PUBLIC INTEREST DESIGN

Summer Program: 2014

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The word design means different things to different people. For some, design is translating an extraordinary idea into complex and poetic form. For others, design is about utility, providing only what’s necessary for basic inhabitation. For me, design is ultimately about people. As Richard Seymour defined it during the Design Council’s Design in Business Week in 2002, “design is making things better for people.”

The beauty of this definition is that it is inherently inclusive. It doesn’t require a specific skill set or a deep understanding of aesthetic principles, it’s simply about improving quality of life and the world in which we live. Design improvements can range from helping a neighbor construct a raised bed for gardening to developing a solar powered street light. Design even includes cooking a nice meal or getting dressed in the morning. Anyone on any scale can take part in design.

The problem with the majority of design definitions is that they don’t include the inherent humility Seymour speaks of. That is, they contain an underlying notion that design is a privilege of professionals, something out of reach or unavailable in daily life. It is for this reason, I believe, that many people don’t consider themselves to be designers. They don’t see it as a basic human quality.

Public Interest Design bridges this misconception by reframing what design is and who can do it. It shows through practice that design is for the people and, most notably, by the people. By democratizing design, PID allows professional and local knowledge to be given equal weight in the decision making process. It transforms the design paradigm into something available to all.

Empowering communities with the tools and resources to transform their own neighborhoods leverages our natural affinity for our homes and communities. This in turn fosters the love of place that helps everyone to be better stewards of the environment.

The City of Austin has been a long-time proponent of community empowerment, robust public engagement and Public Interest Design, weaving the movement’s core values with vital sustainability initiatives. This summer, the Office of Sustainability partnered with the University of Texas School of Architecture and the Center for Sustainable Development to help develop the role of education in furthering public interest design. Investing in young leaders and Austin’s under-served communities, these efforts serve as an ongoing demonstration of Austin’s dedication to the interests of the public, and the value of design to further these.

-Lucia Athens
Chief Sustainability Officer, City of Austin
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ACKNOWLEDGMENTS
The 2014 summer program would not have been possible without the support of the Office of the Provost, the City of Austin Office of Sustainability, The University of Texas at Austin School of Architecture, the Center for Sustainable Development, the National Endowment for the Arts, and the Surdna Foundation. We thank the following individuals and organizations for their generous contributions:

Gregory L. Fenves
Brian Bell
Coleman Coker
Francisco Gomes
Liz Ogbu
Kate Swenson
Jess Zimbabwe
Steven Moore
John Peterson
Barbara Brown Wilson
Sarah Wu
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Public Architecture
Austin Community Design and Development Center
Stanley Studio

Community Partners

Austin Public Library
Center 61
City of Austin
CodeNext
Guadalupe Neighborhood Development Corporation
Guadalupe Association for an Improved Neighborhood
National Wildlife Federation, South Central Region
The Thinkery
Adam Pyrek
Andy Wilson
Eric Clark
James Seppi
William Pyles

Donors

Ecology Action
Native Texas Nursery
Texas Conservation Corps
INTRODUCTION
Public Interest Design intersects design and service.

The Public Interest Design (PID) program bridges disciplines to reveal the public nature of architecture. It provides students a unique opportunity to practice socially and environmentally responsible design, highlighting that designers are not just accountable to their clients, but to all individuals, ecosystems, and entities effected by their work. Emphasizing active engagement and evaluation within an evidence-based design process, the program teaches students how to translate the needs and aspirations of a community into positive design solutions.

Students engage directly with end-users, merging professional and local expertise to develop design interventions that respond to specific socio-cultural needs. Following a community driven approach, stakeholder engagement begins in the earliest stages of the planning process, allowing a participatory, co-design method to take root throughout the summer.

The relevance of the PID program is three fold. First, it offers students a critical understanding of theory underlying the Public Interest Design movement. Second, it provides a real-world service-learning opportunity where students can apply design, engagement, and evaluation skills in service of underserved communities. Third, it connects students with the larger PID community, allowing for like-minded individuals to meet and for new leadership to emerge.

The PID program has been a signature course at the University of Texas School of Architecture (UTSoA) since 2011. Each year the program becomes bolder as new community partnerships are formed. The summer 2014 program was the most dynamic yet. Students faced unique design challenges as they grappled with raising public consciousness about the value of design, collaborating between the design disciplines, engaging communities, bridging form and construction considerations, and measuring the public impacts of built solutions.

The 2014 program kicked off on June 3rd at the second Design Futures Public Interest Design (PID) Student Leadership Forum, hosted by the Tulane School of Architecture in New Orleans. The five-day event engaged multi-disciplinary students and nationally recognized design leaders in a collective examination of the historical and philosophical foundation of the PID movement. The forum examined current PID practices in an effort to discover new skill sets, tools, and leadership practices needed to confront today’s design challenges.

Insight gained into the future of PID studies was brought back to UT and integrated with the program’s course offerings. Four linked courses came together to comprise the 2014 Public Interest Design curriculum. All PID students were enrolled in one of two design/build studios, or “practicums,” taught by Professors Coleman Coker and Francisco Gomes. The studios engaged two different communities over the ten-week summer sessions to design and build an artifact that realized the aspirations articulated by each community. Nearly half of the students enrolled in the Methods of Community Engagement seminar, taught by Dr. Barbara Brown Wilson in collaboration with Liz Ogbu, Jess Zimbabwe, Katie Swenson. Many others enrolled in the Community Design Evaluation seminar, taught by Dr. Steven Moore in collaboration with John Peterson of Public Architecture and Brian Bell of the Seed Network. The program’s design facilitated student and faculty engagement in all four courses, allowing participants to both formally and informally exchange information and challenge each other intellectually.
The intent of this report is to help define the role of education in furthering Public Interest Design. As an open-source documentation of the design build process, we aim to illustrate how design practices, realized within an academic setting, can empower social and environmental change in Austin’s underserved communities.

In an effort to mimic the program’s design, the report will discuss each practicum in tandem with work done in the engagement and evaluation seminars. As each seminar directly informed the design build process, it is best discussed as a unified program rather than as isolated courses.
PROGRAM BRIEF
Advanced Design Build Practicums: Summer Session 1 and 2

The design/build practicums, taught by Coleman Coker and Francisco Gomes, developed two projects serving the Austin Community. Each project integrated planning, architecture, sustainable design, and landscape architecture students. Coker’s project, The Green Alley Demonstration Project, completed a multi-year effort to transform an alley into a piece of sustainable urban infrastructure. Students worked with a diverse community of residents to design and build critical ecological and social elements in an East Austin alleyway. Gomes project, a mobile sustainability education and community engagement hub, served to empower underserved communities and stakeholder groups in the region to speak for themselves about community design and sustainability issues. Students grappled with how to define their primary audience and design a mobile analogue and digital engagement tool that could be deployed throughout the City of Austin.

Methods of Community Engagement Summer Session 1

Methods of Community Engagement, taught by Dr. Barbara Brown Wilson in collaboration with Liz Ogbu, Jess Zimbabwe, Katie Swenson, examined what it meant to truly engage a variety of community members in the design and planning process. The course analyzed best practices and discussed the ethics and methods of community engagement local, community, institutional, and city scales. Students engaged in short field assignments in addition to regular lectures, readings and discussions. In an effort to document their process, students kept an online journal of their work and critical reflections on exercises, readings, and lectures using Tumblr. The final project was a full community engagement plan for the design studio project with which they were engaged.

Developing a comprehensive community engagement plan fostered studio projects that not only produced a well-built and thoughtful physical structure, but also resulted in a long-term contribution to larger issues in Austin. Community engagement undergone throughout the summer was meaningful, continuous, and carried out in a way that engendered long-term stewards out of community partners. We hope these partners will champion, animate, and keep each project relevant in the future.

