From Endings Come Beginnings:
Facilitating the Transition from Ending Student to Beginning Practitioner

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The receipt of a degree is momentous; it is at once the end of an academic career and the beginning of practice life. Terminal coursework thus becomes a critical component in successfully preparing students for the classroom-to-office transition. The ability to creatively resolve environmental design problems requires synthesis of various aspects of theory; research; applied design; and construction methods, materials, and documentation technologies. Essential to student preparedness is the ability to critically analyze, integrate, and apply these myriad skills. Equally as important is the development of student confidence and ownership. The lessons offered within a final studio should therefore integrate these elements into a comprehensive process that fosters independent exploration, discovery, and application. This approach allows students to make their own connections between design skills and, in turn, transforms abstract knowledge into applied understanding. Armed with a holistic comprehension of core fundamentals, emerging practitioners can effectively, efficiently, and creatively address the innumerable challenges of professional practice.

This paper discusses the application of these ideals into a graduate level, terminal design studio. The exploration of meaning is used to organize the studio around a variety of in-depth urban design projects. Student work is augmented with a reading and discussion seminar that highlights the need for reading, writing, and verbal skills in the design process, as well as promotes the continued use of theory and research within professional practice. In total, student design explorations represent theory-to-practice applications related to various scales and contexts encountered within the urban landscape.

Integrated Practice

Taking liberties with Laertius's original mantra, the only constant in design is change. This has never rung more true for architects, landscape architects and urban designers; contemporary practice is as dynamic as it has ever been. The need for critically thinking design professionals capable of making intelligent judgments related to fluctuating social, environmental and economic conditions has long been identified as paramount to the long-term professional health of architecture and landscape architecture (Thompson 1990, Boyer and Mitgang 1996, Miller 1997, Francis 1999, Mitgang 1999, Wines 1999). Landscape architect Ignacio Bunster-Ossa highlights the importance of this fundamental requirement within the context of contemporary practice:

> "The trouble […] is that our world today is in constant flux, changing faster than anyone can anticipate or prepare for. In such a fluid environment anyone set in his or her ways is destined to become obsolete in short order. […] Schools should be giving us the tools with which we can understand and judge the changes that are taking place so that we can

> effectively participate in shaping the flow of things rather than merely go along for the ride (89)."

The question then becomes – how do we teach specific skills now to address future problems not yet defined? Curriculums focused on building young professionals primarily through the training of specialized technical skills fall short of Bunster-Ossa's challenge. Prescribed use of specialized technical skills is neither appropriate nor effective in achieving creative responses to complex design problems. The effects of curriculum over-specialization on the design process may instead "restrict rather than enhance the ability of the students to think creatively" (Lawson 2006, p. 11). Design curricula must therefore foster the ability to synthesize myriad skills to creatively resolve problems and realize desired design outcomes. It is this all-encompassing aptitude that represents the fundamental basis of our professional expertise; it is also the element that makes responsible environmental design attainable, fulfilling, and necessary. This is not to imply that specialized training is insignificant. Foundation skills such as two-dimensional composition, form, and spatial organization, drawing and drafting, and construction technology are all essential to the education of architects and landscape architects. We are by training artful technicians. Built upon a foundation of critical thought and creative problem solving, the many technical specializations required in professional practice can be integrated into studio courses to better equip future practitioners for present *and* future demands.

Integrated Curriculum

Learning is about making connections. The ability to analyze, interpret and apply connected design skills and knowledge requires a great deal of thought. Design studio courses offer an ideal training ground for thinking skills and thus learning. As previously discussed, coursework should cultivate the primary skill of critical thought because it is "more important to be skilful in thinking than to be stuffed with facts" (de Bono 1967, p. 7). Sir Frederic Bartlett once wrote, "Thinking […] like every other known form of skill […] has to be acquired by well-informed practice" (11). Acclaimed experimental psychologist Edward de Bono furthers this claim and expresses the need for an end-product to evaluate the quality of thought, "Thinking about something is the only way to think about thinking, and having something to show for the thinking is the only way to judge its worth" (13). In this approach, design work provides a tangible representation of a student's critical thought processes and provides an effective method of substantiating student understanding through demonstrated synthesis. In total, this process facilitates the shift from isolated theoretical and technical *knowledge* to a deeper *understanding* of the interdependencies of each in creating innovative, integrated, and contextually appropriate applications.

Surely a student capable of fusing the knowledge and skills acquired through schooling and personal experiences represents a prospective employee capable of understanding integrated systems. Studio courses structured to foster synthesis through critical thought and application provide one method for design educators to better choreograph smooth, effective transitions from ending design student into beginning design professional. One simple, yet effective approach to practicing critical thinking and developing student understanding within the studio setting is to cultivate independent exploration, realization and self-ownership (Bose, Pennypacker and Yahner 2005). Educational researchers

agree that the ability of students to achieve their own understanding is essential to the learning process (Barth 1989). In their discussion of an educator's role in this effective transformation, Wiggings and McTighe stress the importance of "ask[ing] learners to interpret, translate, make sense of, show the significance of, decode, and make a story meaningful (49)." These learning opportunities may be lost if the process is too tightly defined by the instructor. Design educators must therefore encourage and advise students to explore their self-generated ideas rather than providing specific direction(s) regarding design assembly.

