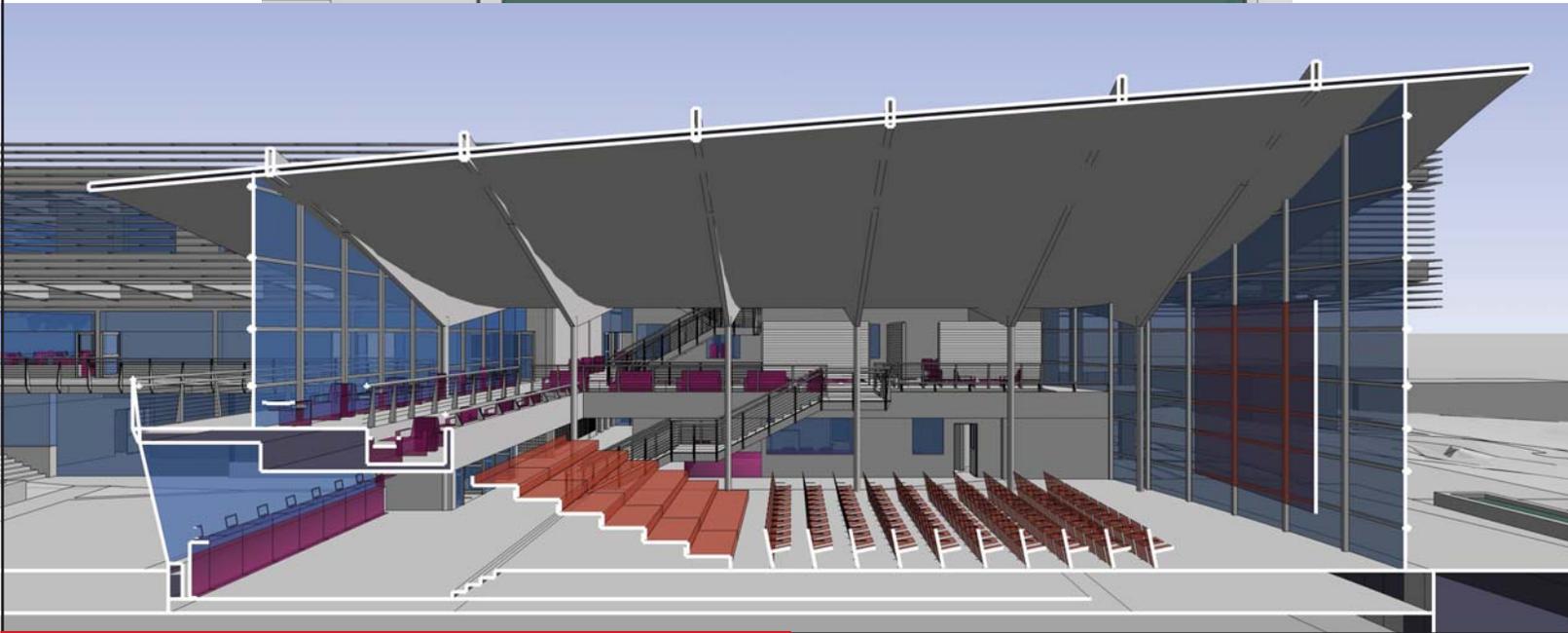


A STUDENTS' REALM
 AN ALTERNATIVE STUDENT CENTER AT
 ROGER WILLIAMS UNIVERSITY
 BRISTOL, RHODE ISLAND
 EVAN CARROLL 2006

AREA DETAILS
 MULTI-USE SPACE
 EXHIBIT

FINAL DESIGN



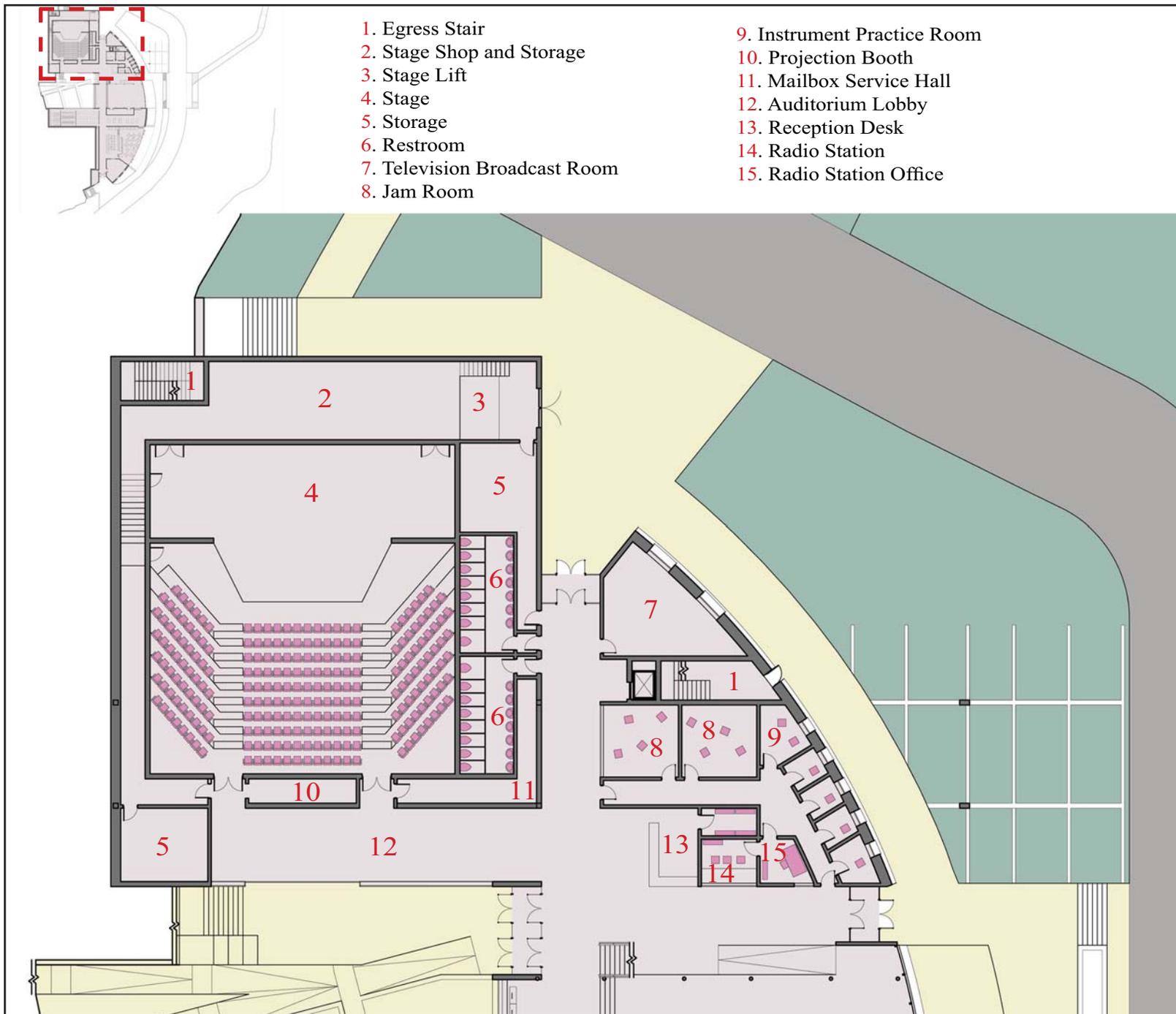


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 BRISTOL, RHODE ISLAND
 EVAN CARROLL 2006

AREA DETAILS
 MULTI-USE SPACE
 MOVIE OR LECTURE

FINAL DESIGN





1. Egress Stair
2. Stage Shop and Storage
3. Stage Lift
4. Stage
5. Storage
6. Restroom
7. Television Broadcast Room
8. Jam Room

9. Instrument Practice Room
10. Projection Booth
11. Mailbox Service Hall
12. Auditorium Lobby
13. Reception Desk
14. Radio Station
15. Radio Station Office

A STUDENTS' REALM
 AN ALTERNATIVE STUDENT CENTER AT
 ROGER WILLIAMS UNIVERSITY

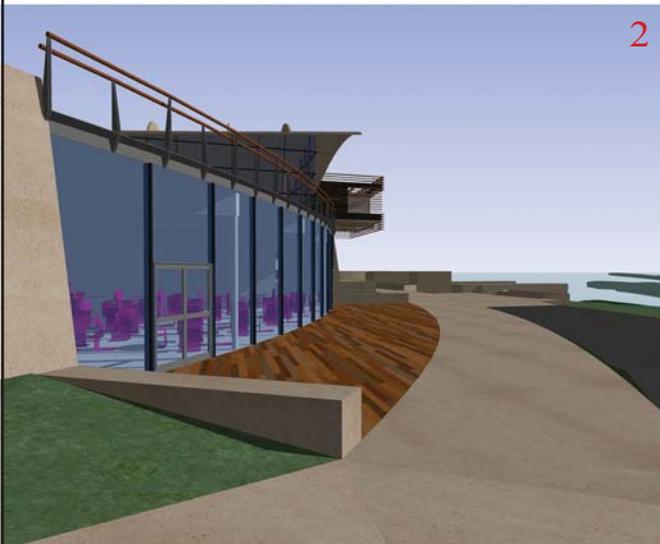
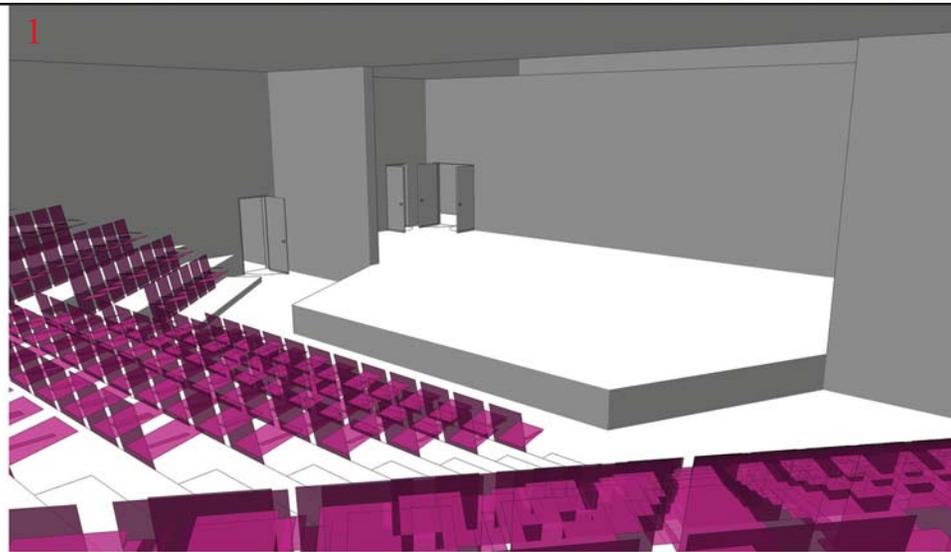
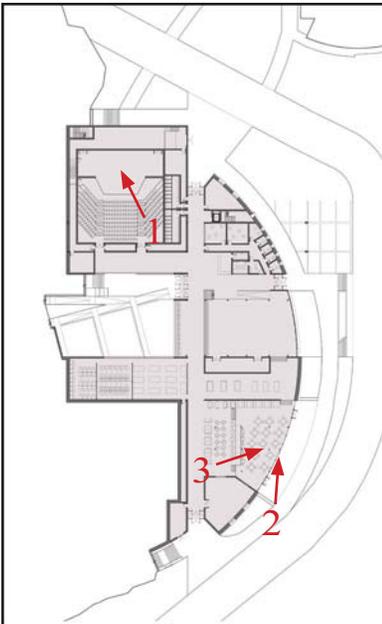
BRISTOL, RHODE ISLAND

EVAN CARROLL 2006

AREA DETAILS
 AUDITORIUM AND AUDIO/VISUAL
 ARTS AREAS

FINAL DESIGN



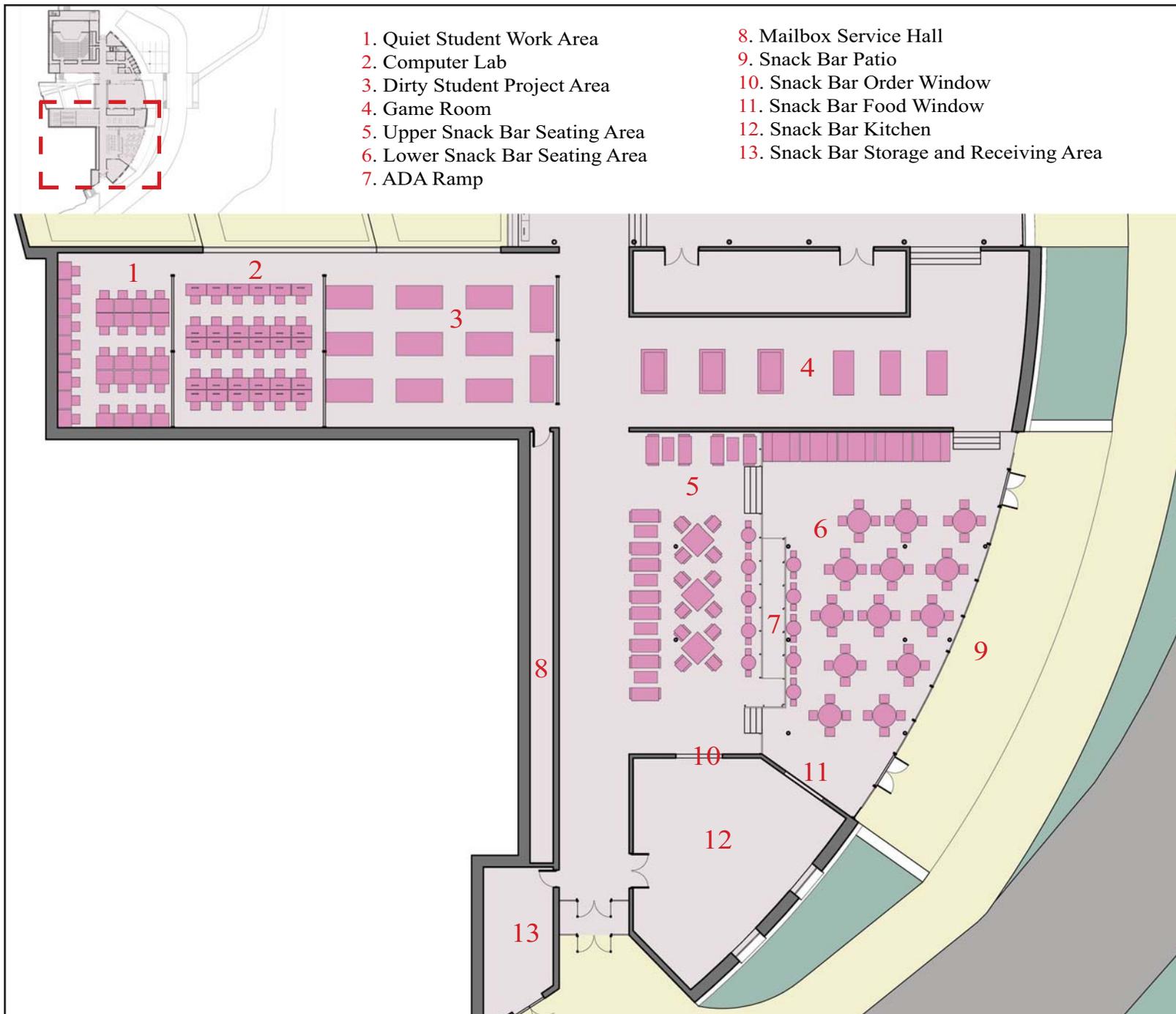


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 AN ALTERNATIVE STUDENT CENTER AT
 ROGER WILLIAMS UNIVERSITY
 BRISTOL, RHODE ISLAND
 EVAN CARROLL 2006