Community Design Evaluation Summer Session 1

Community Design Evaluation, taught by Dr. Steven Moore in collaboration with John Peterson of Public Architecture and Brian Bell of the SEED Network, allowed students to gain an understanding of how to evaluate, analyze, and integrate public design theory and practice. Students were tasked with developing methods to measure two dimensions of architecture; 1. The estimated vs. actual consumption of energy and water in quantitative terms. 2. The intended vs. received social consequences of building in qualitative terms.

Developing and applying post occupancy evaluation (POE) methods in studio gave students an empirical basis for assessing their architectural production. Measuring the social impacts of design choices allowed them to understand individual agency in the decision making process. POE was, then, understood and practiced as a design tool, not simply an analytic tool used after design and construction is complete.

In addition to developing and applying metrics in their respective projects, students were charged with refining the Social Economic Environmental Design (SEED) certification tool. The SEED tool merges community engagement and POE with design practices in support of Public Interest Design. Students studied SEED methodology in an effort to develop an increasingly user-friendly certification process.
DESIGN / BUILD

GREEN ALLEY DEMONSTRATION PROJECT
THE TEAM
**Project Description**

East Austin is comprised primarily of older neighborhoods with single-family homes laid out in a traditional city grid. Many of these neighborhoods have back-of-house service infrastructure, commonly referred to as alleys. These often neglected transits tend to be underutilized and stagnant, little more than a place where trash is collected each week. The City of Austin, working with the University of Texas at Austin School of Architecture (UTSoA) and the University of Texas Center for Sustainable Development (UTCSD), developed the Green Alley Demonstration Project to address these mostly neglected service corridors.

The project stems from the Alley Flat Initiative, a collaboration between the Center for Sustainable Development, the Guadalupe Neighborhood Development Corporation (GNDC), and the Austin Community Design and Development Center (ACDDC). The Alley Flat Initiative reimages sustainable and affordable housing through a network of small, detached residential units, accessed from Austin’s extensive network of underutilized alleyways. Building upon the initiative, the Green Alley Demonstration Project aims to reinvent the alleyways themselves as sustainable and dynamic urban infrastructure.

The project is a first step in the City of Austin’s Green Alley Initiative, a program designed to transform underutilized alleyways into sources of neighborhood pride and spaces that demonstrate Austin’s commitment to sustainability.

**Site**

The alley is located in the Guadalupe Neighborhood of East Austin between East 8th and 9th Streets, and bounded by Lydia and Waller Streets. The Guadalupe neighborhood has experienced profound change within the last decade and is one of the most rapidly gentrifying areas in the city and Nation. As such, the site impacts a network of varied communities who face rising property taxes and displacement.

Residents fall along the wide spectrum of age, race, income, length of residency, and family size. Neighborhood diversity has resulted in a tension between new and old, growth and tradition. Many living on the alley are wary of change yet all place great value in community building. In 2011, UTSoA recognized this unique strength and worked with residents to complete the first greening project in the alley directly across from the summer 2014 site between San Marcos and Waller Streets. The studio installed address markers and garbage
corrals to create spatial organization for the alley, as well as creating a sense of identity and ownership.

Additionally, the project increased safety in the alley as emergency vehicles benefit from the address markers. Supergraphic pavement markings for the alley were created to act as traffic calming measures to allow for safer resident walking and biking. The team also prepared a toolkit handbook that the neighborhood stakeholders and the City of Austin may reference for future alley projects. A report documenting the 2011 process and additional alley projects are available through the Center for Sustainable Development’s website if you would like to learn more.

In 2013, The City of Austin (COA) continued the alley greening legacy at the summer 2014 project site. Working with alley residents to design base-line green infrastructure elements, the COA Department of Public Works installed rain garden, bioswales, permeable and colored pavement, and on-grade planting beds prior to the courses start date.

The 2014 project site is approximately 435’ long and 19’ wide with significant slope along the east west plane. The paved concrete drive is approximately 12’ wide, leaving a 3’6” to 3’ 9” zone in the right of way, the studio’s primary workspace. Eighteen homes exist on the alley, three of which are accessory dwelling units or ‘alley flats’. Several residents expressed interest in constructing accessory dwelling units on their property but the design process has not begun.

Project stakeholders advised that keeping right of way construction under 4’ in height would pose the least risk to public safety. Students chose to heed this concern began a design process that to promote public safety.

**Methods of Community Engagement**

Architecture and planning are often described as the art and science of designing buildings, neighborhoods, and cities. Missing from this definition is the important, but unwieldy, element of the people who inhabit these spaces. Yet, fundamental to the idea of transforming physical spaces into meaningful places and communities is understanding how to engage these people, their life stories, and their relationships. The act of design then becomes about how to translate the learning about these lived experiences into analytic concepts that include, but do not operate in conflict with, the tools we possess as designers.

The challenge of the Green Alley Demonstration Project was to reveal ways that undefined alley space could become an asset to the surrounding community. It was important, especially in the beginning, to identify and engage a diversity of stakeholders involved in the project, and understand that each party had a different vision and agenda for the design. Throughout the ten-week timeframe, a variety of engagement techniques learned in the Methods of Community Engagement seminar were used to identify each stakeholder’s objective. Each strategy provided unique insight into issues in the alleyway.
Interviews: Interviews were useful in understanding the individual needs, desires, and attitudes regarding the Alley Greening Project as well as providing a venue for initial introductions with residents. Interview questions moved from broad to specific so that stakeholders could easily deviate from the script. This allowed for a broader understanding of community perspective.

Asset Mapping / Observation: To determine the assets and characteristics of the neighborhood and community, team members explored and observed physical points of interest and cultural and community resources. Each asset was then recorded on a working map. An interactive drawing board was set up at a bus stop along East 7th Street which individuals could use to document assets which they felt were important in the immediate area.

Community Meetings: Each meeting was an opportunity to test multiple engagement methods, share design ideas, and engage in informal conversation with residents. The team used drawing boards with prompts, a physical model, and a panoramic poster with comment areas at each meeting. Some meetings centered around events, such as a pot-luck dinner. Sharpies were always on hand so that residents could document their thoughts directly on the boards.

Rapid Prototyping / Survey: The lemonade stand was a means of gathering feedback on the goals and program types that were synthesized from the team’s initial engagement activities. For the stand, the team distributed physical flyers and a brief survey which residents could fill out and return. The survey was meant to gauge interest and enthusiasm around the studio’s design goals.

Newsletters: Newsletters kept everyone informed on a weekly basis. Some talked about the design concept while others talked about material choice. They were also used to promote engagement events and recruit volunteers. Sometimes people would respond, sometimes not. The most important thing was connecting with residents regularly.
“We envision a creative design solution that inspires the Guadalupe neighborhood and the City of Austin to view existing alleyways as places of environmental and social impact. We see a design that stacks multiple functions in an effort to encourage environmental stewardship, community connections, and neighborhood ownership. We imagine a design that layers systems to expose the scalar impact of the social and environmental structures in Austin. We envision a collaborative design process that results in a built product that is of great value to our stakeholders, fostering the adoption and replication of the Alley Greening Initiative throughout Austin.”

- Green Alley Community Engagement Plan

Students treated each engagement method as a research opportunity and identified common concerns among stakeholders. For residents, primary issues were traffic speeding, parking by downtown visitors, a lack of neighborhood identity and continuity, safety, on-grade edible plants, and minimal community gathering space. For the City of Austin, replicability as a prototype, minimal maintenance, and community ownership was a primary concern. The Guadalupe neighborhood associations were concerned with the structure’s durability, maintenance, and the willingness of the local residents to become project stewards.