Basis of Design

This brings us to the use of meaning as a basis for design, specifically in an effort to increase student self-awareness and design sensitivity through exploration. We must first understand what is being suggested by this elusive term *meaning*, specifically in relationship to the study of design. In their analysis of design competence, Nelson and Stoltermann identify three principle components of a holistic design process – compound (*materiality*), meaning (*form*), and presence (*appearance*) (117). As the central focus of this three-part assembly, they report:

> "*Meaning* is revealed to us through the ordering potential of systemic relationships that have been created intentionally, in response to purpose, in fulfillment of an end. …[T]hose unifying forces which cause things to stand together, in ordered form, provide a comprehensible unity of significance, importance and value, thus creating meaning for those individuals who are part of the whole or closely related to the whole (117-118)."

In his influential essay *Cultural Studies and Critical Pedagogy* Thomas Dutton expands the discussion onto a global scale, he asserts that in the "postmodern world the production of meaning may be as important as the production of labor (171)." He continues by reconsidering the role of contemporary architectural pedagogy, suggesting it be connected "with the social production of meaning," because "pedagogy is part of processes shaping what people know and how they come to know it […] (171)." Dutton summarizes his argument emphasizing the intimate relationship between pedagogy, knowledge, understanding and, ultimately, meaning:

> "Pedagogy in this broader sense focuses on how people come to understand and articulate their subjectivities. It investigates the social distribution of meaning and knowledge, the institutional constraints of that distribution, and thus how people and groups construct meaning (172)."

The processes involved in developing understanding through critical thinking and creative problem solving cannot be forced because they are as varied and unique as each designer. These processes often remain hidden from the students themselves. Bartlett explains that "It is a succession of feelings, deep laid, frequently unacknowledged, and even, by their possessor, unknown, which may shape both the […] technique and the form of the […] achievement" (190). Students must expend a great deal of thought and effort into substantiating their ideals through the application of specific theoretical principles, available research data, and/or personalized experiences related to given environmental issues and ensuing design solutions. Having advanced a meaningful

interpretation themselves, students are able to apply their understanding toward a clearly articulated and convincingly defended position.

Instructor bias is inherent to this process because proposing pedagogy is by itself a political act of meaning-making (Simon 1987). Therefore the structure and content of the course should be carefully vetted and conflicts openly addressed. Course syllabi and project statements are best constructed as flexible compositions; they must be capable of fostering individual explorations of meaning while orienting students toward attaining a collective purpose. In addition to the primary evaluative factors of sincere effort and demonstrated process, studio projects were evaluated based on satisfying generalized program elements, including pedestrian circulation, vehicular requirements, areas for active and passive recreation, gathering areas of various scales, and etcetera.

Curriculum Application

The aforementioned principles were synthesized into a graduate-level design studio entitled *Design and Meaning (LAND 7050)*. The course was administered within a studio format – four credit hours representing eight contact hours per week. Course enrollment included seven students – five 3rd year Master of Landscape Architecture (MLA) and two 5th year Bachelor of Landscape Architecture (BLA) students. The overall methodology of the course was structured to accommodate both creative work(s) and intellectual dialogue related to "meaning" within the realm of environmental design. The primary objectives included:

- Refinement of each student's ability to accurately perceive, interpret, and respond to place-based meaning(s) and value(s), including the study of socio-economics, culture, history and environmental factors;
- The creation of significant people places; and
- Development of meaningful design solutions and artfully appropriate elements at various scales.

The scope of work included three primary design projects and seven reading seminars. All course projects and readings were focused on landscape architecture issues and applications within urbanized contexts. Depth of design was stressed throughout the course, therefore studio projects representing a wide range of scales (1" = 40'-0" to 1/8" = 1'-0") and phases (schematic design through construction documentation) were augmented with a bi-weekly theoretical and research-based reading seminar.

The primary objective of the integrated reading and discussion component was to strengthen analytical skills through the critique of historic and contemporary writings that address various social, environmental and professional design issues. The readings, and ensuing discussions, required each student to defend multiple points-of-view and challenged them to explore their own value systems. To enrich the discourse, faculty members specializing in a specific topic area were also invited to participate – four sessions were attended by faculty participants. Reading topics were selected based on their applicability to the course's overall premise and to better inform specific aspects of each studio project. The specific topics and related readings are outlined within the project descriptions provided below.

Each facilitator was required to produce a written report of their topic session. Student responses captured the main points of the readings, provided a summary of the discussion, and relayed any insight the student gleaned as a reader, critic, and/or facilitator. This document was organized in narrative fashion to catalogue and summarize the discussion as would be the case for any meeting conducted within a public forum.

