

2014 SGH / Dri-Design **Scholarship**







Fall 2014

ARCH 410 'integrate' design studio University of Nebraska-Lincoln College of Architecture



1

2014 SGH / Dri-Design Scholarship

Fall 2014

ARCH 410 'integrate' design studio University of Nebraska-Lincoln College of Architecture

University of Nebraska-Lincoln

College of Architecture 232 Architecture Hall Lincoln, NE 68588-0107 (402) 472-7943

http://architecture.unl.edu

Fall 2014

Arch 410 Architectural Design: Tectonics

Fundamentals of architectural design. Continuation of problems concerned with human needs. Intermediate projects that emphasize technological considerations as form determinants. Structure, material, equipment, and construction.

All Rights Reserved.

No part of this publication may be reproduced in any manner whatsoever without permission in writing from the University of Nebraska - Lincoln, College of Architecture.

- 4 Sponsors
- **14 Honor Award**: Zoe Cope, Kate Horn
- 20 Merit Award: Melissa Hywood, Michelle McCullough
- **26** Finalist: Trevin Eckhardt
- **32** Finalist: Kevin Bukowski, Elizabeth Szatko

The College of Architecture at the University of Nebraska-Lincoln, in partnership with SGH Inc. and Dri-Design, has established a student scholarship competition for the fourth-year, undergraduate, architectural design studios. The scholarship recognizes student projects exemplifying outstanding design investigation, resolution, and significance.

This opportunity brings together aspiring architects and industry leaders to advance disciplinary knowledge of design, materiality, and innovation.

Following the end-of-semester review, one project from each studio will be selected to compete for the SGH Inc./ Dri-Design Scholarship. These projects will be presented to judges who are all established practitioners in their fields. A finalist will be chosen for producing and communicating a comprehensive architectural project that is a result of design decisions at different scales. To be successful, students need to demonstrate a high degree of professional dedication, rigor, open-mindedness, and resourcefulness. Projects are expected to be rigorously thorough and to clearly communicate the breadth and depth of investigation.

We thank our sponsors SGH, Inc., a leading distributor and installer of customized building products, and Dri-Design, a producer of advanced and sophisticated metal wall panel systems.

Fall 2014 - Architecture Design Studio Faculty Mark Bacon, Adjunct Professor of Architecture David Karle, Assistant Professor of Architecture Nate Krug, Associate Professor of Architecture Joyce Raybuck, Adjunct Professor of Architecture



SGH, ARCHITECTURAL PRODUCTS

SGH, Inc. is a leading distributor and installer of customized building products primarily used for the exterior of commercial buildings. Unlike other providers, SGH, Inc. supplies only the highest quality products and expert installation services. From the initial idea to the final details, SGH, Inc. has the resources to successfully execute projects of any size from concept to completion.

Since we also source the materials we install, our employees have an intricate knowledge of how the products work, the best way to install them and pass that expertise on to our customers. Our professional team works closely with owners, architects and contractors to ensure that the product looks stunning both on paper and in use.

We would especially like to thank Troy Burkey for helping establish this program and for his great stories.



DRI-DESIGN

Founded in Holland, Michigan in 1995, under the leadership of President Brad Zeeff, dri-design has turned the Metal Panel Industry on its ear. With dri-design, Zeeff set out to solve what he viewed as the significant shortfalls of traditional metal panel systems: delamination, staining due to the effects of weather on joints and gaskets, a lack of color and texture options, the rising cost of production and inefficient installation practices.

The result of dri-design's meticulous engineering, is a 100% recyclable, pressure equalized rain-screen, architectural metal wall panel system that attaches to nearly any substrate without the use of clips or extrusions. The pressure equalized rain-screen design can be installed simply over commercial grade Tyvek onto plywood, or as the most sophisticated outboard insulation pressure equalized rain-screen you can design.

We would especially like to thank Jason Zeeff for partnering with SGH and delivering a great lecture in Lincoln, NE.



JOHN DWYER

John Dwyer is the founder and principal of John Dwyer Architect. He is a licensed architect and member of the American Institute of Architects. He began his career as a carpenter, working for his father, and after years of apprenticeship, attended the University of Minnesota College of Architecture and Landscape Architecture. He received his Masters of Architecture in 1999 and completed his internship with SALA Architects in Minnesota and CVDB Arquitectos in Lisbon, Portugal.

In 2004, John founded his first private practice. Among his early works was the first LEED Platinum home in the state and one of the first in the nation. In 2005, he began teaching as a lecturer and adjunct professor at the University of Minnesota College of Design.

In 2007, after Hurricane Katrina, John moved to New Orleans and founded a community design studio in the Lower 9th Ward. In the first 6 months, he provided pro bono design services to over 60 returning households. In 2009, he returned home to pursue new design ideas within the changing economy. Among them was a single family home which came to be known as "the house for the new economy" as well as one of the winning entries in a national competition for affordable, sustainable multifamily housing. In 2010, he developed and founded John Dwyer Architect with a higher level of client service, a greater attention to detail and a stronger focus on beautiful, high performance buildings.