As information surfaced, students began merging shared themes to create five distinct design goals that met each stakeholder’s needs:

- Resonate with the Community
- Be Ecologically Holistic
- Establish Identity
- Be Replicable
- Increase Possibility

A project vision and ethics statement was developed. The goals, vision, and ethics statement were continually checked against competing designs to ensure that the built system would provide long-term infrastructure fully embraced by the community. This iterative process, allowed students to provide residents, community members, and city stakeholders a safe, accessible, and creative space that will served as a small-scale model of sustainability within Central Austin.

Design

The City of Austin’s 2013 improvements provided extensive rainwater management but did little to increase biodiversity or decrease a heat island effect in the area. Social infrastructure, such as seating and community gathering space, was also excluded from the city’s improvements. As sustainability is a three-pronged system of environmental, social, and economic qualities, students decided to generate a concept focused on environmental and social stewardship, adding additional green elements to the City’s previous work.

The design concept was developed over a seven-week period. It began with an investigation into proven technologies and practices that demonstrate and promote environmental and social resiliency. Students studied the site and surroundings, researched previous projects, and spoke with locals as they began sketching. As the design served as a prototype of the City of Austin’s Alley Greening Initiative, modular and easily replicable systems and structures were quickly incorporated.

Availability of locally sourced and recycled materials was considered throughout the process in an effort to reduce the project’s carbon footprint. Attention to overall embodied energy resulted in a choice to incorporate living components, such as plants and habitat, into the design and to use many materials already on site. Students considered design elements in unison and worked to materialize them through physical, interconnected systems.
Although our design does not directly address the issue of noise, lighting, and shade, we propose a design that does capture the spirit and build on it. Our design hopes to capture the spirit and build on it. We envision a module that can be repeated throughout the neighborhood and reconnect with the overarching theme of repurposing the yard space. We also hope to empower the residents to take action and address the needs of their home. As a result, we aim to create a system that is not only visually appealing but also functional and engaging.

We envision a module that can be repeated throughout the neighborhood and reconnect with the overarching theme of repurposing the yard space. We also hope to empower the residents to take action and address the needs of their home. As a result, we aim to create a system that is not only visually appealing but also functional and engaging.
The final design incorporated a series of living planter boxes, formalized as large gabion structures filled with river rock, limestone, and soil, set parallel to the alley. Four-foot cedar habitat boxes straddle the gabion structures while two-foot cedar wrappers provide short-term seating options. The living planters and habitat boxes narrow the alley’s perceived width, acting as a traffic calming and safety devise. They also lift edible plants off-grade, providing residents an opportunity to take ownership in the planting and caring of native species.

Four larger seating elements were distributed throughout the alley, two of which are placed at the site’s high point accompanied by a decorative concrete marker to denote a break in the watershed. This area provides residents community gathering space. Two alleyway entry signs were inscribed with the name Three Sisters Alley and installed on the Waller and Lydia Street ends. The name nurtures community ownership and identity, as the three Salas sisters are the longest living residents on the alley.

A string of low maintenance, drought tolerant, and Texas native plantings were placed on grade in the right of way and within the living planter boxes. The design also included a mural done in partnership with two artist residents on the alley. In an effort to merge concepts, the mural illustrates natural processes such as the sunrise, sunset, and moon cycle.

“The Green Alley Demonstration Project is a space for people to interact with their environment, an environment that includes other neighbors, visitors, wildlife and plant life. The design includes two critical components - habitat for wildlife and direct interaction opportunities for people. The two elements come together at the alley edges, where gabion walls that provide shelter for animals and growing medium for plants are paired with wooden elements for humans to touch and sit on. The driving force behind the design is to increase the possibilities that neighbors see for the alley.” - Elizabeth Farrell

“The ultimate design concept seeks to address a new element into the Green Alley Initiative: habitat. Through feedback with community members and City organizations, we developed a design that seeks to promote healthy larger ecological systems in Austin while also enhancing the identity of the alley. We feel that this broader concept is only strengthened by its replication, and therefore, was effective as a vehicle to move the Green Alley Demonstration project from a prototype to a replicated project across Austin.” - Ellen Sampson
“The most important aspect of the build process was that we never stopped designing. We first built a mock-up, to get used to working together with the available tools, which taught us a lot about the capabilities of ourselves and our available materials. The great part about our design on paper was that it allowed us the flexibility to react to new situations as we began building. We also reacted to materials that were widely available and easy to work with, which gave us opportunity to investigate new possibilities.” - Ann Charleston

“The build process for this studio was a way to continue the development of the design by zooming into the project’s scale and exploring how materiality, construction details, and site conditions might benefit the design concept. Our studio was large enough that we were able to split into groups and bring each component of the project to a refined state of design so that it could then be understood and built by others. As we began prototyping these components, we continued to engage residents and the city of Austin concerning their placement, scale, and number in the alley. Eventually, we reached a level of consensus both outside of and within the studio that we split into a group in charge of fabrication on campus and another in charge of installation at the site.” - Danny Montalvo

“Through evaluation and engagement of current conditions and residents we design in hopes to produce something that will provide a new experience for the neighbors and the community.

Each student brings a different skill set which we use to our advantage improving productivity of the overall production, and impact of the final design.” - Justin Bell

“We began building on the deck in studio with tests of the wooded components and gabion basket folding. Adjustments were made accordingly as we became more aware of the conditions on site. We constructed most of the elements in studio before ever testing them on the site. The build process began all at once and lasted two weeks. The first step was preparing the ground - digging holes for the gabions and wooden elements to fit into. Moving rocks was a huge component of the build process. Rocks at grade needed to be removed, soil and rocks dug up, gabions placed, wooden structures placed and foundations poured, rocks stacked in gabion, soil and filter fabric added, rocks replaced around structure edges - repeat. Exact placement of wooden components was determined on site. The final step was adding plants which required another process of digging and rock moving.” - Elizabeth Farrell
The build process was a collaborative effort. We had a team on site installing gabion planters and wood wrappers, a team collecting recycled material and picking up Home Depot supplies, and a team on campus fabricating and building the elements to be installed on site. Everyone fell into his or her respective roles pretty easily, and we never had to worry about anyone dropping the ball. There was probably one intense week of rapid installation and fabrication. The gabion cages needed to be installed first, and then the wood wrappers could be installed around them. This project team dug a lot of holes, and moved a lot of rocks. Final details such as planting, signage and pollinator habitats came in during the final days.

Since I was on the team on campus, I can speak to the build process there. To construct gabion cages, we used welded wire mesh donated to us by Ecology Action. We folded the mesh into a basket and then tack welded the mesh to stay in place. Wooden wrappers are either constructed as 2’ tall wrappers, 2’ tall seats, or 4’ tall pollinator habitats. The wooden wrappers are constructed out of 2”x4” and 1”x6” cedar. The pollinator habitats were made out of recycled materials and were designed to create little holes, nooks and crannies for pollinators. Signage for the alley consists of a 4’ tall wood habitat with a 4’x1’ concrete sign. To signify the high point of the alley, concrete signage was added to identify the Waller Creek and Ladybird Lake Watershed. The watershed signs were installed on the ground, and the channels cast into the concrete allows water to run in the direction of the watersheds.” – April Ng

“The build process began by making prototypes with students learning how to use the materials and tools available. Design ideas sketched in notebooks were still taking place, as well as producing better construction documents and details. The students worked on a variety of tasks and eventually formed small groups for both on-site construction, as well as a prefabrication and “drawing/engagement” team on campus. The last two weeks was principally construction on site, with opportunities for design “touches” until the very last habitat was placed. On the last day cleanup had already taken place and the build process was over. However, several students and residents have been spotted watering plants or fixing something, so the build process just might still be going on...” – Justin Fleury

Once the final design was approved, we moved out of prototyping and into fabricating. The design was modular, so it was relatively easy to produce the large number of elements in a short amount of time. During this process, the group split between people working off site to fabricate elements and people working on site to install them. At some point the groups became too specialized and emotionally invested in their work to switch tasks, so the split remained in place right up until the end of the build. While it initially was strange being segregated, it allowed us to work quickly and to play to our strengths (and weaknesses, as the group off site doing the fabricating referred to ourselves as “Team Skinny”). We came together the last few days to add finishing touches and complete a big clean up. While I would say that the build phase wasn’t the intensive construction experience I was expecting to have when signing up for a “Design/Build” studio, in it were invaluable lessons in timing, teamwork, and tenacity.” - Katie Clark
“Through evaluation and engagement of current conditions and residents we design in hopes to produce something that will provide a new experience for the neighbors and the community.”

