



LUC PHINNEY
PORTFOLIO

SUBJECT AREA
**DESIGN DETAILING AND
CONSTRUCTION DOCUMENTS**

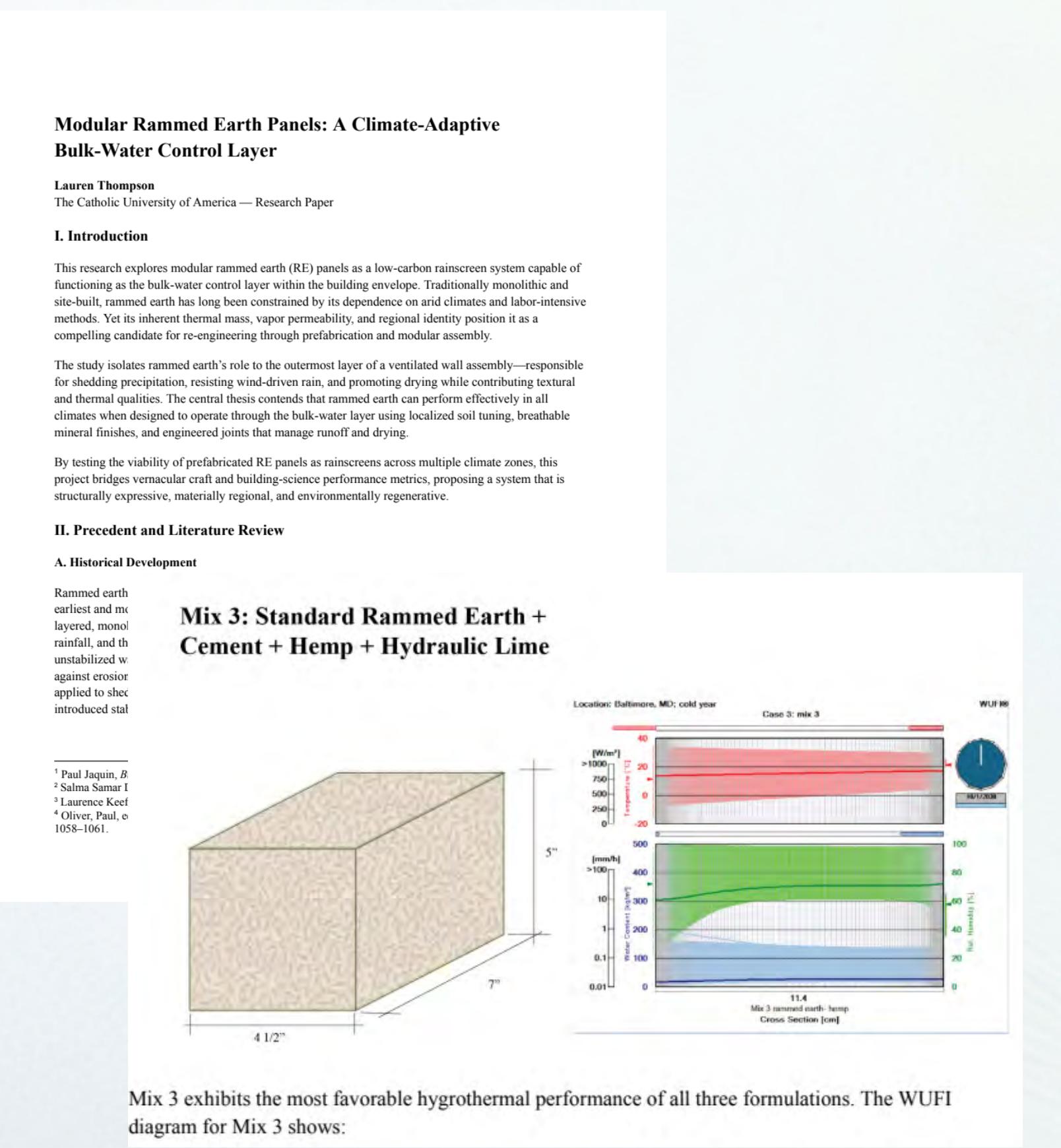
RELEVANT COURSES TAUGHT

Johns Hopkins University

371.177: Design Studies: Detail Product Prototype

Catholic University School of Architecture

ARPL 539: Sustainable Detailing



Student work: Research paper, including novel detail development and analysis
in WUFI for Sustainable Detailing

SCHOLARSHIP AND PUBLICATION



Love's Alterations: Complexity and Parsimony Construction Documentation

Love is not love / Which alters when it alteration finds —Sonnet 116

Why is it that despite our best efforts and every innovation in technology the work of construction documentation seems to grow evermore complex and time consuming? What is the particular nature of these documents, as architectural representations, and how do they achieve (or fail to achieve) their ends? We create documents of exacting detail and comprehensiveness, only to find them insufficiently anticipitory. The bad news is this can only get worse as economies and ecologies, and their various margins, contract. The good news is that systems of ever-increasing complexity follow a predictable path and will ultimately, necessarily, be replaced. Understanding the role that construction documents currently play in the ever-increasing complexity of architectural production, and how it might have been otherwise, is the purpose of this paper: how, if at all, we might move from a prescriptive complex paradigm to an open, yet parsimonious, representational paradigm, and why parsimony is cause for hope.

section 033000 of the accompanying specification are to drawings of the very same plans located with circles and arrows and a paragraph or two dictated for a client meeting. The client's rendering of the building *as if* it were real; the construction of it *such that* it may become real. This mathematical distinction, but it speaks volumes.

The second term I would like to introduce is between a representation's *accuracy* and its *parsimony*. Most construction documents are accurate, but they are not all equally effective. In comparing the disciplinary bridge between the hard and soft sciences, the term "parsimony" used to make justifications. A scientist observes an "Economy in the use of reasoning or explaining; esp. in law of parsimony (or parsimony)" the principle that no more entities than necessary should be invoked in explanations (cf. "Occam's razor n.")¹³ "Occam's razor" is a principle of deductive reasoning, that the *least complex* explanation is the correct one. And with this razor we can distinguish between relatively efficacious prescriptions and those that are not.

Let me define this one more term, and I will return to the topic of parsimony.

ODUCTION
I'd like to introduce two terms, which should lend conceptual clarity to an admittedly muddy backwater of the theoretical course on architectural representation: that concerned with construction documentation. The first term has a life in medical practice at thing which a doctor gives to cure the sick: a prescription. Architectural representations can act like prescriptions, and as far as Alberti the builder began to be seen as an instrument in—or the architect's "hands"; and the role of representation thereunto prescribe the actions of these hands such that the building be well. This is the commonplace understanding of the structure function of construction documents even today. The term "prescription" isolates that faculty which makes all forms of construction documentation different from other disciplinary or professional uses of architectural representation: in their prescriptive capacity, floor plans on page A201 of a construction set are more akin to rassing story. *Superfluous junk* is when someone contract documents only to be disregarded better. When I was first starting out in propagation specification and proceeded to do so to the project specs. A month later I got the bidders on the project. "No one does what, I'm supposed to bury my main trench blow out the lines every fall, everyone trench so deep. I'm only calling you because I did the job because I overbid because I actually did you find this thing, Texas?" Sure enough specification had been written in Florida, in sense than blowing out. In an attempt to applicable, the writer had left a variable, specification. But in Montana, burying in rocky mountain soil was so impractical.

Project's Essential Instruments: Implications of the Theory for Construction Documentation

LUC PHINNEY
Johns Hopkins Univ.

To date, architects have had a cognitive turn of their own, talk about 'design consciousness'; but that day has come. Some practitioners, such as Maurice Merleau-Ponty, the psychological realists, the existential philosophers, and which is more important, what use after all is there in hard things? Architects have to have mental ends. This is the lesson of the saying "Go out and build something". You have the hammer and the bricks. This can lead you to become architects (famous or not) without ever having held the brick in hand or having worked with it). Others will have to do that.

materials and methods fantastically support the architect's role. Neither function nor form (as much as we may long for them in those occupations), however, are made of tools. But what is made of tools is material (if a computer is a material—thorny question). This ambiguous relationship between the use of our instruments and the materiality of our acts and engagements limits and possibly obscures the particular concept of instrumentality. J. J. Gibson's theories, however, help us get a handle on the concept of instrumentality. A history of architecture is a history of its tools, construction techniques,

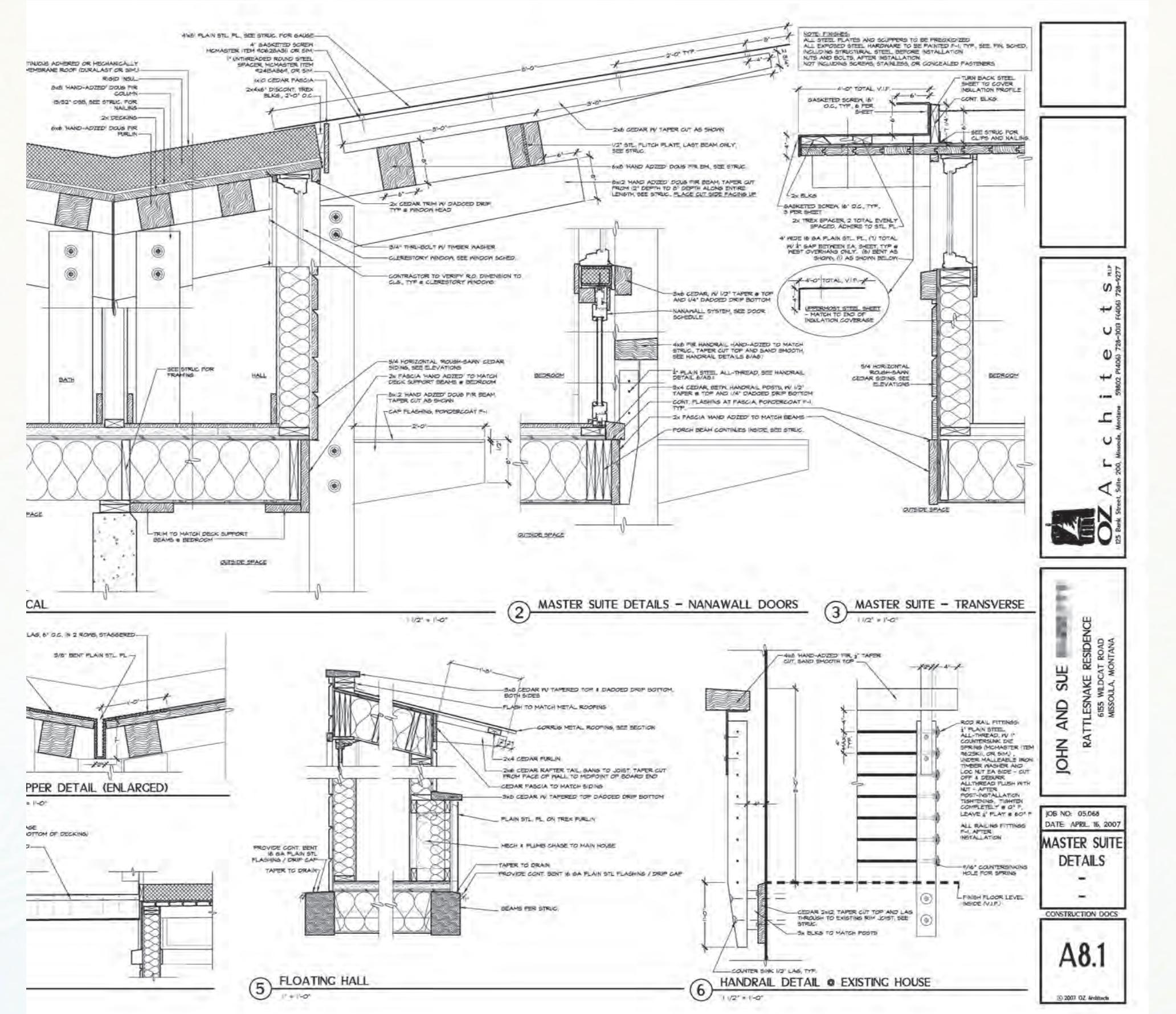
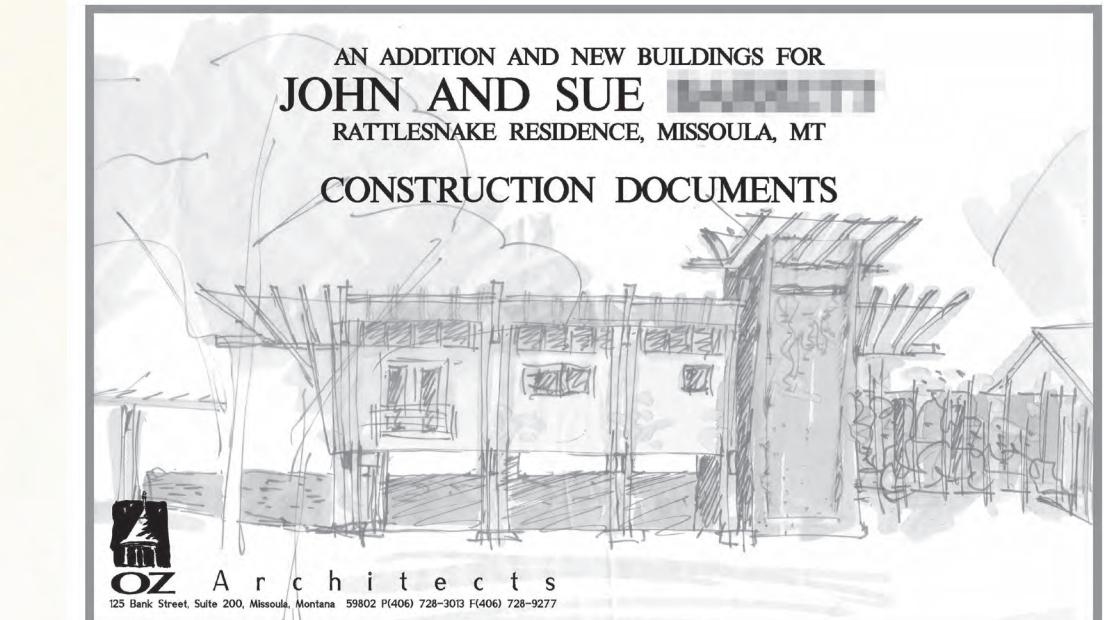


scholarly treatments of construction documentation in architectural practice, presented at multiple years' ACSA annual meetings.

