

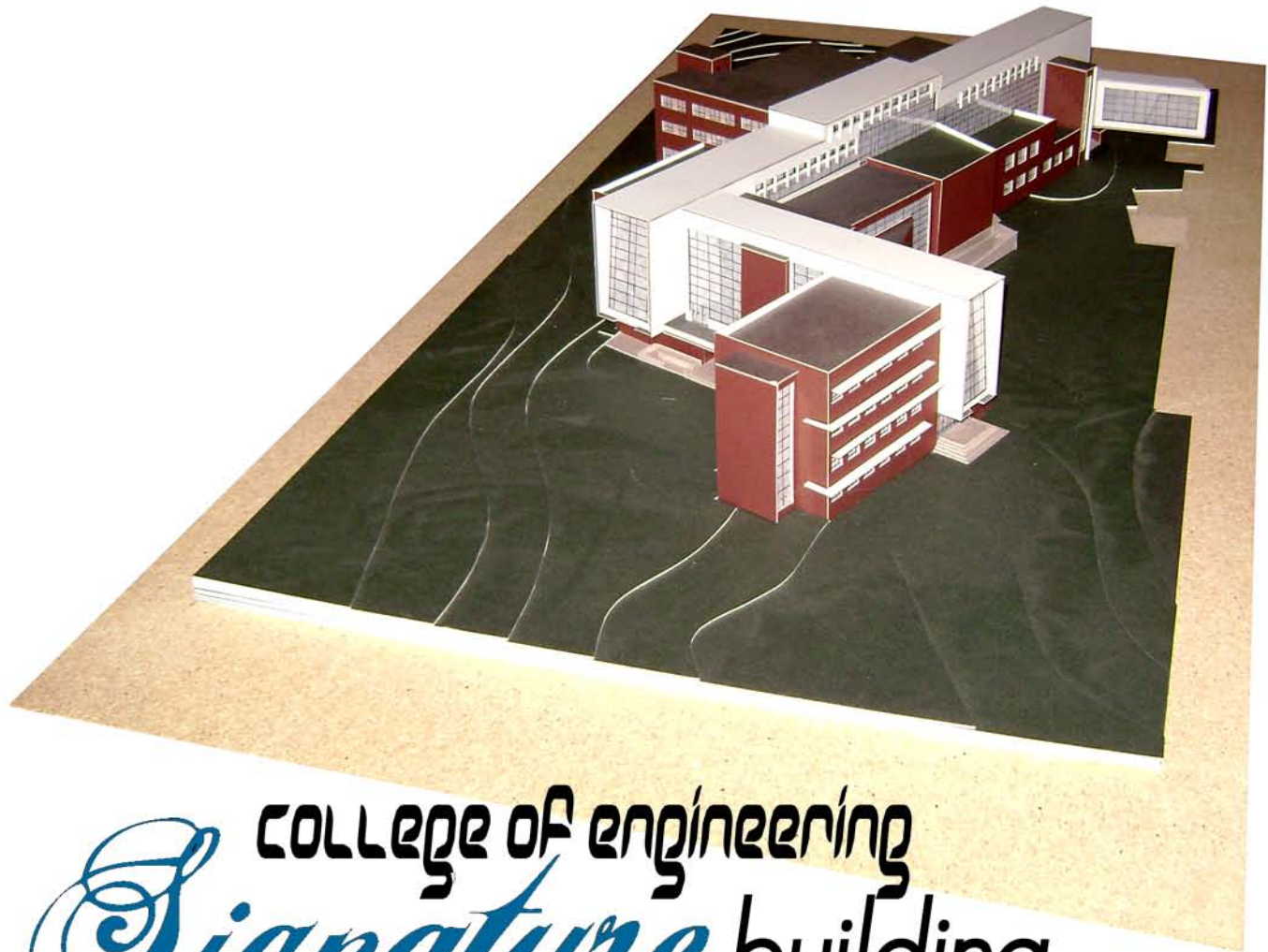
Michael P. Royer

DESIGN PORTFOLIO

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01 - College of Engineering Signature Building

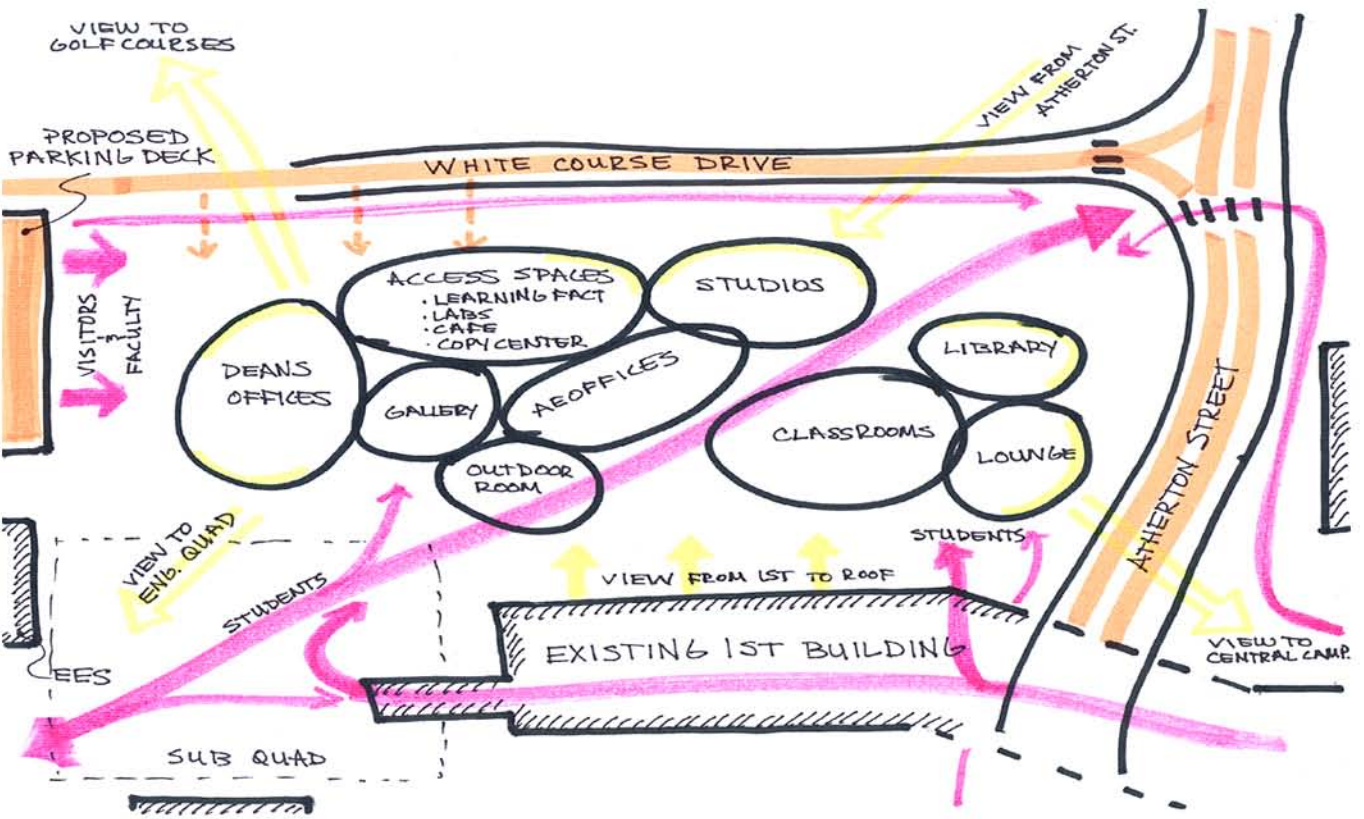
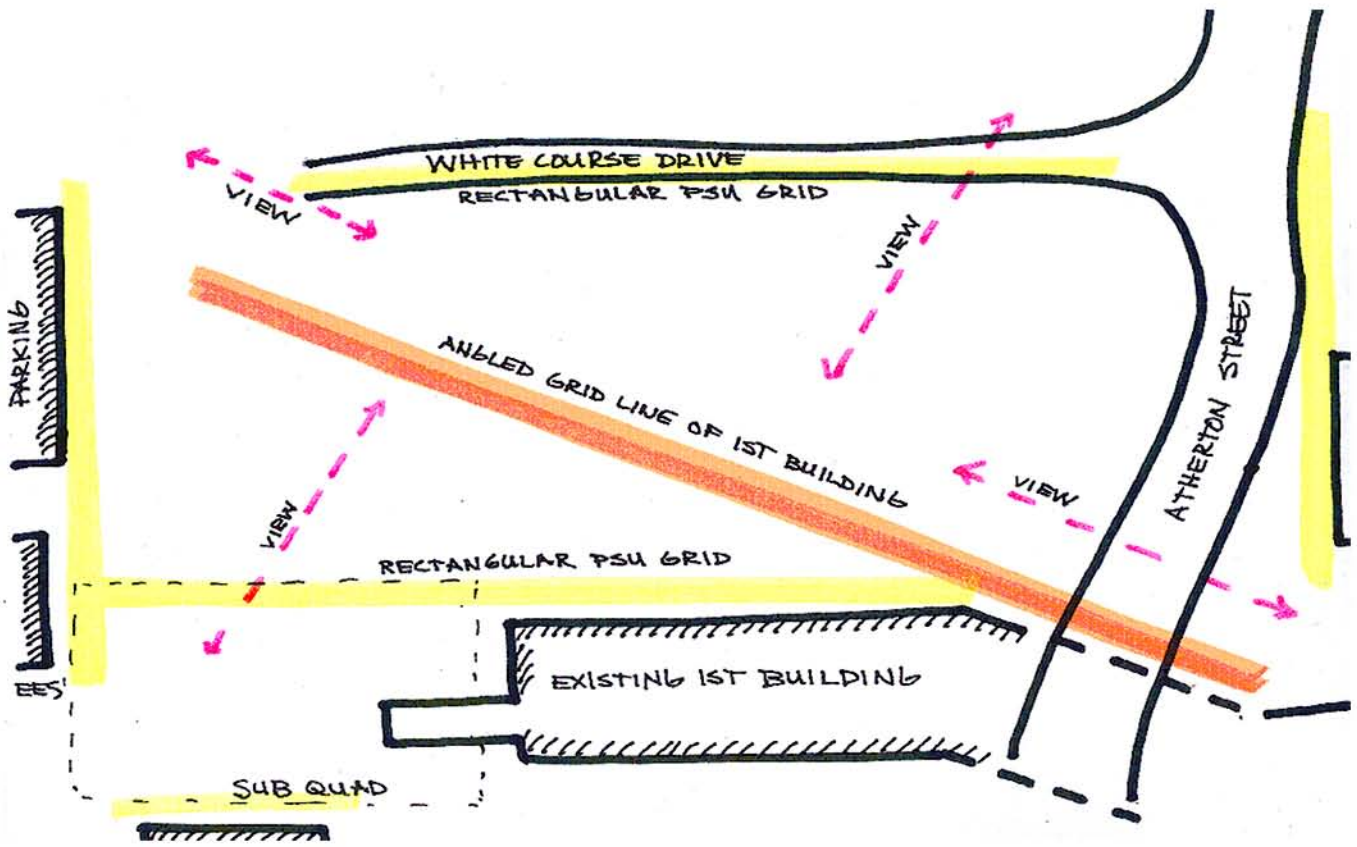