-Justin Bell
Community Design Evaluation

Post occupancy evaluation (POE) metrics were developed in conjunction with the Community Design Evaluation seminar to gauge the short and long term success of the Green Alley Demonstration Project. Some criteria are directly observed on the site post completion, others are evaluated through stakeholder surveys. While the framework is meant to provide concrete evaluation measures, flexibility is expected due to the changing nature of local systems.

Trageted Project Outcomes

1. Create a safe and functional program for all alley users

2. Incorporate stakeholder and neighborhood input in an effort to develop an easily maintained and long-lasting infrastructure that is cared for by the community.

3. Use opportunity to promote healthy environmental systems on a variety of scales.

4. Foster a positive ongoing relationship between the University of Texas, City of Austin, and the Guadalupe neighborhood.

5. Complete a successful prototype that promotes sustainability and continued resident interest for the Green Alley program within Austin.

6. Create a replicable prototype that fosters community communication and inspiration.

POE Metric

1. Equal or fewer incidents of crime in Year 1

2. Fewer than five maintenance issues handled by residents in Year 1

3. 75% occupied habitat and living planter boxes in Year 1

4. 80% or higher in stakeholder satisfaction in Year 1

5. At least three requests to the City of Austin for Green Alley projects in Year 2

6. Complete at least two green alley projects in Year 3
Coleman Coker

Coleman Coker, RA, is principal of buildingstudio and the Ruth Carter Stevenson Regents Chair in the Art of Architecture at the University of Texas at Austin. Coker was awarded the Rome Prize from the American Academy in Rome and is a Loeb Fellow in Advanced Environmental Studies at Harvard University Graduate School of Design. He holds a Master of Fine Arts from the Memphis College of Art and received an honorary Doctor of Fine Arts from there.

Coker founded buildingstudio in 1999 after a thirteen-year partnership with Samuel Mockbee as Mockbee/Coker Architects. With the formation of buildingstudio, Coker sought to blur the boundaries between architecture, art, craft and thinking - rather than separate disciplines, each is essential to the larger realm of building. His work has received numerous honors including National AIA Honor awards, Architectural Record, “Record House” awards and P/A Design Awards. Coker has lectured extensively at universities and professional forums and has participated in numerous design juries across the country. Coker’s work has been published and exhibited widely both at home and internationally.

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Project Description

The Austin Mobile Community Design Hub was made possible by City of Austin and a National Endowment for the Arts Grant awarded to UT’s Center for Sustainable Development in 2013. Envisioned as a mobile ‘storefront’ for community engagement, the project addresses issues of civic participation and design engagement in Central Texas’s rapidly growing and diversifying urban climate.

The Austin Mobile Community Design Hub connects community members with an array multi-media and storytelling tools intended to help them understand the impact of different planning and design choices. Educating Austin’s high-tech region about issues of public architecture and design, the Hub layers analogue and digital learning tools within a mobile system. The Hub’s technological interface and analogue curricula are designed for replication, allowing the outreach tool to serve as a model for other organizations and civic groups interested in supporting community exchange and education in service of enhanced livability and sustainability.

The design challenge embedded within this project was for students to develop a mobile device that layered digital and analogue tools in an effort to facilitate city-wide dialogue. Funding supported the collaborative student led design of the Hub’s tactile structure. The technological aspect, A Samsung 55” F9000 Ultra High Definition touchscreen, however, had to be incorporated.

To ensure that the Hub integrated the most innovative, community-appropriate interface for engagement and education, cross-disciplinary students and faculty from at the UTSOA worked with a team of faculty and city leaders, as well as IT consultants, to design and program the Hub for individuals of all abilities.

“The Hub is a mobile sustainable technology demonstration and educational tool, functioning as a shaded, interactive hub for engagement in the community; as a sustainability “genius bar” manned by a student or city employee; and as a stand-alone interactive informational kiosk based in the new Seaholm Power Plant Eco-district when not otherwise engaged.”

- Center for Sustainable Development
The Latin phrase “in situ” translates literally to “in position” and refers to something “situated in an original, natural, or existing place or position”. Our task in this studio requires reconciliation between a design and place which are not fixed in relation to each other. This ex situ scenario will have repercussions for design, fabrication, scale, social influence, etc.

The studio will seek to interact with a range of potential hosts and users, think about the life of the project in all phases of its life, the role of indeterminacy of use in design, and adaptability and durability of the design of a physical artifact that will likely outlast the relevancy of the digital devices and content it hosts.” - Francisco Gomes

The Community Design Hub is a dynamic and transforming structure built upon a mobile base. Unlike a traditional design center anchored in one location, the hub’s structure allows for travel to community meetings and gatherings, farmers markets, street fairs, local libraries, and K-12 schools. Such portability increases direct engagement with a diversity of community members and stakeholders, including those traditionally under-served.

As a mobile tool intended to serve the plurality of Austin residents, designing the Hub for a specific site or community proved impractical. This design consideration prompted students to question the definition of community or communities. After several conversations, the team discovered their guiding definition. Community is a collection of individuals bound by one or more mutually recognized interests and a shared location in geographic space.

At first glance, the team found no contradiction between this definition of community and the citywide scale of analysis. After all, cities are highly specific spatial locations, and urban areas are home to a multitude of recognizable interest groups. Still, cities are complex ecosystems that pose numerous social, economic, and political problems for their residents. Individuals rarely identify with just one interest. As designers of a tool that seeks to build social equity through civic participation in city planning, they had to account for the complex ways an individual with multiple interest group memberships might engage with urban issues.

The studio partnered with the Austin Public Library to establish temporary ‘sites’ for the Hub. As the library provides democratic and accessible space for all communities, housing the Hub at its local branches enables equal access. The device will travel throughout Austin, spending three months at each of Austin’s Public Libraries for a period two years. In 2016, the Hub will be stationed in the newly build Central Library in Austin’s Seaholm Power Plant Eco-District. Given the preservation of Austin’s historic power plant amid the district’s redevelopment and new central library, the team renamed the Hub, The Stacks.
“We envision a high quality, well designed mobile hub for the citizens of Austin, the City of Austin, and the Austin Public Library. The design will incorporate a digital interface comprised of a 55” touch screen with interactive and up-to-date information about the City’s energy use and sustainability initiatives. The software will have the capability to receive feedback and will include a design tool to help users communicate and realize projects for their communities, engaging users in active learning and community building. We believe the hub is a living entity, changing, growing, and adapting to meet the needs of the citizens of Austin. We aim to participate in a studio that encourages a truly collaborative environment of interdisciplinary students. We seek to learn from internal collaboration, and externally deliver results that satisfy the needs of all stakeholders and, more importantly, the end user.”