SUBJECT AREA

DESIGN DETAILING AND CONSTRUCTION DOCUMENTS

ADJACENT WORK IN SCHOLARSHIP AND PROFESSIONAL PRACTICE



Design, documentation, permitting, and construction administration for Fetcher (left) and Barrett (right) residences, with OZ Architects, Rattlesnake canyon, Montana

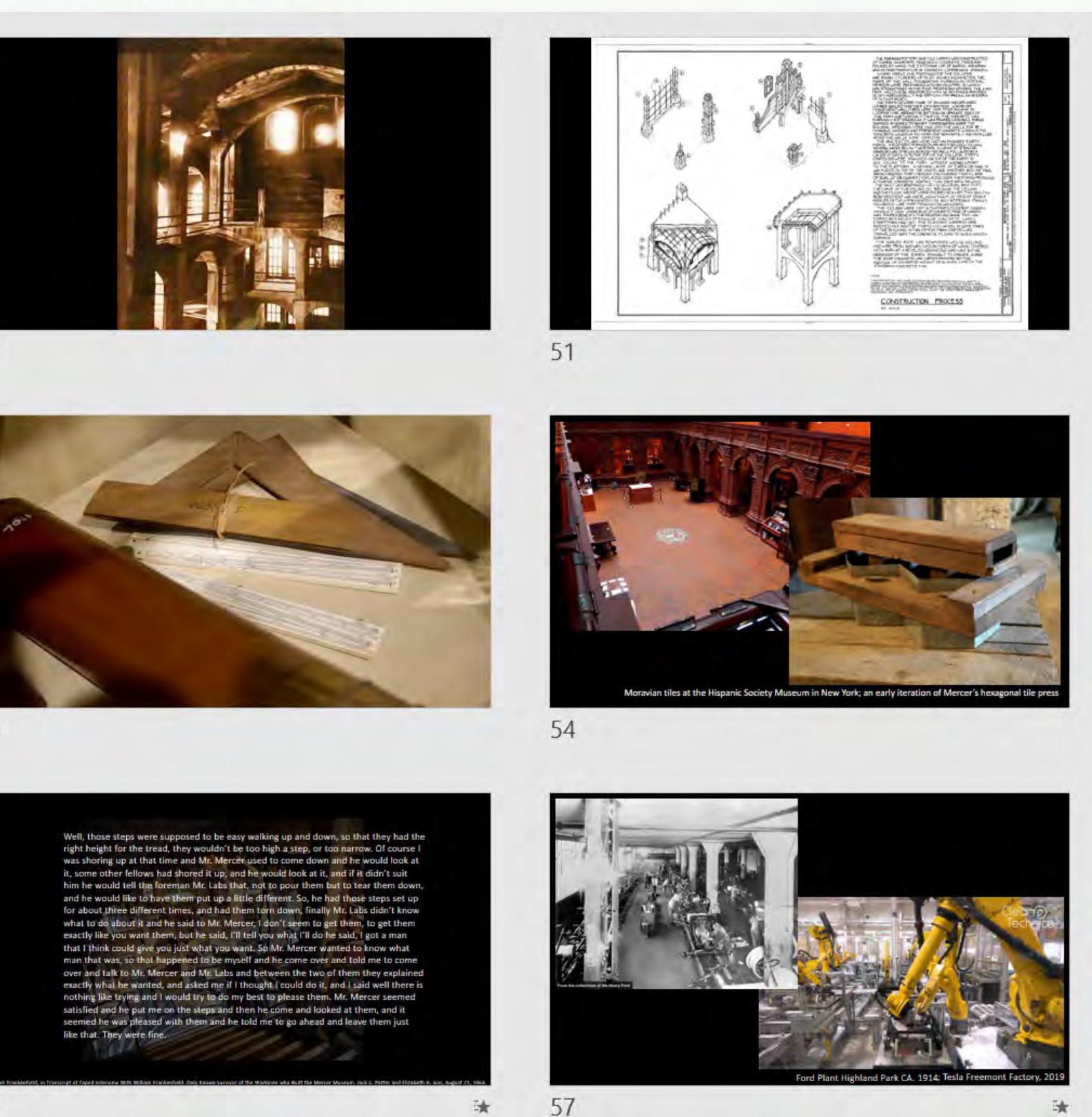
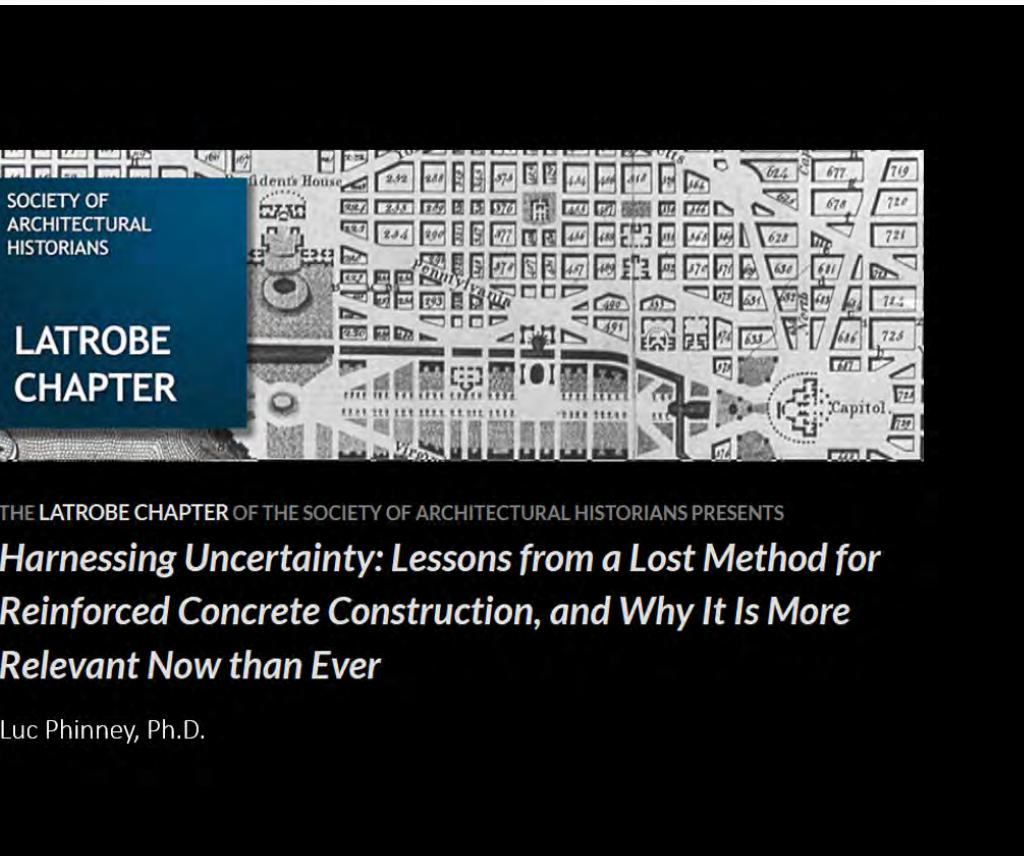
RELEVANT COURSES TAUGHT

Catholic University School of Architecture
ARPL 211/611 History 1

Marywood University
ARCH 128 History and Theory of Architecture and Interior Architecture I

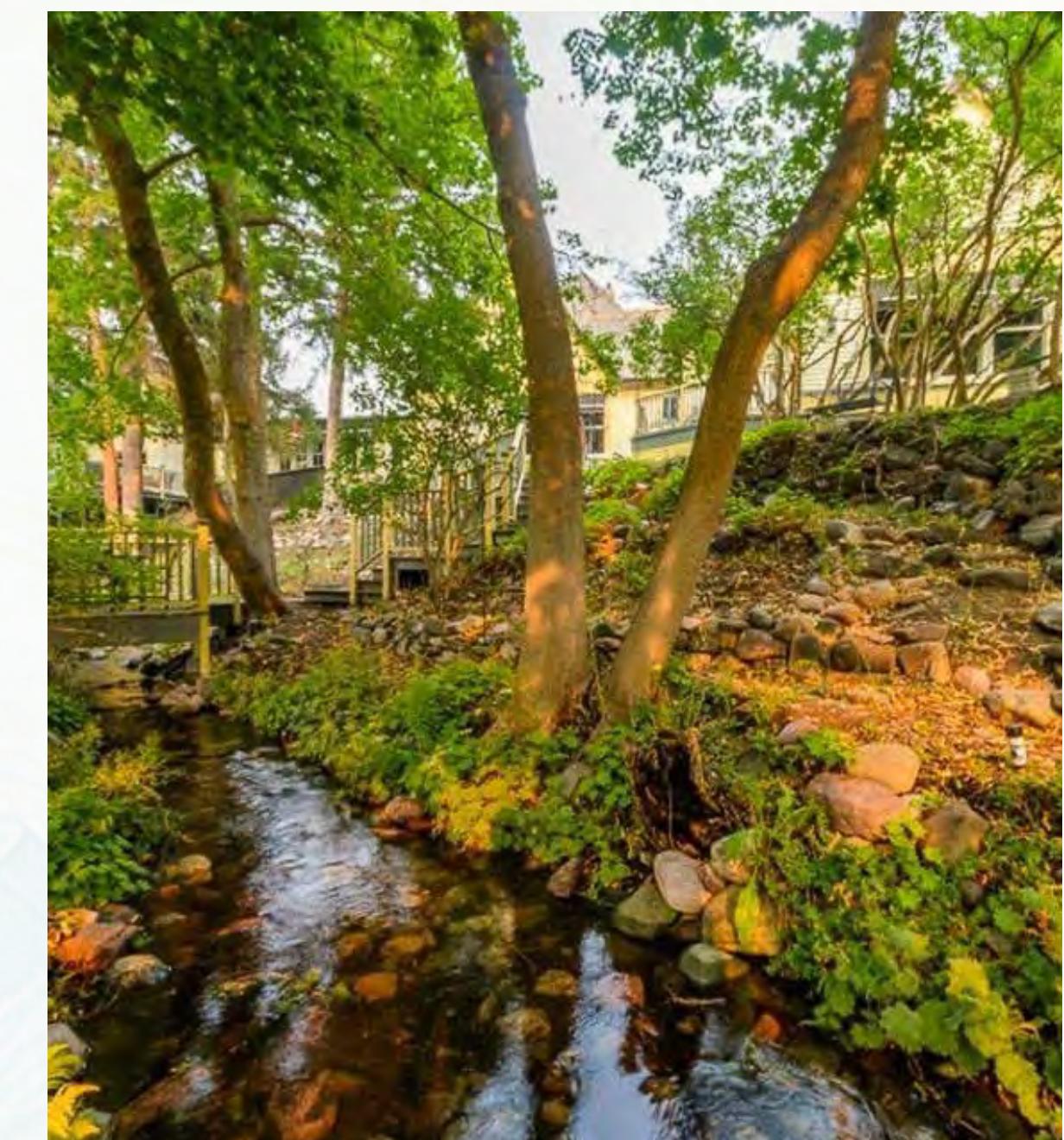
Catholic University School of Architecture
ARPL-409-02 History and Theory of Design Representation (in development)