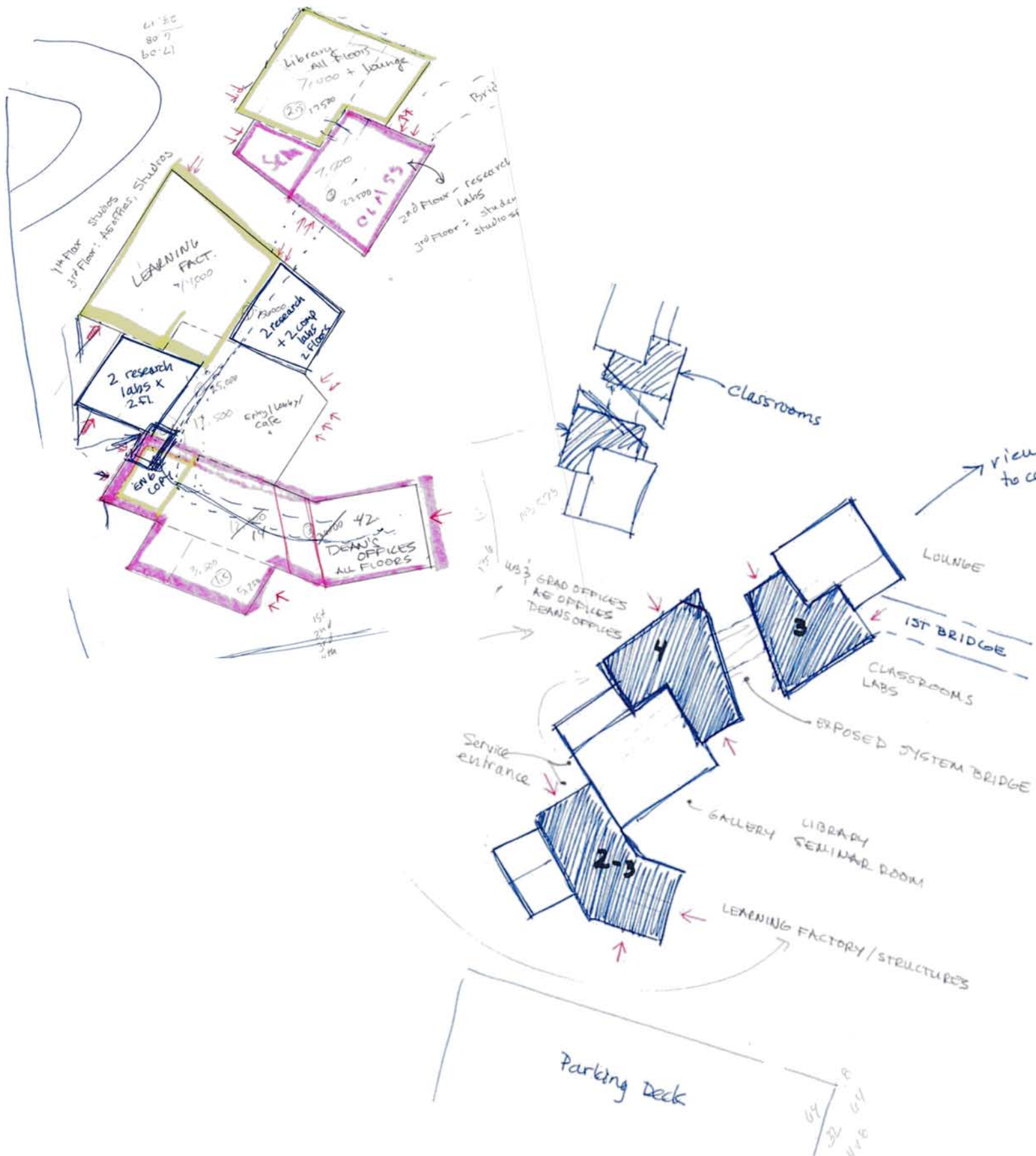
COLLEGE OF ENGINEERING *Signature* building

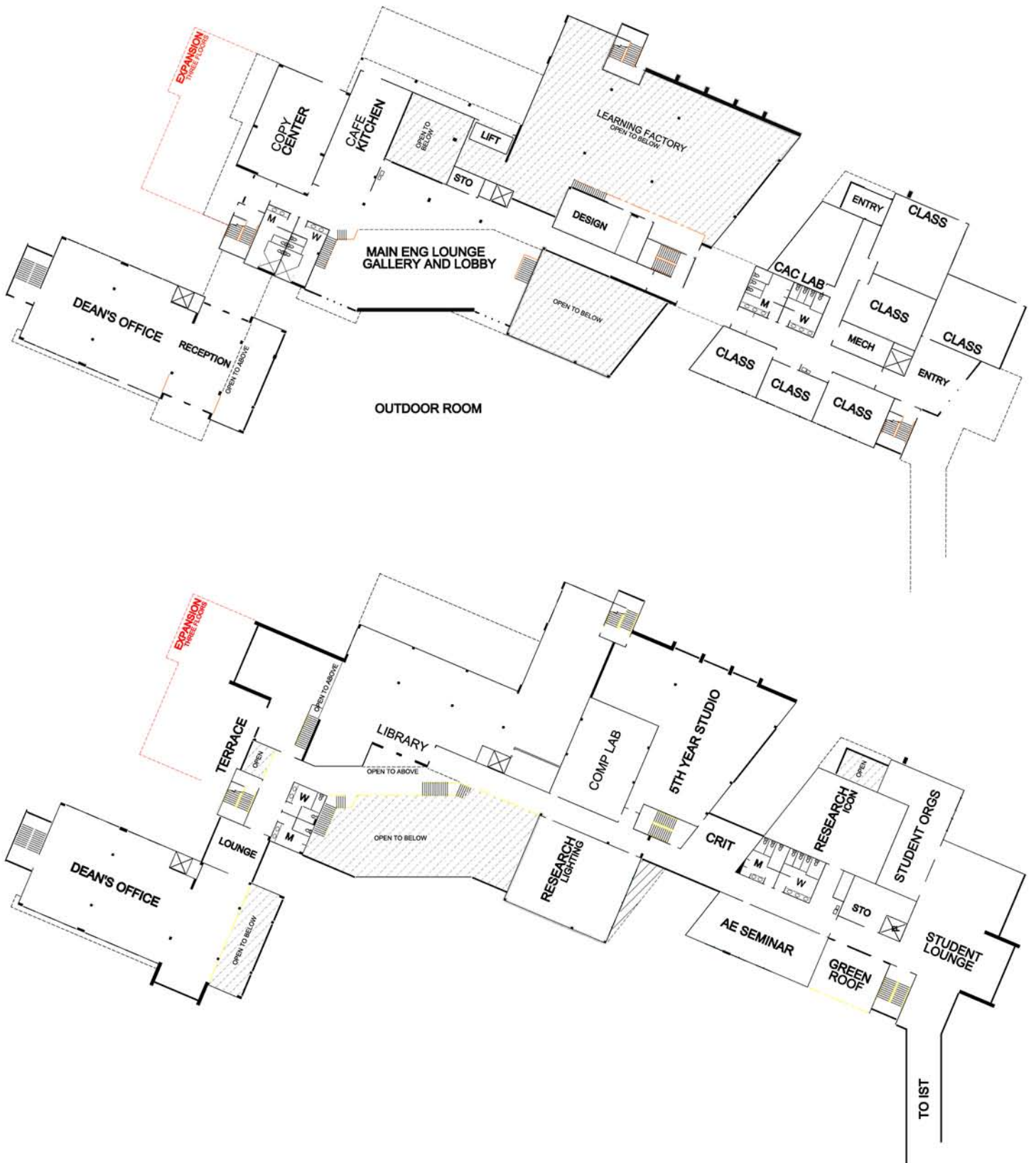
This project was completed for Architecture 442 at Penn State University. A program was provided for a new signature engineering building that is in the University's master plan. The project was completed with a group of four members. As the team member most interested in Architecture, I took the role of team leader and produced the schematic design documents as well as the final hand-built physical model. The semester long project was a design competition. A panel of judges including architects and architectural engineers awarded the project first place.

The project requirements included designing the structure to meet program and overall square foot requirements, investigating life-cycle building, evaluating and designing for LEED certification, and considering structural and environmental systems.

Our main goals for the design were to respond to the surrounding buildings and environment while creating continuity with the rest of campus but standing out as a signature building. The design is centered around a spine that runs the length of the building, protruding out the sides.