- The Stacks Community Engagement Plan

Methods of Community Engagement

Community engagement, learning through trial and error, developing project goals, and designing for an open-ended project are challenging endeavors. Yet, confronting these challenges often enables students to devise increasingly equitable methods of engagement and discover opportunities for sustainable collaboration across stakeholders and decision makers.

For the first two and half weeks of studio, students met with a variety of stakeholders in various city agencies. Gaining exposure to the different interests and becoming knowledgeable about the project at hand, the establishment of project-wide goals became their primary pursuit. The studio held a series of brainstorming activities that revealed common themes among stakeholders. Through a process of synthesis, students merged and distilled common themes, resulting in 11 distinct design goals and a defined project challenge:

“How can design and technology achieve equity by engaging communities, enriching the city’s collective identity?”

Students began answering this question through a variety of engagement activities. They conducted issue surveys, community and asset mapping exercises, informal and formal interviews, field observations, case studies, and rapid prototyping. In an effort to reach the plurality of Austin communities, activities took place in different urban areas. Each area was selected through a process of overlaying American Community Survey and U.S. Census data maps to ensure a diversity of socio-economic, ethnic, and age characteristics. The areas engaged included Montopolis; North Central Austin; Rosewood; Downtown; West Lake/Barton Creek; South Central Austin; and South Austin. Each exercise provided the studio a small qualitative and quantitative picture of Austin’s socio-economic diversity, the at-large community for which they must design.
Interviews: Interviews revealed how people viewed their community in conjunction with, or in juxtaposition to the city. They also revealed what kind of information people would like to have at their disposal in order to fix or improve circumstances that were relevant to them.

Rapid Prototyping: *Walk by - Draw out* was a method designed to observe and evaluate public response to unusual interactive props placed in public spaces. Two 24X36 white paper boards were set up in a stand at two separate locations. A question/prompt was written at top of the boards: What would you like to see built here? What is community? Once the boards were installed, the team stepped away from them. Individuals hardly interacted with the media. The team had to step closer and draw on them for people to express curiosity about the installation. When people approached the media, adults would ask us about why the board was there instead of how to interact with it or what they should draw/write. Children were a great asset to drive adults towards the prototype. As a consequence of children approaching the media, guardians would follow them, and as a result, they interact with the board.

Engagement / Issue Surveys: The intent of the survey was to collect information about the engagement of the citizens of Austin in their communities and about their level of knowledge about technology and city services. 104 responses were collected from five locations: 45th and Burnet, Barton Creek Square Mall, Second Street between Lavaca Street and San Antonio Street, Rosewood Park, and the Sunset Valley Farmers Market.

Case Studies: Two case-studies were developed based off community members who have participated in the city-funded Neighborhood Partnering Program. These studies allowed the team to understand what it takes to have an idea, get other people in the community involved, and see it through to fruition.
Weaving the engagement information together allowed common concerns to surface. Traffic, crime, accessibility, affordability, lack of citizen input in services, housing alternatives, infrastructure, public transportation, and walkability were among the most frequently mentioned. Students also found that a majority of people didn’t know who to contact or where to go if they had a solution for their concern. Circling back to their initial design question, “how can design and technology achieve equity by engaging communities, enriching the city’s collective identity?”, students knew that they must address each issue in order for The Stacks to thrive.
Design

The design concept was developed over a seven-week period. Within this time frame, students considered not only the physical aspects of the analogue structure housing the touch screen, but content displayed by the computer and how the audience would interact with it. Although the software was not programmed within studio, students considered the relationship between the computer’s programming and structure to be essential. The collective image of the Hub and its characteristics emerged as community concerns and design goals surfaced. The team then developed a concept founded on three structural criteria: interaction and integration; safety; and sustainability and health.

Interaction and integration centered upon the Hub’s ability to engage with and accommodate multiple users and user groups at any one time, ranging from a small group in direct screen interaction to a much larger audience for presentations. For this reason, assembly and disassembly had to require no more than two individuals. Given its portability, the Hub also had to adhere to a variety of physical site constraints, such as door frame and elevator cabin dimensions.

Safety concerns led the team to focus their design concept on stability. Whether in transit or in a fixed location, the Hub’s assembly had to be completely stable and allow for unexpected external stresses, such as leaning or bumping throughout the tool’s decade[s] long lifespan. The concept also accounted for the 55-inch screen, which could be damaged by rough use. Security of the digital piece proved a paramount consideration as well.

The studio considered regional materials in relation to health and sustainability. Using the Red List from the Living Building Challenge as a guide for selecting safe materials, the team paired non-hazardous products with as many locally sourced construction materials as possible. The design team also observed ADA requirements to allow individuals with disabilities equal access to Hub’s digital and analogue components.

These considerations resulted in two structures that inform and inspire users into thinking about the spaces they live in. The interaction is digital through a 4K, 55” touchscreen run by an extremely powerful computer that currently operates a variety of applications which encourage users to map their spaces online and share their stories.

The Stack’s surfaces are a place for users to reflect and express themselves. The surfaces are a 360° chalkboard with the map of Austin routed into it. Over 10 replaceable question inserts populate the structure’s surface; users are asked questions about their spaces and they respond by writing on the structures themselves. More than 40 question prompts are included in The Stacks, each originating from a public engagement exercise. Rather than targeting a specific issue in the city, the Stacks prompt questions that can help people identify the issues they feel strongly about.
“To build the Stacks, we formed four informal groups and allowed each student to divide his or her energy among the respective groups according to his or her interests. One group focused on the base and the internal structure, another focused on the pull-out cart that contains the touchscreen and CPU, and a fourth attended to the creation of a stewardship manual that will be used by the Library, CSD, and Office of Sustainability as they operate and maintain the Stacks over the coming years. The first three groups, which were responsible for actually building the physical Stacks, each made several models and partial mock-ups to help inform decisions about composition, mechanics, and materials. As there was considerable overlap in the membership of each group, crucial information about design adjustments or construction progress was conveyed informally from one group to another. We met as a studio three times weekly, however, to ensure that all important information could be shared and discussed.

– Cliff Kaplan

“The build process was fairly straightforward because of all of the preparations that had to be done via computer modeling, etc. The bases and tops of both stacks, the shelf in the small stack, all of the maps (both the skin and the individual local maps), and the question plaque outlines were CNC routed over the course of ±49 hours. Each CNC’d piece was then sanded by hand and sealed or primed and painted. The 40 question plaques, 34 of which had words on them were also laser cut along with other signage for the skin of the piece - those took ±38 hours [for both tests and the final product]. We painted 1,420 square feet of maps, question plaques, etc., including intricate hand-work painting words on 34 plaques and one large introduction statement. Steel was cleaned and welded to protect the edges of the completed piece then inset into the CNC’d bases during the stacking process. Those stacked pieces of plywood were bolted together and then ±88 1x4s were pocket screwed into bottom and top of the bases and into the top of the tops. The skin [city map] was then screwed to the 1x4s, the screw holes were patched and then painted over yet again.”

– Jessica Janzen

“I lost all track of time during the build process, but we probably started making the exterior maps 2.5 weeks before the final date. The two stacks were built one at a time in the last week, the small one first, and the big one last because it has a cart that we had to add in at the last minute to enhance mobility of the screen. That was also the most challenging piece to engineer, so it went in as the final piece. We were more or less in fluid teams between those of us doing surface treatments on the maps and structural pieces, designing and building the structural frame itself, engineering the cart, and writing instructions. All of this was ongoing at pretty much the same time and about half of us worked on all four things.”

– Anonymous
“Our project required a great deal of team effort in non-traditional design work.”