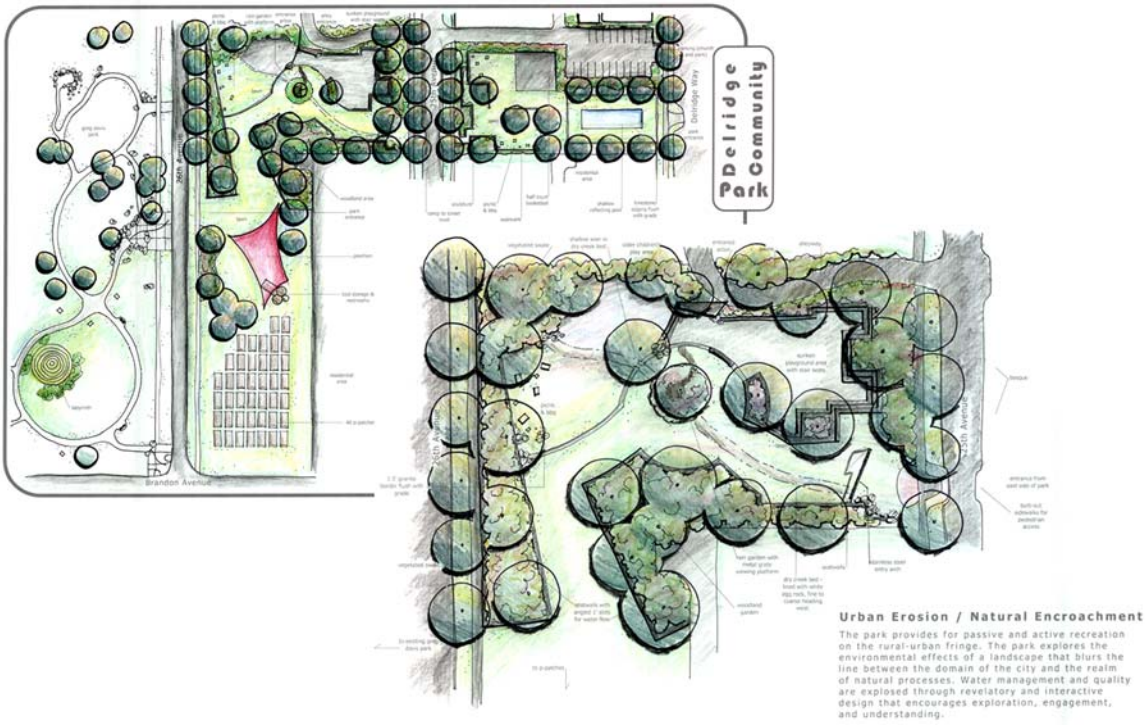
Project #1 – Delridge Parks Project
Seattle's Delridge neighborhood is one of great environmental and cultural diversity. Individuals and families representing a wide-spectrum of nationalities, ethnicities, religions and socio-economic strata make this community one of Seattle's most varied and unique. The natural and constructed environments found within the community are as equally assorted; residential, commercial, and industrial uses coexist alongside parks, green belts and a recovering salmon-bearing creek/watershed. A wealth of history is also found within its geographic boundaries – Native American settlements, Olmsted Legacy sites, and many of the industrial sites instrumental in the building modern-day Seattle have all called Delridge home.

The Delridge Parks project involved a collection of three distinct parcels located in the center of the Delridge community. Students were challenged to unify all three parcels while also responding to each of the area's diverse programmatic demands. Projects were evaluated on their cohesiveness and context sensitivity related to various scales.

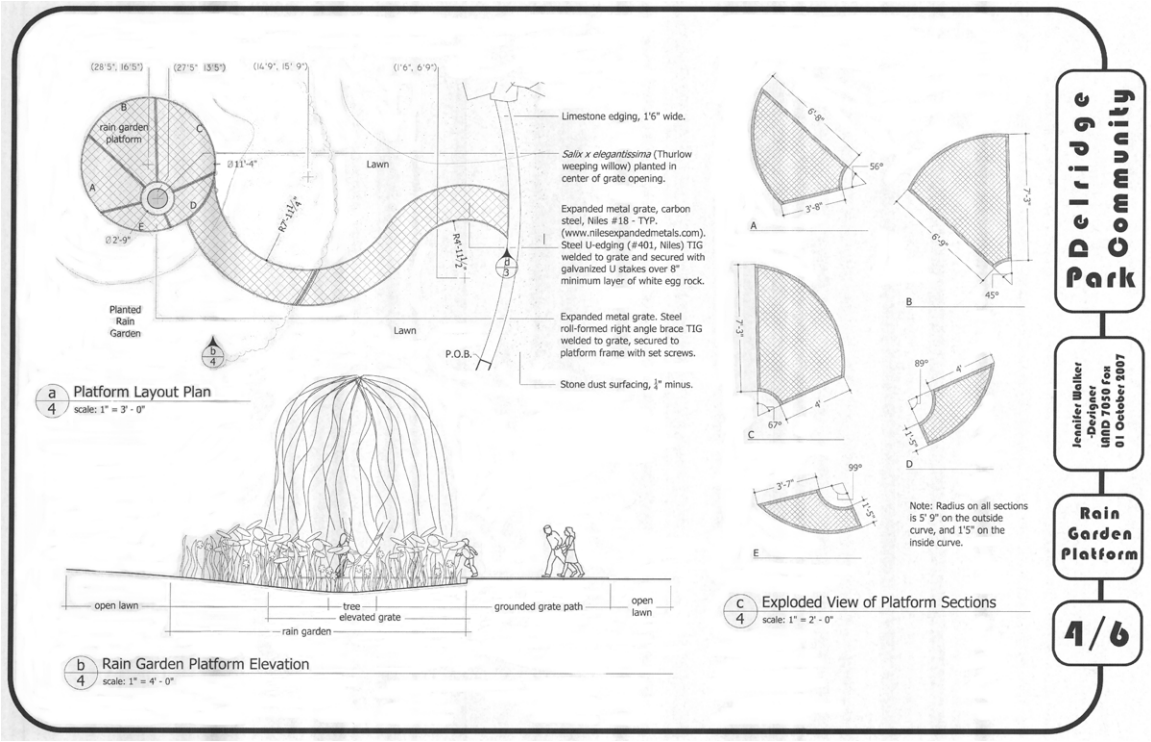
Associated seminar topics and readings included:
Topic #1: Observation and Interpretation
- The Necessity for Ruins (selections) – *J.B. Jackson*
- Axioms for Reading the Landscape – *Pierce Lewis*
- The Beholding Eye – *D.W. Meinig*
- The Language of Landscape (selections) – *Ann Spirn*
- Thought and Landscape – *Yi-Fu Tuan*