SCHOLARSHIP AND PUBLICATION

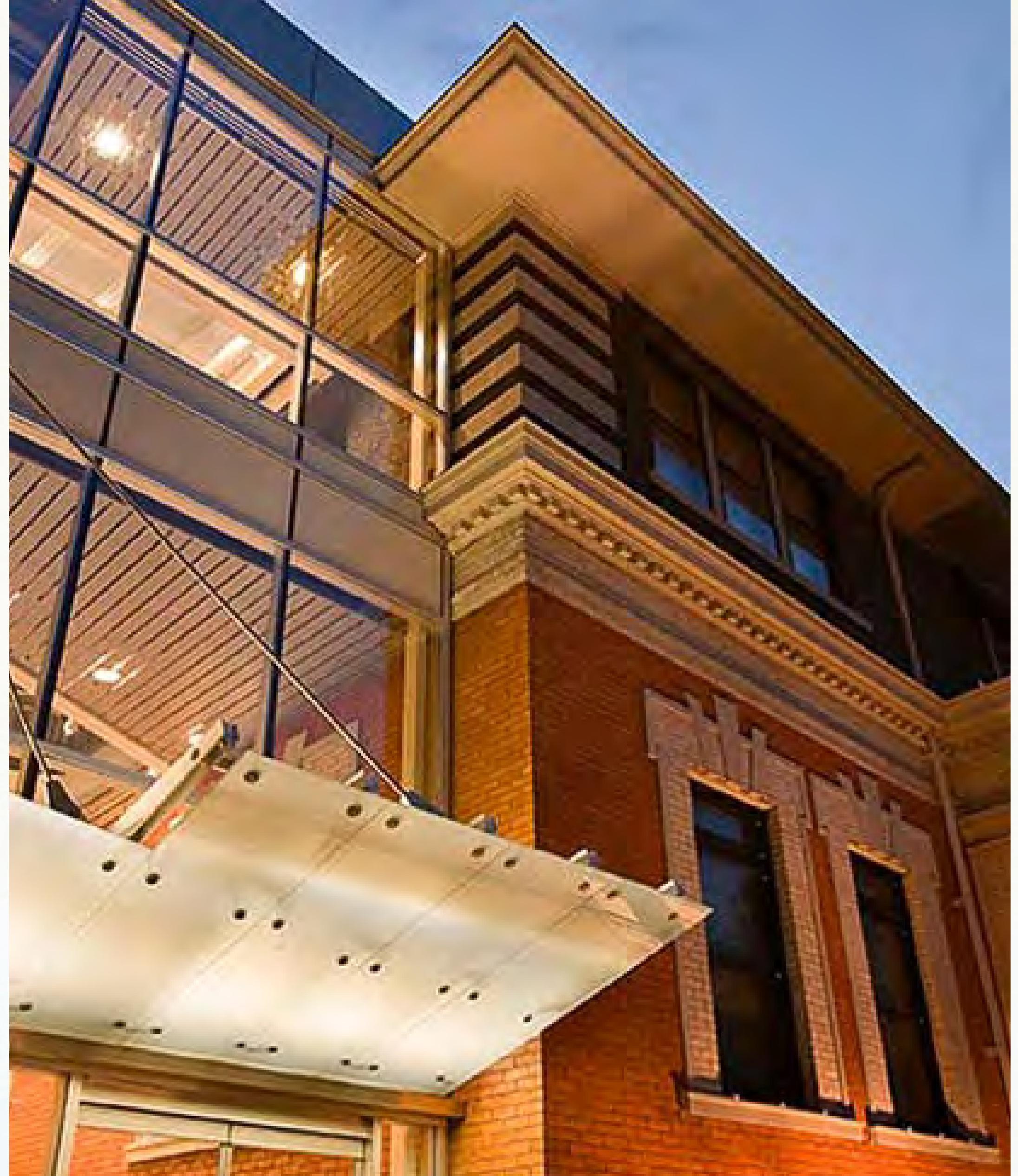


Harnessing Uncertainty: Lessons from a lost method for reinforced concrete construction, and why it is more relevant now than ever
2020 Talk for the Latrobe Chapter of the Society of Architectural Historians

ADJACENT WORK IN PROFESSIONAL PRACTICE



Raymond House - with OZ Architects
Historic preservation and conservation, building addition and landscape architecture



Missoula Art Museum - with OZ Architects - Addition to a Carnegie library and museum expansion - historic building documentation and construction documents.

SUBJECT AREA
STUDIO

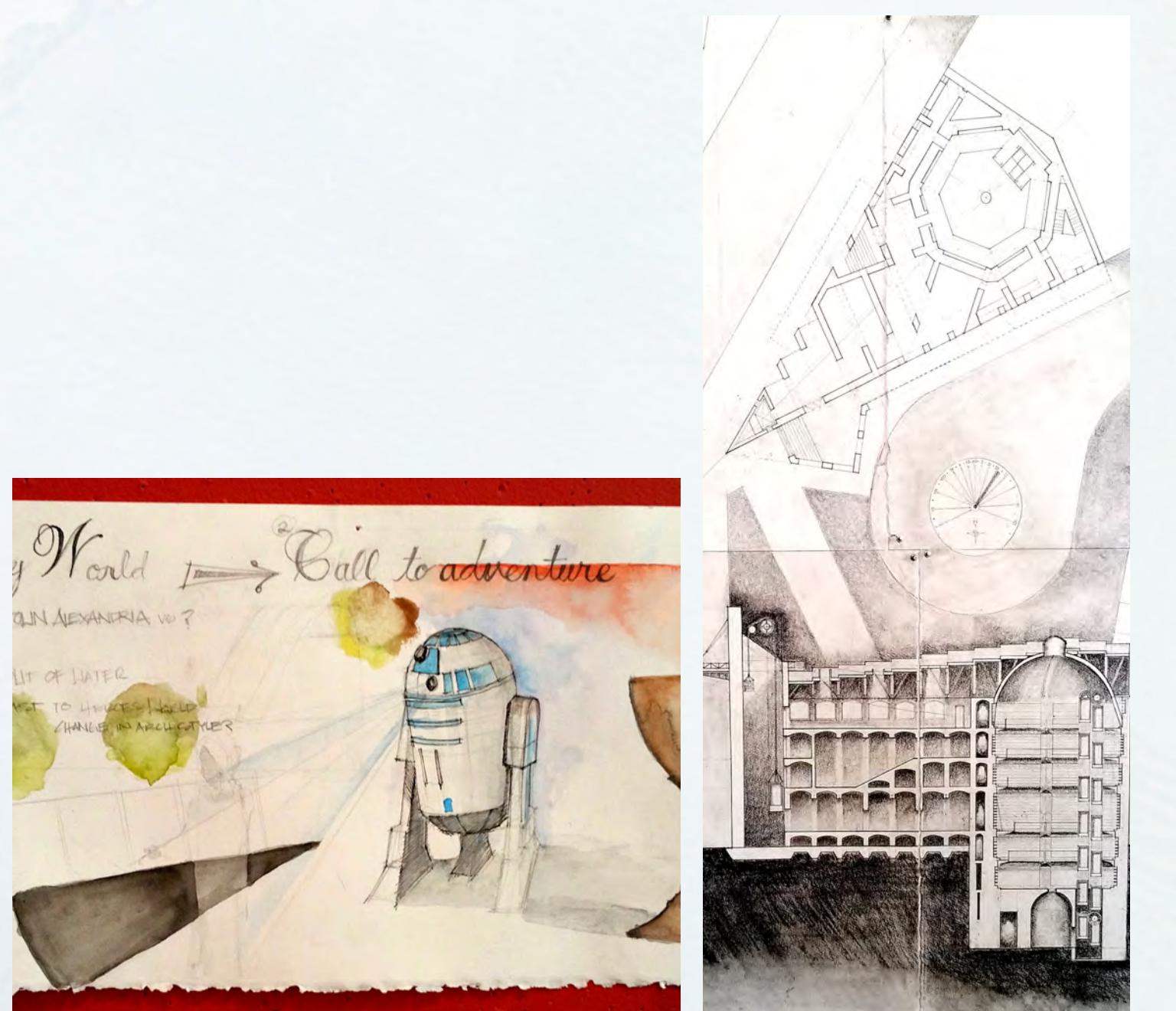
RELEVANT COURSES TAUGHT

Catholic University School of Architecture
ARPL401/501 4th Year Studio: Confluence Fall 2025

Montgomery County Public Schools Construction Trades Foundation Student Built House Project
Residential Design Studio 2023-2025

Johns Hopkins University
Art of Architecture Fall 2011 - Fall 2023

WAAC Virginia Tech
Assistant Teaching as Ph.D.
Farfalle Studio Spring 2015
Braickyard Studio Spring 201