-Jose Latorre
“We set out our goal to address the lack of involvement of typically neglected communities in the design and planning of our city. We understood, through our research and fieldwork, that one project could not address this complex issue: tackling the involvement of groups in community design and planning from participation to action. Our project targets the initial portion of a, in our vision, long-term effort. The Stacks are an installation to encourage users to interact and record their concerns and aspirations about their built environment. These interactions will need to be collected and analyzed by stakeholders with interests in the inclusion of citizenship in the planning processes. The build project was intense and quick. We maximized efficiency by relying on digital fabrication. We routed the chalkboard panels using the CNC machine, and used laser cutter to create other pieces of the installation. Once we had prefabricated the pieces needed we resumed the assembling of The Stacks. In 5 days, the assembly process was completed.”

– Jose Latorre

“All semester, we kept talking about how we can’t wait to build until the last two weeks, and that’s what ended up happening! This was by no means because of our lack of interest or dedication, but the complexity of the problem we were given. We started working in two groups, the analogue tools/interface team and the structure/object team. As we started building, this naturally led to three teams, the structure/object team kept their focus on the structure and details and the analogue tools/interface team split into two groups: one working on the production of the maps and the other focusing on digital tools and stewardship plan.

This is not to say that the teams were super rigid, people were free to move between teams. However, it seems like there most of us had specific interest and skills that worked well with one of the three production teams. The maps team carefully set up CNC files to route out the question prompts and the map that wraps the structure. They then did a lot of finishing work with maps including sanding and painting many coats of chalkboard paint. The digital tools and stewardship plan team were naturally less involved in the physical build process, but they were always there to lend extra hands to the other teams as needed. If I had to simply the build process, I would say there were four parts:

1] base/top: these were CNC routed out of plywood with grooves, notches, and nooks cut out for casters, vertical slats, steel corner bumpers, extra weight, and the mobile TV cart
2] vertical slats: there was also a lot of prep work to cut these down to the right height and put two layers of protective polyurethane coating on them. Also, many of the vertical slats had special notches to account for doors, lighting, and the giant touchscreen.
3] steel corner bumpers: these had to very specific shapes that fit in tightly to the base and were carefully cut to size, holes drilled, and welded prior to installation
4] the TV cart: we had done a mock-up of this to test out how things would hinge/pivot, how the screen will mount, how tall things are (for ADA considerations). All the pieces that make up the cart were cut out, polyurethaned, holes for the hinging action drilled out, and finally assembled.”

– Ko Kuwabara

“Basically we want the structures of the Stacks could be as simple as possible, and also precisely. We used CNC router to cut the base of the Stacks to make sure the lowest inaccuracies, and used wooden slabs to support the top ring as ribs, and covered the structure by chalk board. For details, we use metal slabs to protect the corners and joints from collisions. The most difficult part is the combination of the mobile cart and the Stacks, we need to fix many tiny errors caused by materials to combine them, but fortunately, the final result is great. In the unveiling day, I saw a young girl draw a bird and point out her home on the map of the Stacks, I think we already achieve the first step of our goal.”

– Ang-Ruei Shih
Community Design Evaluation

The process of developing rigorous and practical post occupancy evaluation (POE) metrics for the Stacks is ongoing. Metrics will align with the goals outlined in the initial research question, vision statement, and outcome framework, and will be comprised of both benchmarks and psychometrics. Benchmarks will evaluate the Stack’s success in reaching an appropriately diverse citizenry. They will reveal how and where we are able to engage Austinites.

Psychometrics will evaluate the quality of Stacks interactions, providing insight into whether the individuals are able to identify, analyze, and act upon pressing issues in the community. More specifically, psychometric evaluations will measure whether Stacks interactions augment users’ observational acuity; spatial reasoning skills; communication skills; and analytical skills.

The team faces particular challenges in developing metrics to evaluate the following:

1. The success of a project that essentially strives to democratize design.

2. Providing content without prescribing content.

3. Presenting a vision for the future.

4. Facilitating change for a city, one citizen at a time.

5. Enabling civic change through cognitive change.

6. Measuring physical and analogue interaction.

The design studio created a Stacks Stewardship Manual that provides instruction for how to transport and install the structure. It also includes directions for setting up and using Stacks and short-term and long-term maintenance.

The manual includes an overview of the device’s technology package, including reference information for the Stacks Tumblr page, Twitter, Instragram, and Crowdmap. By incorporating these social media outlets, the team believes users will be able to actively engage the tool from a distance. A copy of the Stacks Stewardship manual can be found on the Center for Sustainable Development’s website.
The Map of The Stacks

**A** 55" Touchscreen
32-touchpoint tactile screen packed with interactive features - refer to “Using The Stacks” section for details of use.

**B** Trackpad
Alternative access to the screen content - use it like you would use a mouse.

**C** Project Info
Brief description of the installation.

**D** MiniMaps
Removable panels that will change when The Stacks switch location - refer to...

**E** Cabinet
Remove minimap to access cabinet for chalk, question placards, and other minimap storage.

**F** Question Placards
11 on display in The Stacks. Additional 29 stored in the cabinet. Some plaquards are empty so that librarians write their own questions.

**G** Map Blackboard
A map of Austin on which users can draw. Refer to “Using The Stacks” section for details of use.

**H** Chalk Pockets
Find chalk stored in this specific spot.

**I** Touchscreen Cart
Access CPU and transform the touchscreen into table mode - refer to “Using The Stacks” section for details.

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The Stacks Austin Stewardship Manual
Cisco Gomes founded his award-winning practice, Gomes+Staub Architects, with partner Dabney Staub in 1999. The work of Gomes+Staub has been published nationally and internationally, notably in 1000x Architecture of the Americas (Verlaghaus Braun, 2008). The firm’s work has been presented in a number of lectures and exhibitions, including the Duke University Museum of Art and the Audi International exhibition in Hanover, Germany. In 2007, Cisco sold his five-person practice in North Carolina to join the University of Texas at Austin School of Architecture faculty where he teaches design and construction.

Cisco has actively practiced as a registered architect since 1996 and has held licenses in the states of Texas, North Carolina, Connecticut, and Virginia. He is a member of the American Institute of Architects, a LEED accredited professional, a CSI Certified Construction Specifier, and a licensed commercial building contractor in the State of North Carolina. He holds a Bachelor of Science in Architecture from the University of Virginia and a Master of Architecture from Harvard’s Graduate School of Design and has served as a juror for numerous design award programs at the regional, state, and local levels.

Since moving to Austin, Cisco has been recognized for his teaching with the School of Architecture Outstanding Studio Teacher Award (2009), the Texas Exes Teaching Award (2011), membership in the UT Society for Teaching Excellence (2011), and the UT Board of Regents’ Outstanding Teaching Award (2012).

Teaching Assistant

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Ethan Menebroker
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Architecture
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Architecture
Public Affairs, Planning
Architecture
Sustainable Design, Planning
Architecture
Architecture
Urban Studies, Architecture
Architecture
Law, Planning
SEED EVALUATION TOOL
In Dr. Steven Moore’s seminar, Community Design Evaluation, students were asked to contribute to the progress and longevity of the Social Economic and Environmental Design (SEED) certification tool. Developed in 2005, SEED emphasizes social equity, grass roots community action, and user flexibility in evaluating the social, economic, and environmental impact of a design project. SEED was founded upon principles of Public Interest Design and upholds the belief that design, for good and bad, plays a vital role in community and individual issues. As a vehicle for achieving change in design culture, SEED’s mission is to “advance the right of every person to live in a socially, economically and environmentally healthy community.” The organization maintains the following principles:

SEED Principle 1: Advocate with those who have a limited voice in public life.
SEED Principle 2: Build structures for inclusion that engage stakeholders and allow communities to make decisions.
SEED Principle 3: Promote social equality through discourse that reflects a range of values and social identities.
SEED Principle 4: Generate ideas that grow from place and build local capacity.
SEED Principle 5: Design to help conserve resources and minimize waste.