Topic #2: Environment as Behavioral Modifier
- Crime Prevention Through Environmental Design (selections) – *Timothy Crowe*
- The Power of Place (selections) – *Winifred Gallagher*
- The Experience of Place (selections) – *Tony Hiss*
- Restorative Experience – *Rachel and Stephen Kaplan*
- Gardening as Healing Process – *Charles Lewis*

Topic #3: Sustainability
- Ecological Values in Twentieth Century Design – *Catherine Howett*
- Partnership with Nature – *Carolyn Merchant*
- The Aesthetics of Ecological Design – *Louise Mosingo*
- The Poetics of City and Nature – *Ann Spirn*
- Gray World, Green Heart (selections) – *Robert Thayer*



The project site challenged students to visually and physically connect three park parcels across two streets, two alleys and around a tight corner (above left). This student developed a "hinge" of programmatic uses to effectively negotiate the difficult doglegged form (bottom right).



The student furthered the "hinge" concept through the development of a modular steel deck system at its center – materials and assembly were fully specified and detailed. The final design provided a responsive aesthetic ("hinge" concept imagery and the area's industrial past), appropriate programmatic use (bio-retention and outdoor classroom), and feasible construction (addressed issues of cost, durability, maintainability and repair).

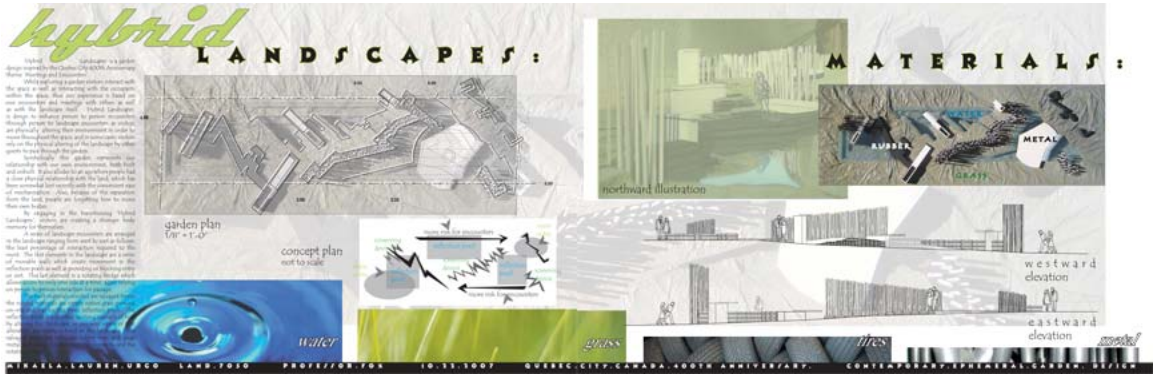
Project #2 – Québec City 400e Ephemeral Garden Competition
The project's aim was to engage the students in a design competition process, specifically the design of a contemporary ephemeral garden celebrating Québec City's 400th anniversary. The project objectives – and their applicability to the course – were clearly set forth by the competition organizers:

> "This project is intended to be a multidisciplinary exploration of garden art and also the meaning and themes addressed by Espace 400e [governing organization]. It is thus not only an exercise in style but also an exercise in meaning on the very idea of "garden" and the relationship linking the garden to be created to the city and the festivities it will be part of – its symbolism, its imagined reality, its relationship to its intrinsic constituents, and its future (Société du 400e anniversaire de Québec)."