Studio artifacts from students at the WAAC



The Art of Architecture at Johns Hopkins



"Confluence Studio"
4th year undergraduate studio at Catholic University

SUBJECT AREA
STUDIO

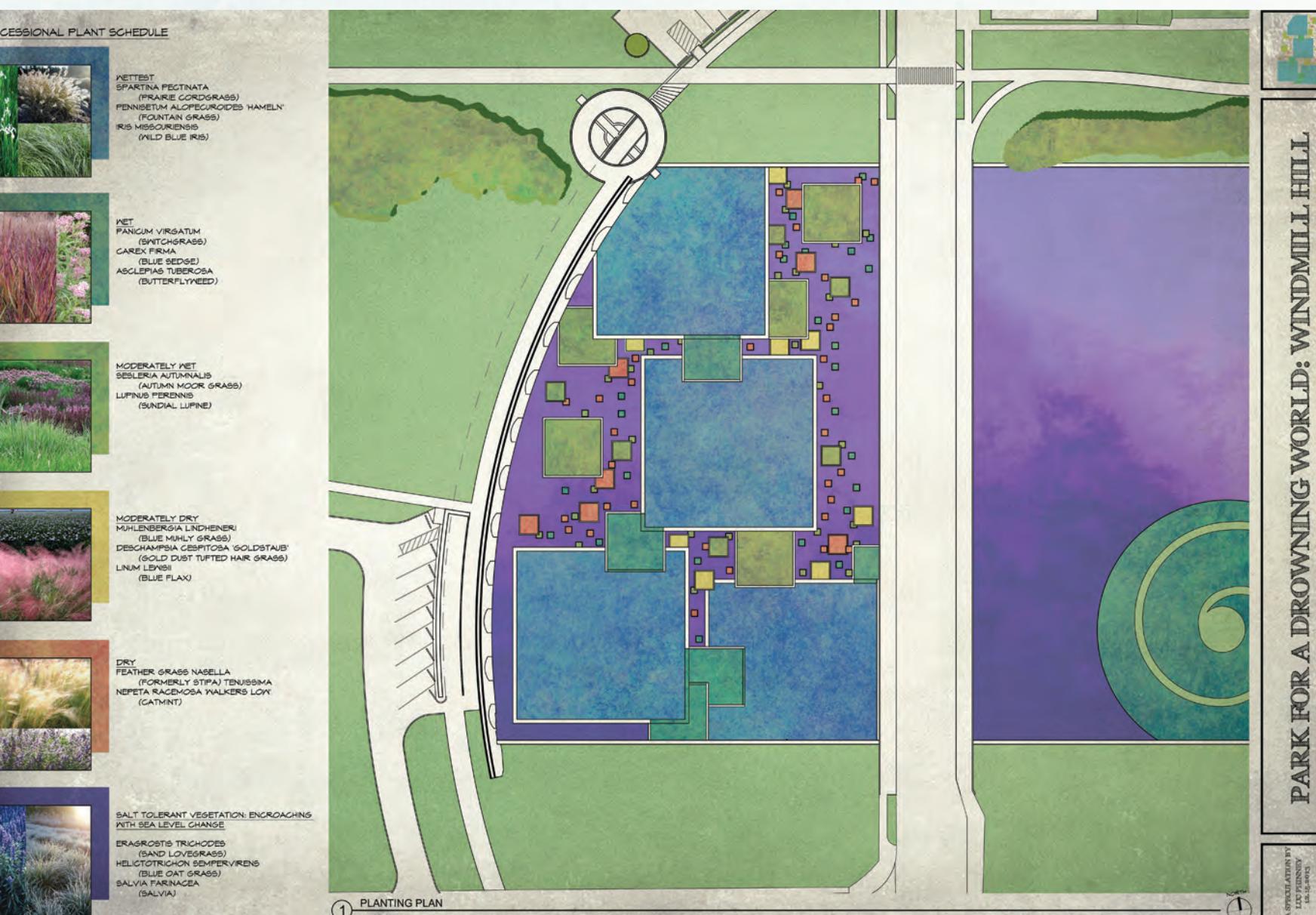
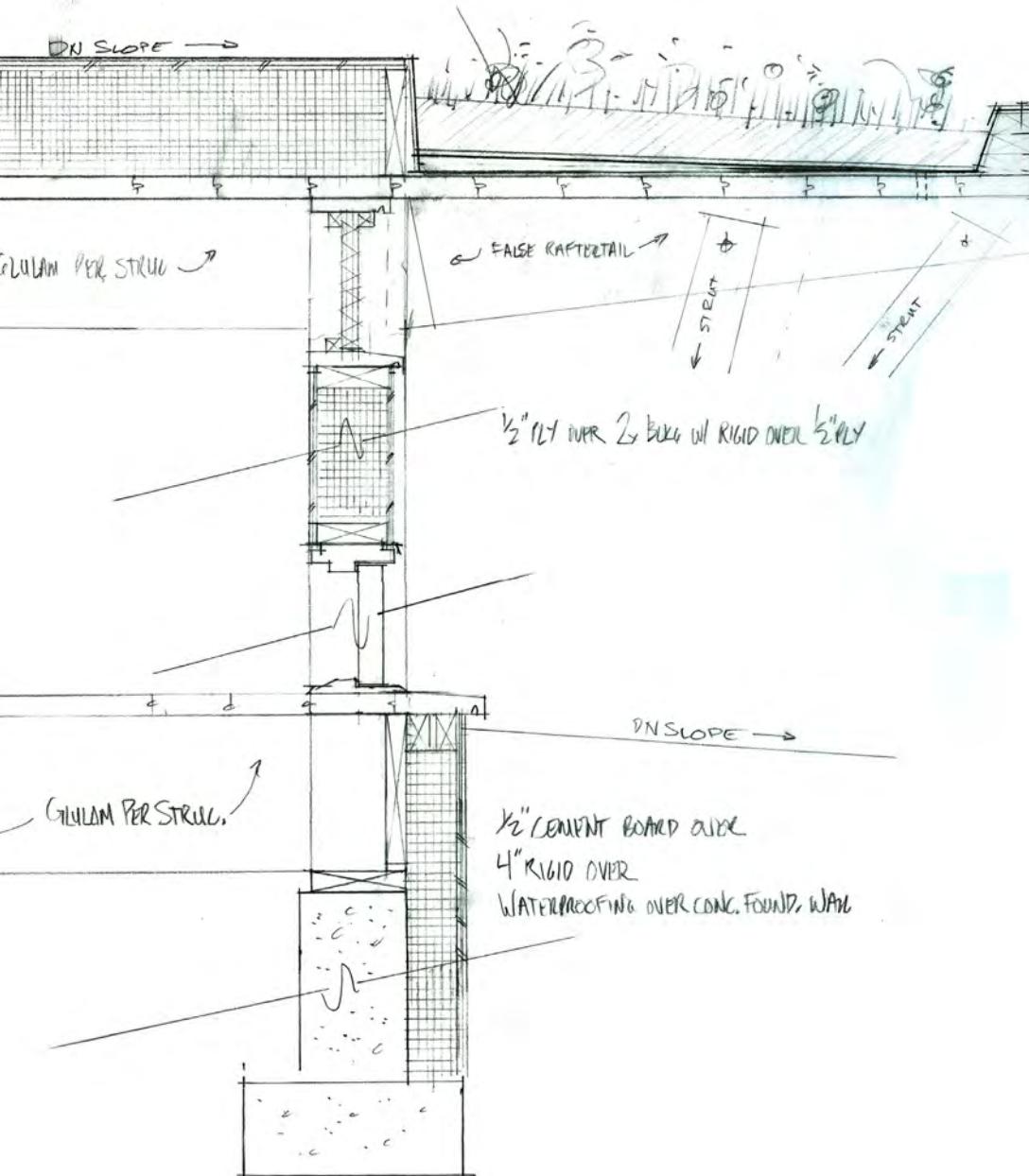
SUSTAINABLE DESIGN AND BUILDING TECHNOLOGY

RELEVANT COURSES TAUGHT

Johns Hopkins University Center for Visual Arts
AS.371.175 The Art of Architecture

Also woven throughout many of my classes!

ADJACENT WORK IN SCHOLARSHIP, BUILDING RESEARCH, AND PUBLICATION



Green roof detail sketch for my own house, 2008.
Competition board for a climate change oriented park design competition, 2017.

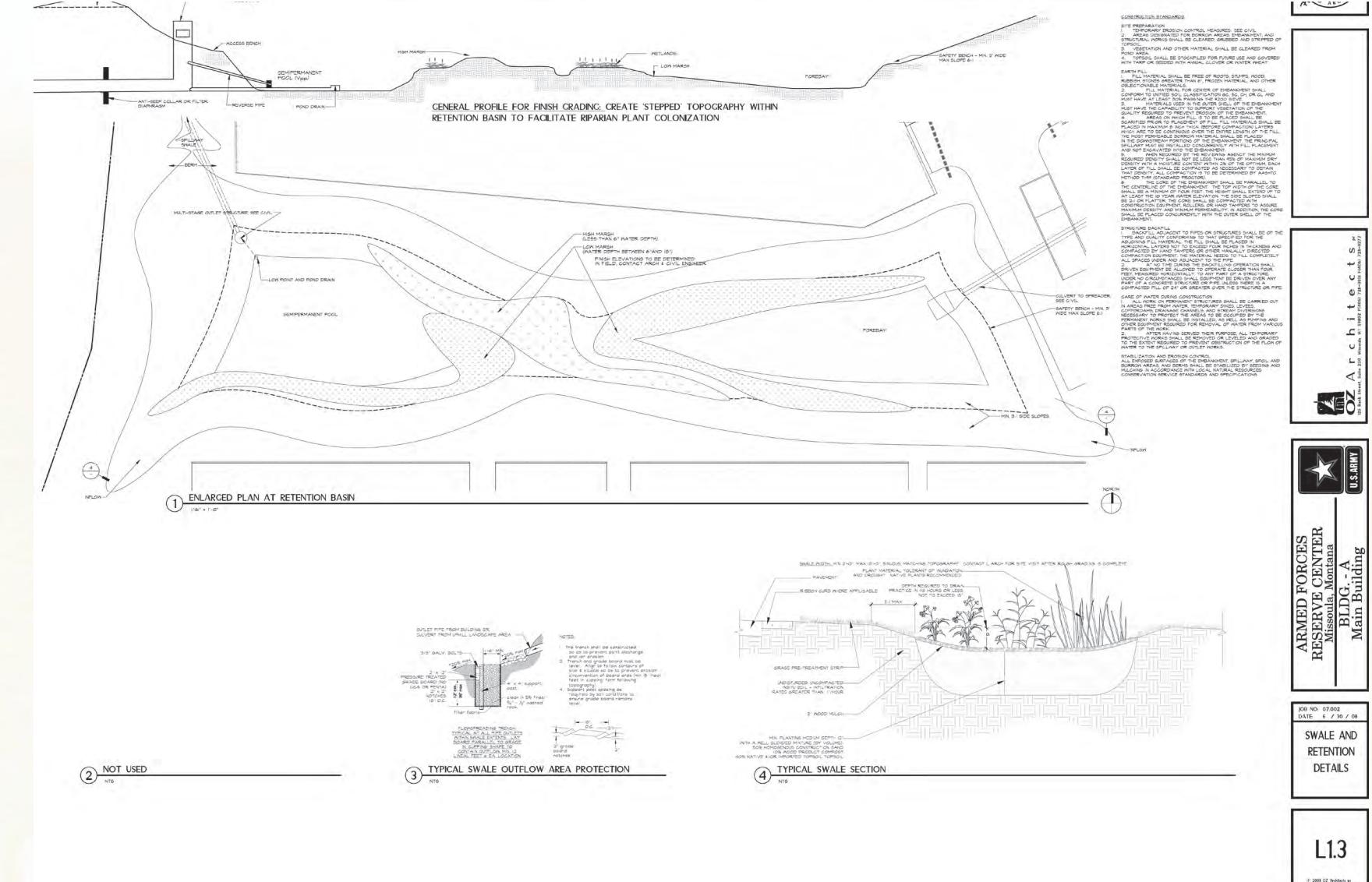
SUSTAINABLE DESIGN AND BUILDING TECHNOLOGY

ADJACENT WORK IN PROFESSIONAL PRACTICE



LEED-gold certified GLR law offices, featuring precast concrete brick-embedded panel system and passive and active solar design. With OZ Architects.

SUSTAINABLE DESIGN AND BUILDING TECHNOLOGY



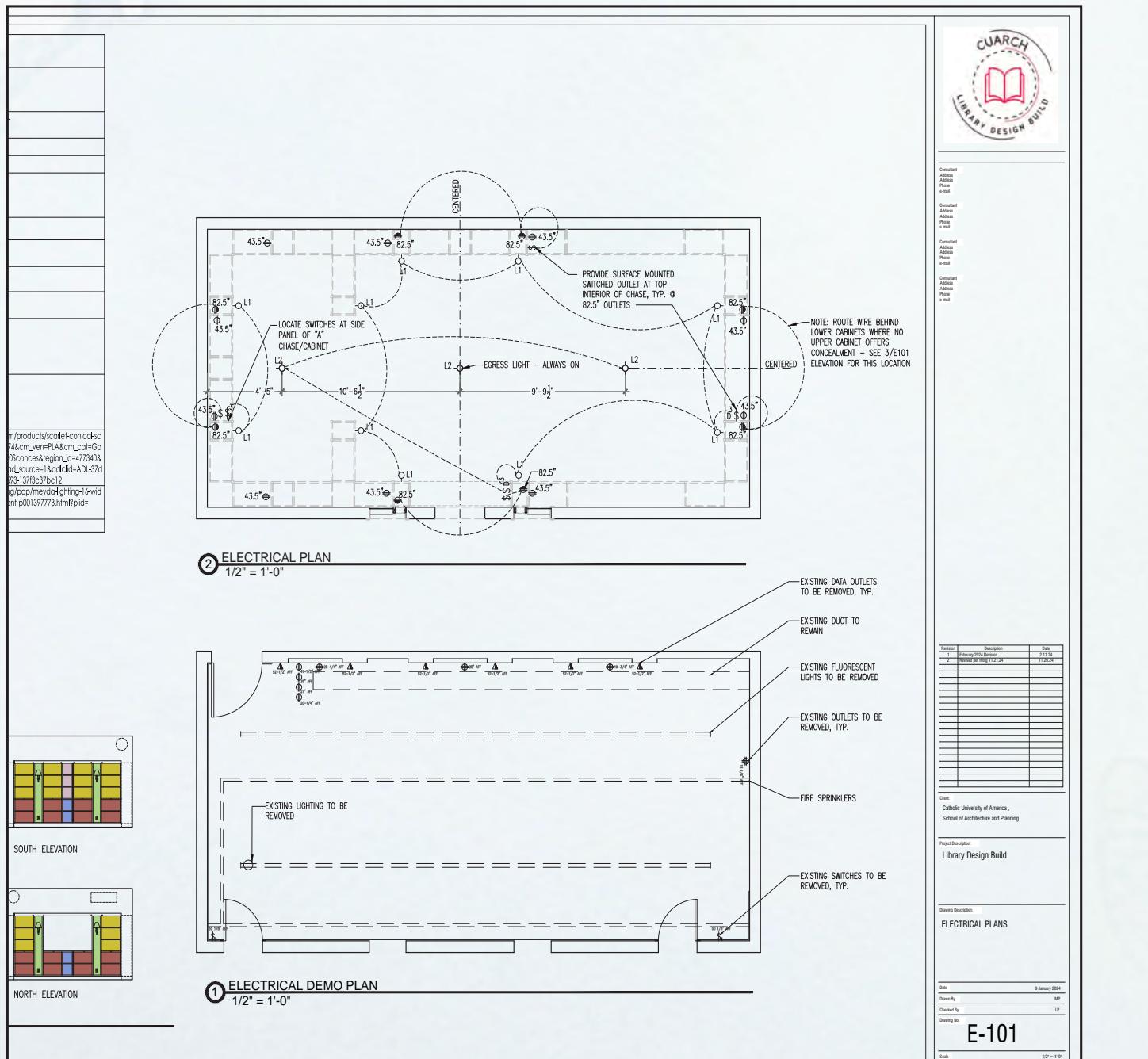
Armed Forces Reserve Center, Missoula, with OZ architects. Featuring bio-regenerative swales and stormwater management.