The SEED certification process is organized around four critical questions. What does success look like? Who is involved in the project? How do you measure success? Did we do what we set out to do? Designers are asked to be clear in their project intentions and provide evidence of positive social change. In return, SEED provides a road map that enables designers to better track their project and achieve pre-determined goals. The process aims to inspire design decisions that come from the ground up and increase commitment to social equity.

The seminar examined and evaluated the SEED tool throughout first five weeks of the PID program. Three core recommendations were then shared with Brian Bell, founder and executive director of SEED, in an effort to further refine the design and evaluation tool’s effectiveness. Together, these recommendations emphasize the relationship of the design team, SEED, and the public through the certification process.

Recommendation 1: Make Application Incremental

Phase 1, Application: For the most part, students left the content of the SEED application the same, which serves as a threshold for a projects initial consideration. The two primary changes made include a statement of Community Engagement Intent that design teams must outline in their application, as well as an outline of the major phases of their project, which are called User Defined Phases. Community Engagement Intentions are necessary in order to set up the engagement process and to understand what each team hopes to accomplish by engaging the community. The User Defined Phases set the point where feedback loops take place between SEED and the design team. Like the current SEED
evaluator program, design teams are encouraged to submit their application during the planning or design phases so that the SEED evaluators can have the most impact.

Phase 2, Design Interface/APP: Once the project application is determined to be eligible for SEED certification, the design team begins to utilize an interface/APP that allows them to communicate with both the public and SEED. It functions as a tool for increasing project participation and accessibility, as well as a tool to evaluate the engagement process. The interface allows SEED to assure that communities are sufficiently involved in all their certified projects.

In each phase of the application, the design team will submit documentation to SEED categorized by four feedback loops: Intentions, Metrics, Participation and Evaluation. SEED evaluates the submitted documentation and responds to the design team at the relevant user-defined phase or feedback loop. The APP/interface allows the design team to quickly compile documentation on an engagement activity and submit it to SEED for feedback. A quick response from SEED is essential so that the design team is not delayed.

The design team utilizes the interface to create a public web page that serves as a tool to make project information available in real-time, including important dates for meetings, workshops, and community feedback. It can be imagined as a newsletter that is generated to update the community on the project while giving them a forum to express their opinion. The interface is considered a feedback loop between the design team and the community, serving to strengthen the overall engagement process.

Phase 3, Certification and Impact: After the project has been completed and gone through Intentions, Metrics, Participation and Evaluation feedback loops with SEED and the public, it is determined for provisional certification by SEED. Provisional certification serves as recognition for projects that have successfully completed the phased feedback system. Projects given provisional certification enter the SEED catalog, and the public interface becomes a website established by and for the community. However, for full SEED certification, the project must be evaluated during its inhabitation phase or phases. This assures that the project was well received socially and ecologically, and was proven to increase social equity.

Recommendation 2: Utilize Application to Document and Organize Community Engagement

The key incentive of proposed process is the ability to utilize the application for both engagement and evaluation in real-time. Throughout the design process, the Design Team can use the APP to document and organize methods of engagement. At each phase, the APP prompts the design team to document four related types of information: intent, metrics, participation and evaluation. This documentation is submitted in full to SEED for review, and a summary of the information is posted to the public interface for the community to comment.

The APP prompts the design team to reference information submitted in the previous phase, as well as any input previously received from SEED and the community. The design team lists the intent, metrics, participation and evaluation that occurred in each phase. The intent is the specific goals for this phase, which may be the same or revised from goals from the previous phase, or new goals specific to this phase only. Per the current SEED application, each goal should be categorized as social, environmental or economic, or some combination of the three.

A participation category lists and explains the variety of ways the design team interacted with the community. For each activity, the design team should describe who attended and how much influence each person had on the decision.
**Process Overview**

**Small Project**
- Chicken Coop
- Green Alley Project

**Large Project**
- Campus Master Plan
- Disaster Relief

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**Intentions**
- State Community Engagement Intentions
- Define Project Phases

**Process**
- SEED Application
- Design Interface
  - User Defined Phases
    - Plan
    - Design
    - Implementation
- Provisional Certification
- SEED Catalogue
  - Intentions
  - Process
  - Impact

**Impact**
- Community Website
  - Documentation
  - Evaluation Over Time
  - POE (Performance of Expectations)
  - Business Model
  - Inhabit

- Public Interface
  - Engagement Tool
    - Calendar
    - Documentation
    - Real Time Feedback

---

**Process Overview**

**Small Project**
- Chicken Coop
- Green Alley Project

**Large Project**
- Campus Master Plan
- Disaster Relief

---

**Feedback and Evaluation**
- Example Activities
  - Vision, Goals, Intentions
  - Problem Statement
  - Measurements of Success
  - Identify Stakeholders
  - Needs Assessment
  - Precedent Research

- Design Proposals/Critiques
- Prototype Development
- Revision
- Eval. Community Involvement
- Interpret Community Input

- Construction
- Commission
- Handover
- Maintenance
- Documentation
- Case Study Research

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**Provisional Certification**

**Inhabit**
making process, whether major or minor. To fill out this section, the design team can draw from the information they have been continually uploading and organizing within the APP. The last section, evaluation of community engagement, allows the design team list the lessons learned and explain how successful they think they were in addressing the aforementioned goals and benchmarks.

**Recommendation 3: Expand Case Studies through a SEED Catalogue**

A summary of project information is posted to a public interface where the community is given the opportunity to respond and comment. Submitting this information at each phase, not only keeps the design team on track, but also makes the information more digestible for reviewers and allows them to give more directed feedback that the design team can carry through the certification process. After each phase submission, SEED quickly responds with both quantitative and qualitative feedback in the form of short narrative and easily readable infographics.

Triangles are used illustrate project development. The first triangle reflects the values stated in the design team’s intentions - are they leaning more social, economic or environmental? The second triangle shows how intentions in each of three categories have developed and changed at each phase of the design process. For example, the team may have had less clear and fewer social intentions in the first phase, but then developed them to address social issues, in the second phase. The third triangle explains the overall strength of the design team’s execution in each of the three categories. These triangles are revised at each phase so the design team, reviewers, and the public can easily look back and see what has changed and stayed the same throughout the design process.

The last phase before occupancy is the implementation phase. In this phase, in addition to the narrative and triangles, SEED feedback will include approval or disapproval for provisional SEED certification. Project information will appear as a case study in the SEED catalogue and made available for the public as an educational tool.

During occupancy, the final inhabitation phase is executed. In this phase, the design team’s documentation on participation must include an occupant survey that collects both quantitative and qualitative feedback from those using the building. SEED feedback includes either approval or disapproval for final SEED certification. The project is updated as a case study on the website, with the final SEED feedback triangles giving an overall picture of the projects intentions, process and impact. At this point the community takes full ownership of the public interface.

The final outcome of this process is the creation of a SEED catalogue that allows the design process for each project to be made public. Each case study will include:

- Documentation of the collaborative process
- How goals were defined and refined
- Examples of engagement strategies
- Evaluation of the overall process

From this database of SEED case studies, interested parties learn from the successes, failures, and experiences of past design teams.
Conclusion

A revised website will act as the interface for the proposed processes. It will also serve as an APP, allowing the SEED community and the public project information in real-time. While thinking about the APP and the enhancements proposed to the application process and catalog, students considered how the digital interface would fit into an expanded the SEED business model.