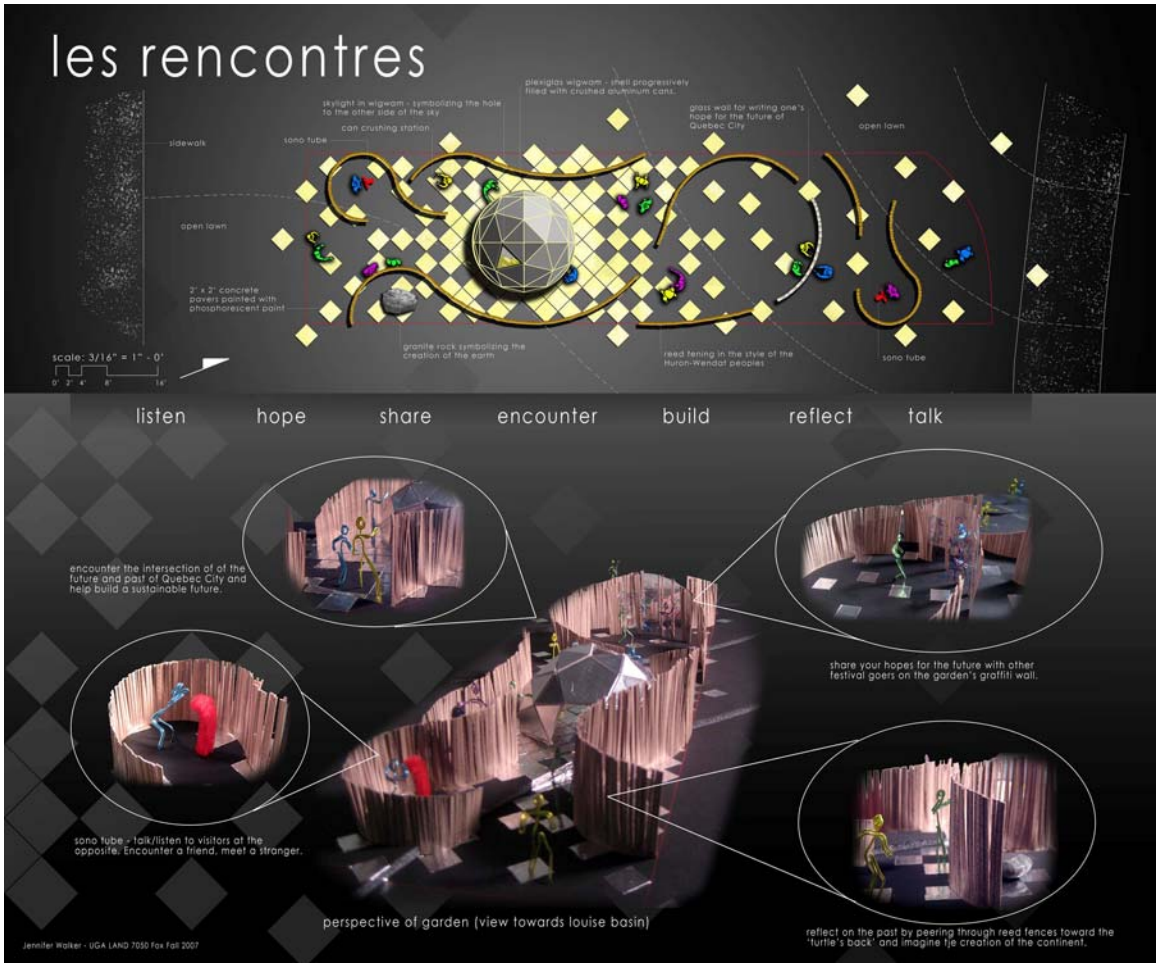
Designs were evaluated based upon the "originality of their ideas, the coherence and clarity of their creative approach, the originality and the spatial and architectural quality of their concepts and, finally, the quality of their proposed architecture in the relation to the context and to the theme of the festivities: Meeting and Encounters (Société du 400e anniversaire de Québec)."

Associated seminar topics and readings included:
Topic #4: Aesthetics, Meaning & Metaphor

- Garden from Region – *Terry Harkness*
- An Ecological Aesthetic – *Jusuck Koh*
- Form, Meaning, and Expression in Landscape Architecture – *Laurie Olin*
- The Language of Landscape (selections) – *Ann Spirn*
- Landscape as Ecologically Revealing Language – *Robert Thayer*



This student utilized research of historic forms, innovative materials and industrial design processes to assemble components of the city's landscape – past, present and future. She also developed a social program using kinetic structures to invite direct user interaction.



This design represents the marriage of modern materials and vernacular structures/materials of the region's indigenous Huron-Wendat peoples. It also fosters shared experience(s) through the use of sound tubes, interactive message boards, and a geodesic dome constructed from recycled cans collected during the festival.

Project #3 – Chase Street Elementary School

Chase Street Elementary is a small urban school located in the historic Boulevard Neighborhood of Athens, Georgia. The building had recently been renovated and the grounds remained in a state of disrepair following construction activities. The site was therefore in need of a development plan responsive to the specific needs of the institution, school district, neighborhood and city. The primary objective of this project was to introduce the School of Environmental Design (SED) students to educational facility design processes, client interviews, program development and layout/planting design documentation; including idea synthesis and articulation through verbal presentation. The students were tasked with sensitively designing an environment that would facilitate the processes of exploration, learning and recreation. The scope of work included schematic development through construction documentation. Each student was also required to maintain a record of the time spent on this project.