AREA DETAILS
AUDITORIUM AND SNACK BAR
 PERSPECTIVES

FINAL DESIGN





1. Quiet Student Work Area
2. Computer Lab
3. Dirty Student Project Area
4. Game Room
5. Upper Snack Bar Seating Area
6. Lower Snack Bar Seating Area
7. ADA Ramp
8. Mailbox Service Hall
9. Snack Bar Patio
10. Snack Bar Order Window
11. Snack Bar Food Window
12. Snack Bar Kitchen
13. Snack Bar Storage and Receiving Area

A STUDENTS' REALM

AN ALTERNATIVE STUDENT CENTER AT
ROGER WILLIAMS UNIVERSITY

BRISTOL, RHODE ISLAND

EVAN CARROLL 2006

AREA DETAILS
SNACK BAR
PLAN

FINAL DESIGN





- 1. Egress Stair
- 2. Indoor Mechanical Room
- 3. Outdoor Mechanical Room
- 4. Hair Salon
- 5. Storage Room
- 6. Global Programs Office
- 7. Global Programs Reception Desk
- 8. Outdoor Cafe Area
- 9. Cafe
- 10. Copy Shop
- 11. Art Supply Store
- 12. Grocery Store
- 13. Club Office
- 14. Club Meeting Room
- 15. Retail Area Arcade

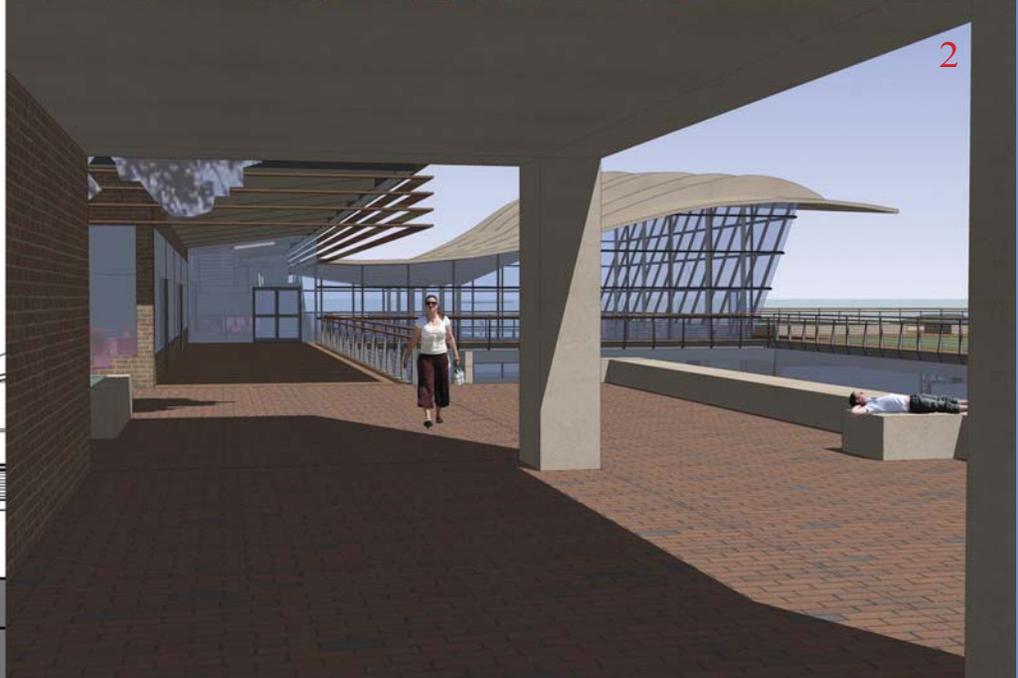
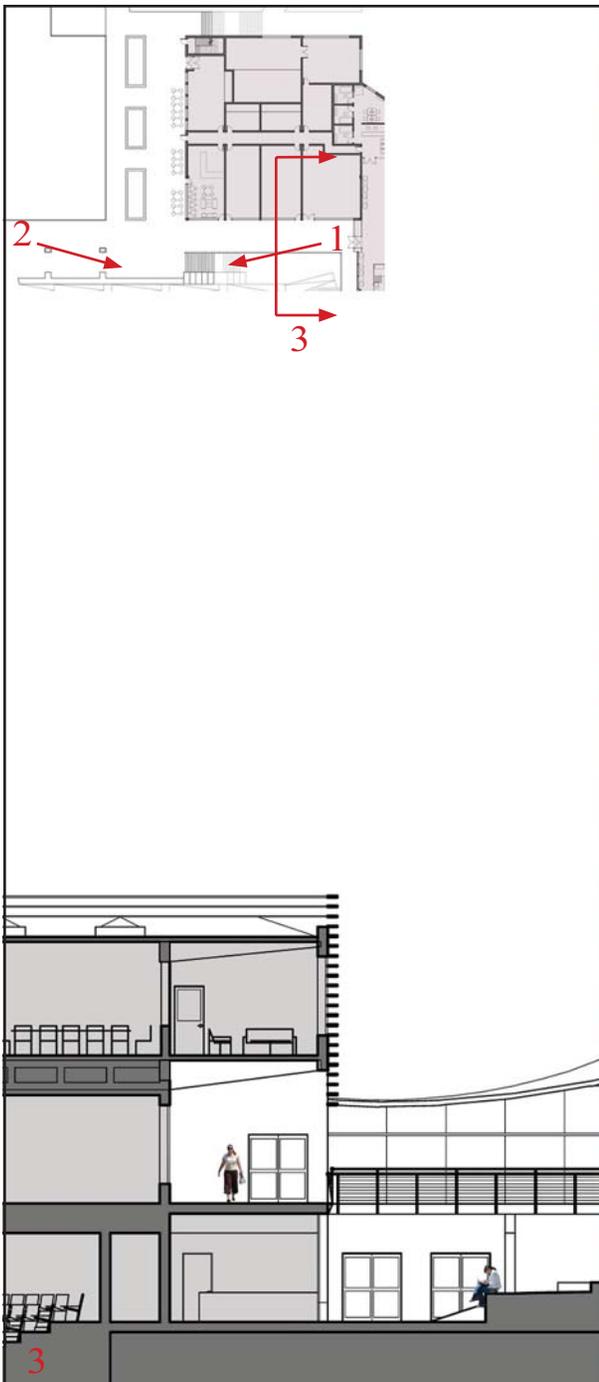


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 ROGER WILLIAMS UNIVERSITY
 BRISTOL, RHODE ISLAND
 EVAN CARROLL 2006

AREA DETAILS
 QUAD LEVEL
 PLAN

FINAL DESIGN



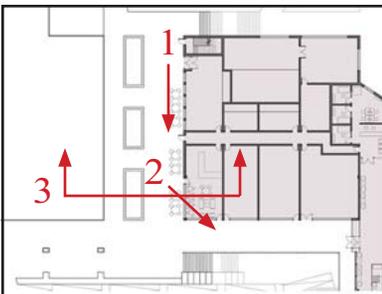


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 AN ALTERNATIVE STUDENT CENTER AT
 ROGER WILLIAMS UNIVERSITY
 BRISTOL, RHODE ISLAND
 EVAN CARROLL 2006

AREA DETAILS
 RETAIL ARCADE
 PERSPECTIVES AND SECTION

FINAL DESIGN



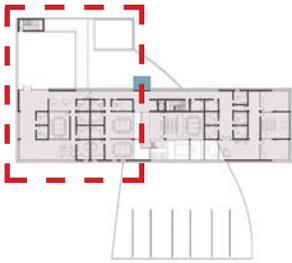


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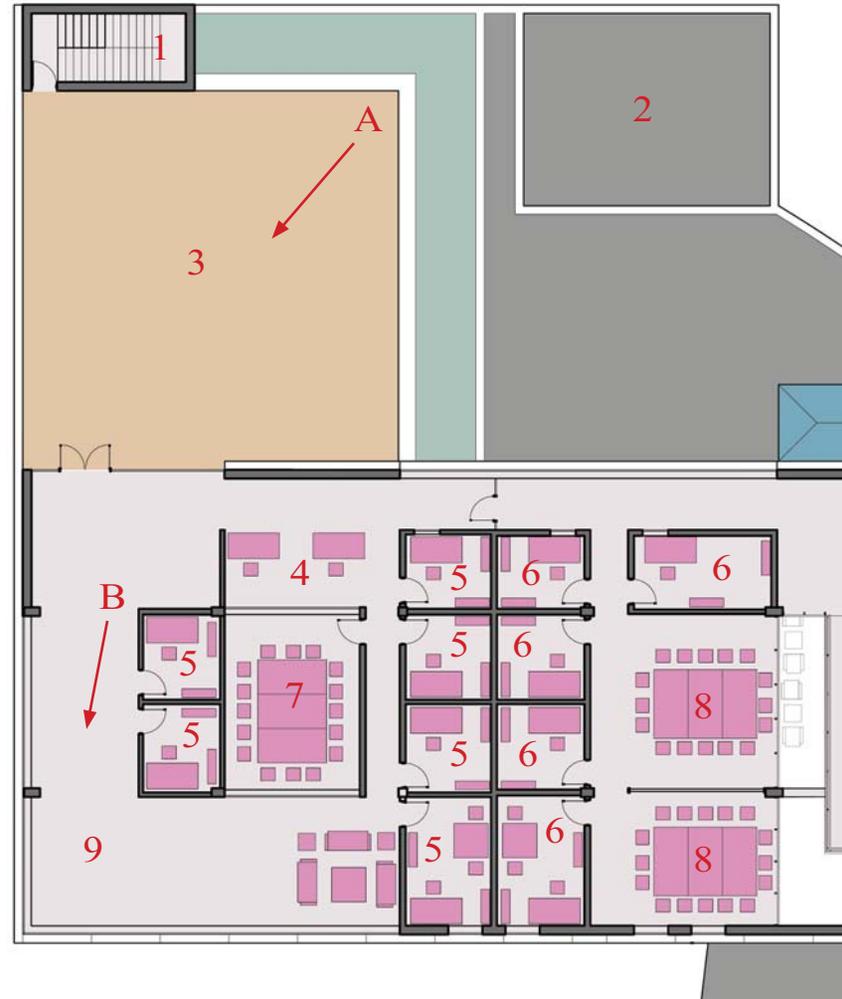
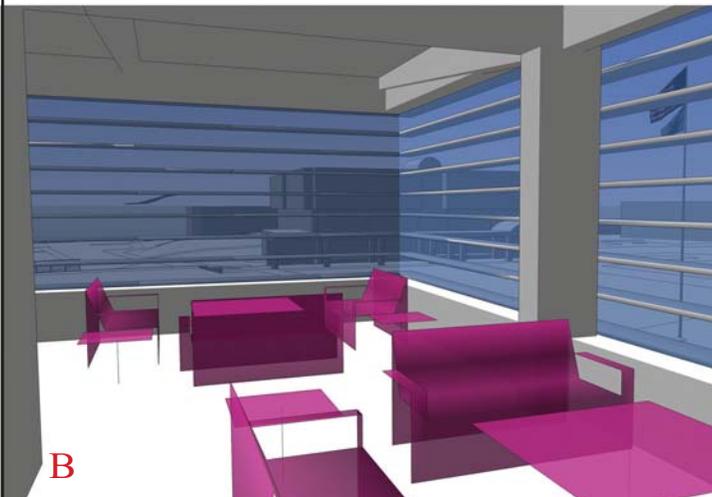
AREA DETAILS
CAFE STREET
 PERSPECTIVES AND SECTION

FINAL DESIGN





- 1. Egress Stair
- 2. Open to Mechanical Space Below
- 3. Multi-Cultural Center Patio
- 4. Multi-Cultural Center Reception
- 5. Multi-Cultural Center Office
- 6. Student Club Office
- 7. Multi-Cultural Center Classroom
- 8. Club Meeting Area
- 9. Multi-Cultural Center Lounge



A STUDENTS' REALM
 AN ALTERNATIVE STUDENT CENTER AT
 ROGER WILLIAMS UNIVERSITY
 BRISTOL, RHODE ISLAND
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AREA DETAILS
 MULTI-CULTURAL CENTER
 PLAN