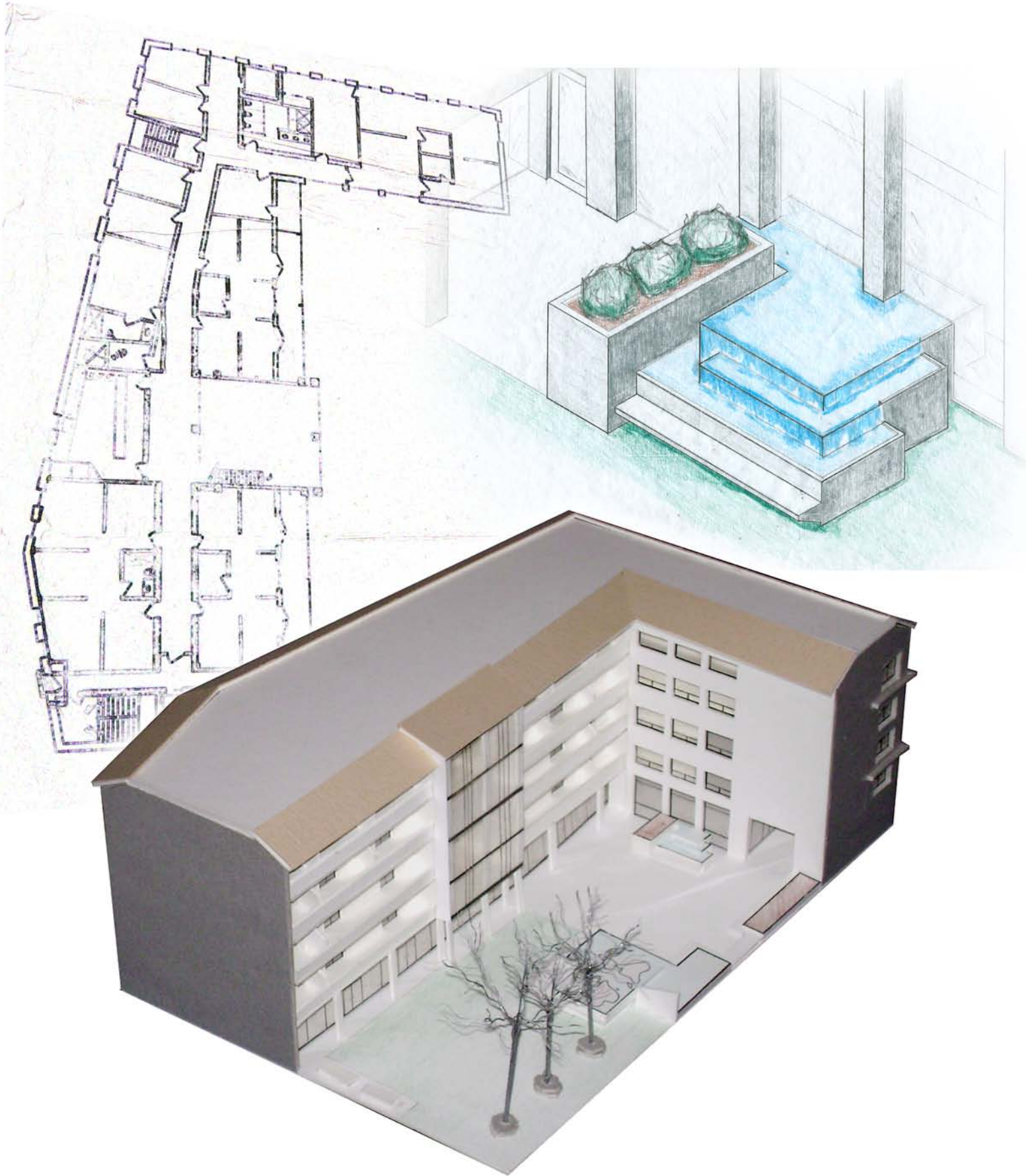




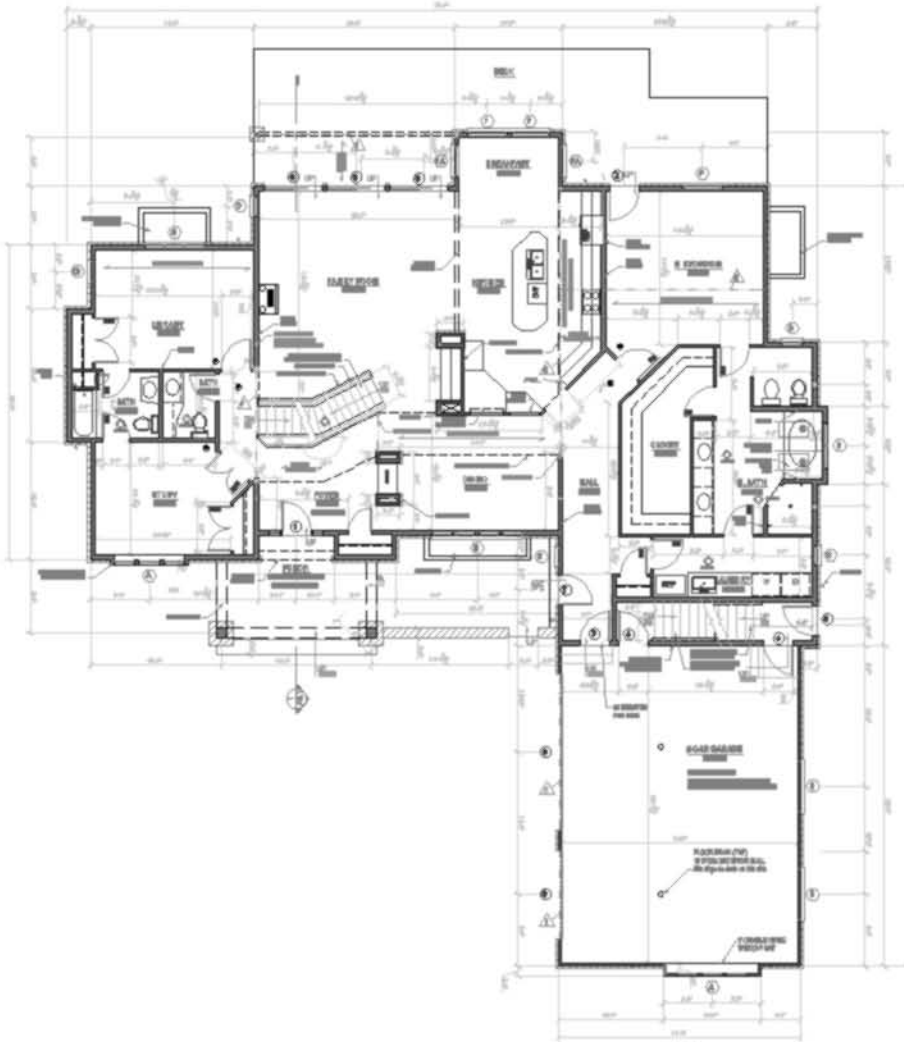
02 - Piazza del Collegio Romano Refugee Center



As part of a semester spend studying in Rome, a partner and I designed the renovation of an auxiliary police building into a refugee center. The site is in the heart of downtown Rome on the Piazza del Collegio Romano. Our goals for the project were to maintain a facade to match the existing fabric of the city while creating an interior courtyard with a modern and refreshing appearance.



03 - Residential Design



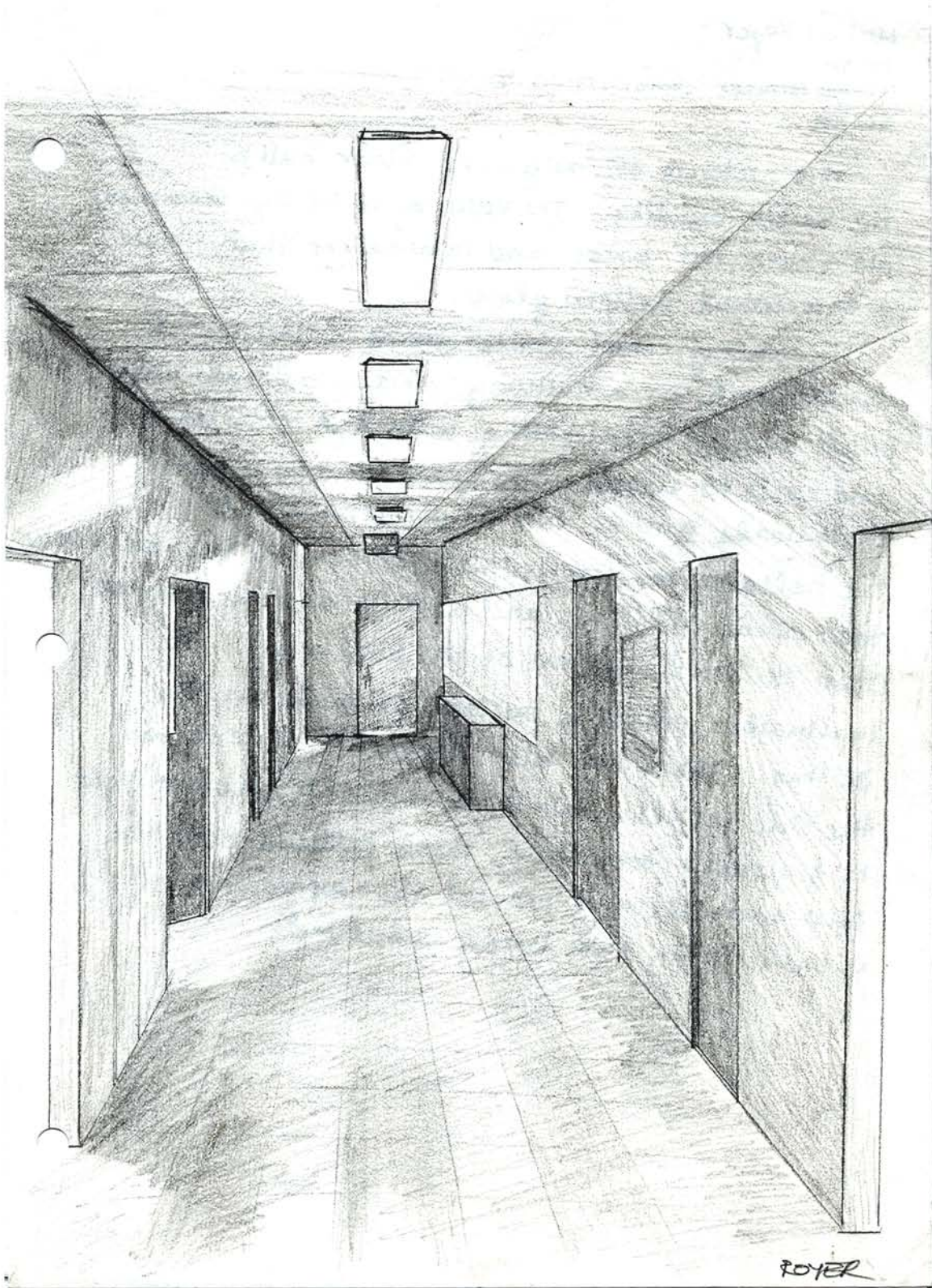
This house was designed and drafted for a family friend and is currently under construction in State College, Pennsylvania. I have worked for the owner on several occasions on new projects as well as renovations.

1 FIRST FLOOR PLAN
A3.2 SCALE 3/16" = 1'

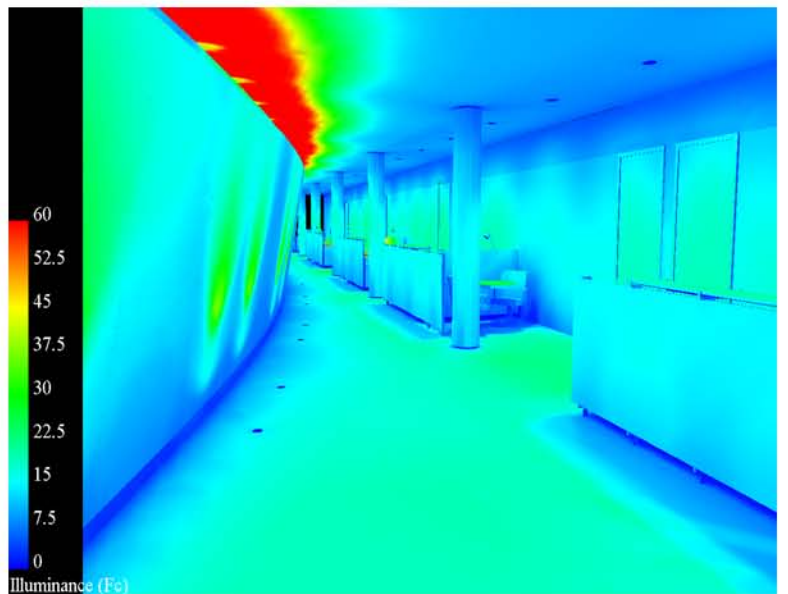
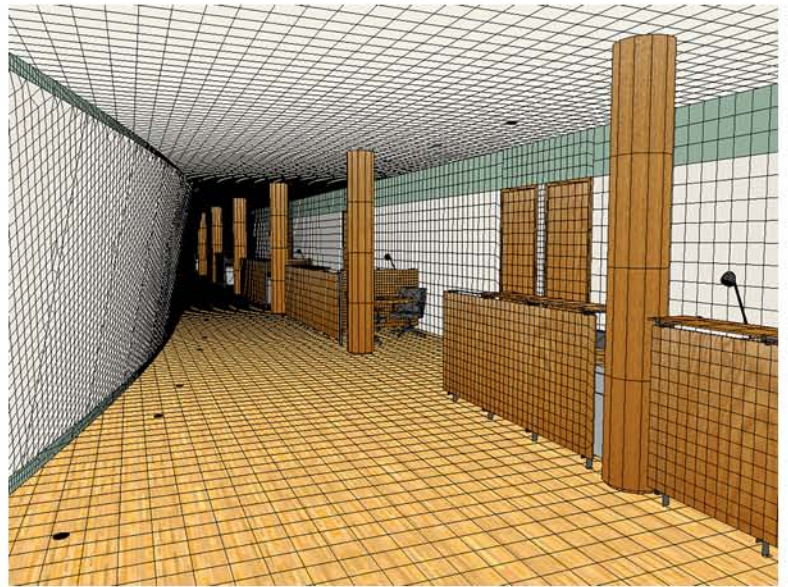
- NOTES
1. INTERIOR WALL FRAMING TO BE 2x4 @ 16" O.C.
 2. INTERIOR WALL FRAMING TO BE 2x4 @ 16" O.C. WITH 12" INS BATT INS.
 3. REFER TO ROOFING AND SOFFIT SCHEDULES FOR DETAILS.
 4. REFER TO INTERIOR BLINDS AND PAINT SCHEDULE FOR DETAILS.
 5. SLOPE ESTIMATED TO BE AS SHOWN FOR CONSTRUCTION PURPOSES.



04 - Architectural Lighting Design



ROYER



This lighting solution for an open office is documented and calculated using AGI32 software. The design utilizes a task-ambient system to provide adequate illuminance levels for working while using non-uniform perimeter emphasis to provide a relaxing work environment.



◀ A hand rendering of a hallway. ▲ A Photoshop rendering of a building facade.