SUBJECT AREA
DESIGN-BUILD

RELEVANT COURSES TAUGHT

Catholic University School of Architecture
ARPL 407/507 Design Build: Library Construction

Virginia Tech
Frascari Library Build-Build

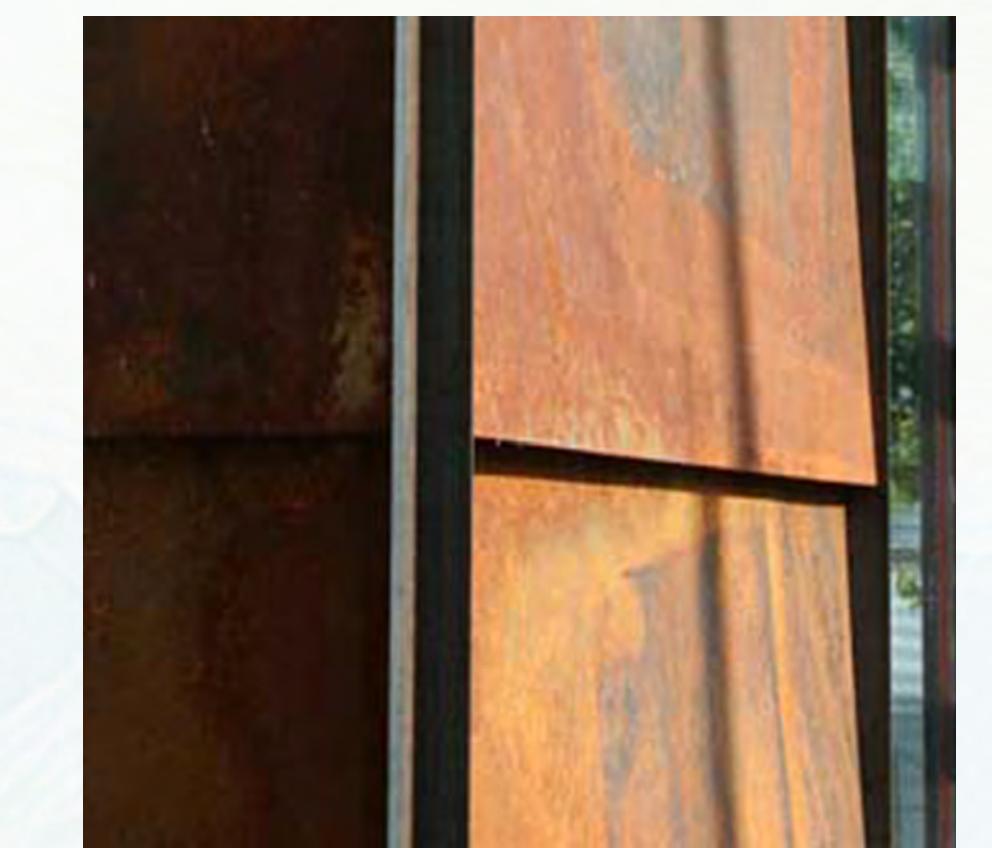
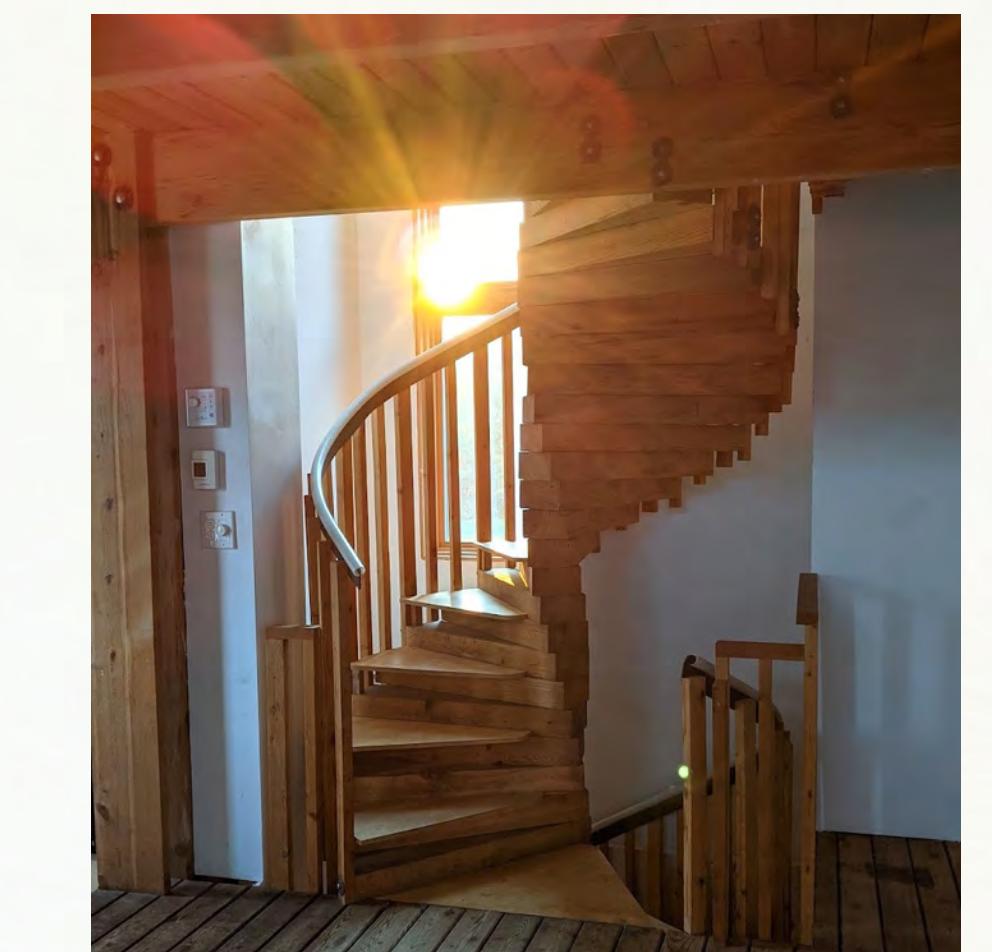


Electrical plan created in my design-build class for a library project at Catholic University.

ADJACENT WORK IN PROFESSIONAL PRACTICE



Camano Island Cabin - With BuildLLC
Design documentation and project management for a residential building featuring Corten siding, glass pocket doors, hot-rolled steel and ground concrete interior finishes.



House at Sherwood and Shakespeare - Designed and self-built 2005-2009 - Featuring live-edge fir siding, Corten stair tower, heavy timber spiral stair, travertine fireplace.



SUBJECT AREA
DESIGN-BUILD

SUBJECT AREA DESIGN RESEARCH

RELEVANT COURSES TAUGHT

Catholic University School of Architecture
ARPL 494/594 Independent Study in Design Build



Book chapter from *Ceilings and Dreams* and introduction to *Confabulations: Storytelling in Architecture* co-written with Paul Emmons exploring the role of narrative in architecture

ADJACENT WORK IN SCHOLARSHIP AND PUBLICATIONS



\$28.12½: Economy in Edificial Acts and Plans

A paper delivered at the April 2016 at Architekturtheoretisches Kolloquium: Architekt – Hausvater – Investor: die Ökonomie des Planens, Bauens und Nutzens, Stiftung Bibliothek Werner Oeschslin, Einsiedeln, Switzerland

Luc Phinney
April 2016
4000 Words

Consider first how slight a shelter is absolutely necessary.
— H. D. Thoreau

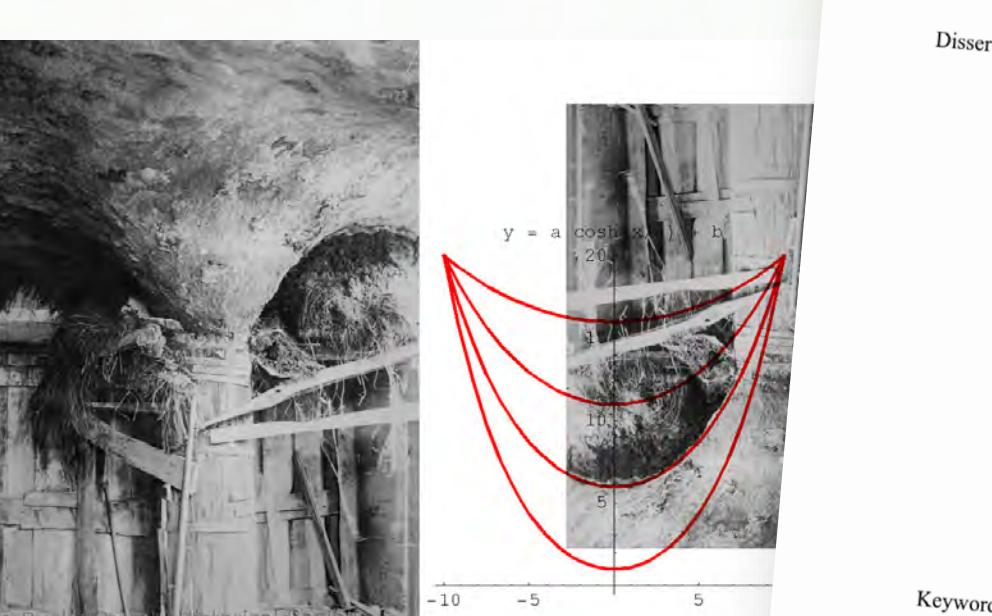
One hundred and fifty years ago the first significant American contribution to architecture was made in and about (and as) a one-room cabin on the wooded outskirts of Concord Massachusetts. This is a large claim for a small building and a central claim for an eccentric man, who never thought of himself as having much to do with architecture, and yet who left as his most significant architectural contribution the set of drawings and specifications literary scholars often mistake for a text called *Walden*. There are good reasons why *Walden* is taken to be a literary work; but I would like to use the tools of literary analysis to show that it is as valid an architectural edifice as literary edification; and that, if anything, in its structure it more closely resembles a set of construction documents than an architectural treatise. Walden, the critics would have us think, an interesting story. Or if not story, account. If not account, diary. Or perhaps it is philosophy. Critics are in fact much better at telling us what *Walden* is *not*, that what, in the end, it is. But we should start at the beginning. And the beginning of *Walden* is economy.

The first and most densely reasoned chapter of the book is called "Economy," and is devoted to that topic. Thoreau does not use the term "economy" the way we do today; nor is his use congruent with his contemporaries, whose various economies he critiques. "Even the poor student," he writes,

$y = ax^2 + bx + c$

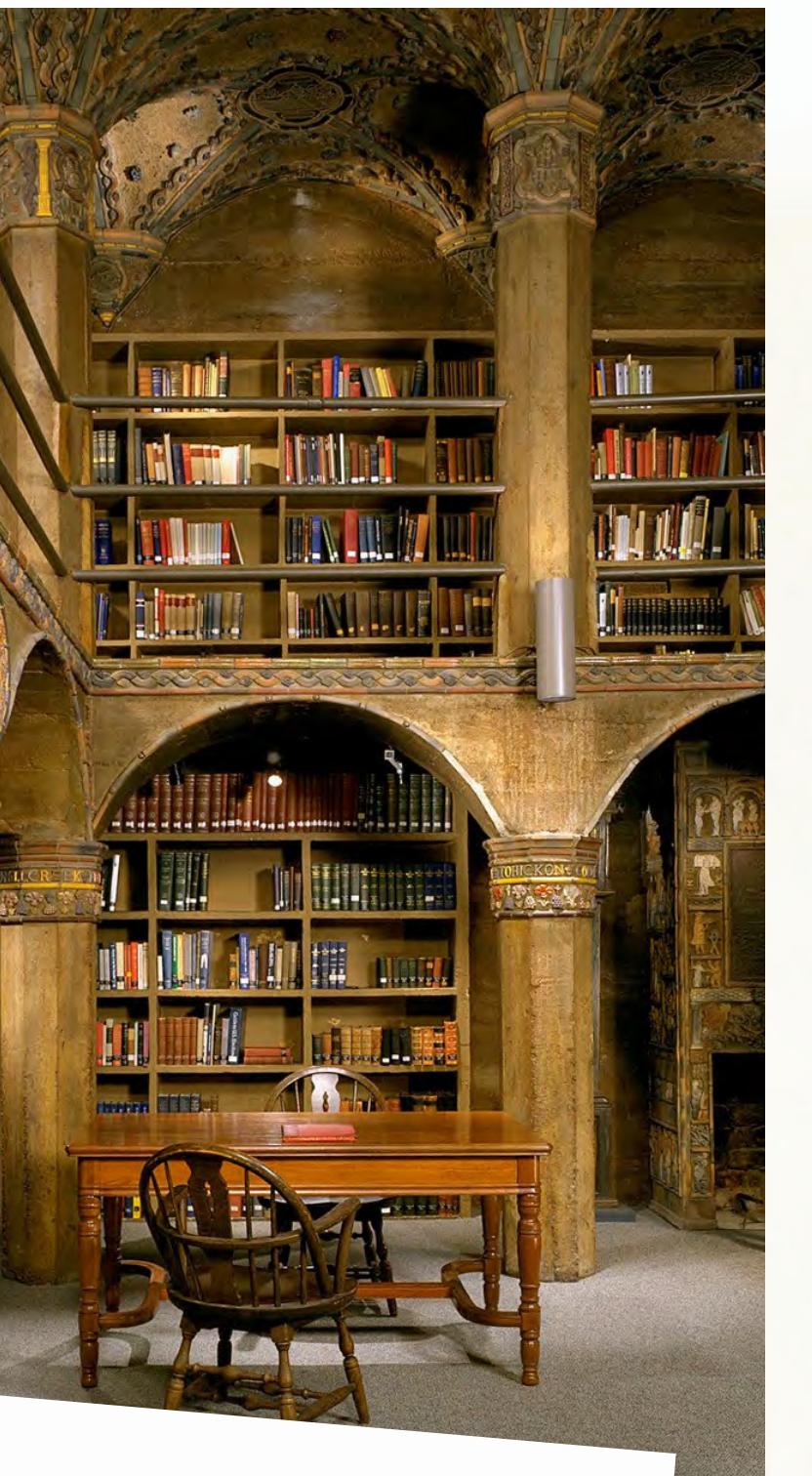
Keywords: Architecture, Ceramics, Henry Chapman Mercer, Improvisation, Innovation, Reinforced Concrete, Tools