A STUDENTS' REALM

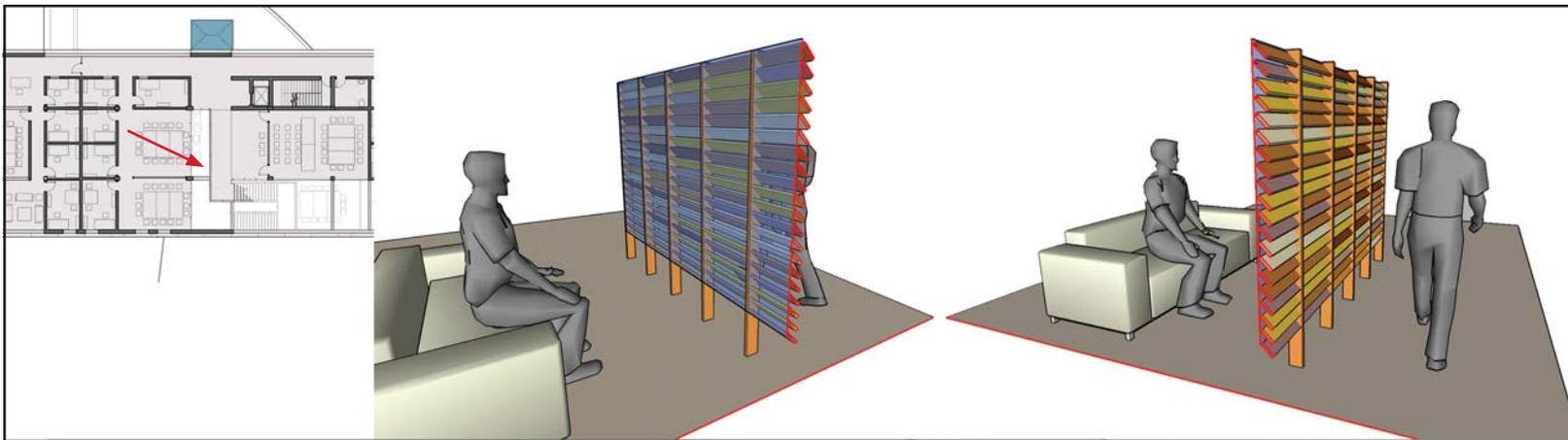
AN ALTERNATIVE STUDENT CENTER AT
 ROGER WILLIAMS UNIVERSITY

BRISTOL, RHODE ISLAND

EVAN CARROLL 2006

AREA DETAILS
 UPPER LEVEL
 PLAN



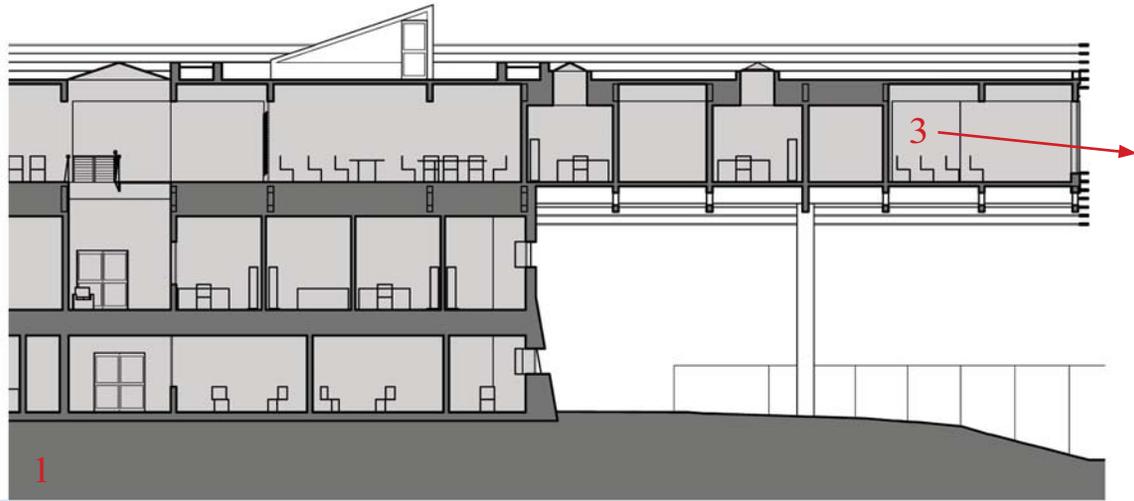
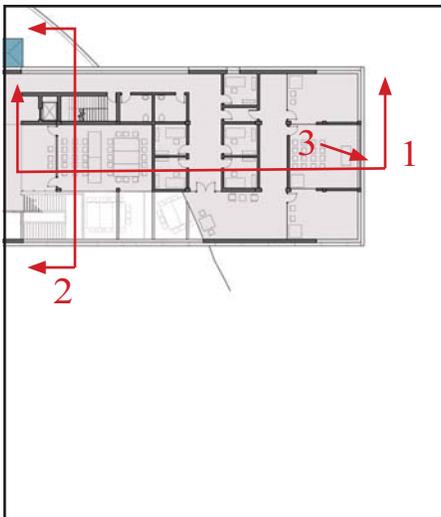


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 AN ALTERNATIVE STUDENT CENTER AT
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 BRISTOL, RHODE ISLAND
 EVAN CARROLL 2006

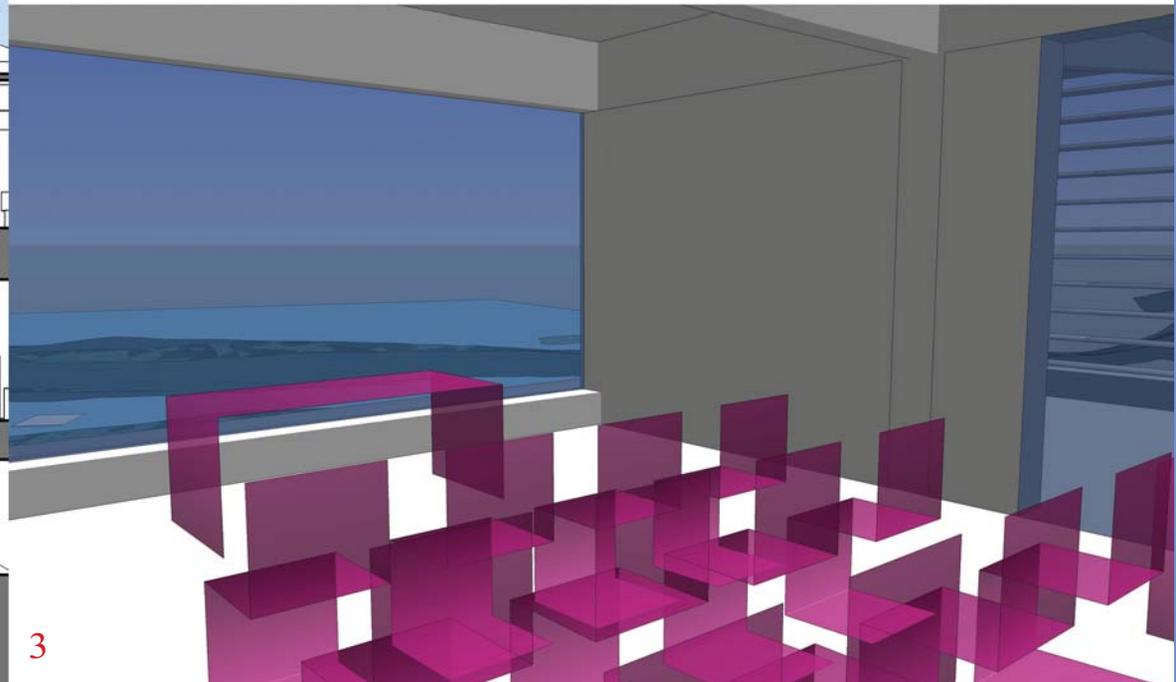
AREA DETAILS
STUDENT MEETING AREA
 PERSPECTIVE AND DIAGRAM

FINAL DESIGN





2



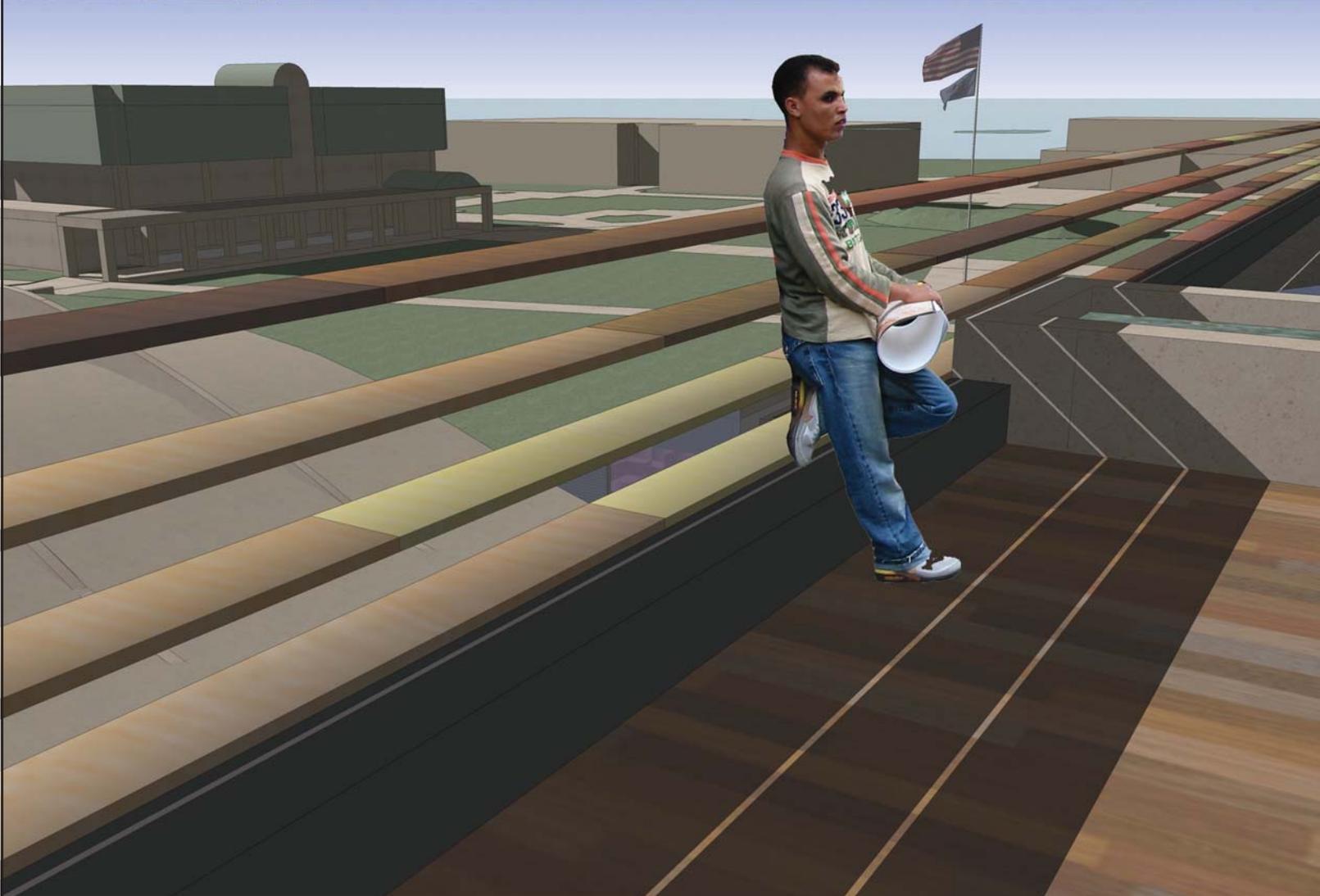
3

A STUDENTS' REALM
 AN ALTERNATIVE STUDENT CENTER AT
 ROGER WILLIAMS UNIVERSITY
 BRISTOL, RHODE ISLAND
 EVAN CARROLL 2006

AREA DETAILS
PRAYER AND MEDITATION SPACE
 PERSPECTIVE AND SECTIONS

FINAL DESIGN





A STUDENTS' REALM

AN ALTERNATIVE STUDENT CENTER AT
ROGER WILLIAMS UNIVERSITY

BRISTOL, RHODE ISLAND

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AREA DETAILS
ROOF TERRACE
PERSPECTIVE

FINAL DESIGN



ROOF:

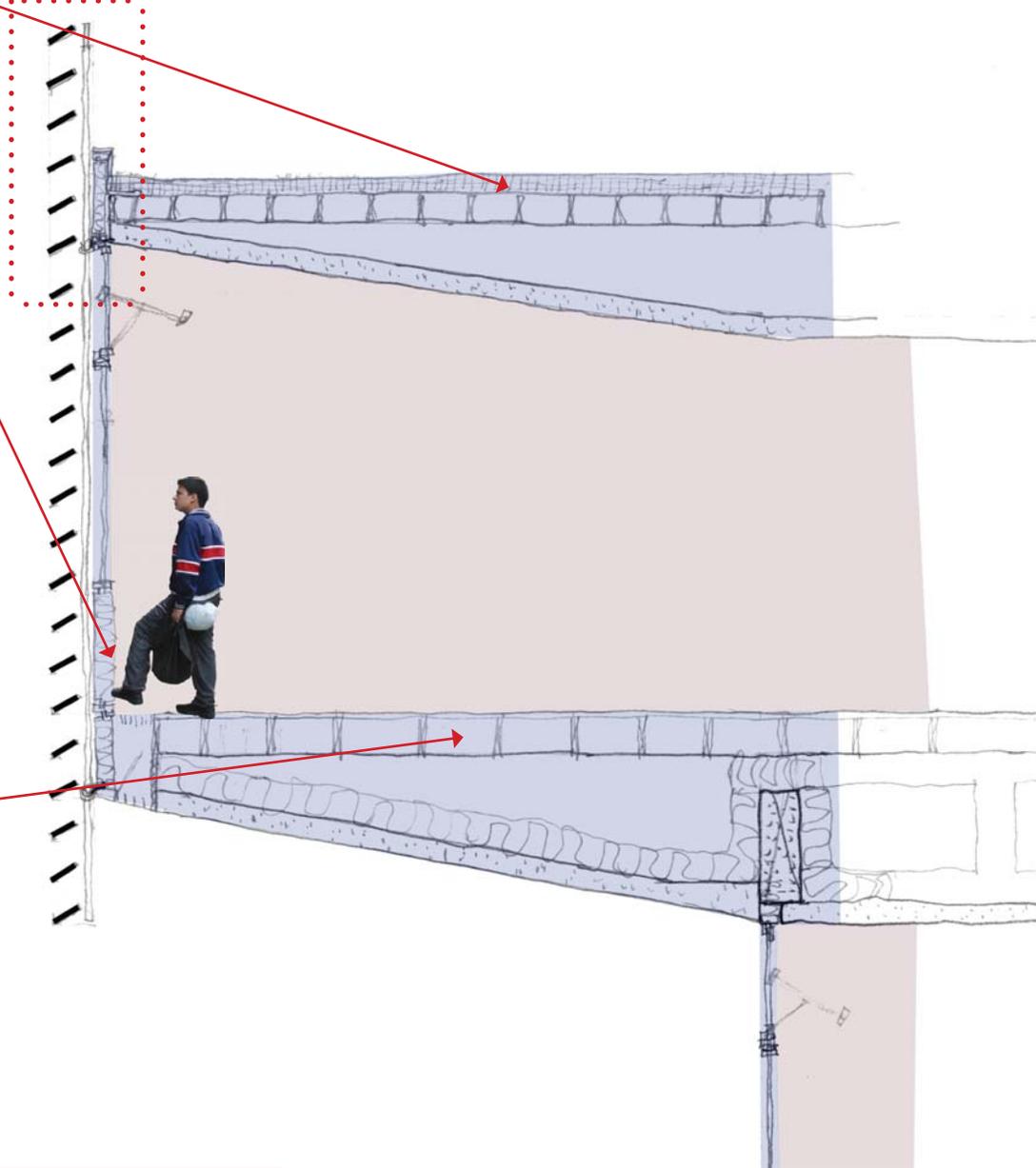
- 1" DIA PEBBLES
- ROOFING MEMBRANE
- 6" RIGID INSULATION
- 3/4" PLYWOOD
- 2X8 JOIST SUB-STRUCTURE
- SITE-CAST CONCRETE GIRDER CANTILEVER
- 6" CONCRETE SLAB CEILING WITH COOLING PIPES

THIRD FLOOR WALL:

- 2X8 WOOD LOUVRES
- DIE-CAST STEEL LOUVRE SUPPORTS
- 2" DIA STEEL PIPE
- PRESSURE PLATE GLASS
- FACADE WITH:
 - STATIONARY WINDOW
 - INSULATED PANEL
 - OPERABLE WINDOW

THIRD FLOOR:

- FINISH SURFACE
- RAISED FLOOR DECKING
- 2X10 JOIST SUB-STRUCTURE
- SITE-CAST CONCRETE GIRDER CANTILEVER
- BATT INSULATION
- 6" CONCRETE SLAB



A STUDENTS' REALM

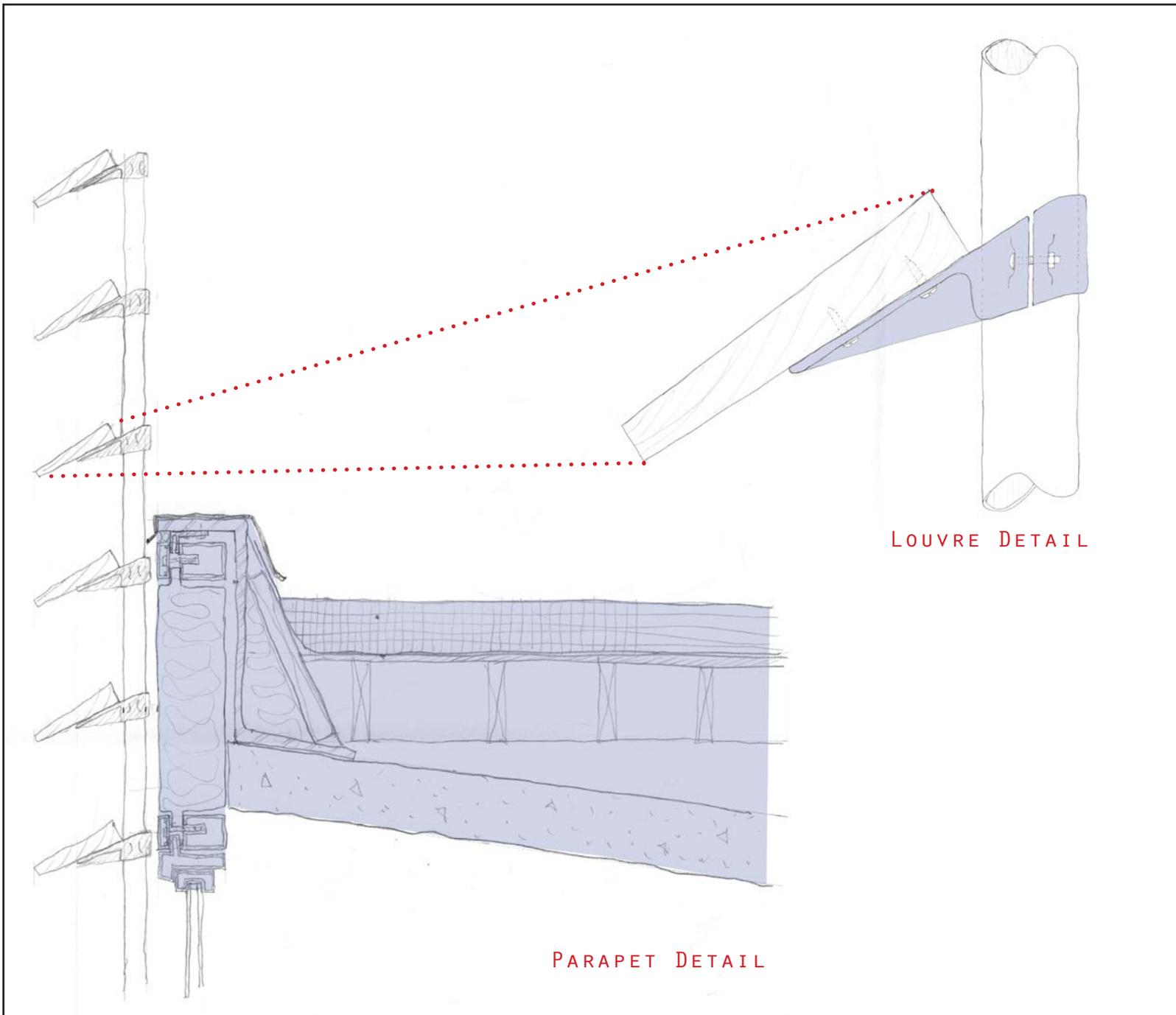
AN ALTERNATIVE STUDENT CENTER AT
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BRISTOL, RHODE ISLAND

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WALL SECTION AND DETAILS





LOUVRE DETAIL

PARAPET DETAIL

A STUDENTS' REALM
AN ALTERNATIVE STUDENT CENTER AT
ROGER WILLIAMS UNIVERSITY
BRISTOL, RHODE ISLAND
EVAN CARROLL 2006

WALL SECTION AND DETAILS

SECOND FLOOR WALL:

FINISH EXTERIOR SURFACE
 2X6 STUD WALL
 WITH BATT INSUL.
 PRESSURE PLATE GLASS
 FACADE WITH:
 STATIONARY WINDOW
 OPERABLE WINDOW

SECOND FLOOR:

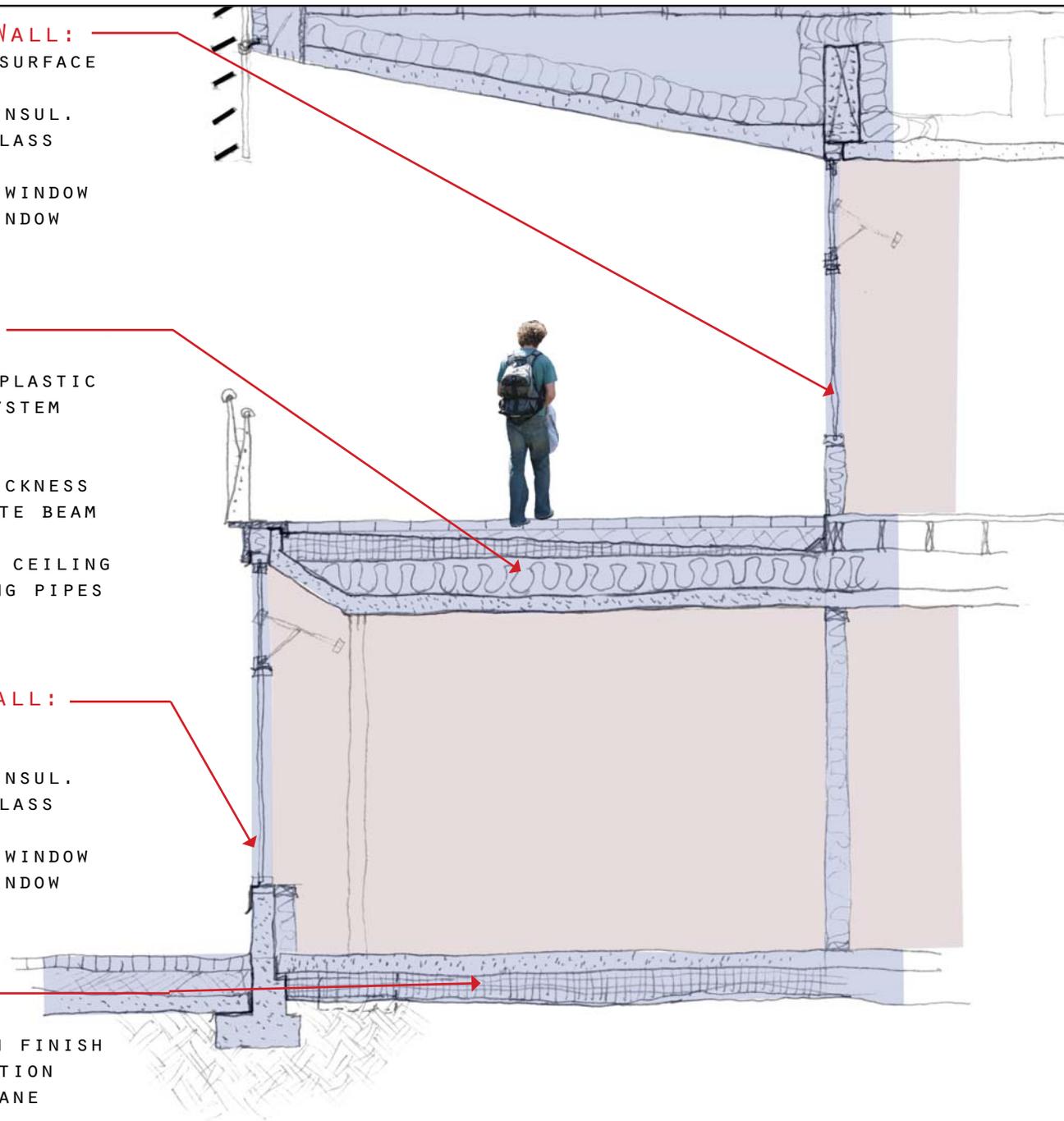
CONCRETE PAVERS
 WATER PERMEABLE PLASTIC
 SHIMMING SYSTEM
 ROOFING MEMBRANE
 RIGID INSULATION
 VARYING THICKNESS
 SITE-CAST CONCRETE BEAM
 BATT INSULATION
 6" CONCRETE SLAB CEILING
 WITH COOLING PIPES

FIRST FLOOR WALL:

8" CONCRETE BASE
 2X6 STUD WALL
 WITH BATT INSUL.
 PRESSURE PLATE GLASS
 FACADE WITH:
 STATIONARY WINDOW
 OPERABLE WINDOW

FIRST FLOOR:

6" CONCRETE SLAB
 WITH POLISH FINISH
 12" RIGID INSULATION
 WATERPROOF MEMBRANE

**A STUDENTS' REALM**

AN ALTERNATIVE STUDENT CENTER AT
 ROGER WILLIAMS UNIVERSITY

BRISTOL, RHODE ISLAND

EVAN CARROLL 2006

WALL SECTION AND DETAILS

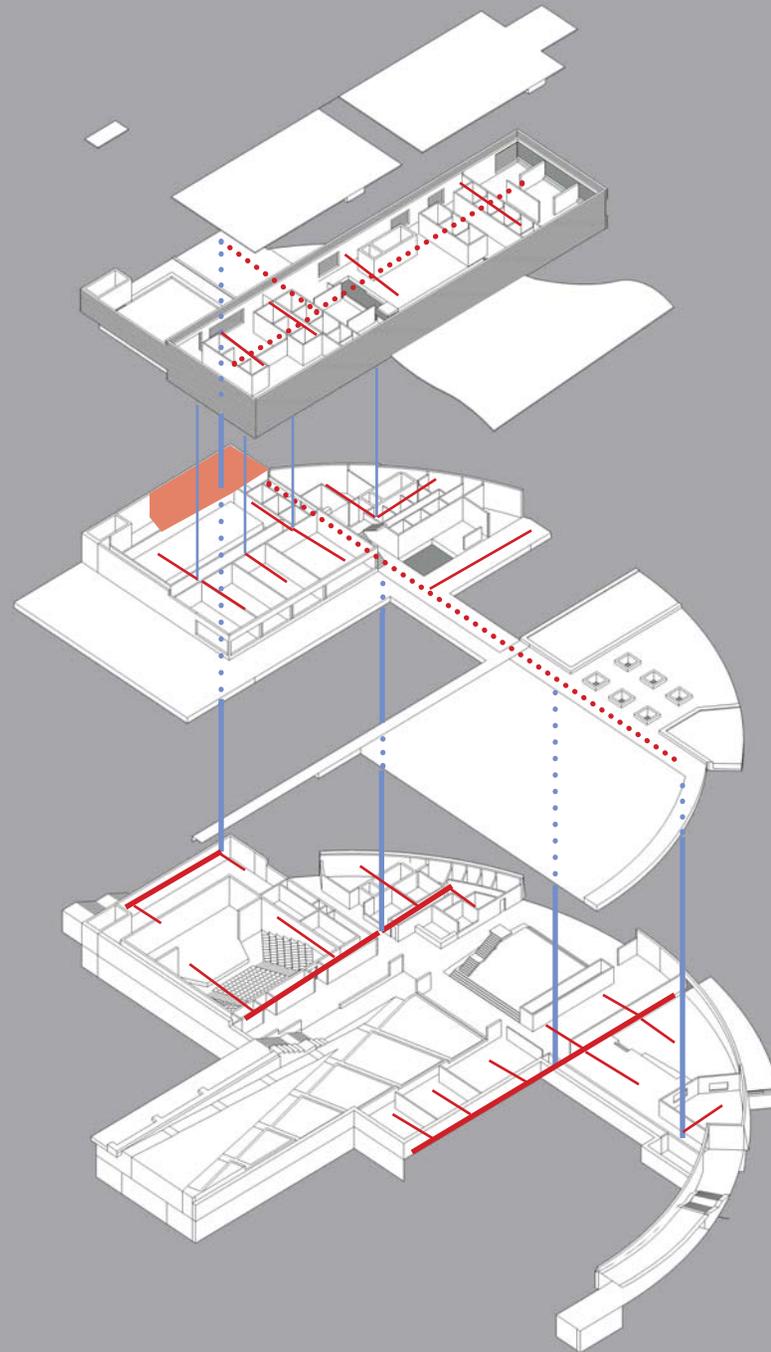
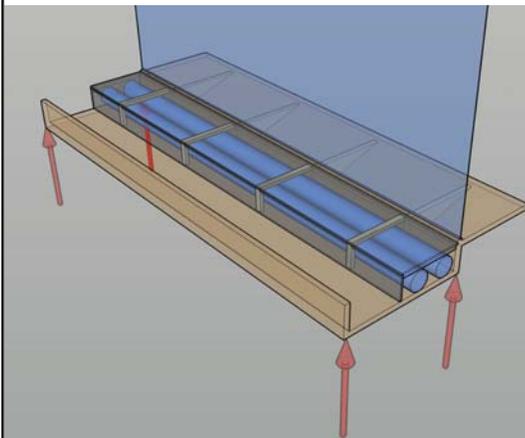


Mechanical System

Red lines move horizontally and blue lines move vertically. Dotted lines are either under floors or graphically hidden. The thinner lines are minor ducts, and the thicker lines are major arteries.

The mechanical system is a variable air volume forced-air system. The mechanical room is on the north side of the Center with access on the roof, if the entire unit needs replacing. The two major arteries are accounted for within the concrete structural system. One is shown by the dotted red line on the Upper Level, and the other is the dotted red line on the Quad Level.

Shown below is how the ducts are taken through the Multi-Use Space and over the main entrance.



A STUDENTS' REALM

AN ALTERNATIVE STUDENT CENTER AT
ROGER WILLIAMS UNIVERSITY

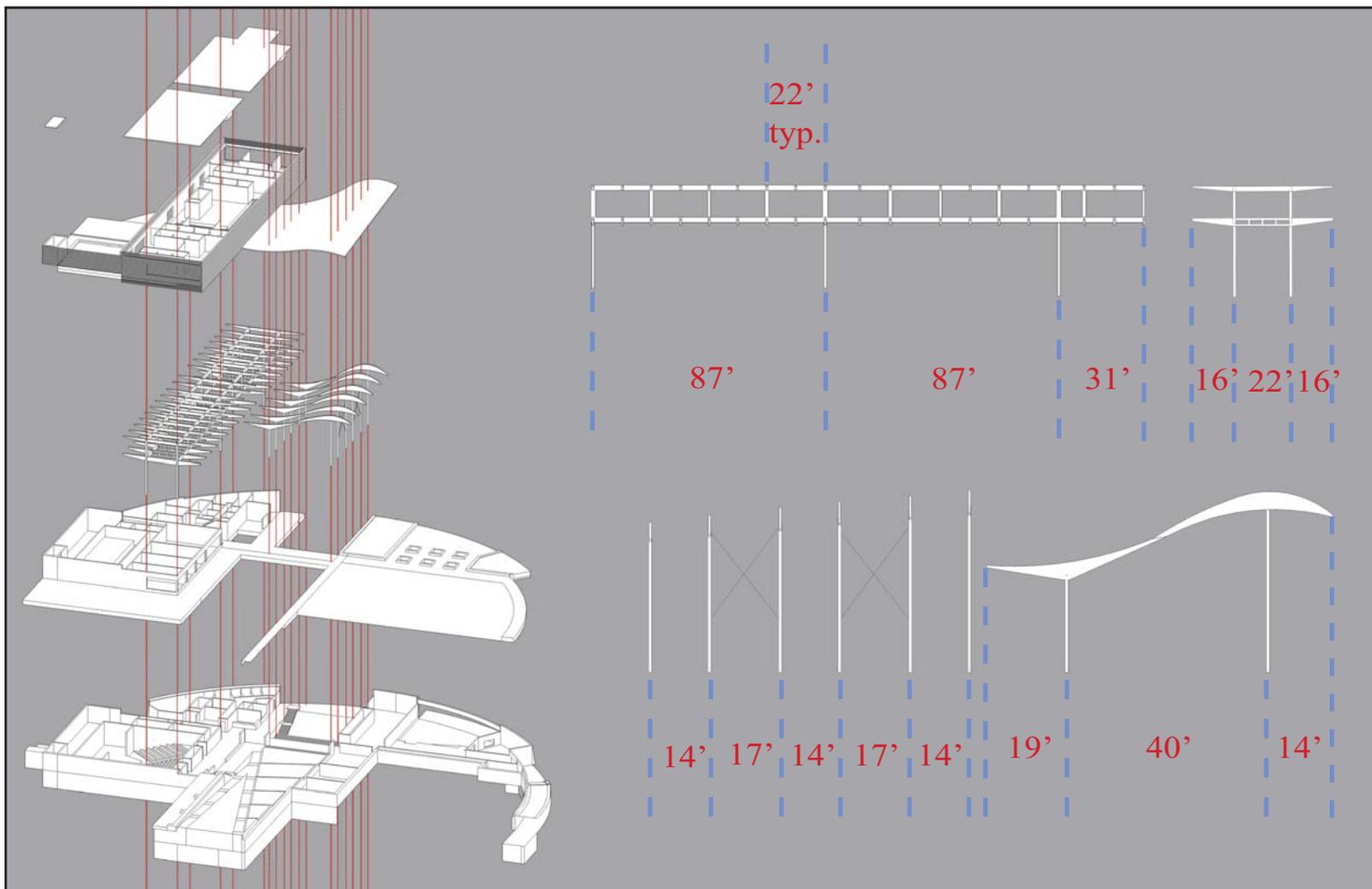
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MECHANICAL SYSTEM

FINAL DESIGN





Building Structure

The Student Center structure is site-cast concrete. There are two separate major structures that both involve cantilevering, making the structural package very expensive.

The cantilever section is a vierendeel truss with a height of 14 feet. This truss is supported in six places total. The small number of supports gives the lower levels of the Center a great deal of freedom for new kinds of spaces in the future.

The other structural system is more complex. It consists of tall braced columns that each support a tapered rib that in turn supports a concrete shell. The entire system gains rigidity from both the curvature of the shell and the bracing of the columns. The result of the use of this structure is a Multi-Use Space with a cathedral-like airiness.

A STUDENTS' REALM

AN ALTERNATIVE STUDENT CENTER AT
ROGER WILLIAMS UNIVERSITY

BRISTOL, RHODE ISLAND

EVAN CARROLL 2006

STRUCTURE DIAGRAM



Books:

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Terrence E. Milani and J. William Johnston, The College Union in the Year 2000, (San Francisco: Jossey-Bass, 1992), p-p

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"Roger Williams Junior College Picks Mount Hope Bay Shore Location," Special to the Herald News, Herald News, 28 May 1965, sec. E.

"Roger Williams Junior College Plans \$9 Million Plant," Bristol Phoenix, 28 May 1965.

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Carol J. Young, "A Campus-on-the-Bay Was Designed That Way," Providence Evening Bulletin, 4 June 1969, 1-2.

Diane J. Hinchcliffe, "Development – Not Just Expansion," Bristol Phoenix, 3 October 1969, 26.



Other Sources:

Roy Nirschel, "State of the University Address," 21 September 2005 [manuscript online]; available from <http://www.rwu.edu/About+RWU/Office+of+the+President/State+of+the+University.htm>

Students at Roger Williams University, Written Questionnaires, (15 November 2005).

Students (various) at Brown University and Rhode Island School of Design, Casual Interviews, (20 November 2005).

Richard D. Mitchell, (Executive Vice President and Chief Operating Officer), Formal conversation, (1 December 2005).

Square One Software, "The Weather Tool." The weather data file used with this program was found at: http://rredc.nrel.gov/solar/old_data/nsrdb/tmy2/State.html

Precedents:

Ewha Campus Center. Seoul, Korea. Dominique Perreault.

The McCormick Tribune Center. Illinois Institute of Technology, Chicago. OMA.

Shapiro Campus Center. Brandeis University, Waltham, Mass. Charles Rose Architects.



Person	be alone		group work		use computer		read		study		relax		eat		watch tv		make music		listen to music		be with friends		party
	place	time	place	time	place	time	place	time	place	time	place	time	place	time	place	time	place	time	place	time	place	time	place
	1	library	7	dorm	3	room	lots	library	5	library	8	room	1	cafe	10	room	1.5	n/a	0	room	lots	Campus	lots
2	room	3	library	4	room/library	lots	room/library	5	room/library	6	room	1	cafe	10	room	1	n/a	0	room	15	dorm	lots	bayside
3	library	7	n/a	0	dorm	10	room/library	8	library	6	room	2	cafe	3	room	1	n/a	0	room	1	gym	12	campus/bays
4	room	2	dorm	5	room	55	room	8	room	11	room	20	room	14	room	2	jam room	18	room	60	campus	lots	campus
5	room	lots	library	1	house	lots	room/library	some	campus	some	campus (ou	1	house/jazz	3	house	1	jam room/lots	campus	lots	campus	some	campus	
6	n/a	0	library	5	room	lots	library	10	library	lots	room	lots	cafe	10	room	10	n/a	0	room	lots	room	lots	campus
7	parking lot	6	n/a	0	room	6	library	3	room/library	6	room	lots	snack bar	3	room	2	n/a	0	room	lots	room	lots	bayside
8	room	3	library	1	room	1	room/library	1	room/library	2	room	3	cafe	1	room	1	n/a	0	campus	3	campus	3	campus
9	room	3	library	2	room/librar	6	library	3	room/librar	5	room	5	café/room	2	library	1	room	2	room	6	room	8	campus
10	room	4	engineering	2	room	8	library	1	library	3	room	1	café/room	2	room	1	room	2	room	4	campus	8	room
11	room	3	library	2	room/librar	8	library	2	room/librar	3.5	room	5	cafe	3	room	1	n/a	0	room	lots	dorm	10	campus
12	room	6	room	some	room	3	room	0.5	room	0.5	room	some	cafe	0.75	room	0.5	n/a	0	room	lots	campus	lots	room
13	room	3	library	3	room/librar	3	n/a	0	n/a	0	room	1	cafe	0.5	room	0.5	n/a	0	gym	1	campus	4	n/a
14	room	10	n/a	0	room	15	room	room	room	2	room	5	cafe	8	n/a	0	n/a	0	n/a	0	room	7	n/a
15	room	10	n/a	0	room	25	room	5	room	3	room	40	room	30	room	40	n/a	0	room	lots	room	lots	campus
16	room	2	engineering	7	business b	3	n/a	0	campus	some	campus	lots	cafe	16	room	5	n/a	0	campus	lots	campus	lots	campus
17	dorm	8	engineering	6	room/librar	10	room/library	8	campus	some	n/a	0	café	16	dorm	5.5	n/a	0	dorm	lots	campus	lots	campus
18	campus (o	2.5	library	8	room/arch	20	room	3.5	room/librar	some	n/a	0	arch buildi	some	room	some	n/a	0	campus	lots	campus	lots	off campus
19	gazibo	0.5	campus	0.5	dorm/librar	0.75	n/a	some	business b	3	beach	some	cafe	0.5	room	0.5	classroom	2	classroom	3	campus	lots	n/a
20	room/librar	30	library	2	room	21	library	14	classroom	some	gym/dorm	1.5	cafe	1		some	room/club	0.5	campus	lots	dorm	lots	off campus
21	apartment	14	library	3	apartment	28	apartment/c	21	apartment	7	apartment/c	18	off campus	14	apartment	14	n/a	0	campus	3	campus	8	campus/off-c
22	room	lots	library	lots	room	lots	library	little	library	little	room	little	room/snac	lots	room	lots	n/a	0	gym/library	lots	room	lots	dorm
23	car		n/a	0	room		library		library		room		snack bar		room		n/a	0	room		room		room
24	room		library/dorm		room		n/a	0	library		dorm		room/snack bar		dorm	some	n/a	0	car, room		campus	lots	campus
25	room	14	library	2	room	5	room	2	room	3	room	5	snack bar	2	room	2	n/a	0	dorm	4	dorm	6	dorm
26	room	10	library	1	room	3	room	1	room	3	dorm	2	snack bar	1.5	dorm	1	room	0.5	room	3	dorm	4	campus
27	room	little	library	little	room	lots	library	little	room	little	room	little	snack bar	lots	room	lots	n/a	0	room	lots	dorm	lots	bayside
28	room	little	dorm	little	room	lots	room/library	some	room	lots	room	lots	student un	lots	room	lots	n/a	0	dorm	lots	Campus	lots	bayside
29	room	2	library	1	room	3	room	1	room	2	room	1	snack bar	2	room	1	room	1	room	1	campus	16	campus
30	bathroom	1	library	2	room	5	room/library	2	room/librar	3	dorm	3	snack bar	lots	room	1	n/a	0	room	5	campus	lots	almeida
31	room	little	library/busi	some	room	lots	room	little	library	lots	room	lots	snack bar	lots	room	little	n/a	0	room	lots	campus	lots	almeida