These two AGI32 renderings illustrate the opposing Flynn modes of 'Visual Clarity' and 'Haziness'.



design with light

2006-2007 STUDENT DESIGN COMPETITION

PHS philadelphia

project description:

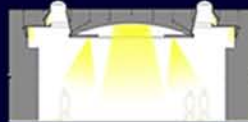
RETAIL SHOPPING MALL, MADISON, WISCONSIN
 CENTER COURT, CONCOURSE, AND STORE COURT

key design features:

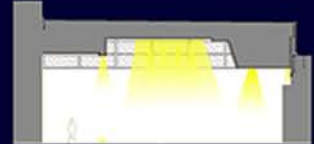
- CONTEMPORARY** FIXTURES WITH MODERN STYLE, METALLIC FINISHES, DECORATIVE PENDANTS
- VISUAL FEATURES** HIGHLIGHT STRUCTURAL ELEMENTS, DYNAMIC COLOR CHANGING ACCENTS, CONTINUITY
- FLEXIBILITY** REMOTE CONTROLLED TRACK FIXTURES, PROGRAMMABLE FIXTURES, ADAPTABILITY TO MANY SITUATIONS
- ENVIRONMENTALLY CONSCIOUS** PHOTOSENSORS, WITHIN ASHRAE CODE REQUIREMENTS, DAYLIGHTING



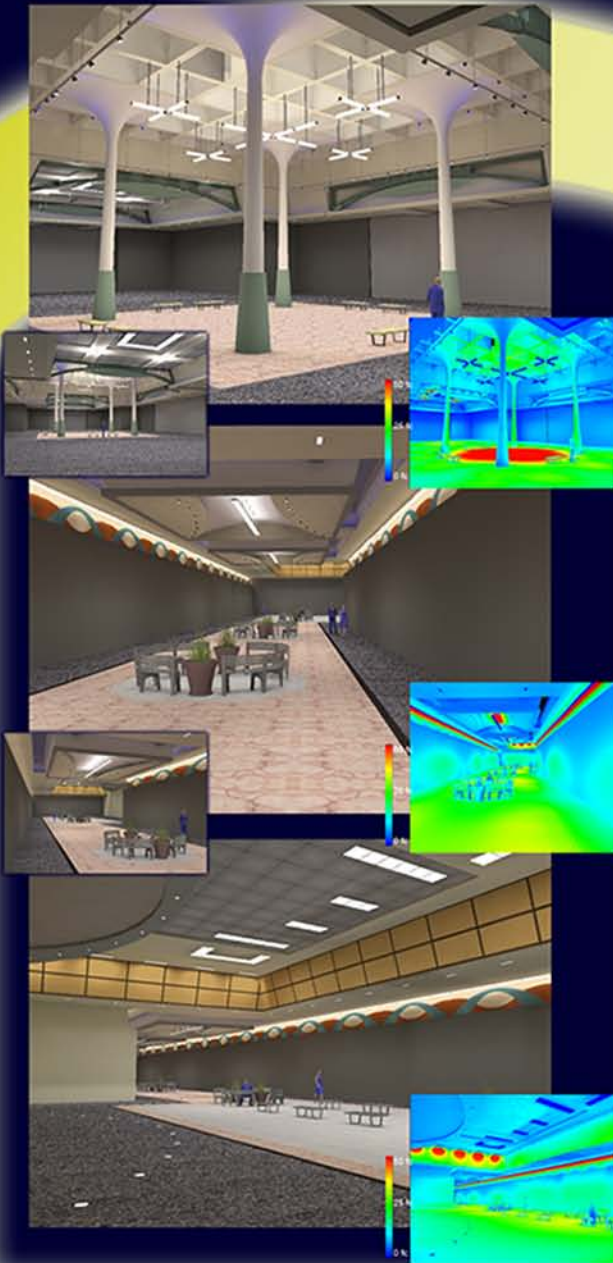
SCHEMATIC SECTION: MAIN COURT



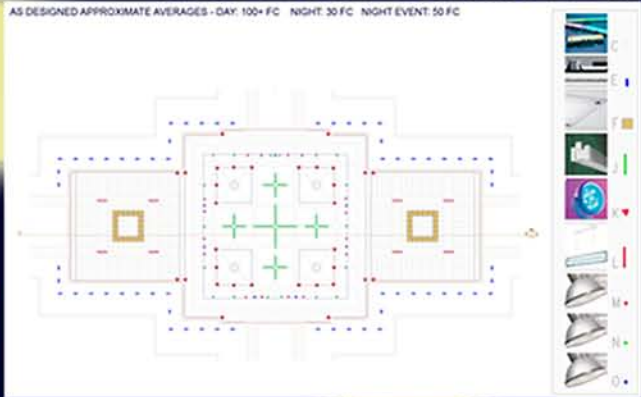
SCHEMATIC SECTION: CONCOURSE



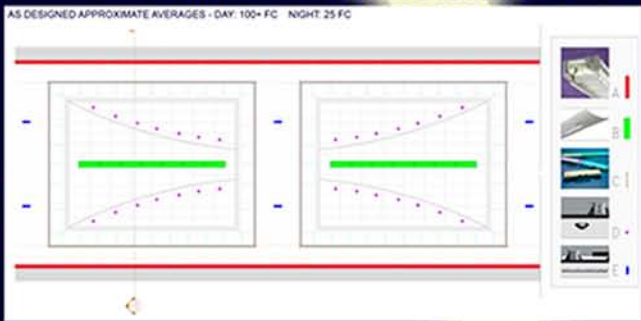
SCHEMATIC SECTION: STORE COURT



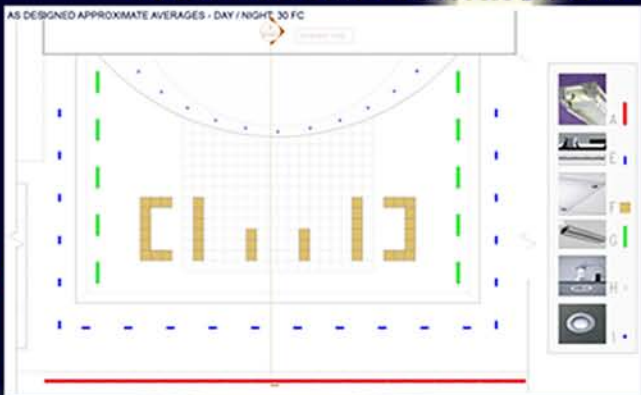
MAIN COURT LIGHTING PLAN



CONCOURSE LIGHTING PLAN



STORE COURT LIGHTING PLAN



HOWARD BRANDSTON STUDENT LIGHTING DESIGN EDUCATION GRANT 2007
PERFORMING ARTS CENTER

AT THE APPEAL OF MODERN STYLING, THIS DESIGN FEATURES SLEEK ANGULAR FORMS TO INTRODUCE VISUAL INTEREST WHILE CREATING A COMFORTABLE AND INVITING AMBIANCE. THE FOCUS OF THE DESIGN IS THE TWO PAVILIONS. THE TWO SPACES HAVE BEEN DESIGNED TO ACT AS REARERS FOR ARRIVING PATRONS WITH LUMINAIRES UPLOFTING THE CEILING TO CREATE A GRAND SENSE OF ARRIVAL. AN INTRODUCING CUSTOM CHANDISER HAS BEEN ADDED TO THE NORTH PAVILION TO CREATE A CENTER IN THE ROOM WHILE PROVIDING A MOUNTING LOCATION FOR THEATRICAL FIXTURES. THE CHANDISER GLOWS A SUBTLE ORANGE, LIT FROM WITHIN BY LEDs. THIS DESIGN ELEMENT IS ALSO VISIBLE FROM THE SOUTH PAVILION AND IS INTENDED TO DRAW PEOPLE FURTHER INTO THE BUILDING.

AS PATRONS DESCEND THE STAIRWAY FROM THE SOUTH PAVILION TO THE GRAND FOYER, THEY SEE THE GLOW OF THE NORTH PAVILION AHEAD AND A HANGING CUSTOM PENDANT TO THE LEFT. THE FIXTURE IS SHELDED FROM VIEW WHILE IN OTHER SPACES IN ORDER TO PREVENT DISTRACTION FROM OTHER FEATURE ELEMENTS. IN THE GRAND FOYER, CUSTOM GRILL FIXTURES HAVE BEEN DESIGNED TO GIVE THE SPACE A MODERN AESTHETIC AND CREATE VISUAL INTEREST. THE GRILLS ARE BACKLIT BY LED FIXTURES TO ALLOW A DRAMATIC MOOD TO BE SET WITH COLORED LIGHT. WALL SPOCKES ENHANCE THE PATTERNS CREATED BY THE LARGE WOOD COLUMNS AND CREATE A SENSORY TO THE MORE MODERN NORTH PAVILION. HIGHER ILLUMINATION LEVELS GUIDE PATRONS TO THE CONCOURSE WHERE THEY CAN BUY TICKETS TO THE SHOW. LUMINAIRES WERE SELECTED TO PROVIDE STRONG FACIAL RECOGNITION CHARACTERISTICS. OVERALL, THE DESIGN CREATES A HIERARCHY OF SPACES BY CHANGING ILLUMINATION LEVELS IN ORDER TO DRAW GUESTS TO DESIRABLE SPACES. SIMPLE, ANGULAR FORMS CREATE A MODERN BUT ELEGANT ATMOSPHERE FOR A STATE-OF-THE-ART PERFORMING ARTS CENTER.