Paper presented at the 2016 Oeschslin Symposium, Eisendeln, Switzerland, sponsored by ETH Zurich



2018 Dissertation "Innovation in Practice: Experiment and Improvisation in the Architecture of Henry Chapman Mercer".

SUBJECT AREA DESIGN RESEARCH



Innovation in Practice: Experiment and Improvisation in the Architecture of Henry Chapman Mercer

Charles Lucas Phinney

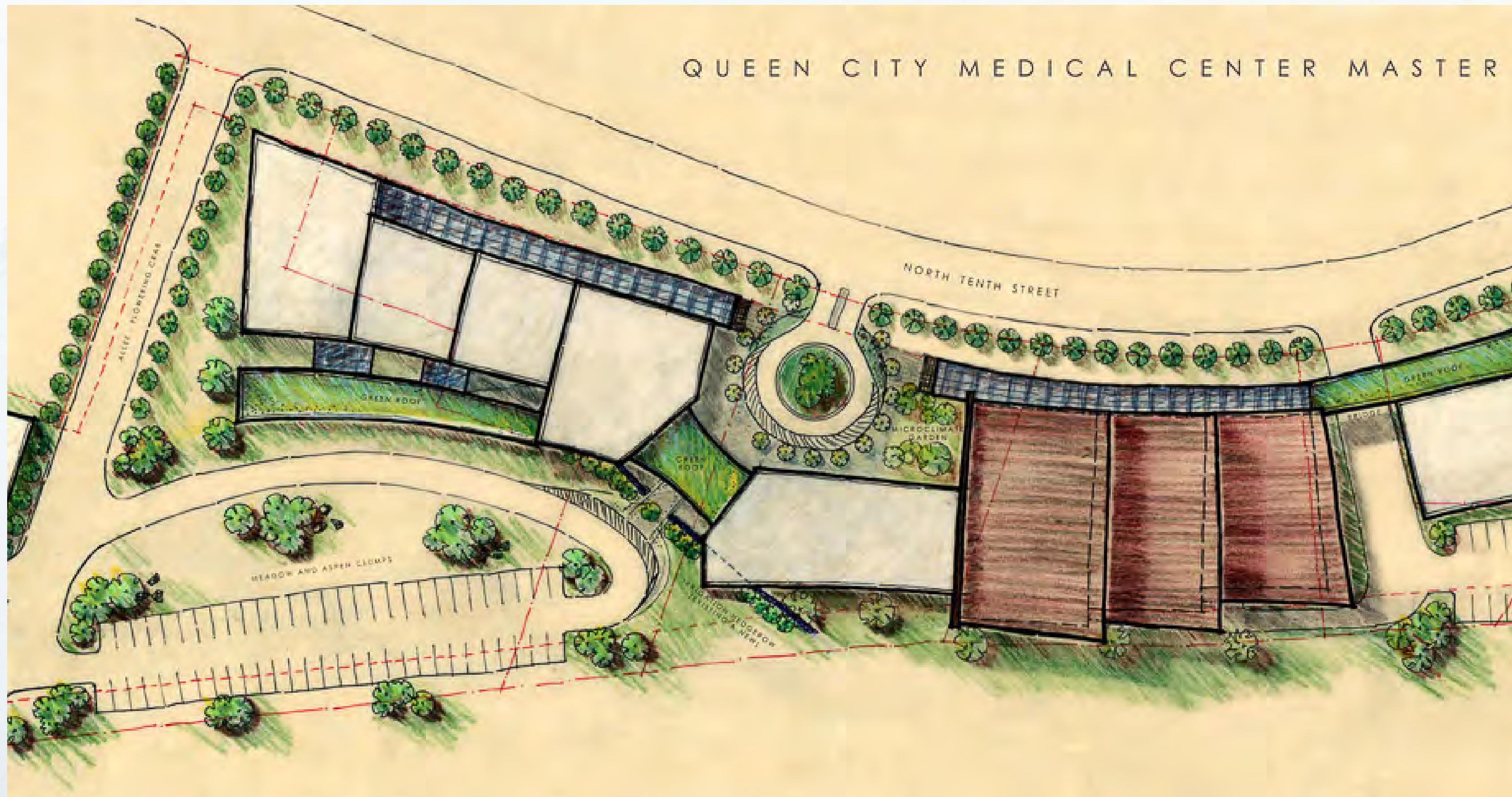
Dissertation submitted to the faculty of the Virginia Polytechnic Institute and State University in partial fulfillment of the requirements for the degree of Doctor of Philosophy In Architecture and Design Research

SUBJECT AREA

LANDSCAPE ARCHITECTURE AND MASTER PLANNING

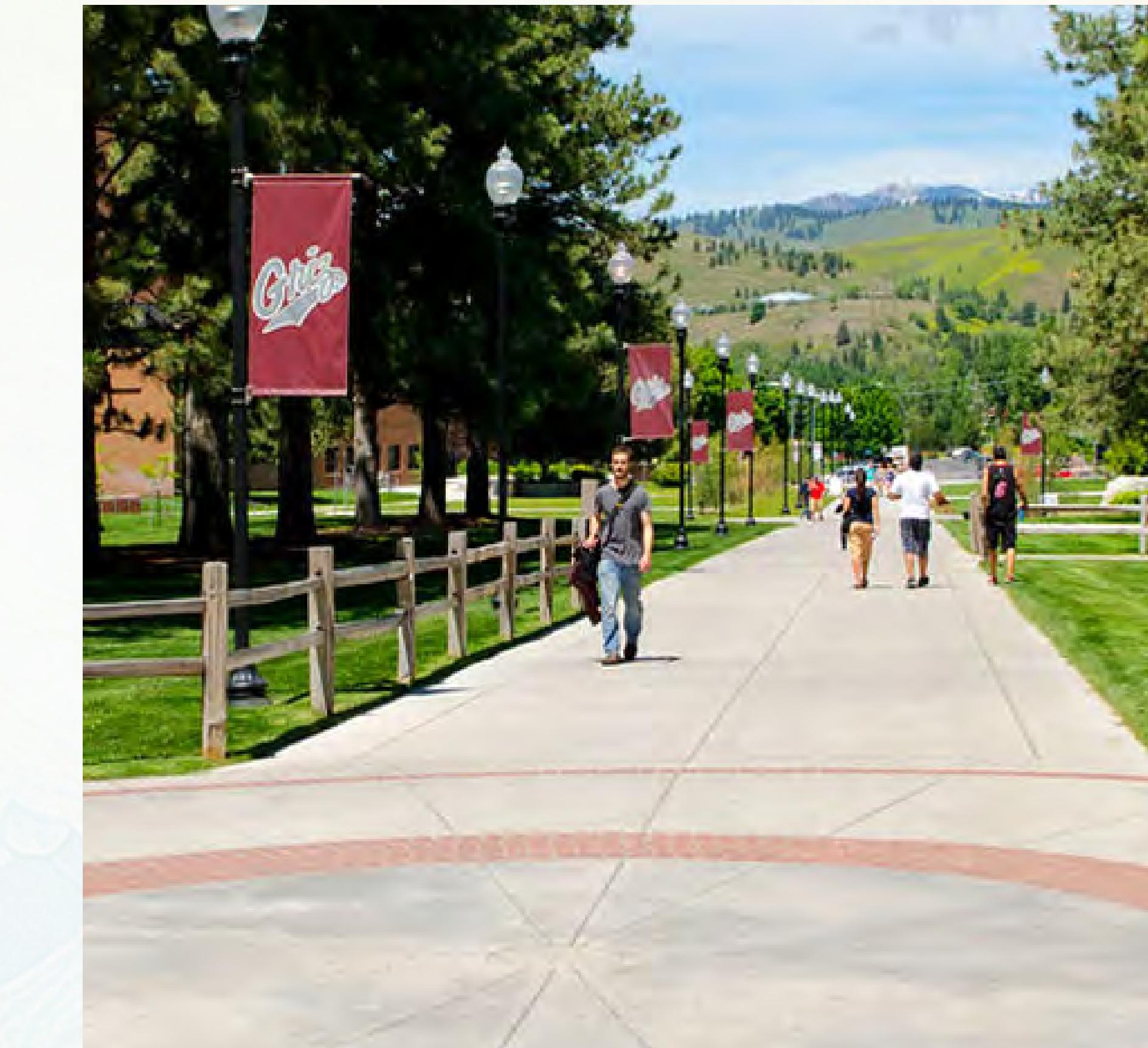
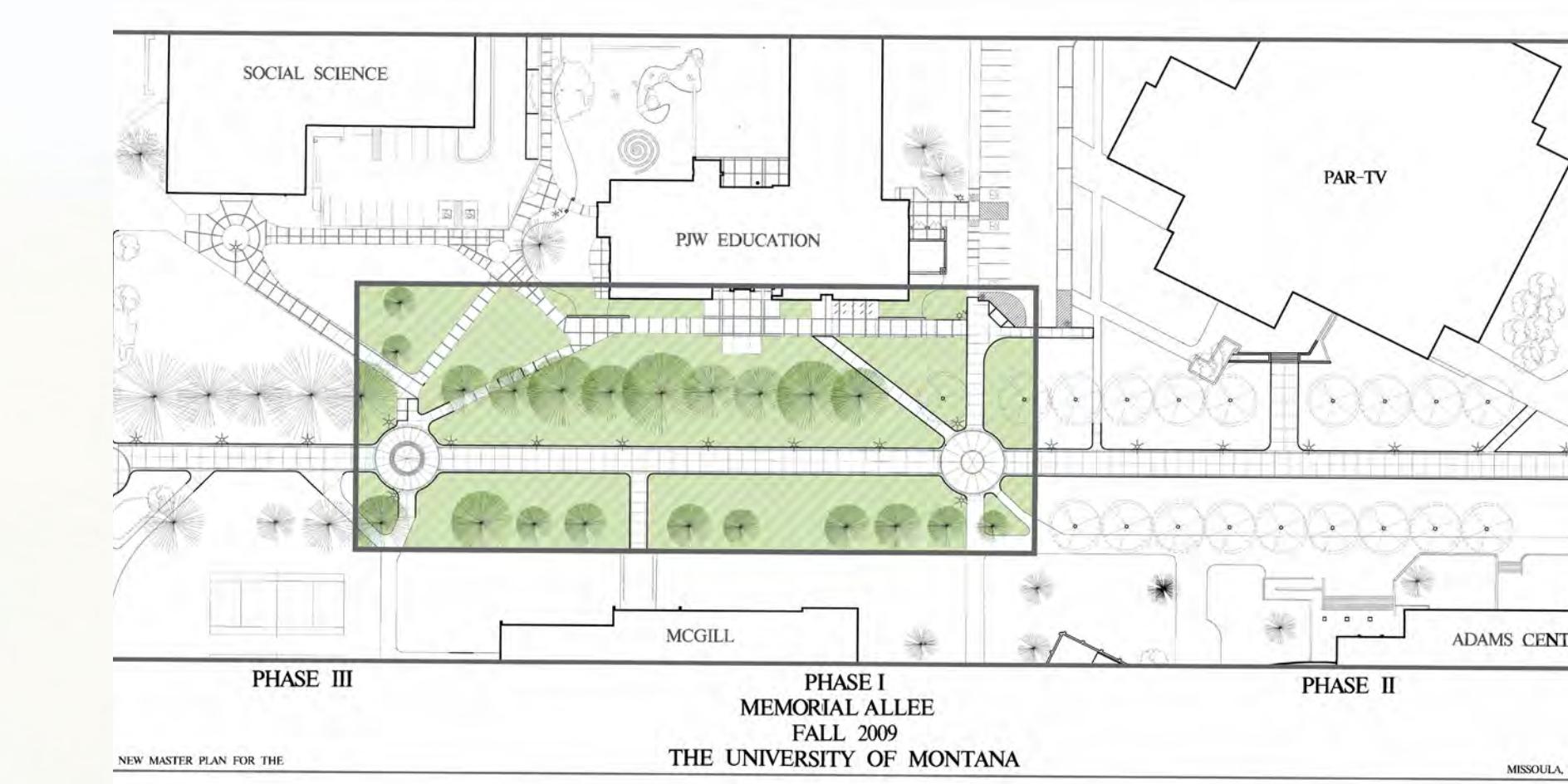
RELEVANT COURSES TAUGHT

Johns Hopkins University Center for Visual Arts
AS.371.175 The Art of Infrastructure



Hand rendering, Queen City Medical Campus Master Plan, Spearfish, South Dakota. With OZ Architects.