Person	Party		Class	Major	Most Time Spent	Time spent in room?	more/less s/good	What do you want to get out of college?	Why did you choose RWU?	Comments
	place	time								
1	campus	8			room/gym	lots	less	education, Basketball	education, Basketball	
2	bayside	10			room	10/day	more	education, meet new people	campus, Basketball	
3	campus/bayside	4	Freshman	Biology	gym	2/day	less	education, become a doctor, grow up as an individual	pretty campus	
4	campus	10			room	8/day	less	further myself, become a better human	location, people	wants more time alone
5	campus	4		communic	campus	4/day	good	to learn, knowledge	I have no idea	
6	campus	lots	Freshman	education	dorm	some	good	higher level of education	campus	
7	bayside	lots	Freshman	business	dorm	lots	good	start future	environment	
8	campus	5	Freshman	undeclare	dorm	lots	good	to succeed in life	I don't know	
9	campus	6	Freshman	psych/edu	library	some	more	education, meet new people	location, small school	
10	room	6	Freshman	creative w	library	some	more	education	location, education	
11	campus	12	Freshman	elementar	room	lots	less	to be a teacher, education, prepare for the real world	atmosphere, education	
12	room	lots	Freshman	constructi	dorm	lots		graduate, get a job, have fun	great campus	
13	n/a	0	Freshman	chemistry	dorm	lots	good	I have to, education	beautiful campus	
14	n/a	0	Freshman	criminal ju	dorm	80		army officers must have degrees	?	
15	campus	15	Freshman	undeclare	dorm	70	good	I have to be at college, education	it's closest	
16	campus	8	Freshman	engineerin	dorm	lots	good	to not be in the real world yet, education, friends, life-learning	scholarship, it's the right fit for me	
17	campus	16	Freshman	engineerin	dorm	52	good	to learn, education to make millions	pretty campus, different majors that I was interested in	
18	off campus	1	fifth year	architectu	arch building	14		to learn, become a better designer	educational program	
19	n/a	0						to have good career in the future	size, location, major	Eating outside would be fun
20	off campus	8			library, gym	50	more	to get a bachelors of science, learn awareness of myself	scholarship	
21	campus/off-cam	5	Freshman		classrooms	45	good	get a degree, make new friends, learn language, have a new experience, get degree to work and be more independent	to study and live with wife who goes here	commuter and international stud
22	dorm	lots	junior	Biology	room			to get money and a job		
23	room		junior	legal stud	room/work	lots	less	to get a job	the campus	
24	campus	lots	junior	marketing	bed/library	lots	less	to get a decent job	the view	
25	dorm	6	Freshman	undeclare	dorm	lots	less	to see what I want to do with my life	not too big, not too small	
26	campus	lots	Freshman	undeclare	dorm	some	good	to have the college experience and get a degree	the campus	
27	bayside	lots	Freshman	business	room	lots				
28	bayside	lots	Freshman	constructi	room, class	lots		to get a degree and have fun	location and major	
29	campus	6	Freshman	biology	dorm	some	more	to get an education and a job	I liked it	
30	almeida	5		undeclare	dorm	half	good	to get an education, a good job and make money	scholarships and aid	
31	almeida	5	Freshman	communic	dorm	lots	good	get a good education	the campus	



Evan Carroll, Architecture Thesis Project 2005/2006: The
Students' Realm

Where do you spend most of your time during a school week?

How much of your week do you spend in your room? Would you like to be there more, less or neither?

On the RWU campus (including your room), where are your favorite places to do the following things? How much time to you spend at these places?

Be alone? Time spent:
Place:
Other comments:

Do group work? Time spent:
Place:
Other comments:

Use a computer? Time spent:
Place:
Other comments:

Read? Time spent:
Place:
Other comments:

Study? Time spent:
Place:
Other comments:

Relax? Time spent:
Place:
Other comments:

Eat? Time spent:
Place:
Other comments:

Watch TV? Time spent:
Place:
Other comments:

Make music? Time spent:
Place:
Other comments:

Listen to music? Time spent:
Place:
Other comments:

Be with friends? Time spent:
Place:
Other comments:

Party? Time spent:
Place:
Other comments:

Why are you at college? What do you want to get out of it?

Why did you choose to go to RWU?

A STUDENTS' REALM

AN ALTERNATIVE STUDENT CENTER AT
ROGER WILLIAMS UNIVERSITY

BRISTOL, RHODE ISLAND

EVAN CARROLL 2006

APPENDIX II
QUESTIONNAIRE FORM

APPENDIX



Codes and Zoning

A STUDENTS' REALM

AN ALTERNATIVE STUDENT CENTER AT
ROGER WILLIAMS UNIVERSITY

BRISTOL, RHODE ISLAND

EVAN CARROLL 2006



Roger Williams University Zoning

The current, but not up to date, master plan for Roger Williams University includes plans for the following buildings:¹

1. New Facilities Management Center
2. New Residence Halls
3. New Parking Deck
4. Addition to Student Union

¹ Roger Williams University and Kaestle Boos Associates, Inc., Roger Williams University Campus Master Plan, March 28, 2003 Revised April 15, 2003.

5. New Academic Building
6. Addition to Performing Arts Center
7. New Boathouse
8. Revised Campus Entrance and Exits
9. Additional perimeter parking areas and new pedestrian zones
10. Preservation of open space with pathways along the waterfront and adjacent perimeter wetlands, views to the water, views to Mount Hope Bridge and Library Clock Tower.



A STUDENTS' REALM

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BRISTOL, RHODE ISLAND

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ROGER WILLIAMS
UNIVERSITY ZONING



The zones on this map are based in the regulations made by the Coastal Resources Management Council.

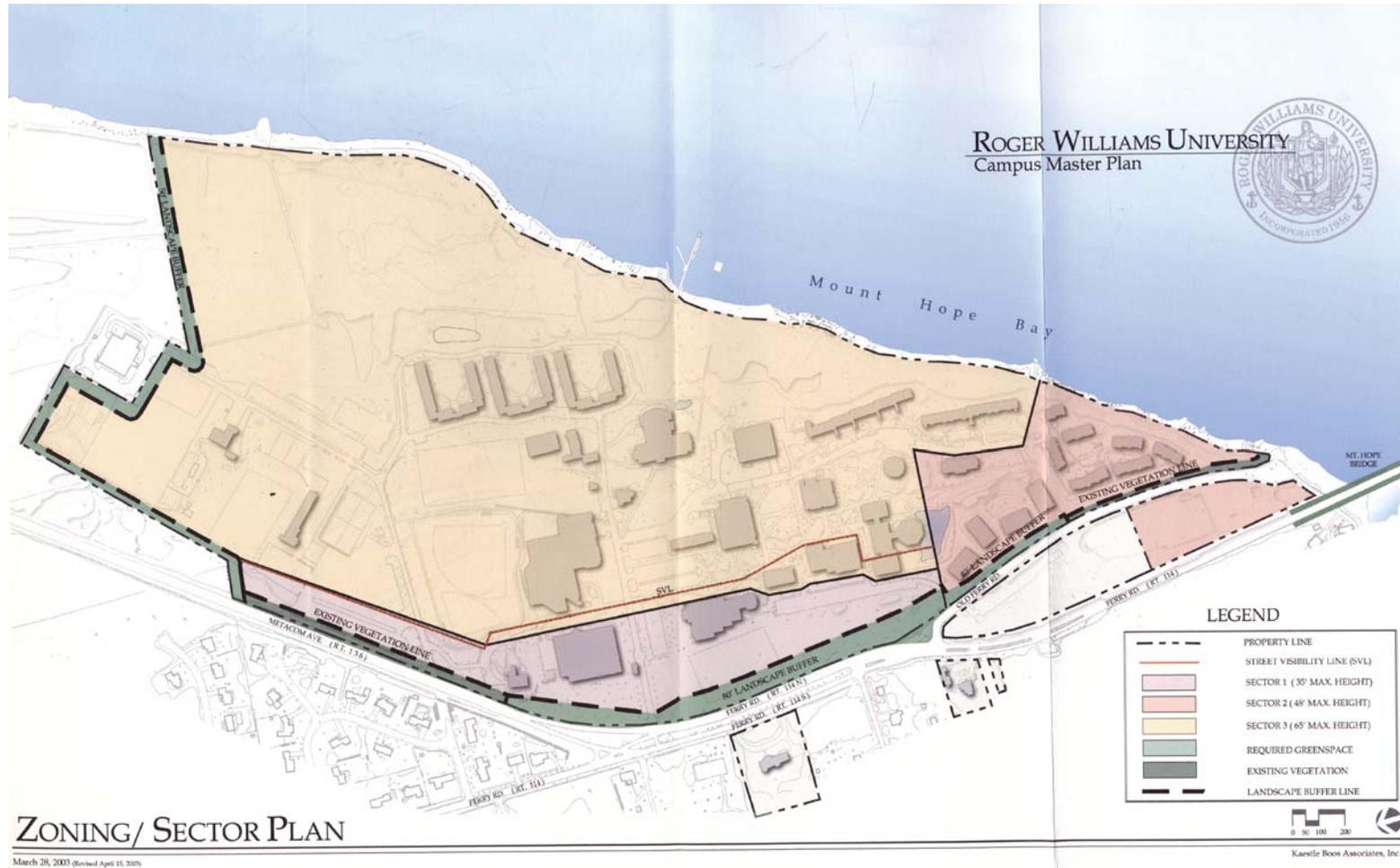


A STUDENTS' REALM
AN ALTERNATIVE STUDENT CENTER AT
ROGER WILLIAMS UNIVERSITY
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ROGER WILLIAMS
UNIVERSITY ZONING



The zones in this map are based on Article IX, Division 4, Sec. 28-352, Part (b) of the Bristol Code of Ordinances.



A STUDENTS' REALM
 AN ALTERNATIVE STUDENT CENTER AT
 ROGER WILLIAMS UNIVERSITY
 BRISTOL, RHODE ISLAND

EVAN CARROLL 2006

ROGER WILLIAMS
 UNIVERSITY ZONING



Coastal Resources Management Council Zoning

The coast at Roger Williams University is defined as a “Type 1 Conservation Area” by the Coastal Resources Management Council.¹ Following are some details from the CRMC publication.

Section 200.1

Type 1 Conservation Areas

A. Definition

Included in this category are one or more of the following:

- (1) water areas that are within or adjacent to the boundaries of designated wildlife refuges and conservation areas,
- (2) water areas that have retained natural habitat or maintain scenic values of unique or unusual significance, and
- (3) water areas that are particularly unsuitable for structures due to their exposure to severe wave action, flooding, and erosion.

¹ The State of Rhode Island, Coastal Resources Management Program: As Amended, 1996 Version.



B. Findings

5. Several stretches of shoreline within Narragansett Bay have survived the rapid proliferation of residential development during recent decades in pristine condition. Examples include the Potowomut River, the Palmer River in Barrington and Warren, and the Mt. Hope Cliffs in Bristol. It is important that as much of this land as practicable be preserved from alteration to assure that Rhode Island’s rich diversity of shoreline types and high scenic value are preserved.

C. Policies

2. The mooring of houseboats and floating businesses, the construction of recreational boating facilities, filling below mean high water, point discharge of substances other than properly treated runoff water (see Section 300.6), and the placement of industrial or commercial structures or operations (excluding fishing and aquaculture) are all prohibited in Type 1 waters.
3. In Type 1 waters, activities and alterations including dredging, dredged materials disposal, and grading and excavation on abutting shoreline features are all prohibited unless the primary purpose of the alteration or activity is to preserve or enhance the area as a natural habitat for native plants and wildlife or a beach renourishment/ replenishment project. Structural shoreline protection facilities shall not be permitted to preserve or enhance these areas as a natural habitat or to protect the shoreline feature. Notwithstanding the Council’s prohibition against construction of recreational boating facilities in Type 1 Waters, the Council recognizes that some residential boating facilities may have pre-existed in Type 1 Waters prior to the formation of the Council. The Council’s ultimate goal is to remove said structures and restore the areas involved to be free of all recreational boating facilities. Although recreational boating facilities are inconsistent with the Council’s goals for Type 1 Waters, in order to provide for the equitable transition and compliance with the Council’s goals pre-existing residential boating facilities may be permitted under the limited terms and conditions set forth in Section 300.4 of the RICRMP and in the Council’s Pre-existing Residential Boating Facilities Program.

A STUDENTS' REALM

AN ALTERNATIVE STUDENT CENTER AT
ROGER WILLIAMS UNIVERSITY

BRISTOL, RHODE ISLAND

EVAN CARROLL 2006

COASTAL RESOURCES
MANAGEMENT PROGRAM ZONING



Bristol Zoning

The following section will include information that is quoted from the Bristol Code of Ordinances.¹ The Sections that would be relevant to the project are listed and within those sections some particularly pertinent pieces of information will be quoted. Text in brackets will be notes that are not part of the quotation.