LightWire Linear LED (F2) Controllable LEDs

ERCO Atmos (1) 35W T4 MR

ERCO Quadra Wallwasher (1) 20W T4 MR

ERCO Quadra Downlight (1) 35W T4 MR

ERCO Quadra Downlight (1) 18W CFL

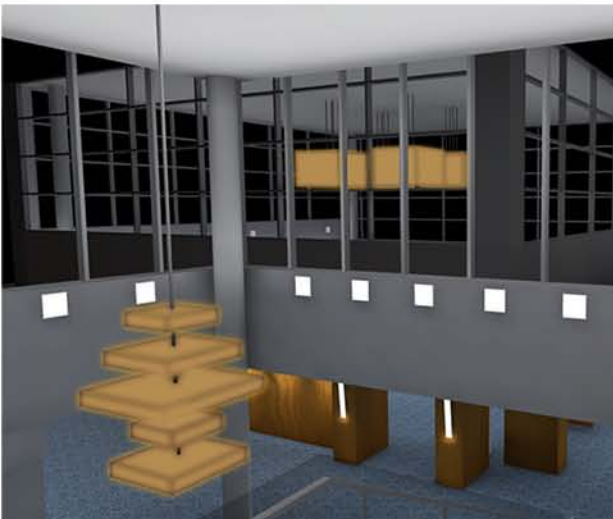
Axiol Versen MR432 (1) 28W CFL

Paga 5009 In-Grade (1) 35W T4 MR

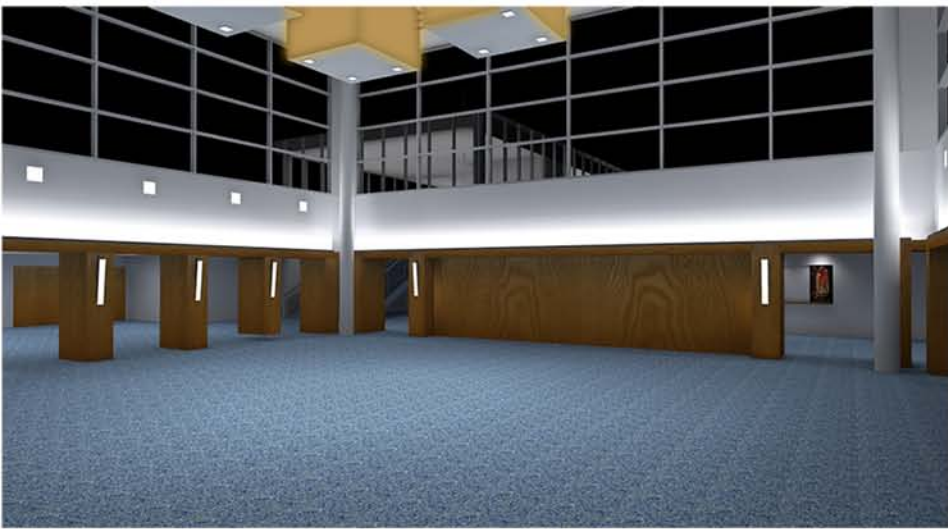
Lightline Bar - Grey (1) F2475

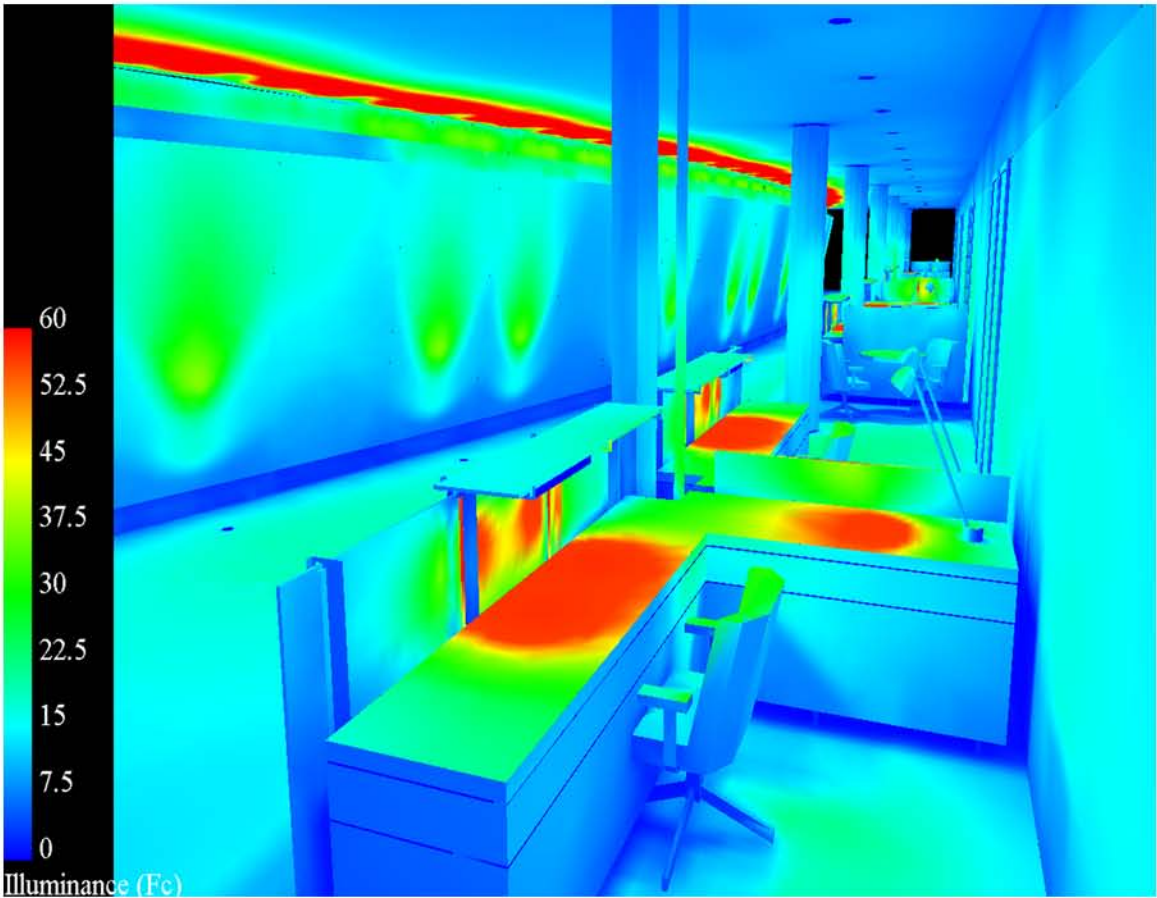
Pradential Strip (1) F2375

NORTH PAVILION AND CONCOURSE conceptual design
 GRAND FOYER AND SOUTH PAVILION conceptual design



modern elegance





05 - Lighting Festivals



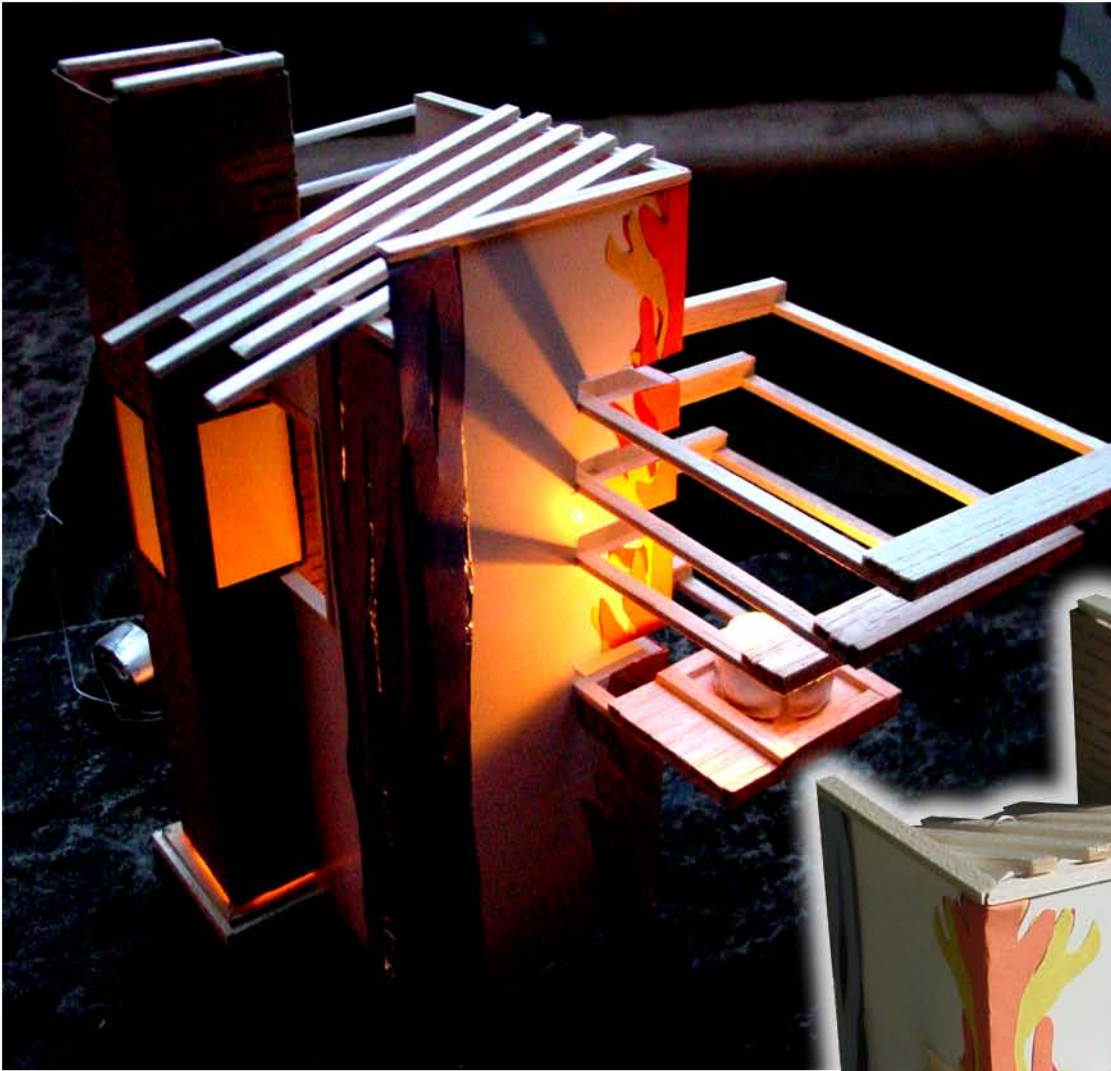
In an event held by the local chapter of the Illumination Engineering Society, students and professionals were placed on teams and given outdoor spaces on the Penn State campus to illuminate. Luminaires were selected in a draft style and then used to create the team's desired theme. Teams then toured the spaces at night.



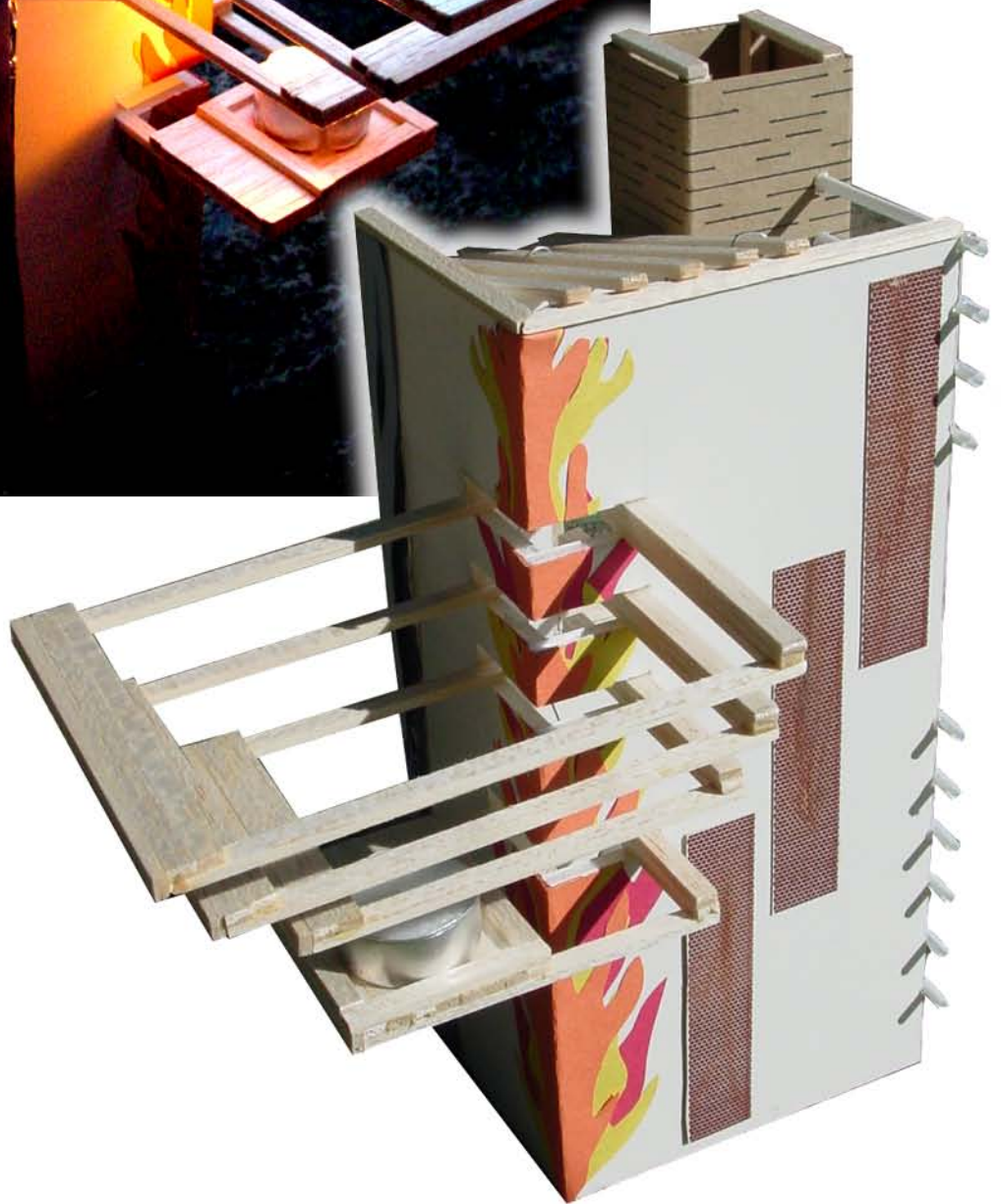
At the Festival of Lights USA in Conyers, GA, teams of professional lighting designers, educators, and students from around the world were teamed together to illuminate several prominent sites around the town. This site is the Landford Elliot House and was the site of the banquet dinner on the final night of the event.