ADJACENT WORK IN PROFESSIONAL PRACTICE



University of Montana Memorial Allee and partial campus Master Plan, and photo of phase one completion.

SUBJECT AREA

LANDSCAPE ARCHITECTURE AND MASTER PLANNING



Milltown Dam Superfund Project
Community design charettes facilitation (pro bono work)

DESIGN DRAWING AND SKETCHING

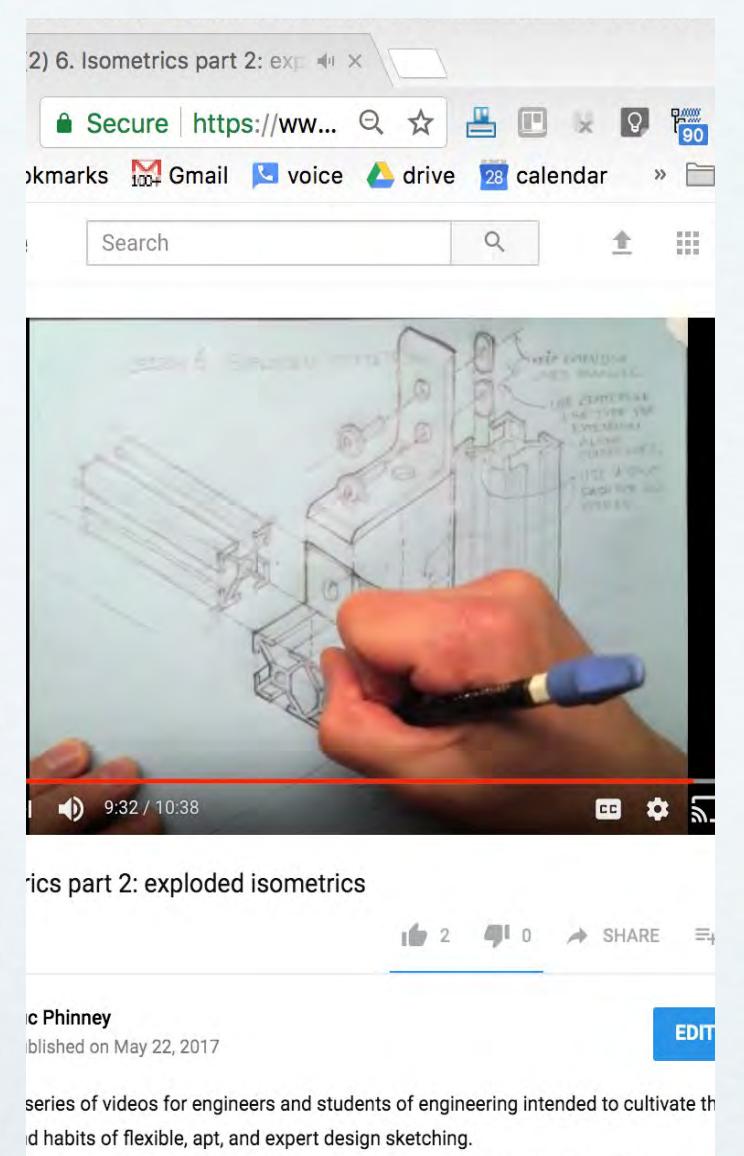
RELEVANT COURSES TAUGHT

Catholic University School of Architecture
ARPL 408/508 On Drawing

Catholic University School of Architecture
ARPL 40902/50902 Topics in Design Graphics: Learning from DC

Johns Hopkins University
AS.371.186 Fundamentals of Design Drawing
and 3-D Visualization

Montgomery County Public Schools Student-Built House Program
Architectural Drafting Techniques



Kenan grant funded Youtube video series on engineering design drawing



Student sketchbook work from one semester's architectural drawing course.

DESIGN DRAWING AND SKETCHING

ADJACENT WORK IN TEACHING AND PROFESSIONAL PRACTICE



Nix fellowship travel sketching, Paris; Visiting Corbusier, Scarpa, and Zumthor (counterclockwise from bottom)



School of Education at the University of Montana, design sketch and photo of phase 1 completion, With OZ Architects

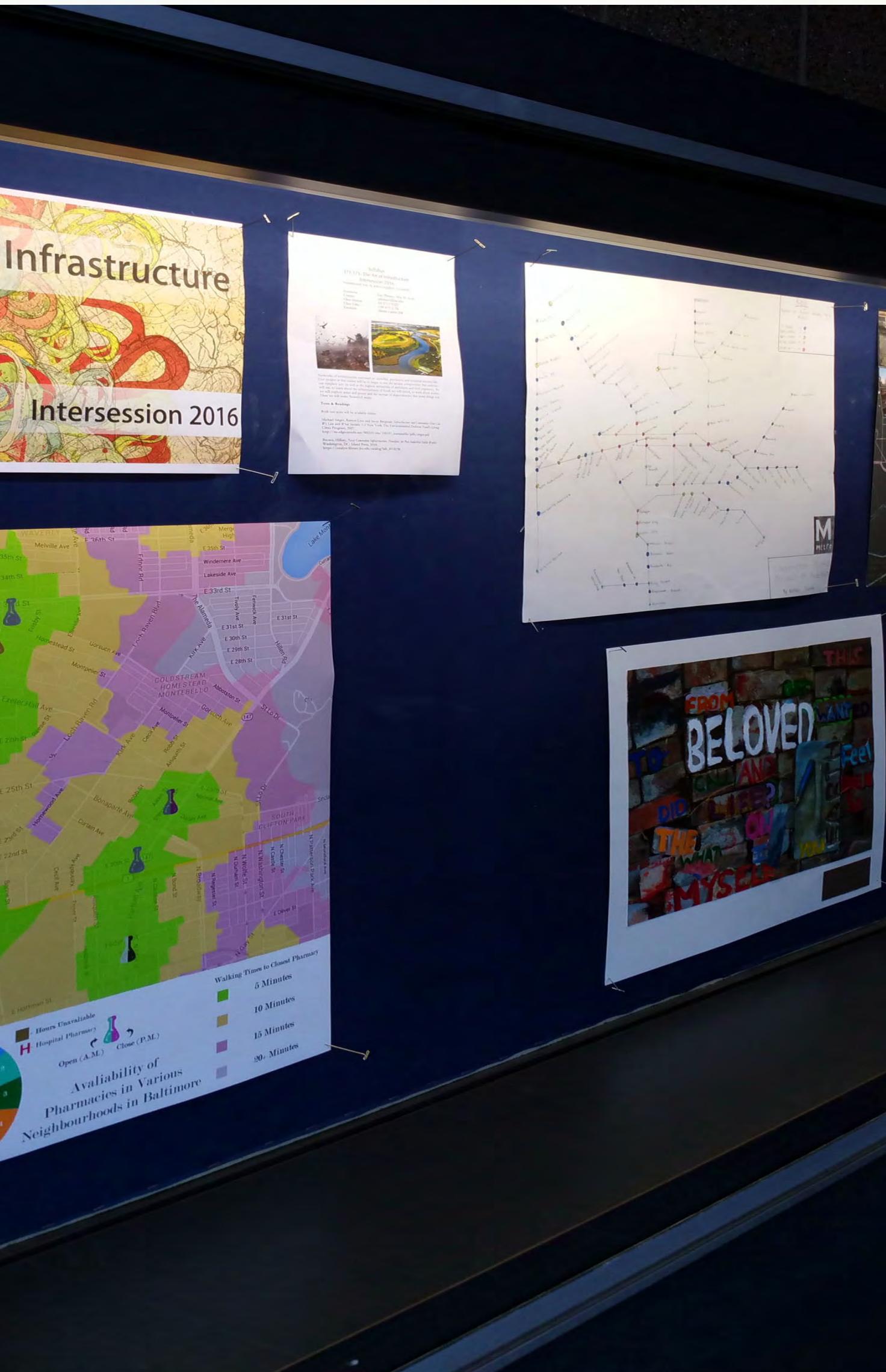
COMPUTATION AND COMPUTER APPLICATIONS

RELEVANT COURSES TAUGHT

Johns Hopkins University Department of Mechanical Engineering
530.150 Engineering Design Graphics and Fundamentals of CAD

Montgomery County Public Schools Student-Built House Program
Advanced CAD Applications

Montgomery County Public Schools Student-Built House Program
CAD Technologies



Exhibition for *The Art of Infrastructure* class, featuring student created GIS composite maps and Storymaps of food and medication deserts, climate-change impacts to emergency routes, literary localities, and etc.

COMPUTATION AND COMPUTER APPLICATIONS

ADJACENT WORK IN SCHOLARSHIP AND PUBLICATION



Initial sketch by author, upper left. Iterations on Midjourney, 8/2023

A screenshot of a Miro board titled 'Generative AI Tools in Architecture and Construction CTE'. It contains sections for 'Goals and topics', 'Outline', 'words', 'Keywords', 'Design and Modeling Software', 'Generators - to-Image', 'Image Generators - Image-to-Image', and 'Image Generators - Image-to-Image'. Each section includes sub-sections and examples of generated images.

Generative AI Tools in Architecture and Construction CTE - Interactive Paper/Presentation for the University of Maryland Eastern Shore Department of Career and Technical Education

RELEVANT COURSES TAUGHT

Montgomery County Public Schools Student-Built House Program
Residential Design Studio



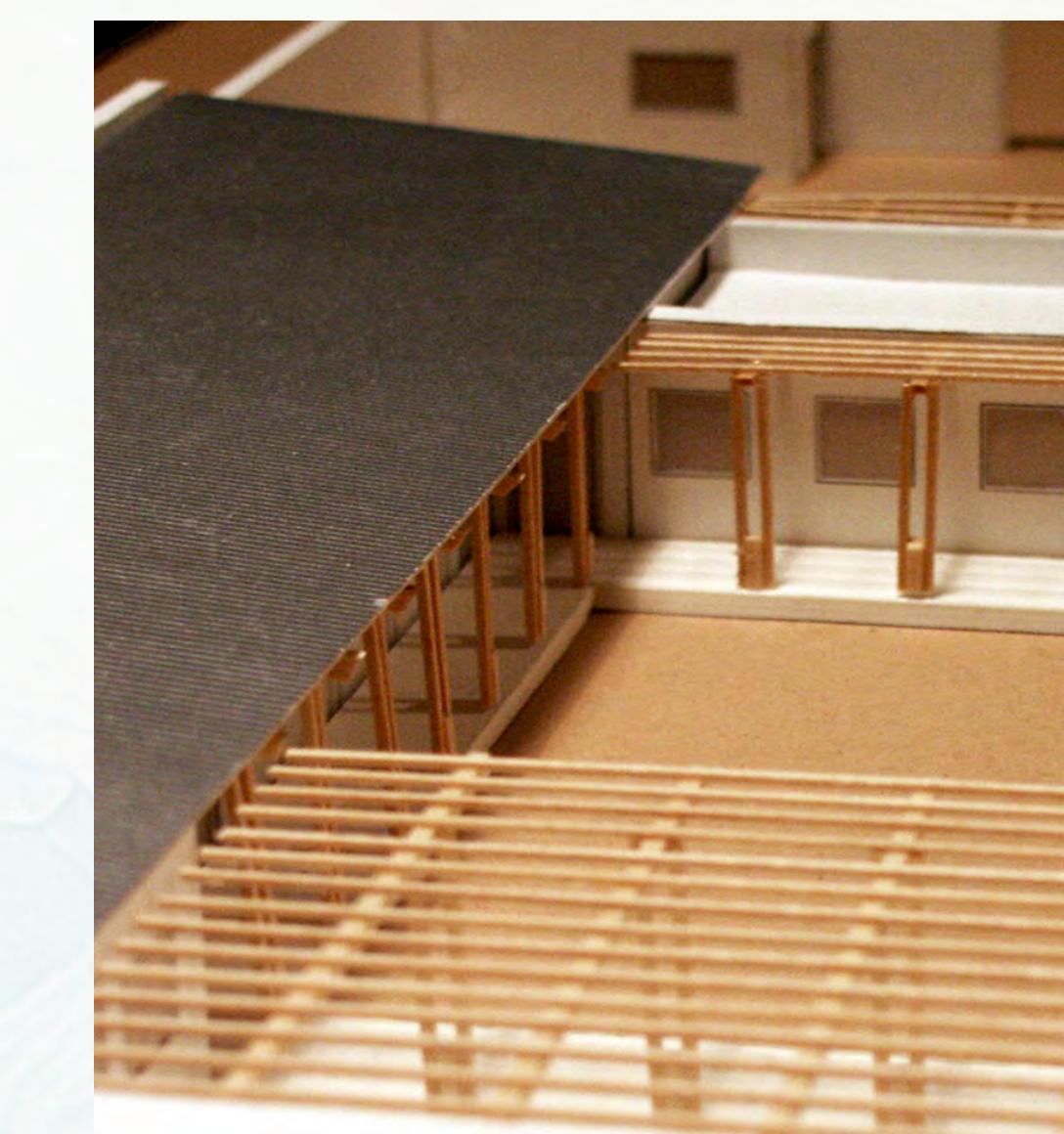
Student-built house under construction.