A preliminary stakeholder meeting was conducted, including representatives from the school staff and related community groups. The design phase of the project ran for approximately six weeks. In addition to providing an overall site master plan, each student was required to deliver basic construction documentation to the community

organizers – specifically a planting plan and layout plan. The purpose of this documentation was to allow the community to implement desired aspects of the designs whenever available funding and/or volunteer labor materialized. The process culminated in SED student presentations to members of the school administration, faculty, staff, community groups, and interested neighbors.

The response from both SED students and stakeholders has been very positive. Many of the students have maintained an active role within the project and become members of associated organizations. In addition, the Chase Street Parent-Teacher Organization continues to use many of the designs (specifically the graphics) to pursue various environmental education grants and other sources of external funding in support of their ongoing site renovation efforts.

Associated seminar topics and readings included:
Topic #5: Playing, Learning and the Primitive Mind

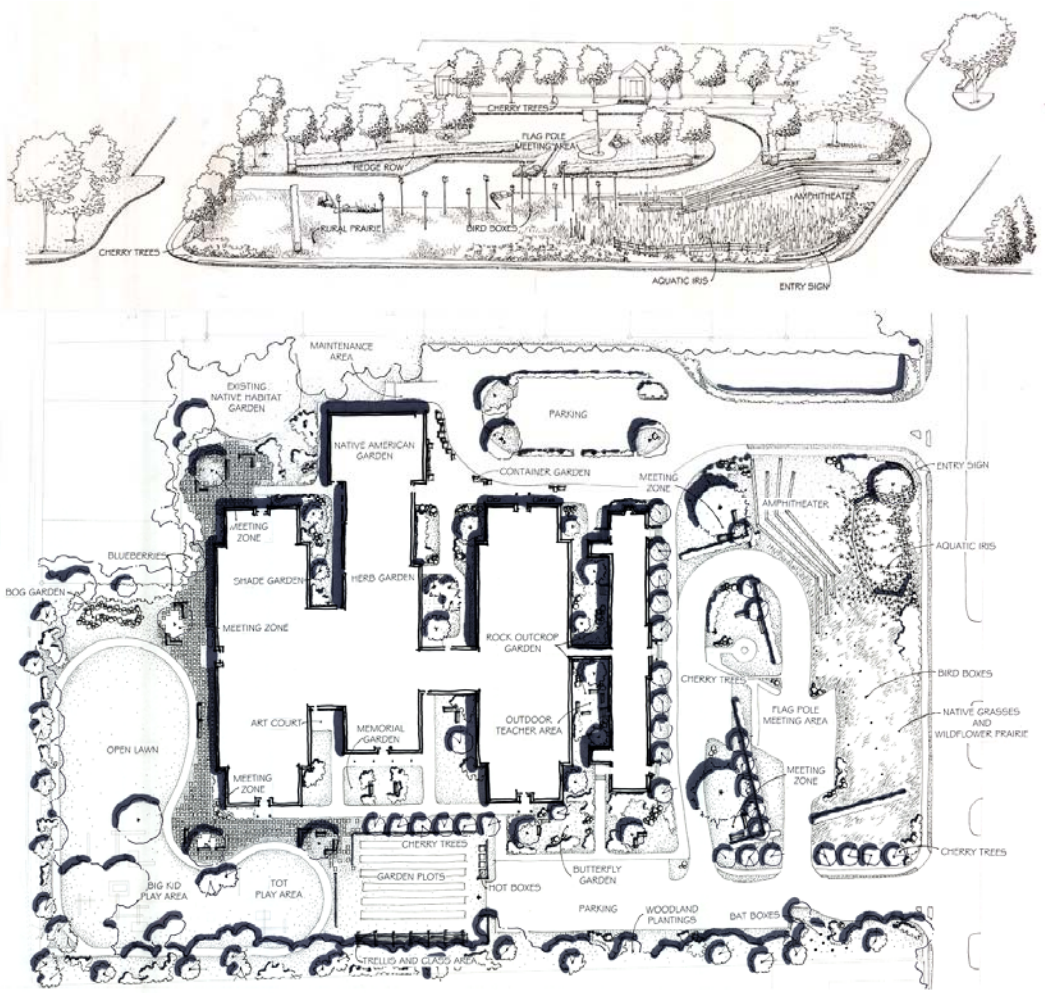
- House as a Mirror of Self (selections) – *Clare Cooper Marcus*
- Multiple Intelligences (selections) – *Howard Gardner*
- Homo Ludens (selections) – *Johan Huizinga*
- Inner and Outer Landscapes – *Randolph Hester and William O'Donnell*
- Last Child in the Woods (selections) – *Richard Louv*