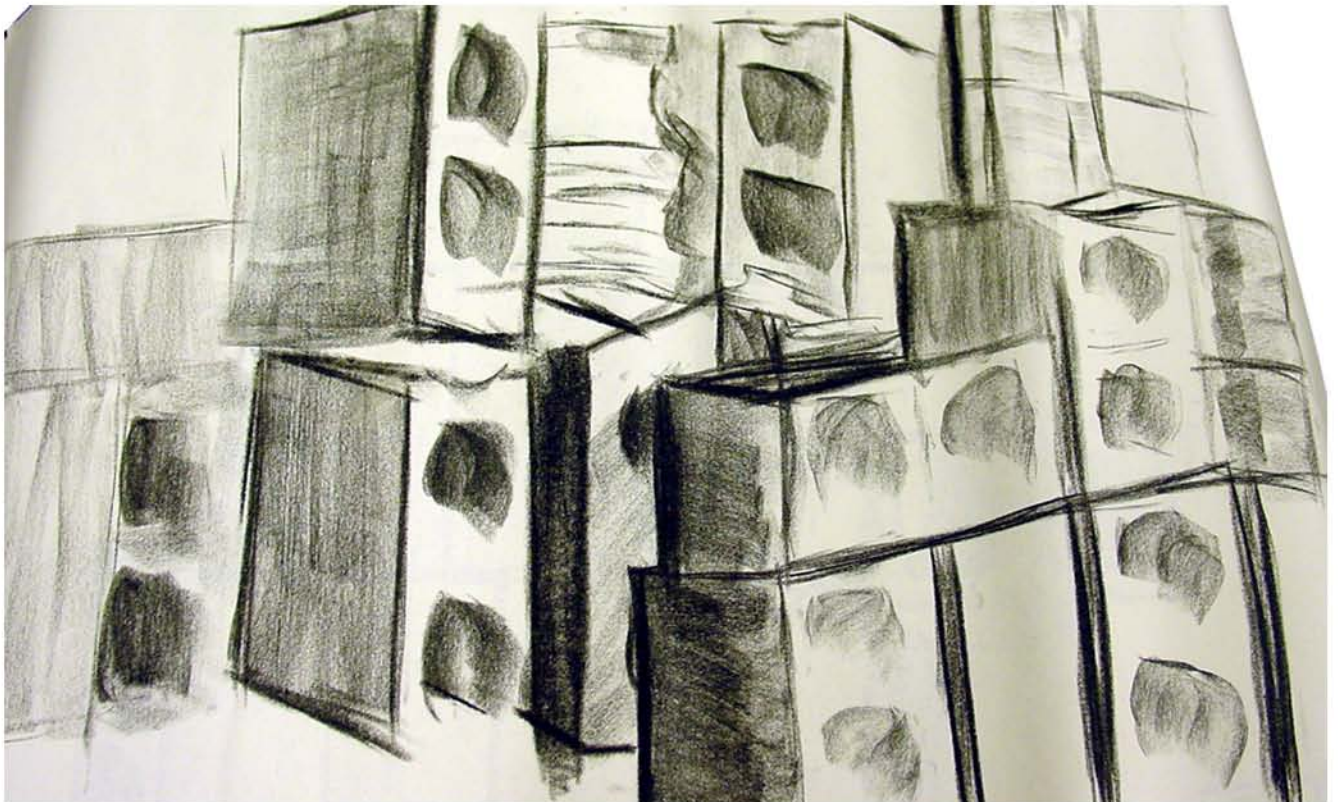
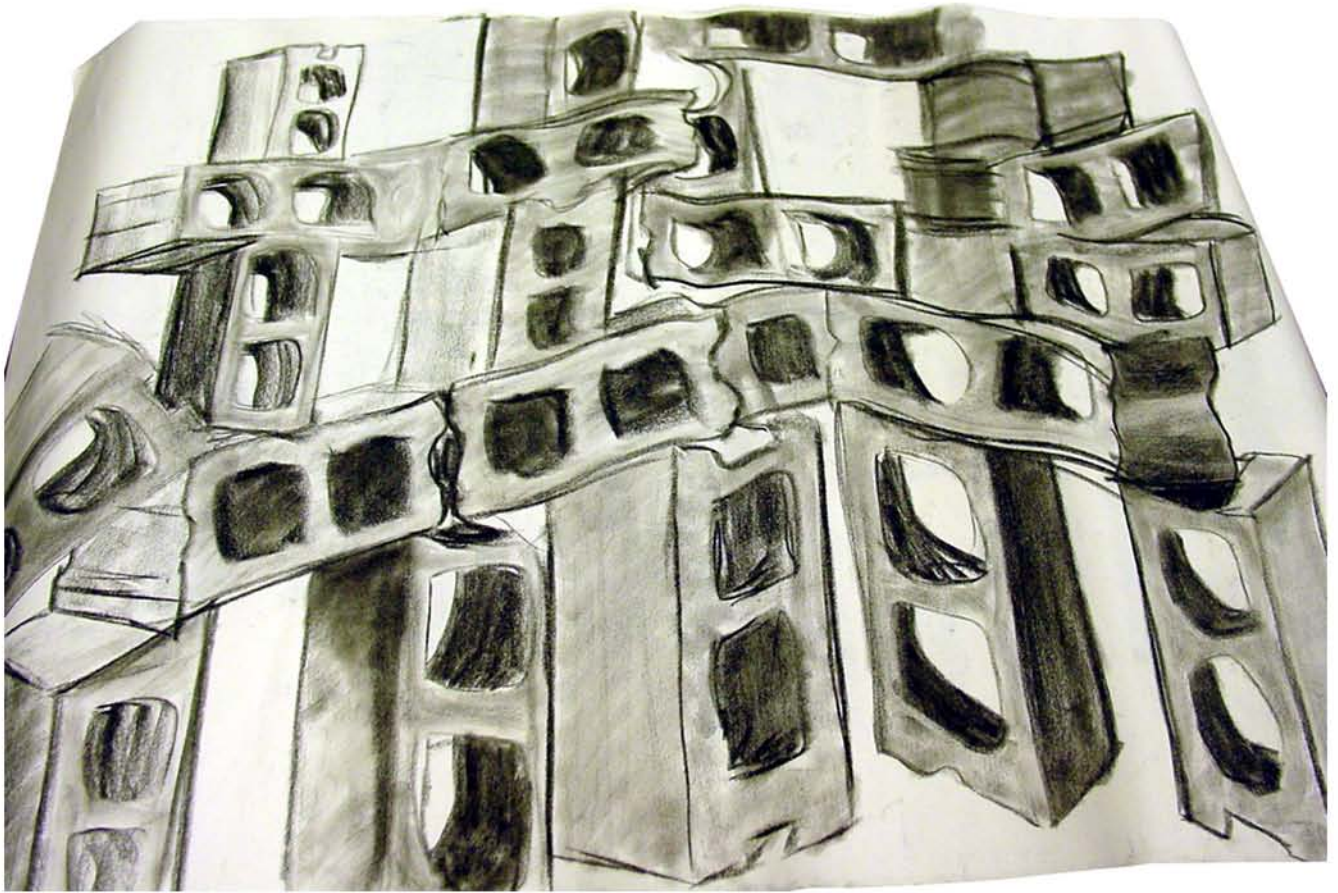


06 - Fallingwater Summer Residency



As a high school junior, I was selected from a national pool of applicants to spend a week studying at Frank Lloyd Wright's famous Fallingwater, my favorite piece of architecture. During the week we learned about the house and its design as well as completing several architectural exercises.







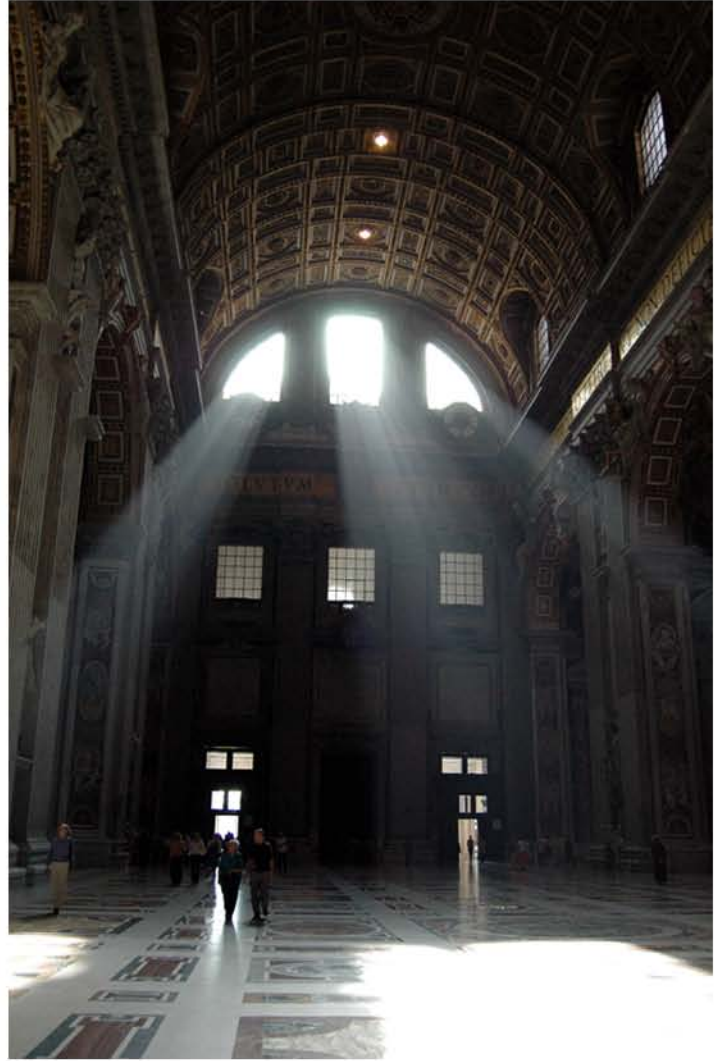



As a photographer I am most fascinated with capturing light and patterns. These photographs highlight some of my favorite images. I have also enhanced my knowledge as a photographer by working as a photojournalist for the Daily Collegian newspaper.












PENNSSTATE



**ARCHITECTURAL ENGINEERING
SENIOR THESIS PORTFOLIO**

AE 481W / AE482

Current course information and assignments for students enrolled in the AE thesis program.

PROJECT ARCHIVES

Search and view current thesis projects or completed projects from past years.

ABOUT AE THESIS

Learn about the Architectural Engineering Senior Thesis Program and its history.

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PENNSSTATE



**ARCHITECTURAL ENGINEERING
SENIOR THESIS PORTFOLIO**

Course Information: AE 481W and AE482

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SEARCH

GENERAL INFORMATION

- COURSE SYLLABUS
- GRADING POLICY
- WEBPAGE GUIDE
- REPORT FORMAT REQUIREMENTS
- BUILDING SELECTION GUIDELINES
- THE ELEMENTS OF A PROPOSAL
- BREADTH PROPOSAL IDEAS:
 - CM •LE •ME •ST •Arch
- PRESENTATION OUTLINE ASSIGNMENT
- FINAL REPORT - GENERAL GUIDE
- PRESENTATION GUIDE & TIPS
- GUIDE TO PRESENTATION QUESTIONS

- MENTORING CENTER (Coming Soon)
- REFERENCE LIBRARY (Coming Soon)
- CONFERENCE ROOM / MESSAGE BOARD
- AE JOB PLACEMENT CENTER
- AE CAREER FAIR

- CURRENT PROJECT LIST
- PRESENTATION DATES for 2008:
 - ◊ Faculty Jury: April 14-18
 - ◊ Awards Jury / Senior Banquet: May 2
- FINAL PRESENTATION SCHEDULE (Spring)

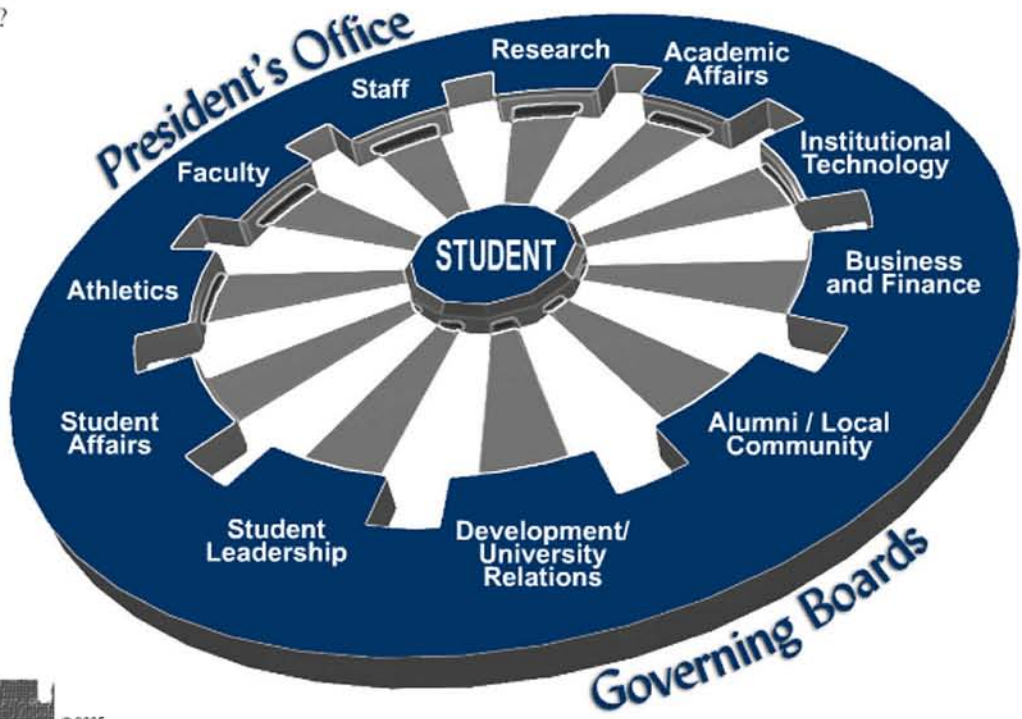
ASSIGNMENTS

ANNOUNCEMENTS:
See the course message board for class times.