ADJACENT WORK IN PROFESSIONAL PRACTICE



Sussex school, featuring stream daylighting initiative, SIPS panel construction, and high-performance details. With OZ Architects.



Afghan Womens Center design and modular construction model fabrication. Various locations, Afghanistan. With Inscape Publico.

SUBJECT AREA

COMMUNITY DESIGN

PROFESSIONAL PRACTICE AND CONSTRUCTION MANAGEMENT

RELEVANT COURSES TAUGHT

Catholic University School of Architecture
ARPL 407/507 Design Build: Construction Documentation

ADJACENT WORK IN SCHOLARSHIP AND PUBLICATION

Capricious Concrete: On Plasticity in Material and Method

Things simply are not 'fit for their purpose.' At one time a flake of flint was fit for the purpose of surgery, and stainless steel is not fit for the purpose yet. Every thing we design and make is an improvisation, a lash-up, something inept and provisional. We live like castaways. - David Pye

LUC PHINNEY
Virginia Tech / Johns Hopkins

In a method displaying remarkable adaptability, a man at the turn of the last century built a seven-story reinforced concrete museum in less than a year with one horse and ten laborers. Concrete does not lend itself to speed. More significantly for this paper, concrete is rarely employed in architectural processes as flexible or adaptable – as plastic – as their material result might suggest. On the contrary, concrete construction often calls for greater attention to tolerances, specifications and construction sequence; that is, for greater control, than alternate materials and methods. Despite many of the claims made in the foment of early modern hyperbole, concrete construction is typically not a plastic affair. Every corner, gap, and detail must be drawn and calculated, measured and laid out, and built on site in formwork before the "plastic" material flows in to take its eventual shape. In this the most monolithic, most seemingly-sculptural of materials is in practice one of the least, often requiring more complex carpentry than similar forms executed in wood, and more intricate patterning of metal ties and connectors than similar structures made of metal. Concrete may be the most difficult material commonly used in contemporary construction; certainly, it is one of the hardest to predict.

Control is the question at the heart of what follows: How do our drawings, and the conversations that surround them like mayflies, set in motion a set of controlled activities which result in a (more or less) predicted-building; and to what degree does the explicit nature of that prediction – a representational activity which mimics, but is not equivalent to, depiction – foreclose on the collaborations and improvisations that may otherwise enrich architectural activity?

For the sake of brevity we will need to assume here a passing familiarity with contemporary architectural practice, in the United States and similar jurisdictions, and in that setting the way a typical set of construction contract documents is created by a design team and interpreted by a contractor or builder. As it is practiced today, this is often called, in brief, the design-bid-build model, in which the architectural document has as its objective the complete foresight of all the variables of construction. That this is a pervasive and almost

Chapter Title (ACSA will complete)

Capricious Concrete:
On Plasticity in Material and Method

1



A meditation on the contradictions inherent in working with that least-forgiving of plastic materials, reinforced concrete. Presented at the 2018 ACSA Annual Meeting.

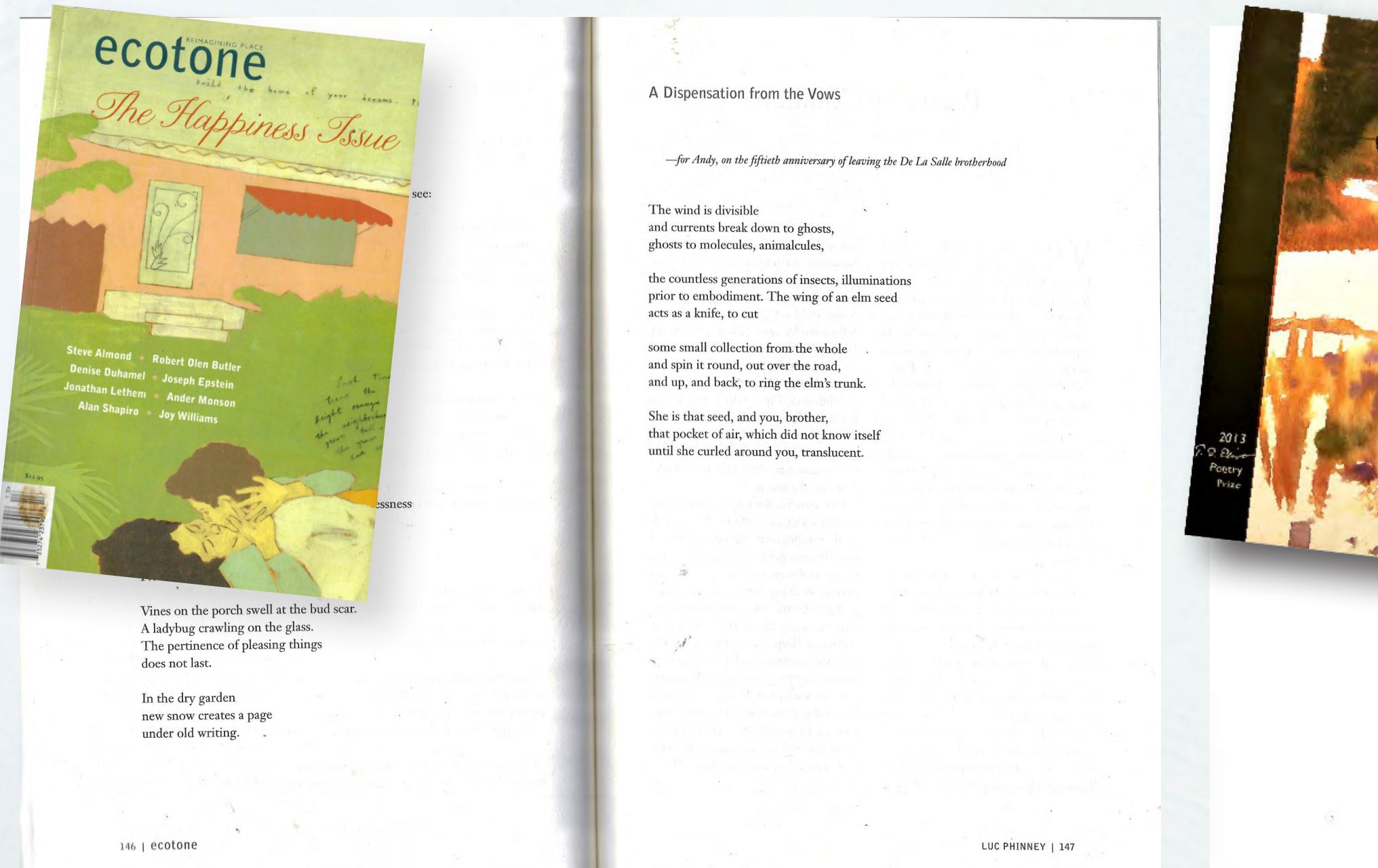
PROFESSIONAL PRACTICE AND CONSTRUCTION MANAGEMENT



Neely-Mitchell Residence, indelible in my imagination as the first jobsite I worked on as a young professional. With Jerry Fulks Company / SBCH Architects.

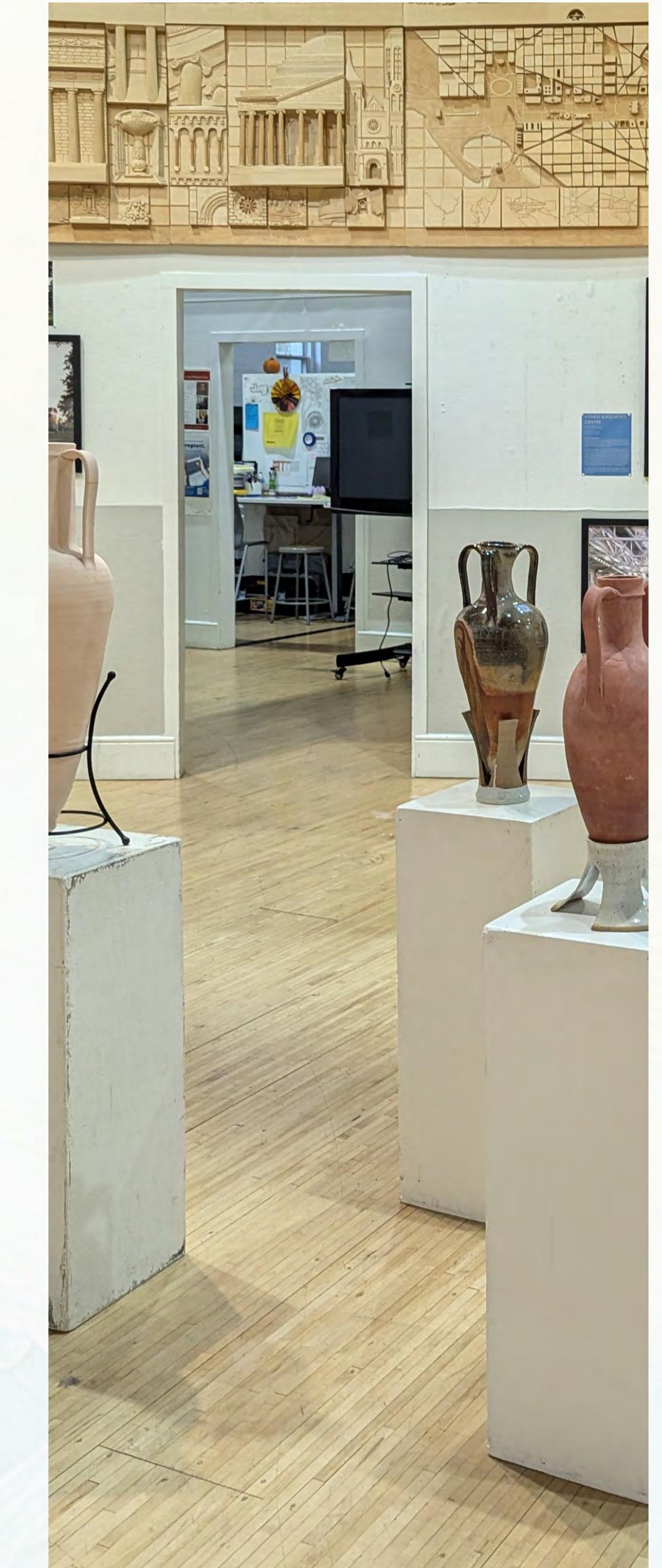
RELEVANT COURSES TAUGHT

Johns Hopkins University Center for Visual Arts
Artists Books
Johns Hopkins University Writing Seminars
Flash Fiction Prose Poetry
Johns Hopkins University Writing Seminars
Rhythm Clinic
Johns Hopkins University Writing Seminars
Introduction to Fiction and Poetry I and II
City of Takoma Park
Ceramics: Introduction to Wheel Throwing
City of Takoma Park
Ceramics: Advanced Wheel Throwing



Poems published in various magazines and collected in the TS Eliot Prize Winning book, *Compass*.

CREATIVE WORK AND PUBLICATION



CREATIVE WORK AND PUBLICATION

PHINNEY
FIN