Topic #6: Sensitivity, Responsibility & Social Justice

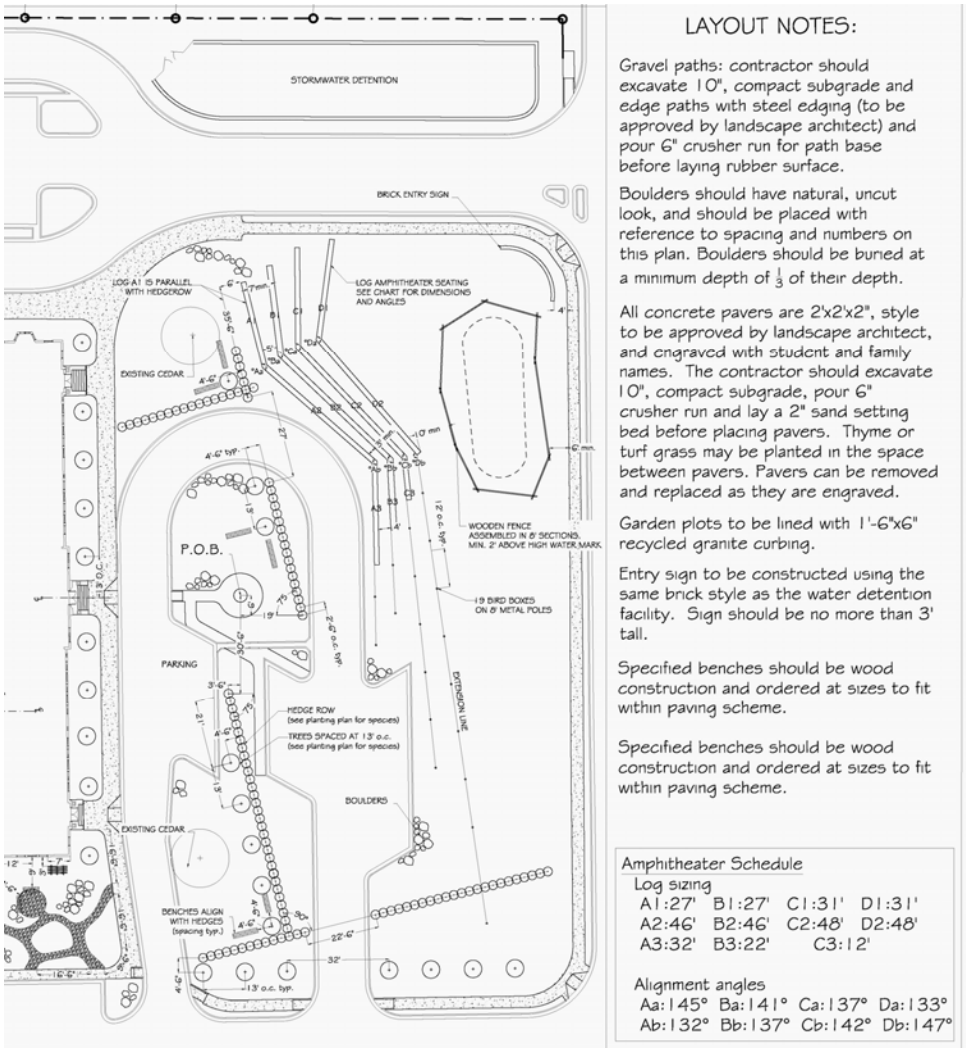
- Nature as Community – *Giovanna Di Chiro*
- Proactive Practice – *Mark Francis*
- Stewardship: the Profession's Grand Delusion – *Robert Scarfo*
- Design Like You Give a Damn (selections) – *Cameron Sinclair and Kate Stohr*
- 100 Years of Humanitarian Design – *Kate Stohr*

Topic #7: Perspectives on Wilderness & Nature

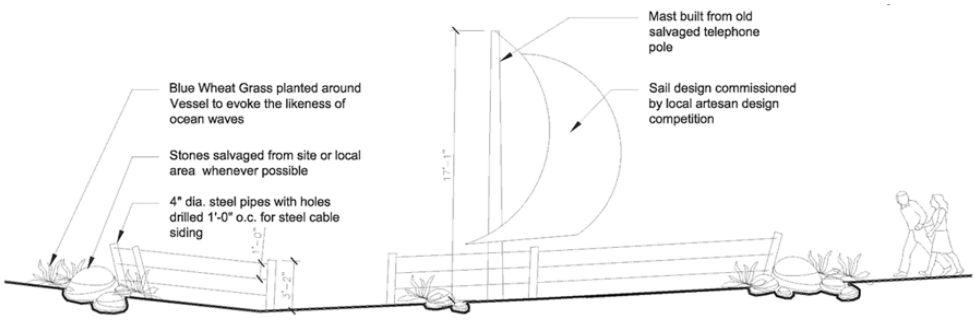
- The Trouble with Wilderness – *William Cronon*
- Faking Nature – *Robert Elliot*
- The Big Lie: Human Restoration of Nature – *Eric Katz*
- Constructing Nature: The Legacy of Frederick Law Olmsted – *Ann Spirn*
- Psychological Benefits of a Wilderness Experience – *Stephen Kaplan and Janet Frey Talbot*



This student's concept was to envelop the school into a regionally-specific outdoor classroom. The proposed design expresses the area's endemic landscape in artfully arranged patterns.