Chapter 28: Zoning

Article I. In General

Sec. 28-3. Establishment of zoning districts

(6) Educational-institutional zoning district: The educational-institutional zoning district shall be as follows:

E-I Zone: Educational Institutional. This zone is intended for college/university facilities to be used in a planned

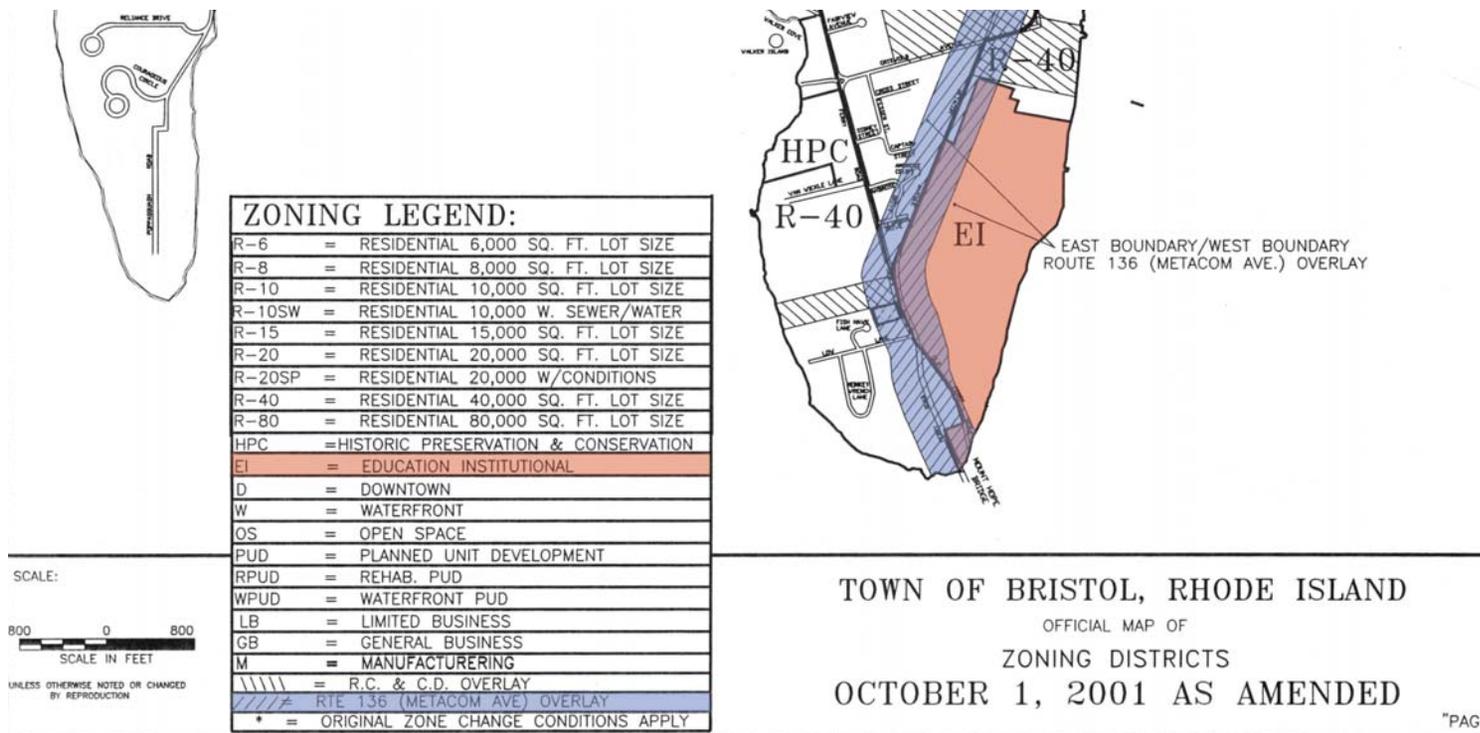
¹ Town of Bristol, Rhode Island, Code of Ordinances: Supplement No. 17 (Bristol, 2005), chapter 28.

manner while protecting surrounding cultural, historic and environmental resources.

(7) Special zones.

Route 136 (Metacom Avenue) overlay zone: This overlay zone is intended to provide for high quality development, mitigation of traffic impacts, protection of residential uses, and preservation of scenic resources along Metacom Avenue by placing additional review criteria and design standards on development in this area.

Sec. 28-4. Official zoning map.



Article III. Permitted Uses

Sec. 28-82. Use Regulations.

Table A. Permitted Use Table [The following list of permitted uses is for the Educational-Institutional Zone.]

Gardening and Raising of Crops, Dormitory, Community Residence, Medical Clinic, Day Care Facility with more than 6 persons, Church, Synagogue, Religious Educational Building, Monastery/Convent, Retirement Home, Civic Convention center and assembly hall, Library, Museum (non-profit), Fire Station, K-12 school (with Special Permit), College University, Specialty School (with Special Permit), Wireless Telecommunications Antenna, Wireless Telecommunications Facility (with Special Permit), Book Store/Café, Pump Station, Sewage Treatment Plant (with Special Permit), Camp for boys or Girls (with Special Permit), Bowling Alley (with Special Permit), Skating/rolling Rink (with Special Permit), Billiards Parlor (with Special Permit), Theater, Playground/Park, Open Space and a Non-profit Community or Education Center.

Article IV. Dimensional Regulations

Sec. 28-112. Commercial and industrial zones. [The data extracted from the table in this section is data for the Educational-institutional zoning district.]

Minimum Lot Area	80,000 sf
Minimum Lot Width	150 ft
Minimum Frontage	150 ft
Maximum Lot Coverage by Structures	20%
Maximum Lot Coverage by Structures and Pavement	40%
Maximum Floor Area Ratio	0.6
Minimum Distance of Structure Residential Zone Boundary	50 ft
Minimum Front Yard Setback	75 ft
Minimum Side Yard Setback	50 ft
Minimum Rear Yard Setback	50 ft
Maximum Height of Principle Structure	35 ft
Maximum Height of Accessory Structure	35 ft

Article V. Supplementary Regulations

Sec. 28-147. Antennae. [The New Center will need an antenna for the WQRI radio Station.]

Sec. 28-149. Earth removal; special use permit. [There will not likely be earth removal, but it is possible.]

Sec. 28-152. Zoning modification permits. [A project at Roger Williams University is likely to be looking for zoning modification.]

Article VIII. Off-Street Parking and Loading Regulations

[The contents this article will not need to be followed for the site for The Center because The University owns the surrounding land. This article can still be used for guidelines though.]

Sec. 28-251. General requirements.

Sec. 28-252. Parking; number of required spaces.

Sec. 28-253. Loading; number of required spaces.



Article IX. Land Development Projects and Special Zones

Division 1. Generally

Sec. 28-285. Route 136 (Metacom Avenue) overlay.

It is a goal of the town, as stated in the comprehensive plan, to promote high quality development along the corridor of Route 136 (Metacom Avenue) that will minimize the impact of increasing traffic flows, protect residential privacy and property values, and preserve scenic resources. The overlay district is established to provide an additional set of review criteria and design standards on development projects to achieve this goal.

- (1) Overlay zone boundaries. The overlay zone is as mapped on the official zoning map. If more than 50 percent of a parcel of property is included in this overlay, then the overlay shall apply to the entire parcel.
- (3) Review process. The review process for any development plan proposed in the overlay zone shall be as follows:
 - c. Notwithstanding any provision of this subsection, all entrance and exit driveways onto Route 136 (Metacom Avenue), a state road, shall be in accordance with the requirements of the state department of transportation and shall require a physical alteration permit from the state department of transportation.
- (4) Development design standards. All development projects located within the Route 136 (Metacom Avenue) overlay zone shall be reviewed in accordance with the following standards:
 6. Setback. There shall be a maximum 50-foot setback from Route 136 which shall consist of a landscaped area and sidewalk.

Division 3. Soil Erosion/Storm Runoff Control

Sec. 28-331. Drainage requirements.

Division 4. Educational Institutional Zoning District (EI Zone)

Sec. 28-351. Purpose.

The purpose of the EI zone is to permit the continued viability and expansion of higher education institutions in designated districts of the town in a planned manner, while protecting surrounding cultural, historic, and environmental resources. It is hereby recognized that a higher education institution exists in the town. In order to recognize this existing development and to permit this institution to grow and expand, an EI zone has previously been incorporated into Table A--Permitted Use Table and Table C--Dimensional Table. The standards and criteria for the EI zone are hereby created and mapped on the official zoning map. (Amend. of 9-20-01, § 808.1)

Sec. 28-352. Permitted uses and dimensions.

- (a) Use of property owned or leased by a higher education institution (hereafter "institution") and located in an EI zone shall be governed by the provisions of this division. Specific permitted principle uses are identified in Table A--Permitted Use Table. Accessory uses that are normally accessory and subordinate to such permitted uses are also permitted in the EI zone.
- (b) Specific dimensional requirements are identified in Table C--Dimensional Table, for the EI zone, provided however that for the Campus of Roger Williams University, east of Metacom Avenue, the EI zone shall be further divided into three subdistricts, based on the permitted height. These districts shall be: EI-35 (35 foot maximum height), EI-48 (48 foot maximum height), EI-65 (65 foot maximum height). The location of such subdistricts shall be based on those certain "sectors" shown on that certain map entitled "Roger Williams University Map, for Draft Institutional Master Plan, dated September 20 2001," (the Roger Williams Draft Map) a copy which is in the custody of the town clerk and hereby incorporated by reference. Dimensional requirements are hereby declared to be an integral part of the nature of the educational institution use and therefore any variance sought from the zoning board from dimensional requirements shall be deemed to be a use variance. (Amend. of 9-20-01, § 808.2)



Sec. 28-353. Parking.

Specific parking and loading requirements are identified in article VIII of this chapter.

- (1) Off-street parking spaces required for institutional uses shall be located in the EI zone or immediately adjacent thereto.
- (2) When an institution has a noncontiguous campus, parking may be supplied on one part of the campus to meet the parking needs of the other noncontiguous part of the campus provided that a shuttle service is supplied by the institution to move students and staff between the noncontiguous campuses. This provision is applicable only if an institutional master plan, which includes a parking/shuttle plan, has been submitted and approved in accordance with the provisions of this chapter.
- (3) Notwithstanding article VIII of this chapter, the planning board as part of its approval of the institutional master plan may:
 - a. Allow sodium vapor lights to be used provided that such lights are aimed and shaded so as not to cast glare or light onto neighboring properties.
 - b. Allow the size of certain parking spaces to be reduced to not less than nine feet in width.
 - c. Modify interior landscaping standards for parking lots, provided that in the EI 35 zone only, any reduced landscaping is replaced elsewhere on the campus in the EI 35 zone and so delineated on the institutional master plan.
- (4) The parking requirements, as to the number of parking spaces required pursuant to subsection 28-251(3) of this chapter, are hereby declared to be an integral part of the nature of the educational institution use and therefore any variance sought from the zoning board from parking requirements shall be deemed to be a use variance.

(Amend. of 9-20-01, § 808.3)

Sec. 28-354. Institutional master plan requirement.

All higher education institutions shall file an institutional master plan with the planning board, which institutional master plan shall be in compliance with the use and dimensional requirements of this division and the town's comprehensive plan and which shall be approved by the planning board as a major land development project.

- (1) Purpose. An institutional master plan is required to promote the orderly growth and development of institutions while preserving neighborhood character, and historic resources, and to insure that the plans are consistent with the town's comprehensive plan. The institutional master plan shall be a statement, in text, maps, illustrations, or other media of communication that is designed to provide a basis for rational decision making regarding the long term physical development of the institution. The plan shall include an implementation element which defines and schedules for a period of five years or more, the specific public actions to be undertaken in order to achieve the goals and objectives of the plan.



Rhode Island Building Codes

The building codes for Rhode Island are based on the International Building Code (IBC¹). The State of Rhode Island publishes a packet which is a list of amendments to the IBC.² The following chapters will be the most useful ones for the level that this project will attain.

- Chapter 3: Use and Occupancy Classification
- Chapter 4: Special Detailed Requirements of Use and Occupancy
- Chapter 5: General Building Heights and Areas
- Chapter 6: Types of Construction
- Chapter 10: Means of Egress
- Chapter 11: Accessibility

Chapter 3: Use and Occupancy Classification

The new center, as planned in the current program could include any of the following occupancy classifications:

- A-1 Fixed seating assembly spaces (303)
- A-2 Assembly spaces for eating (303)
- A-3 More general assembly areas (303)
- B Business spaces (304)
- M Mercantile spaces (309)
- S Storage spaces (311)

Chapter 4: Special Detailed Requirements of Use and Occupancy

The following special uses may be in the new center:

- Atriums (404)
- Motion Picture Projection Rooms (409)
- Stages and Platforms (410)

¹ International Code Council, 2003 International Building Code, USA 2003.

² State of Rhode Island, Rhode Island State Building Code: Regulation SBC-1-2004, July 1 2004.