<ul style="list-style-type: none"> ■ OWNER PERMISSION FORM..... ■ INITIATION CHECKLIST..... ■ MAPPING THESIS WEB DRIVE..... ■ EMAIL CLOAK AND PDF LINKS..... ■ STUDENT CPEP TEMPLATES <ul style="list-style-type: none"> ◊ FIRST PAGE DRAFT..... ◊ FULL FUNCTIONALITY..... ■ BUILDING STATISTICS (PART I AND II)..... ■ THESIS PROJECT ABSTRACT <ul style="list-style-type: none"> ◊ COLOR AND CONTENT DRAFT..... ◊ FINAL MOUNTED ON BOARD..... ◊ ABSTRACT POSTED ON WEB..... ■ STUDENT BIO SKETCH (PAPER COPY & WEB COPY)..... ◊ EXAMPLE - CM..... ◊ EXAMPLE - LE..... ◊ EXAMPLE - ME..... ◊ EXAMPLE - ST..... ■ FALL SEMESTER SELF-EVALUATION..... 	<p>DUE DATE:</p> <p>FIRST DAY</p> <p>IN-CLASS</p> <p>SEMINAR</p> <p>SEMINAR</p> <p>9/7</p> <p>9/14</p> <p>8/31 - 10/15</p> <p>9/19</p> <p>10/10</p> <p>10/8</p> <p>9/21</p> <p>TBD</p>
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- Why Reflective Questions?
- About Reflective Practice

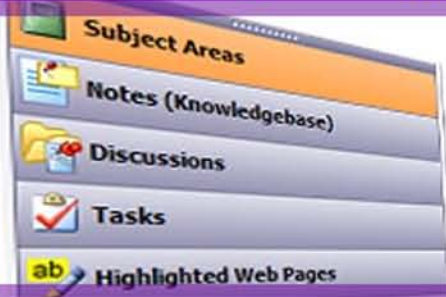


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 American Association of State Colleges and Universities
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As a high school student I became interested in web design and taught myself the necessary tools. Since then I have worked for both Penn State University and private companies to design webpages.

knowledge management for you



- collect, structure and connect information from diverse sources
- organize the Internet your way
- build a lifelong knowledge database
- emphasize and search your relevant information quickly

KnowledgeWorkshop

Home User »

- ◆ Manage shopping web sites
- ◆ Plan a vacation
- ◆ Organize information on hobbies and interests
- ◆ Build an online recipe book

Business & Government »

- ◆ Manage marketing research information
- ◆ Keep tabs on competitors
- ◆ Organize product documentation
- ◆ Document and encrypt sensitive information such as usernames and passwords

Education »

- ◆ Highlight course material, manage notes and improve exam preparation
- ◆ Assemble, organize and share course material
- ◆ Manage research data
- ◆ Build a grants database



NOVEMBER 2007:

KnowledgeWorkshop Version 2

is released and now available for download...

CURRENT NEWS



ARTHUR W. PAGE CENTER

"Public relations, in this country, is the art of adapting big business to a democracy so that the people have confidence that they are being well served and at the same time the business has freedom to serve them well."

-Arthur W. Page

FOR INTEGRITY IN PUBLIC COMMUNICATION

PENNSTATE



College of Communications

WHO WAS ARTHUR W. PAGE?

ABOUT THE PAGE CENTER

PAGE LEGACY SCHOLARS GRANTS

RESEARCH RESOURCES AND HOLDINGS

LINKS OF INTEREST

CONTACT US

WELCOME TO THE ARTHUR W. PAGE CENTER



"We see the Page Center as a lighthouse for those students and practitioners interested in demonstrating and articulating the highest standards of communication and ethical behavior in business, as well as other institutions."

-Lawrence G. Foster

The Arthur W. Page Center at the Penn State College of Communications...

- is a research center dedicated to the study and advancement of ethics and responsibility in corporate communication and other forms of public communication.
- is supported by the Page Legacy Trust through a leadership gift from Lawrence G. Foster, a distinguished Penn State alumnus and retired corporate vice president for public relations at Johnson & Johnson.
- closely cooperates with the Arthur W. Page Society, the nation's leading professional organization for senior public relations executives, but functions as a separate entity.
- and announces its first Page Legacy Scholar competition through which it will award up to \$75,000 in grants to support scholars and professionals making important contributions to knowledge, practice, or public understanding of ethics and responsibility in public communication or other principles of Arthur W. Page.

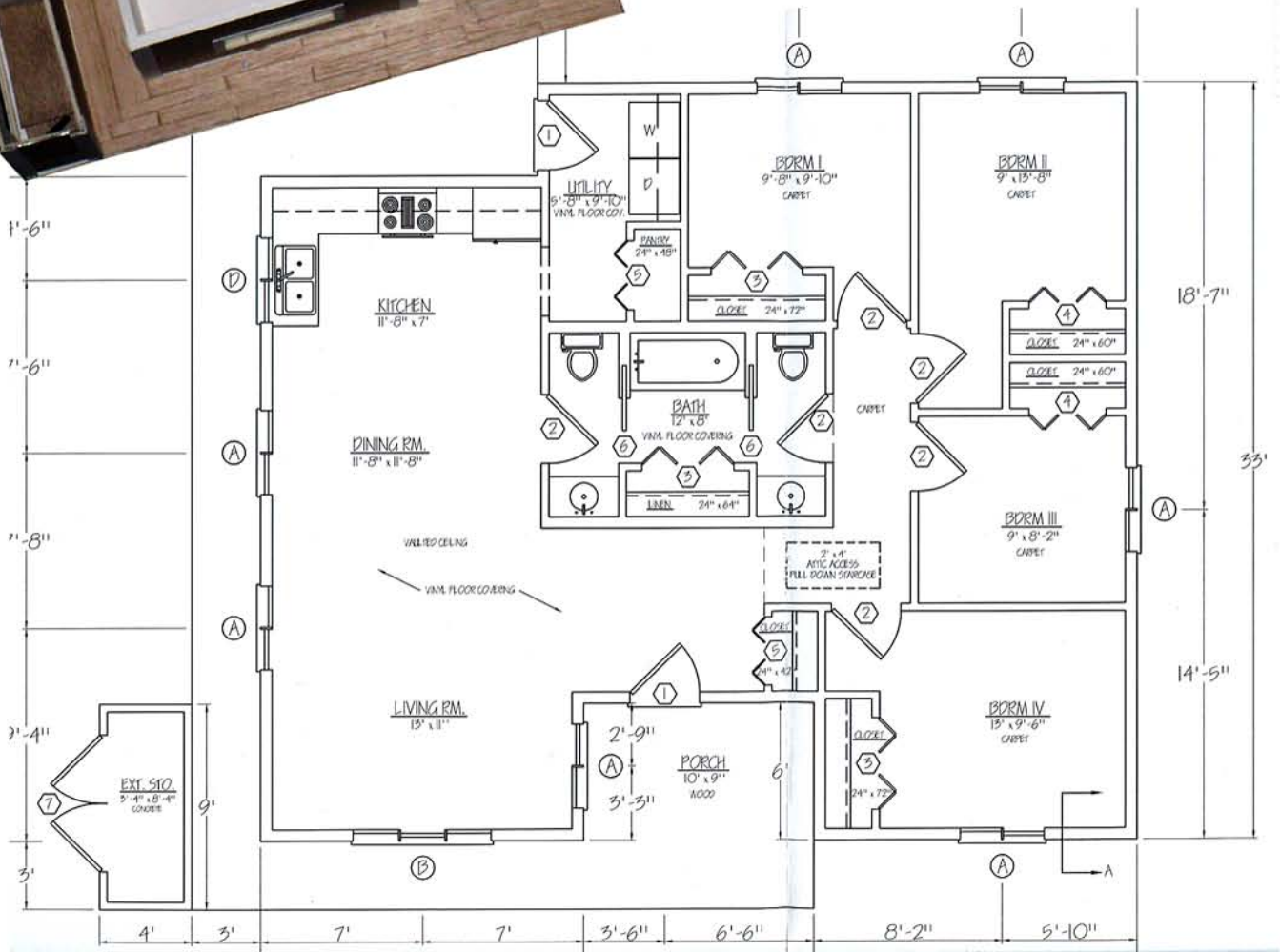
Updated 11/7/04
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College of Communications

09 - Technology Student Association Competitions



As a high school student I became involved with the Technology Student Association, an organization where students can compete at the local, state, and national levels in a variety of events. I competed in the architectural modeling, web design, architectural drafting, architectural CAD and promotional graphics competitions. I placed in the top three nationally in several of the competitions including a second place finish in architectural modeling as a junior and a first place finish as a senior.

This model is from my junior year. The competition was to design and model a home from Habitat for Humanity.