MATT KREILICH

As design principal and partner of Snow Kreilich Architects, Matthew Kreilich is the heart of the firm's collaborative working model taking an active role in both strategic and detail design resolutions in the studio. His passion lies in the belief that in addition to solving complex and pragmatic needs of a client's program, design has the transformative power to enhance our everyday life experiences. Matthew provides design leadership and insight into all of the firm's projects, as well as acting as the project designer on some of the studios' most significant projects.

Matthew's design leadership and experience continue to be recognized both locally and nationally. Matt was recently honored with the AIA National Young Architect Award for outstanding design leadership and locally recognized with the Minneapolis/St.Paul's Business Journal's 40 under 40. His work has received numerous Awards including MN AIA Honor Awards, the National AIA Honor Award, Progressive Architecture Award and the Holcim Award. Matthew was also the recipient of the prestigious Ralph Rapson Traveling Study Fellowship.



MARC SWACKHAMER

Associate Professor of Architecture at the University of Minnesota where he serves as the Director of the M.Arch Program. Marc is also a cofounding principal (with Blair Satterfield) of the awardwinning and internationally published architecture and design collaborative HouMinn Practice. HouMinn's work has been published and exhibited internationally and their prototype research won national awards from ID Magazine and Architect Magazine. In his research, Swackhamer studies the relationship between performance and ornament through the lenses of digital production and fabrication technologies. Marc has also developed significant research in the area of biomimetics and its relationship to design. He is currently co-authoring a book on innovations in mimetics with Blaine Brownell. Swackhamer was a chair of the 2008 National ACADIA (Assoc. for Computer Aided Design in Architecture) Conference and now serves on ACADIA's Board of Directors. As an Associate Member of the University of Minnesota's Digital Design Consortium he conducts research in the area of digitally produced modular wall systems. Through this effort, he and Blair Satterfield have collaborated with numerous faculty members and researchers from multiple disciplines across the university. He received degrees from the University of Cincinnati and Rice University.