**TABLE 302.3.2
REQUIRED SEPARATION OF OCCUPANCIES (HOURS)^a**

USE	A-1	A-2	A-3	A-4	A-5	B ^b	M ^b	R-1	R-2	R-3, R-4	S-1	S-2 ^c	U
A-1	—	2	2	2	2	2	2	2	2	2	3	2	1
A-2 ^c	—	—	2	2	2	2	2	2	2	2	3	2	1
A-3	—	—	—	2	2	2	2	2	2	2	3	2	1
A-4	—	—	—	—	2	2	2	2	2	2	3	2	1
A-5	—	—	—	—	—	2	2	2	2	2	3	2	1
B ^b	—	—	—	—	—	—	2	2	2	2	3	2	1
E	—	—	—	—	—	—	2	2	2	2	3	2	1
F-1	—	—	—	—	—	—	3	3	3	3	3	3	3
F-2	—	—	—	—	—	—	2	2	2	2	3	2	1
H-1	—	—	—	—	—	—	NP	NP	NP	NP	NP	NP	NP
H-2	—	—	—	—	—	—	2	4	4	4	2	2	1
H-3	—	—	—	—	—	—	1	3	3	3	1	1	1
H-4	—	—	—	—	—	—	1	4	4	4	1	1	1
H-5	—	—	—	—	—	—	1	4	4	4	1	1	3
I-1	—	—	—	—	—	—	2	2	2	2	4	3	2
I-2	—	—	—	—	—	—	2	2	2	2	3	2	1
I-3	—	—	—	—	—	—	2	2	2	2	3	2	1
I-4	—	—	—	—	—	—	2	2	2	2	3	2	1
M ^b	—	—	—	—	—	—	—	2	2	2	3	2	1
R-1	—	—	—	—	—	—	—	—	2	2	3	2	1
R-2	—	—	—	—	—	—	—	—	—	2	3	2	1
R-3, R-4	—	—	—	—	—	—	—	—	—	—	3	2 ^d	1 ^d
S-1	—	—	—	—	—	—	—	—	—	—	—	3	3
S-2 ^c	—	—	—	—	—	—	—	—	—	—	—	—	1
U	—	—	—	—	—	—	—	—	—	—	—	—	—

For SI: 1 square foot = 0.0929 m².

NP = Not permitted.

a. See Exception 1 to Section 302.3.2 for reductions permitted.

b. Occupancy separation need not be provided for storage areas within Groups B and M if the:

1. Area is less than 10 percent of the floor area;
2. Area is provided with an automatic fire-extinguishing system and is less than 3,000 square feet; or
3. Area is less than 1,000 square feet.

c. Areas used only for private or pleasure vehicles shall be allowed to reduce separation by 1 hour.

d. See exception to Section 302.3.2.

e. Commercial kitchens need not be separated from the restaurant seating areas that they serve.



Chapter 6: Types of Construction

The new center will be of Type I or Type II construction.

TABLE 601
FIRE-RESISTANCE RATING REQUIREMENTS FOR BUILDING ELEMENTS (hours)

BUILDING ELEMENT	TYPE I		TYPE II		TYPE III		TYPE IV	TYPE V	
	A	B	A ^d	B	A ^d	B	HT	A ^d	B
Structural frame ^a Including columns, girders, trusses	3 ^b	2 ^b	1	0	1	0	HT	1	0
Bearing walls									
Exterior ^f	3	2	1	0	2	2	2	1	0
Interior	3 ^b	2 ^b	1	0	1	0	1/HT	1	0
Nonbearing walls and partitions	See Table 602								
Exterior									
Nonbearing walls and partitions							See Section 602.4.6		
Interior ^c	0	0	0	0	0	0		0	0
Floor construction									
Including supporting beams and joists	2	2	1	0	1	0	HT	1	0
Roof construction									
Including supporting beams and joists	1½ ^c	1 ^c	1 ^c	0	1 ^c	0	HT	1 ^c	0

For SI: 1 foot = 304.8 mm.

TABLE 602
FIRE-RESISTANCE RATING REQUIREMENTS FOR EXTERIOR WALLS BASED ON FIRE SEPARATION DISTANCE^a

FIRE SEPARATION DISTANCE (feet)	TYPE OF CONSTRUCTION	GROUP H	GROUP F-1, M, S-1	GROUP A, B, E, F-2, I, R ^b , S-2, U
< 5 ^c	All	3	2	1
≥ 5 < 10	IA	3	2	1
	Others	2	1	1
≥ 10 < 30	IA, IB	2	1	1
	IIB, VB	1	0	0
	Others	1	1	1
≥ 30	All	0	0	0

For SI: 1 foot = 304.8 mm.



Chapter 5:
General Building Heights and Areas

TABLE 503
ALLOWABLE HEIGHT AND BUILDING AREAS
Height limitations shown as stories and feet above grade plane.
Area limitations as determined by the definition of "Area, building," per floor.

GROUP	Hgt(feet) Hgt(S)	TYPE OF CONSTRUCTION									
		TYPE I		TYPE II		TYPE III		TYPE IV	TYPE V		
		A	B	A	B	A	B	HT	A	B	
		UL	160	65	55	65	55	65	50	40	
A-1	S A	UL UL	5 15,500	3 8,500	2 8,500	3 14,000	2 8,500	3 15,000	2 11,500	1 5,500	
A-2	S A	UL UL	11 15,500	3 15,500	2 9,500	3 14,000	2 9,500	3 15,000	2 11,500	1 6,000	
A-3	S A	UL UL	11 15,500	3 15,500	2 9,500	3 14,000	2 9,500	3 15,000	2 11,500	1 6,000	
A-4	S A	UL UL	11 15,500	3 15,500	2 9,500	3 14,000	2 9,500	3 15,000	2 11,500	1 6,000	
A-5	S A	UL UL	UL UL	UL UL	UL UL	UL UL	UL UL	UL UL	UL UL	UL UL	
B	S A	UL UL	11 37,500	5 37,500	4 23,000	5 28,500	4 19,000	5 36,000	3 18,000	2 9,000	
E	S A	UL UL	5 26,500	3 26,500	2 14,500	3 23,500	2 14,500	3 25,500	1 18,500	1 9,500	
F-1	S A	UL UL	11 25,000	4 25,000	2 15,500	3 19,000	2 12,000	4 33,500	2 14,000	1 8,500	
F-2	S A	UL UL	11 37,500	5 37,500	3 23,000	4 28,500	3 18,000	5 50,500	3 21,000	2 13,000	
H-1	S A	1 21,000	1 16,500	1 11,000	1 7,000	1 9,500	1 7,000	1 10,500	1 7,500	NP NP	
H-2	S A	UL 21,000	3 16,500	2 11,000	1 7,000	2 9,500	1 7,000	2 10,500	1 7,500	1 3,000	
H-3	S A	UL UL	6 60,000	4 26,500	2 14,000	4 17,500	2 13,000	4 25,500	2 10,000	1 5,000	
H-4	S A	UL UL	7 UL	5 37,500	3 17,500	5 28,500	3 17,500	5 36,000	3 18,000	2 6,500	
H-5	S A	3 UL	3 UL	3 37,500	3 23,000	3 28,500	3 19,000	3 36,000	3 18,000	2 9,000	
I-1	S A	UL UL	9 55,000	4 19,000	3 10,000	4 16,500	3 10,000	4 18,000	3 10,500	2 4,500	
I-2	S A	UL UL	4 UL	2 15,000	1 11,000	1 12,000	NP NP	1 12,000	1 9,500	NP NP	
I-3	S A	UL UL	4 UL	2 15,000	1 11,000	2 10,500	1 7,500	2 12,000	2 7,500	1 5,000	
I-4	S A	UL UL	5 60,500	3 26,500	2 13,000	3 23,500	2 13,000	3 25,500	1 18,500	1 9,000	
M	S A	UL UL	11 21,500	4 21,500	4 12,500	4 18,500	4 12,500	4 20,500	3 14,000	1 9,000	
R-1	S A	UL UL	11 UL	4 24,000	4 16,000	4 24,000	4 16,000	4 20,500	3 12,000	2 7,000	
R-2 ^a	S A	UL UL	11 UL	4 24,000	4 16,000	4 24,000	4 16,000	4 20,500	3 12,000	2 7,000	
R-3 ^a	S A	UL UL	11 UL	4 UL	4 UL	4 UL	4 UL	4 UL	3 UL	3 UL	
R-4	S A	UL UL	11 UL	4 24,000	4 16,000	4 24,000	4 16,000	4 20,500	3 12,000	2 7,000	
S-1	S A	UL UL	11 48,000	4 26,000	3 17,500	3 26,000	3 17,500	4 25,500	3 14,000	1 9,000	
S-2 ^{b, c}	S A	UL UL	11 79,000	5 39,000	4 26,000	4 39,000	4 26,000	5 38,500	4 21,000	2 13,500	
U ^c	S A	UL UL	5 35,500	4 19,000	2 8,500	3 14,000	2 8,500	4 18,000	2 9,000	1 5,500	

For SI: 1 foot = 304.8 mm, 1 square foot = 0.0929 m².
 UL = Unlimited, NP = Not permitted.
 a. As applicable in Section 101.2.
 b. For open parking structures, see Section 406.3.
 c. For private garages, see Section 406.1.



Chapter 10: Means of Egress

**TABLE 1005.1
EGRESS WIDTH PER OCCUPANT SERVED**

OCCUPANCY	WITHOUT SPRINKLER SYSTEM		WITH SPRINKLER SYSTEM ^a	
	Stairways (inches per occupant)	Other egress components (inches per occupant)	Stairways (inches per occupant)	Other egress components (inches per occupant)
Occupancies other than those listed below	0.3	0.2	0.2	0.15
Hazardous: H-1, H-2, H-3 and H-4	0.7	0.4	0.3	0.2
Institutional: I-2	NA	NA	0.3	0.2

**TABLE 1014.1
SPACES WITH ONE MEANS OF EGRESS**

OCCUPANCY	MAXIMUM OCCUPANT LOAD
A, B, E, F, M, U	50
H-1, H-2, H-3	3
H-4, H-5, I-1, I-3, I-4, R	10
S	30

**TABLE 1015.1
EXIT ACCESS TRAVEL DISTANCE^a**

OCCUPANCY	WITHOUT SPRINKLER SYSTEM (feet)	WITH SPRINKLER SYSTEM (feet)
A, E, F-1, I-1, M, R, S-1	200	250 ^b
B	200	300 ^c
F-2, S-2, U	300	400 ^b
H-1	Not Permitted	75 ^c
H-2	Not Permitted	100 ^c
H-3	Not Permitted	150 ^c
H-4	Not Permitted	175 ^c
H-5	Not Permitted	200 ^c
I-2, I-3, I-4	150	200 ^c

For SI: 1 foot = 304.8 mm.

**TABLE 1004.1.2
MAXIMUM FLOOR AREA ALLOWANCES PER OCCUPANT**

OCCUPANCY	FLOOR AREA IN SQ. FT. PER OCCUPANT
Agricultural building	300 gross
Aircraft hangars	500 gross
Airport terminal	
Baggage claim	20 gross
Baggage handling	300 gross
Concourse	100 gross
Waiting areas	15 gross
Assembly	
Gaming floors (keno, slots, etc.)	11 gross
Assembly with fixed seats	See Section 1003.2.2.9
Assembly without fixed seats	
Concentrated (chairs only—not fixed)	7 net
Standing space	5 net
Unconcentrated (tables and chairs)	15 net
Bowling centers, allow 5 persons for each lane including 15 feet of runway, and for additional areas	7 net
Business areas	100 gross
Courtrooms—other than fixed seating areas	40 net
Dormitories	50 gross
Educational	
Classroom area	20 net
Shops and other vocational room areas	50 net
Exercise rooms	50 gross
H-5 Fabrication and manufacturing areas	200 gross
Industrial areas	100 gross
Institutional areas	
Inpatient treatment areas	240 gross
Outpatient areas	100 gross
Sleeping areas	120 gross
Kitchens, commercial	200 gross
Library	
Reading rooms	50 net
Stack area	100 gross
Locker rooms	50 gross
Mercantile	
Areas on other floors	60 gross
Basement and grade floor areas	30 gross
Storage, stock, shipping areas	300 gross
Parking garages	200 gross
Residential	200 gross
Skating rinks, swimming pools	
Rink and pool	50 gross
Decks	15 gross
Stages and platforms	15 net
Accessory storage areas, mechanical equipment room	300 gross
Warehouses	500 gross

For SI: 1 square foot = 0.0929 m².



Chapter 10: Means of Egress (Continued)

**TABLE 1018.1
MINIMUM NUMBER OF EXITS FOR OCCUPANT LOAD**

OCCUPANT LOAD	MINIMUM NUMBER OF EXITS
1-500	2
501-1,000	3
More than 1,000	4

**TABLE 1024.10.1
SMOKE-PROTECTED
ASSEMBLY AISLE ACCESSWAYS**

TOTAL NUMBER OF SEATS IN THE SMOKE-PROTECTED ASSEMBLY OCCUPANCY	MAXIMUM NUMBER OF SEATS PER ROW PERMITTED TO HAVE A MINIMUM 12-INCH CLEAR WIDTH AISLE ACCESSWAY	
	Aisle or doorway at both ends of row	Aisle or doorway at one end of row only
Less than 4,000	14	7
4,000	15	7
7,000	16	8
10,000	17	8
13,000	18	9
16,000	19	9
19,000	20	10
22,000 and greater	21	11

For SI: 1 inch = 25.4 mm.

Chapter 11: Accessibility

**TABLE 1108.2.2.1
ACCESSIBLE WHEELCHAIR SPACES**

CAPACITY OF SEATING IN ASSEMBLY AREAS	MINIMUM REQUIRED NUMBER OF WHEELCHAIR SPACES
4 to 25	1
26 to 50	2
51 to 100	4
101 to 300	5
301 to 500	6
501 to 5,000	6, plus 1 for each 150, or fraction thereof, between 501 through 5,000
5,001 and over	36 plus 1 for each 200, or fraction thereof, over 5,000

**TABLE 1024.6.2
WIDTH OF AISLES FOR SMOKE-PROTECTED ASSEMBLY**

TOTAL NUMBER OF SEATS IN THE SMOKE-PROTECTED ASSEMBLY OCCUPANCY	INCHES OF CLEAR WIDTH PER SEAT SERVED			
	Stairs and aisle steps with handrails within 30 inches	Stairs and aisle steps without handrails within 30 inches	Passageways, doorways and ramps not steeper than 1 in 10 in slope	Ramps steeper than 1 in 10 in slope
Equal to or less than 5,000	0.200	0.250	0.150	0.165
10,000	0.130	0.163	0.100	0.110
15,000	0.096	0.120	0.070	0.077
20,000	0.076	0.095	0.056	0.062
Equal to or greater than 25,000	0.060	0.075	0.044	0.048

For SI: 1 inch = 25.4 mm.