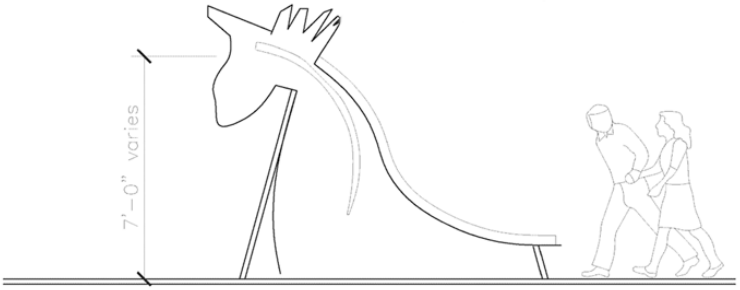
Developing construction documents helped the student understand the many detailed considerations necessary to adequately represent and clearly communicate the design intent of these abstract ecological patterns and material arrangements.



3a. elevation: ¼" = 1'-0"

3. ODYSSEUS' VESSEL

The apparatus symbolic of safely returning Odysseus home after twenty long years. Although he lost his original vesel along the journey, Odysseus eventually returns home by way of the sea, the origin and root of many of his adventures.



4a. elevation: ½" = 1'-0"

4. TROJAN HORSE SLIDE

A structure symbolizing Odysseus' wit, craftsmanship, and determination. The Trojan Horse began the final battle in the Iliad, beginning Odysseus' 20 year long journey home.

Inspired by Homer's Odyssey, the two illustrations above express another student's conceptual integration of detailing and materiality into simple, yet engaging play features.

Student Feedback

The following responses are representative samples provided by students through course evaluations. Although qualitative, the collected student feedback supports the validity of this overall approach to increase student confidence and it highlights the value that students place on the effectiveness of an integrated, theory-to-practice methodology.

"I think it [the course] boosted my confidence. By working through an entire project, from concept to details, I was able to see how I best work, and how beneficial it is to work at several scales. I think I will approach projects differently from now on – understanding what it takes to make a complete and cohesive design. […]The details can have such a great affect on the overall concept, and this understanding was made much clearer through this process." – Rebecca, 3rd Year MLA

"I put the projects from this class into my portfolio to show prospective employers I understand the various phases of projects and can handle the associated construction documentation." – Zhen, 3rd Year MLA

"I definitely feel that this course helped with the transition between academia and practicing in the real world. The level of critical thinking required for this course I feel

was a step above any of the other studios with the amount and type of readings that were required." – Zach, 5th Year BLA

"It [the course] pulled together macro- to micro-scale issues of a site, as a project would in professional practice. Very helpful." – Drew, 3rd Year MLA

"For what I feel was the first time, I was able to dig deeper into the fabric of my designs by testing them against the theories and principles we covered in related readings and seminar sessions. I felt free to experiment with new techniques and theories in my design work and I was finding that I could explain almost all of my design gestures. I also felt that, in pursuing the readings, I had found the motivation to continue experimenting and pushing things forward as I saw advantages it had for my own design work." – Eric, 5th Year BLA

"…it was great to end the studio experience and to have a chance to complete projects which are interesting and thought provoking as well as technically accurate." – Mikaela, 3rd Year MLA

"The course definitely increased my confidence level for several reasons. One, taking a project through several phases of the design process was a great confidence booster. Previously, I had assumed that I could do that, but to apply that process to a studio project, encounter problems – and then solve them – was a great confidence builder. Secondly, the course offered multiple opportunities to describe, justify, and illustrate personal design decisions and theories. That experience – of taking a personal ethic that had evolved over the previous years and vocalizing it through design – is something that is immensely helpful in working in a professional office." – Jennifer, 3rd Year MLA

Metamorphosis

This initial curriculum exploration shows great promise as an ongoing service-learning course. Ideally, the continued development of the course and associated projects will transition into a design-build format. This added construction component will allow students to directly apply construction principles, as well as see their designs realized. Its maturation may involve associated courses, other disciplines, and/or allied student organizations. Future iterations would most likely explore the challenges of ongoing issues at a local and/or regional (Georgia Piedmont) level. There are many examples of this holistic approach successfully enriching both curriculum and community – Auburn University's Rural Studio, University of Detroit Mercy's Detroit Collaborative Design Center, University of Illinois's East St. Louis Action Research Project, and the University of Pennsylvania's West Philadelphia Landscape Project are all exemplary models.

Summary

Effective, engaging and elegant solutions are achieved when a strong unifying concept remains clearly visible throughout the life of a project – conceptualization through construction documentation. The ability to achieve these results requires a process involving foresight, creativity, technical knowledge, adaptability, and refinement. Terminal studios within environmental design curriculums that are structured to facilitate critical thought and discourse afford students a better understanding of the inherent interconnectedness of these processes. The consolidation of critical thought and

analytical synthesis into a unified curriculum narrative offers a productive means of developing confident and inspired beginning practitioners capable of contributing to professional practice and society alike. Ultimately this approach assists graduating students in their transition to practitioners capable of synthesizing complex environmental problems into successful design solutions responsive to contemporary issues and beyond.

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