PRE-DELIBERATION





DELIBERATION



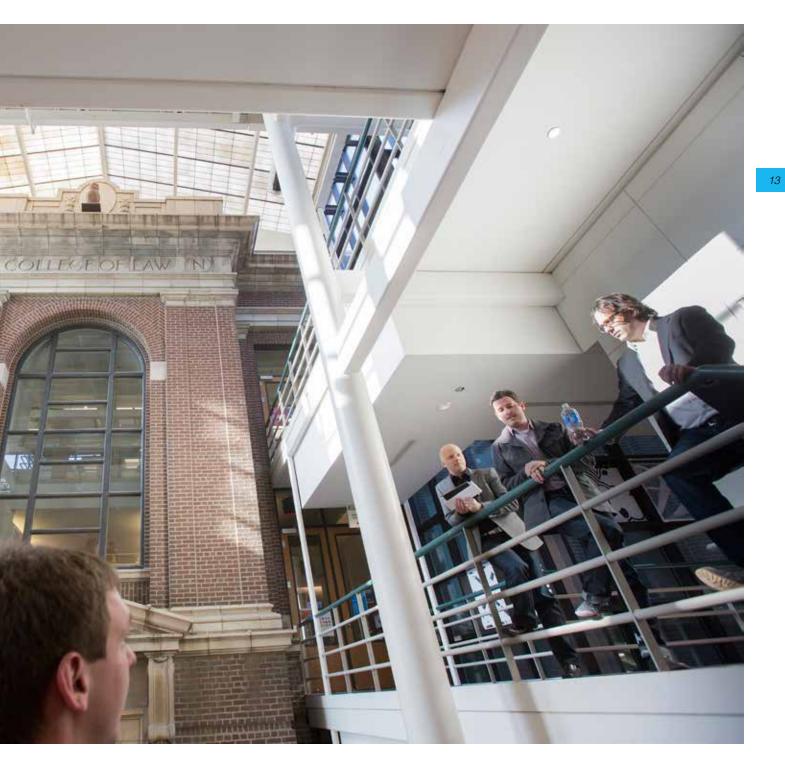






ANNOUNCEMENT





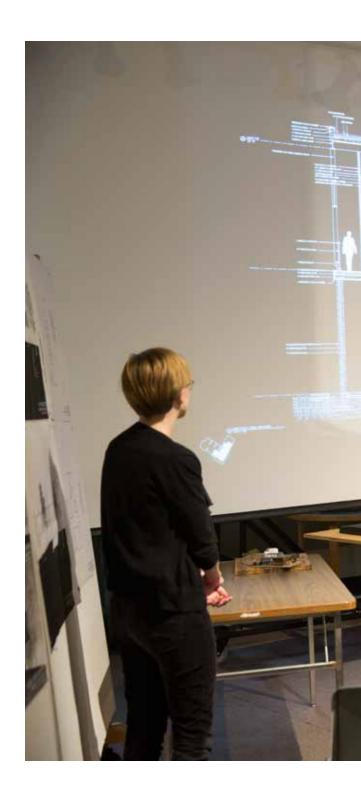
Honor Award

Architecturing Archicultures

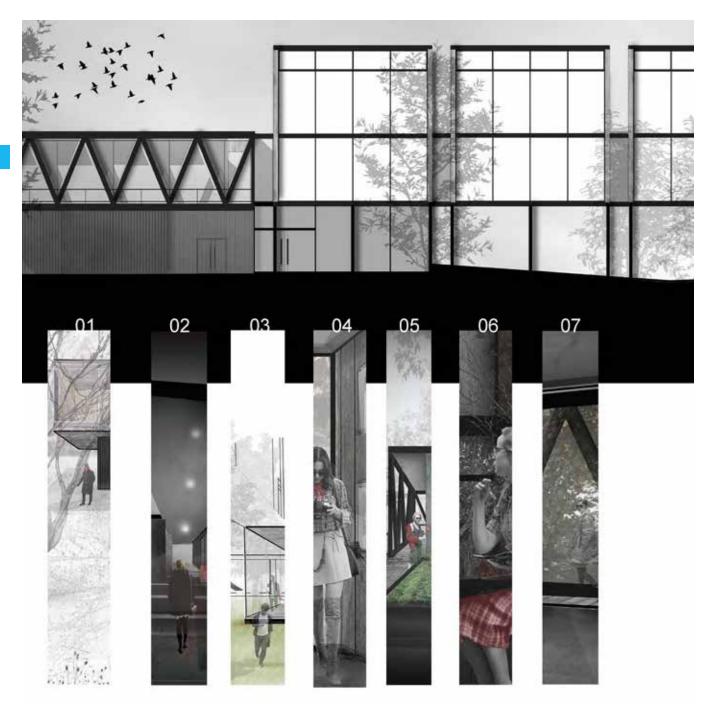
Zoe Cope, Kate Horn Faculty Mentor: Joyce Raybuck

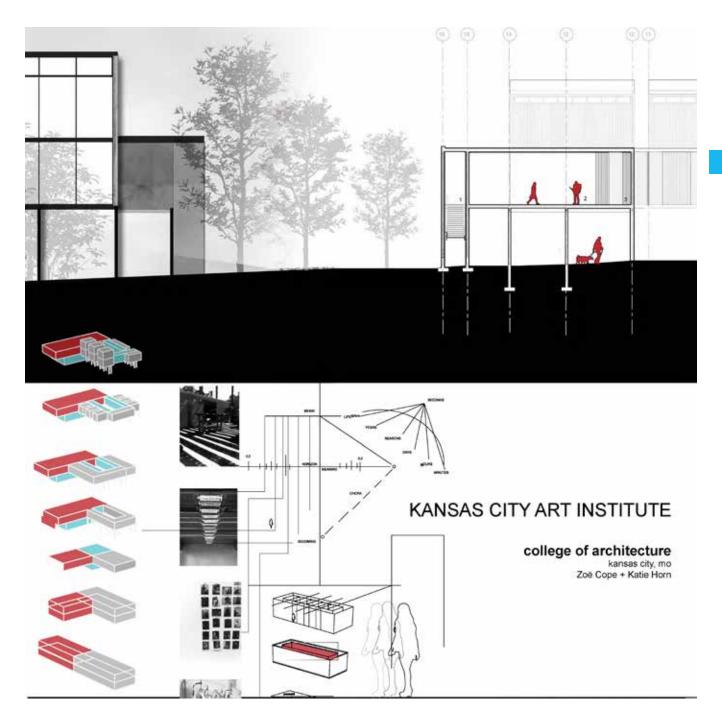
The Kansas City Art Institute College of Architecture is not just a school of Architecture, but also a school of thought on Architecture. This project opens a dialogue about the past, present, and future of our profession as it is allied to the academic pursuit of an Architecture.