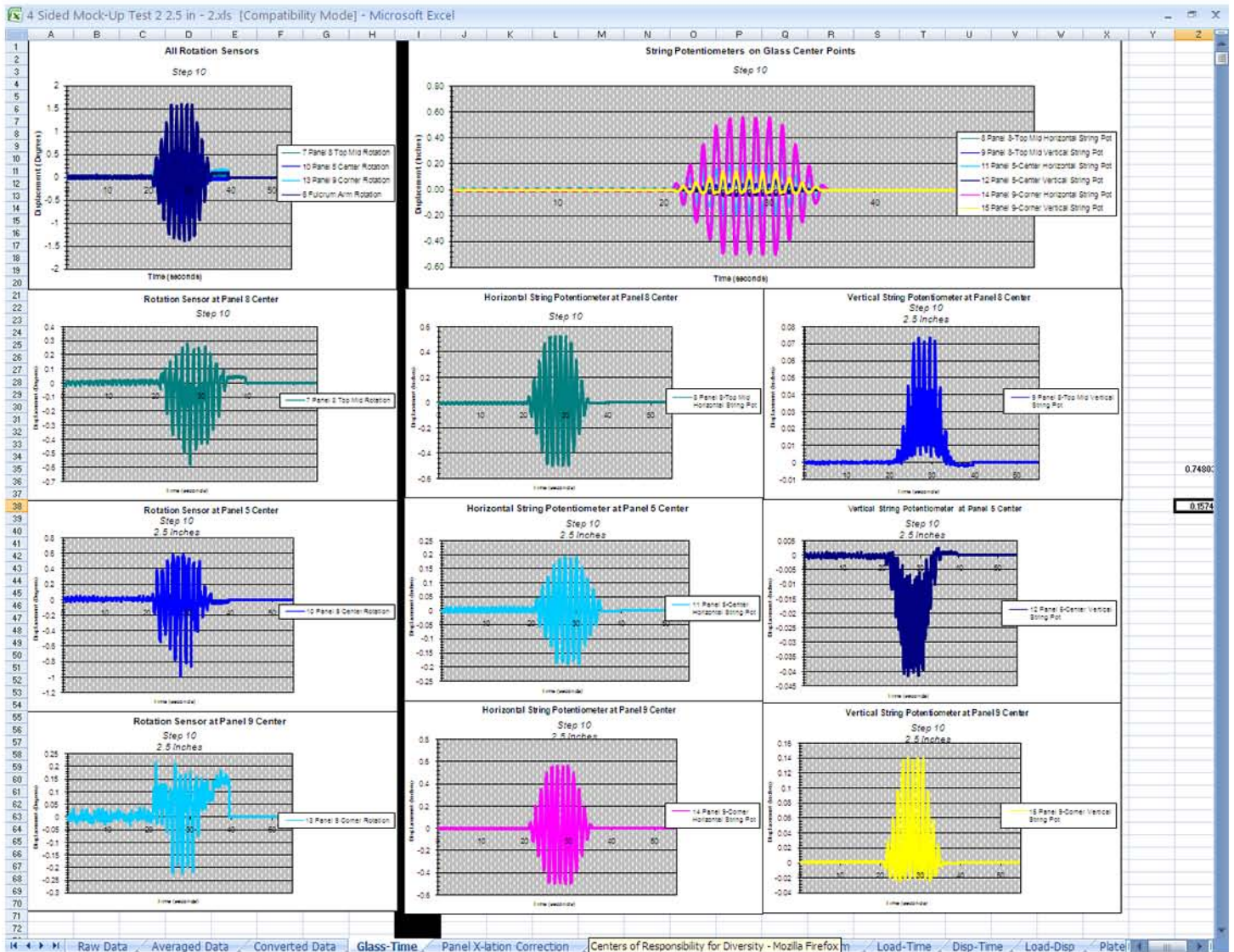




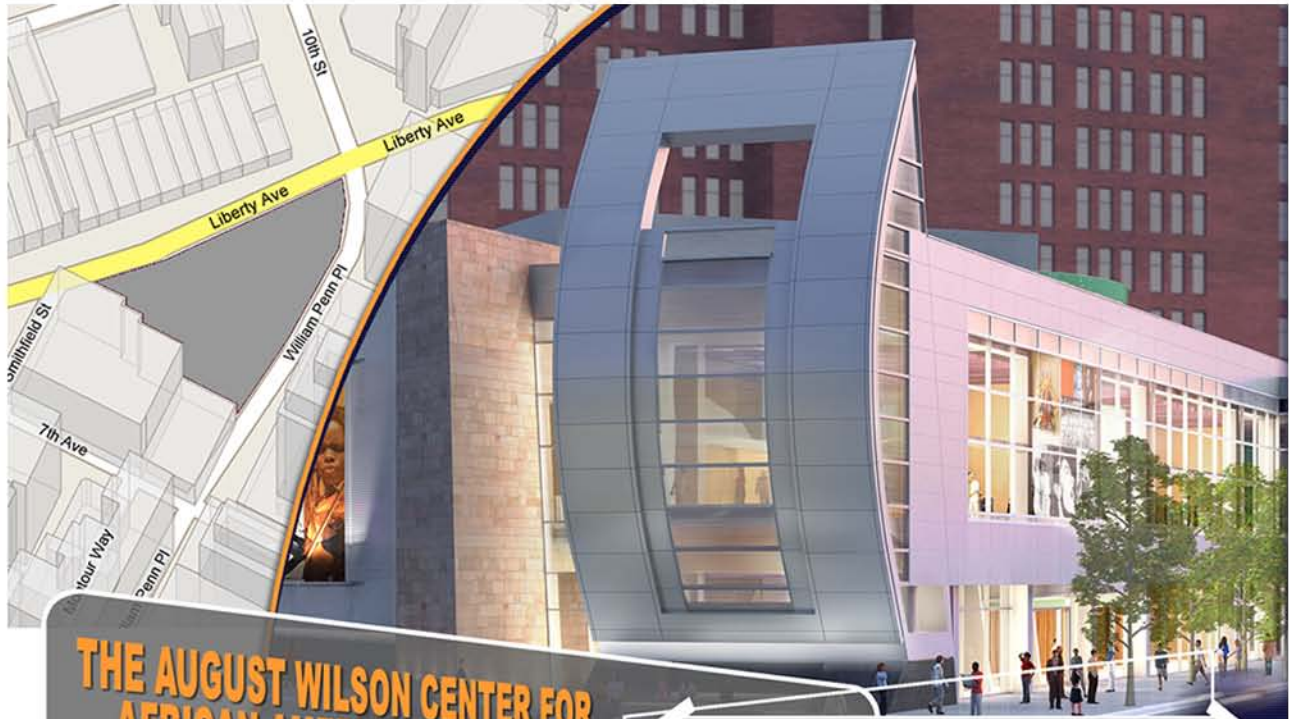
This design and model for an 800 student high school won first place in the Technology Student Association national high school architectural modeling competition.

10 - Building Envelope Research Laboratory





As a research assistant for the Building Envelope Research Laboratory, I have worked on several experiments as well as assisting graduate students with their work. One of the main projects I have worked on is with SSG glass panels. Using a variety of sensors, the movement of the curtainwall system was recorded during racking tests.



**THE AUGUST WILSON CENTER FOR
AFRICAN AMERICAN CULTURE**
LIBERTY AVENUE PITTSBURGH, PA

- ARCHITECT:**
PERKINS + WILL
- CIVIL ENGINEER:**
A&A CONSULTANTS
- STRUCTURAL ENGINEER:**
ATLANTIC ENGINEERING
- CONSULTANTS:**
ARUP
ATS CHESTER ENGINEERS
AUERBACK+POLLACK+FRIEDLANDER
DUQUESNE LIGHT
HORNFECK ENGINEERING
MIDDLEBROOK+LOUIE
SEXTANT GROUP
THE STUDIO I COMPANY
TIMOTHY ENGINEERING
- CONSTRUCTION MANAGEMENT:**
TURNER CONSTRUCTION
STERLING CONTRACTING, LLC
EBONY DEVELOPMENT, LLC
- OWNERS REPRESENTATIVE:**
OXFORD DEVELOPMENT COMPANY
- DELIVERY METHOD:**
CM AGENT
24 PRIME CONTRACTS

architecture

The 63,000 SF facility located in downtown Pittsburgh features a 500 seat performance venue, permanent and temporary exhibit spaces, educational and meeting spaces, a cafe, a book store and offices. The building consists of two levels above grade and is scheduled to be constructed between August 2007 and May 2009 at a budgeted cost of 23 million dollars.

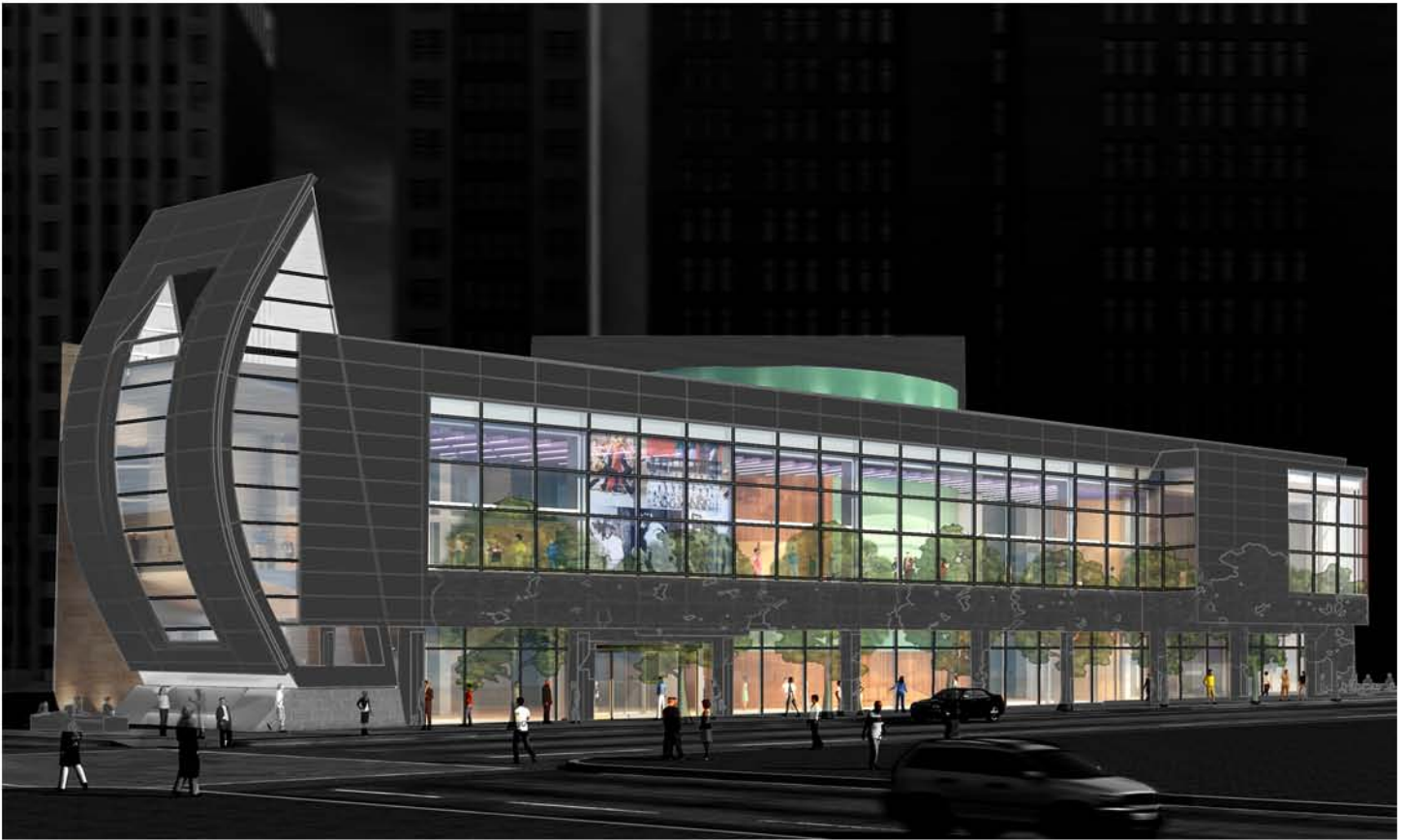
lighting

Aside from the fully functional theatre lighting system, the building is lite with a variety of lighting systems including, fluorescent and HID fixtures. Exposed interior structure dictates interior fixture selection in many spaces, while the sail feature is the only accented facade feature.

building systems

The building rests on a cast-in-place concrete foundation system to grade (partial basement). A combination moment frame and braced frame steel system with reinforced concrete slabs is used for the two upper floors. The building is serviced by Duquesne Light electrical service which is converted to a 208Y/120 system. Theatre and building loads are serviced from separate main boards. Multiple dimming systems are utilized and a backup generator protects the entire system. The mechanical system is forced air heating and cooling with stem to steem humidification. Five AHUs are housed on the roof.

an architectural engineering senior thesis portfolio
MICHAEL PATRICK ROYER
lighting and electrical option



In my fifth year, I am working on a dual honors thesis in Architecture and Architectural Engineering. As part of the standard Architectural Engineering thesis program, I am working to redesign the lighting and electrical systems of an existing building, The August Wilson Center for African American Culture. Additionally, I am working to design a large addition to the project. Finally, I will complete a cost estimate and construction schedule for the project. Progress on my thesis can be monitored at <http://www.engr.psu.edu/ae/thesis/portfolios/2008/mpr184/>