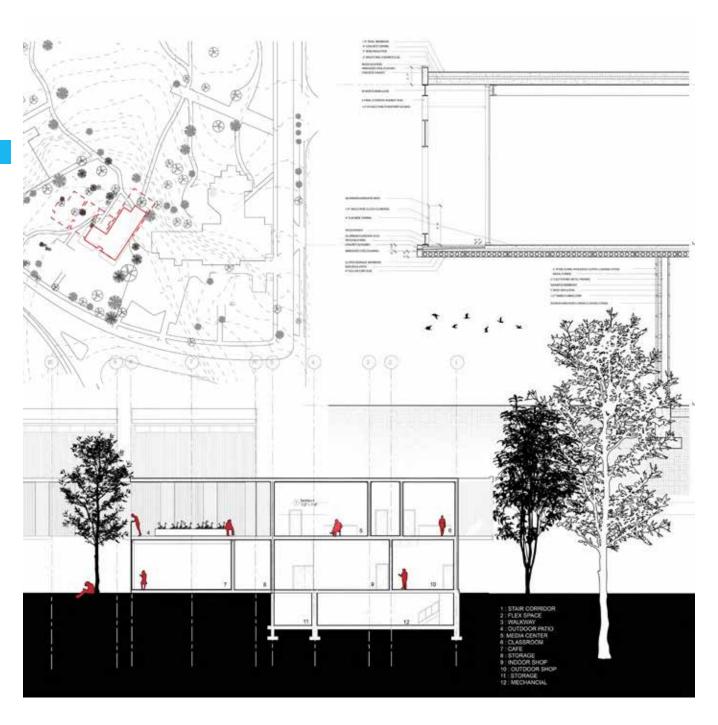
Sustainable strategy massing was done early in order to capitalize upon natural conditions provided by the site. These strategies helped inform the conceptual strategies of program adjacencies and journey. This project as a whole represents the journey from process to product both through the building itself and through the curriculum that inhabits it. The overall design was formulated through attention to materiality, detail, and experiential condition. Seven key moments that demonstrated this best were represented through careful renderings, facade studies, and technical detailing. Documentation of the entire building moves from technical plans, which represent the bones of the building into fully detailed building sections that maintain a level of abstraction and finally rendered building elevations. Each drawing set adds another layer of information to the previous in the same way that moments color and fade with time to layer our memories.













Merit Award

Sacred Architecture: searching for the ineffable

Melissa Hywood, Michelle McCullough Faculty Mentor: Mark Bacon

Architecture is a sensorial interaction that provides us with a perceptual and integrated understanding in the world. Buildings, to be more specific, are experienced as a full extension of our bodies. The Material Logics + Sacred studio searched to understand the connection between the multisensory experience and the crafting of a building. The search relied on confluent investigations of material logic and sacred architecture.

Traditionally, the cathedral has stood as a physical manifestation of Catholic values and ideology. The church has existed as a private, introspective, and non-public space; much like the common perception of Catholic culture. Recently, Catholicism has made significant shifts, taking an inclusive approach in their principles. While the religion has progressed, its architecture has yet to align to these new ideals. This sacred space challenges religious architecture's hold on tradition.

The massing and material strategies translate current Catholic ideology into formal experience. The massing of the building is developed off of the strict perpendicular axes and morphed into a space that centers on community integration. The centralized courtyard and programmatic ramp space provide an invitation to the broader community and guide their experience into the spaces of light. Through the use of materials, the user follows the progression of Catholic culture from the monolithic, traditional stone entrance, up the ramp into the perforated lpe transitional space, and into the light of the acid-etched glass sanctuary. The sanctity of communal experience is emphasized throughout the church as a symbol of progression rather than historical representation.







MATERIAL STRATEGY



Monolithic Volumes Investige volumes in dock. Bute to retirence hoddong manufact churches



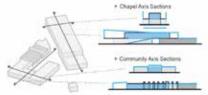
Highlight Destinations: Cleate Egist scaures at the heightened points at destrooter with apid-etched glass that seems light dong chapes into the biddony.



Warm Core Spaces Warm the two core spaces and create a visual hamilton from the healthy stock follow light in these pilaces of promisestor.



Highlight Nooks
Define rooss with lipe toeking. Clase the Starth and South sales, to drow reshurd light while connoting views to the West.



Section Study such community case is righted to bue

EAST ELEVATION

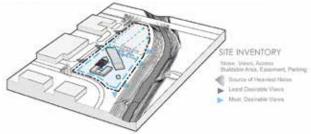








Traditionally, the cathedral has stood as a physical manifestation of Catholic values and ideology. The church has existed as a private, introspective, and non-public space; much like a common critique of Catholic culture. Recently, Catholicism has made significant shifts, taking an inclusive approach in their principles. While the religion has progressed, its architecture has yet to align to these new ideals.



MASSING STRATEGY



Intersect

Soft dies are perpendicular to one another god intendict at the center. Workto over anematic haddonel fast and their



Rotate

Stiff eating off of the traditional cost or notice to be overn estimately by providing easily occurs and before trans-



Separate

Primary chapet is sevared to establish an experiential processor. The community building is pailed bowly from the right chapet. No office calculation will fin the plant of inference for.



Widen & Punch Out

A case is holissed into the center of each touking allowing community is the on vitings part of program.



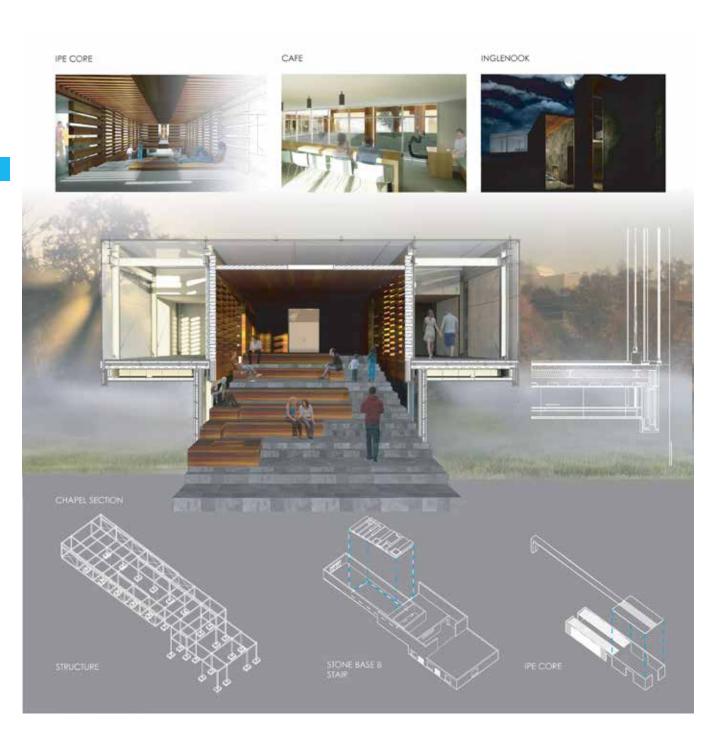
Heighten

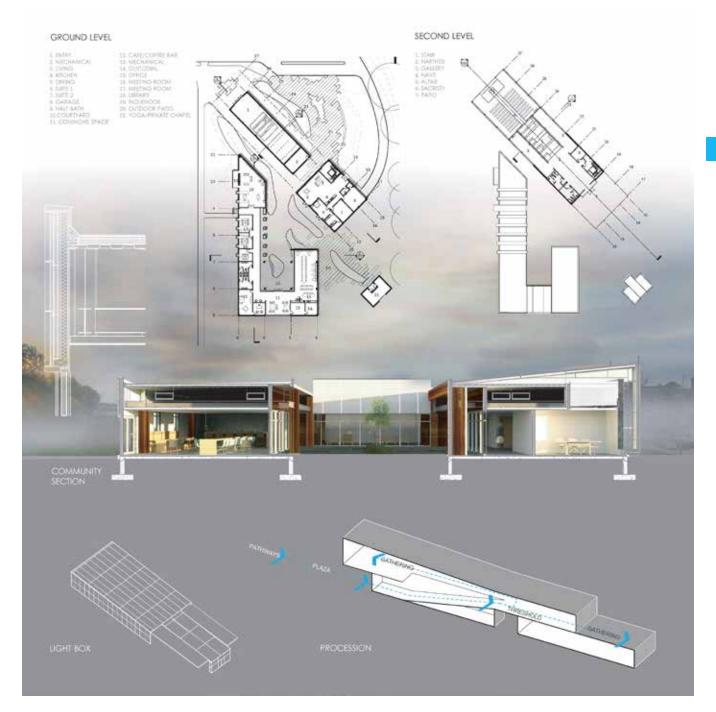
The territripator of each over a frequential to designate destruction paints.



Pop Up

Reveal on clothed within the community space to above contain lightly, contain should above, and make interior reveal.





Finalist

Lied Education Center for the Arts

Trevin Eckhardt Faculty mentor: Nate Krug

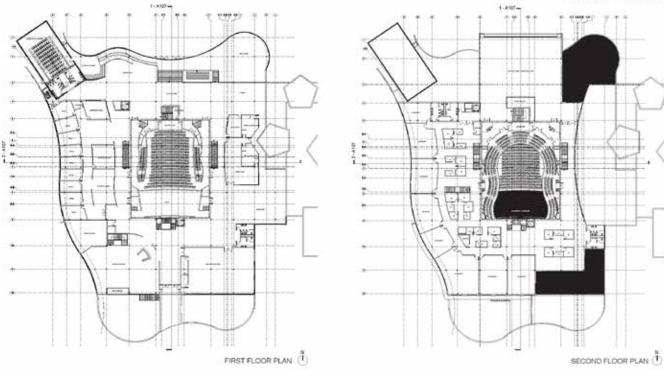
The Lied Education Center for the Arts (LECA) of Creighton University in Omaha, Nebraska opened its doors in 1996 to combine the areas of Fine and Performing Arts under one roof. From that day, the Arts program has struggled with lack of storage space, small classrooms, inadequate performance spaces, etc. The need for expansion becomes needed for the continuance of a proper educational space. The idea behind Phase II of LECA is to create a new addition that becomes a main focal and gathering point for the arts college as well as the Creighton as a whole. Student interactions, student spaces and events became a major factors in the design. These were considered to develop Phase II into an interaction hub for the campus.

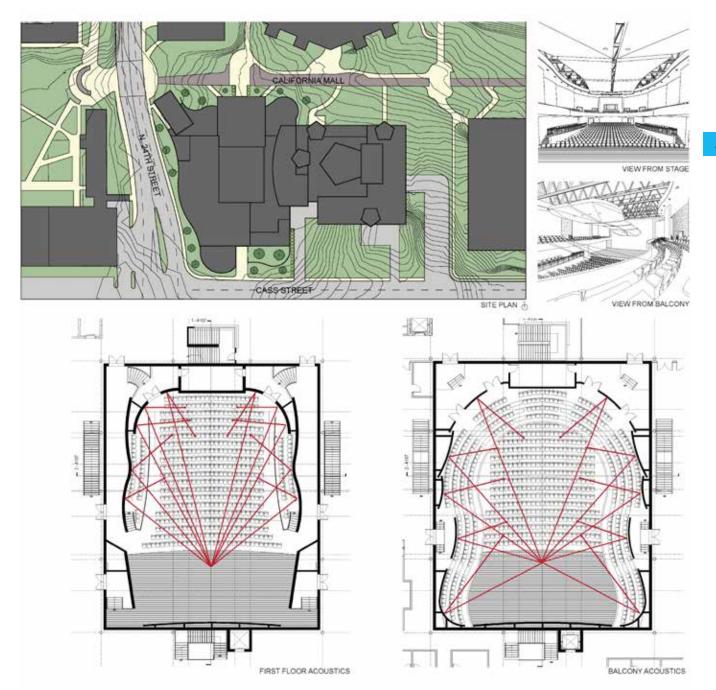
LECA Phase II is a 120,000 square foot addition where a 950 seat music hall is the main feature designed to accommodate music performance of all types. The three story addition also features a lecture hall, café, offices, classrooms, practice rooms, and student resource centers. The new spaces create a design based on the uses and interaction of the students of the college. The additional space will allow the college to grow and expand to better accommodate the students and their education. The new facility will bring a new set of programs into use for the college. Bringing this large array of programmatic elements together develops LECA Phase II into a user-based design, mainly focused on the students.

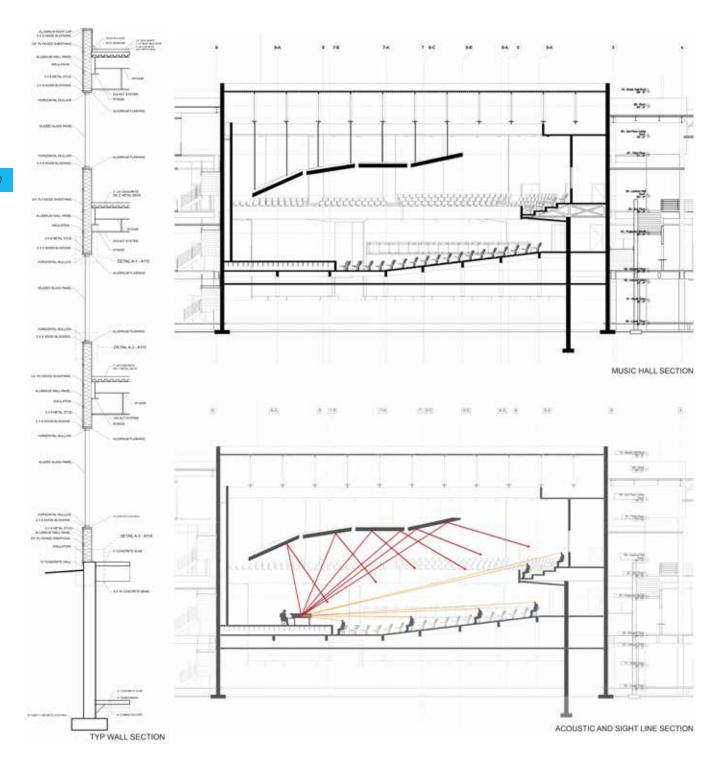














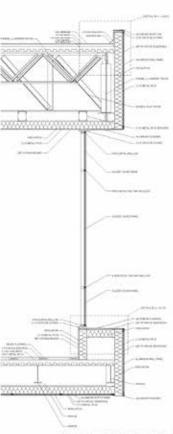
MAIN ENTRANCE



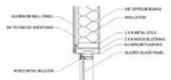
NORTHWEST PERSPECTIVE



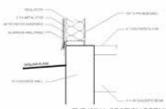
SOUTH ELEVATION



WALL SECTION AT EVENT SPACE



TYP WALL SECTION DETAIL



TYP WALL SECTION DETAIL

Finalist

Air Rights Architecture

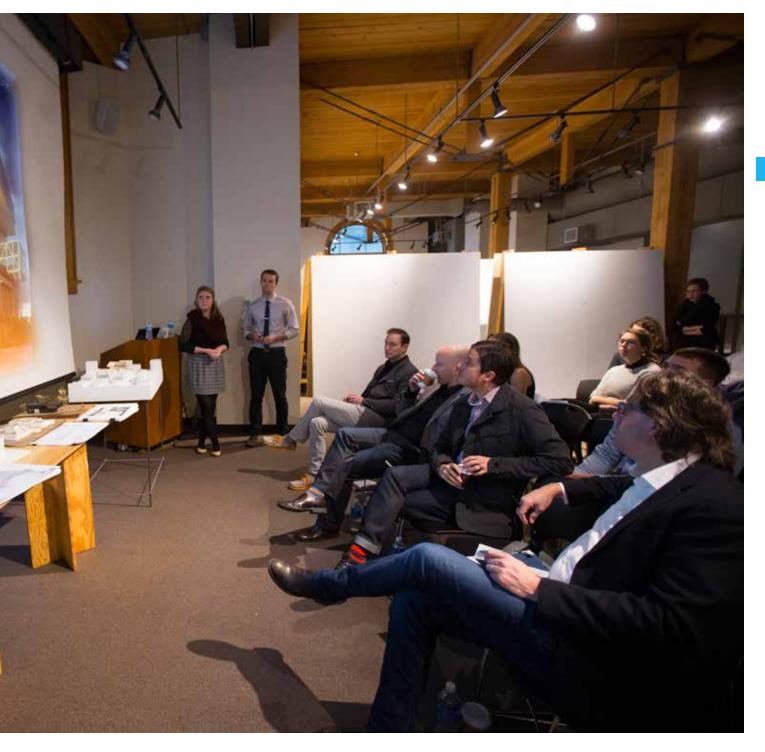
Kevin Bukowski, Elizabeth Szatko Faculty mentor: David Karle

Air Rights Architecture investigates the use of the available air space above buildings, challenging preconceived notions that architecture must primarily touch the ground. The use of air space allows for the densification of urban areas as well as providing space for auxiliary programs to function and sustain the areas around them. Air rights and the sale of space above buildings is becoming a highly explored area of architecture around the United States.

This proposal is located in downtown Lincoln, Nebraska, near the heart of the commercial business district, above the historic Grand Manse. The project site is surrounded by four of the most highly trafficked roadways in Lincoln making the site highly visible to the public. The project site is positioned between many new developments such as the Pinnacle Bank Arena, Haymarket expansions and the P Street District as well as established Lincoln landmarks such as the University of Nebraska Lincoln, Memorial Stadium and the State Capital Building.

The population of Lincoln is projected to nearly double over the next thirty years, this makes a project that focuses on the densification of the city's downtown a desirable solution. This proposal looks to make contextually conscious use of valuable air right's property above the Grand Manse with a design that will accommodate the needs of a growing urban density, while providing unique architectural attributes that will excite and engage the public. Like many other cities, Lincoln has the opportunity to take advantage of air space and densify using air rights architecture.









LIFT

Avoids disturbing HVAC on roof of Grand Manse.

2. Provides an acoustical barrier



VOID

 Preserves natural sunlight! windows of Grand Manse.

2. Fits into contextual datum lines



SUPPORT

Utilizes existing egress core
 Dormant (private) core



SEPARATE

Separating program for privacy
 Providing outdoor patio space.



ACCESS

Providing direct access to public spaces of program.



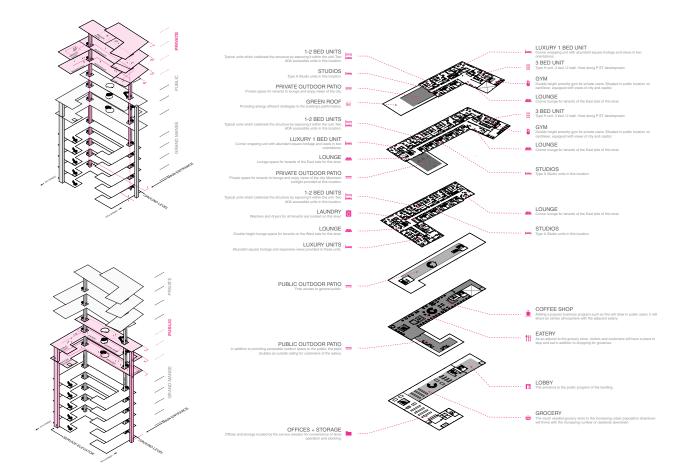
TURN

Orientation for view opportunities.



TIER

 Maximizes green spaces and creates outdoor patios
 Steps down to urban fab









BUILD UP NEW CORES



ADD GIRDERS AND COLUMNS TO FRAME OUT LOWER MASSING



TRUSSES LOCATED OUTSIDE ON LOWER MASSING



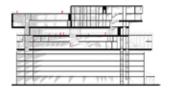
ADD GIRDERS AND COLUMNS TO FRAME OUT UPPER MASSING



TRUSSES LOCATED INSIDE ON UPPER MASSING

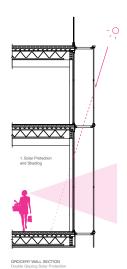


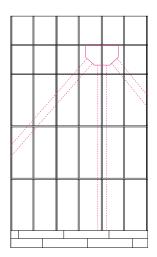


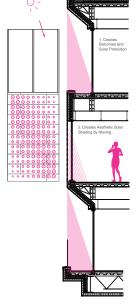


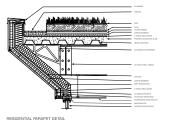


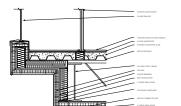
SOUTH SECTION EAST SECTION SOUTH SECTION WEST SECTION WEST SECTION











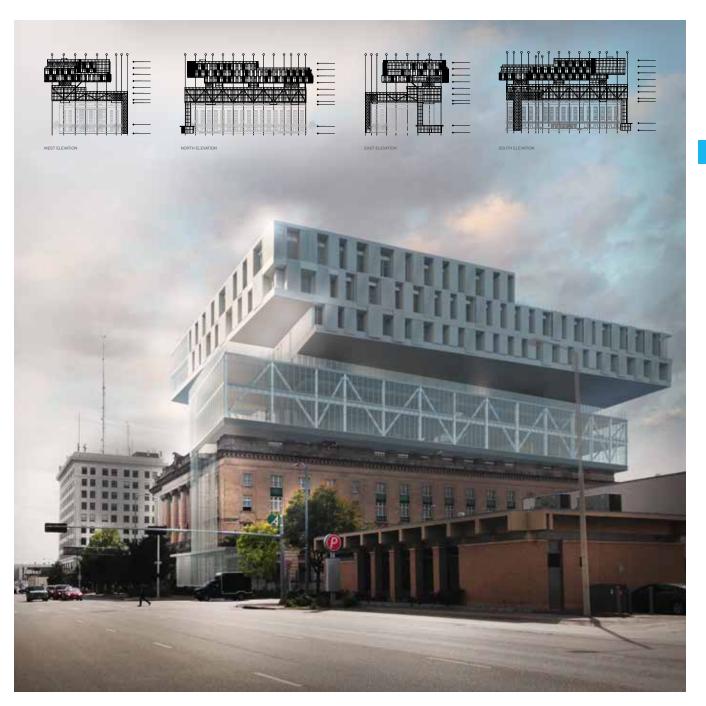
GROCERY WALL PARTIAL ELEVATION
Exposing and Celebrating Structural Trusses











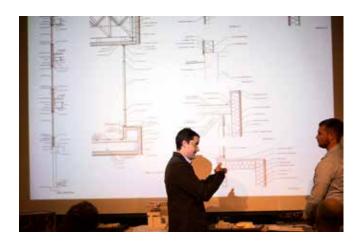












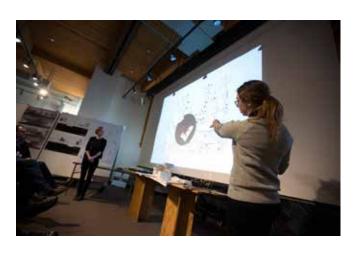


















DESIGN STUDIOS

Mark Bacon

Adjunct Professor of Architecture

Sean Coffey Kekeli Dawes Alex Hill

*Melissa Hywood

Jacob Jambor Zebulun Lund

*Michelle McCullough

Garrett Peterson Rachel Plamann Rex Sandquist Rebecca Walker Junxing Wu Wei Xia Yunsen Zhong

* Studio Finalist

David Karle

Assistant Professor of Architecture

Travis Barrett

*Kevin Bukowski
Meredith Butler
Alexander Eastman
Mackenzie Gibbens
Ethan Griger
Meghan Janousek
Hillary Krajnik
Nathan Moulds
Nolan Schaefer

*Elizabeth Szatko
Caitlin Tangeman

Salem Topalovic

Leul Yoseph

Nate Krug

Associate Professor of Architecture

Danielle Blume
John Coughlin
*Trevin Eckhardt
RodRick Ekwall
Anna O'Neill
Kelsey Peatrowsky
Carolina Preciado
Michael Seager
Steven Severson
Corey Thiele
Xiaoyu Wu

Joyce Raybuck

Adjunct Professor of Architecture

Maria Bataller Hormeno
Philip Claghorn
*Zoe Cope
Allison Fejfar
Kaitlin Frankforter
Elizabeth Heldridge
*Kathryn Horn
Madeline Horner,
Matthew Kreutzer
Bryan Perez
Ryan Plager
Soeren Tanke

2014 SGH / Dri-Design Scholarship

Fall 2014

ARCH 410 'integrate' design studio University of Nebraska-Lincoln College of Architecture