SEED is a powerful program to certify a careful process where promises made by designers are kept. Municipalities, NGO’s, advocacy groups, non-profits, and corporations will particularly benefit from SEED’s online presence and APP/interface. A community group or small municipality, for example, could be interested in publishing their community engagement methods online, but not have the financial resources to build an appropriate website. The SEED APP can provide them the required online presence and also increase their marketing ability.

There are several incentives in the expansion and refinement of the SEED tool. It will add market value and brand identity to public projects, reduce liability for public projects by certifying process and intentions, and allow organizations of all sizes to establish an online presence and magnify their brand. The SEED program is also a cutting edge educational tool. Incremental feedback loops educate both the design team and public throughout the process, allowing for measurable project outcomes based on community engagement and social equity.

The proposed APP will propel SEED to become a leader in many platforms for community engagement. The expanded and refined process will become an accessible, robust tool to empower designers and communities. The SEED network will also grow and continue to add to the catalog. The material gathered in the SEED catalog will provide opportunity for online and print publishing in the future, as well as add to overall public awareness and education for community engagement.

By incorporating these recommendations into their present business model, SEED will achieve positive outcomes centered on increasing social, economic, and environmental sustainability within the building culture. By strengthening SEED’s brand power, making it more accessible, the organization will expand its reach and recognition. This will lead to increased buy-in from a diverse market. Expanding upon the existing group of case studies by developing a SEED catalogue is key. Using this process, SEED can facilitate a new of dialogue amongst communities, designers, and evaluators of where SEED is an integral part.
Apply
Phase 1
Phase 2
Phase 3
SOCIAL
ECOMONIC
ENVIRONMENTAL
FEEDBACK LOOP 1:
INITIAL APP.
GRAPHIC PHASE DEVELOPMENT
At each phase, the feedback triangle from SEED expands to reflect the project’s development and growth

SEED FEEDBACK OVERVIEW

FEEDBACK LOOP 1: INITIAL APP.

FEEDBACK LOOP 2: PLANNING

FEEDBACK LOOP 3: DESIGN

FEEDBACK LOOP 4: INHABITATION
My Project:

**SEED Home**

**SEED Catalog**

**My Projects**

**Project Details:**

**Location:** ____________________

**Status:** ...

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**Overview**

**Background**

**Plan Phase 1**

**+**

**FEEDBACK**

---

**Socially Focused**

**Scale**

**ENVIRONMENTAL:**

**ECONOMIC:**

**SOCIAL:**

---

**Upcoming Events:**

---

**Featured Projects:**

**PROJECT NAME**
Location
Scale
Economically Focused
+Environmentally Focused
Keywords

---

**Featured Projects:**

**PROJECT NAME**
Location
Scale
Economically Focused
+Environmentally Focused
Keywords

---

**Featured Projects:**

**PROJECT NAME**
Location
Scale
Economically Focused
+Environmentally Focused
Keywords

---

**Featured Projects:**

**PROJECT NAME**
Location
Scale
Economically Focused
+Environmentally Focused
Keywords
Steven Moore

Steven A. Moore teaches design and courses related to the philosophy, history, and application of sustainable technology. In 1999 Moore was appointed Director of the Sustainable Design Program, in 2002 he was co-founder of the University of Texas Center for Sustainable Development, and in 2006 he became Bartlett Cocke Professor of Architecture and Planning. Moore received his undergraduate degree in architecture from Syracuse University, his Ph.D. from Texas A&M University, and is a Loeb Fellow of the Harvard Graduate School of Design. He has practiced as the design principal of Moore/Weinrich Architects in Maine and has received numerous regional and national awards for design distinction.

Moore has recently published articles in Center, the Journal of Architectural Education (JAE), and the Journal of Architecture (JOA), Urban Studies, and Science Studies. He has published, co-authored, or edited five books related to the social construction of sustainable technologies, buildings, and cities. With support from the National Science Foundation (NSF) he has just released a new book, Questioning Architectural Judgment: The Problem with Codes in the United States.
Barbara Brown Wilson

Barbara Brown Wilson is an Assistant Professor of Community and Regional Planning and Sustainable Development in the School of Architecture at UT Austin. She is also Co-Director of the UT Center for Sustainable Development. Brown Wilson holds a PhD in community and regional planning and a masters in architectural history, and this urban historical perspective informs both her teaching and her research. She teaches courses on urban planning history and theory, the ethics of sustainable development, sustainable community design and development, methods of community engagement, and urban social movements. She co-authored a book with Dr. Steven Moore entitled Questioning Architectural Judgment: The Problem of Codes in the United States (Routledge 2013) that considers the social history of building regulation and its current applications. Her research often draws from history, but is also change-oriented in terms of its focus on possibilities for engaged and integrated sustainable development. She’s currently working with recovery and housing activists on the Gulf Coast; developing tools for public engagement around complex sustainability problems; and identifying best practices for engagement in public interest design.

In addition to her teaching and research, Dr. Brown Wilson is also active in service of her academic, professional, and local community. As co-director of the CSD, Dr. Brown Wilson oversees the Center’s research, educational, and community outreach programs, including a longstanding community effort: the Central Texas Sustainability Indicators Project. She founded the School’s Public Interest Design summer program, which brings in top students from around the country to work with community partners on complex urban issues using design thinking, as well as the Design Futures Student Leadership Forum. Her background in organizational development and facilitation informs her work overseeing the many projects underway at the CSD. She was a co-founder of the Austin Community Design and Development Center (ACDDC), a nonprofit design center that provides high quality green design and planning services to lower income households and the organizations that serve them, and continues to serve on the board of directors for ACDDC and the Texas Low Income Housing Information Service.

Teaching Assistant

Nicole Joslin
CONCLUSION
The 2014 Public Interest design program concluded with community celebrations for each project. The Stack’s celebration was held at Carver Public Library. The Green Alley Demonstration Project’s celebration was held on site. Each event brought together community members, students, UT faculty, City of Austin employees, and local organizations to celebrate and reflect upon the design build approach to community building.

UT’s Public Interest Design program has wide-reaching benefits not only for each community involved, but also in helping to define the role of education in furthering the PID movement. Integrating local and professional expertise, the PID program drew from architecture, landscape architecture, planning, and sustainable design to materialize projects that intersect design and service, revealing the public nature of architecture.
RESOURCES & BIBLIOGRAPHY
Design/Build Practicum Resources

Guadalupe Neighborhood Development Corporation:
http://www.guadalupendc.org/

Austin Community Design and Development Center:
http://www.acddc.org/

The Thinkery:
https://thinkeryaustin.org/

Austin Public Library:
http://library.austintexas.gov/

Center 61:
http://www.center61.com/

City of Austin, Office of Sustainability:
http://austintexas.gov/department/sustainability

City of Austin Department of Public Works:
http://austintexas.gov/department/public-works

City of Austin, Neighborhood Partnering Program:
http://austintexas.gov/neighborhoodpartnering

CodeNext:
http://www.austintexas.gov/codenext

National Wildlife Federation:
http://www.nwf.org/

City of Austin Watershed Protection Department:
http://austintexas.gov/department/watershed-protection/programs

Ecology Action:
http://www.ecology-action.org/

Wildlife Austin:
http://austintexas.gov/department/wildlife-austin

Texas Parks and Wildlife Department: Nest boxes and Birdhouses:
http://www.tpwd.state.tx.us/huntwild/wild/birding/birdhouses/

Native Texas Nursery:
http://www.nativetx.com/

Texas Conservation Corps:
http://www.americanyouthworks.org/green-jobs-programs/texasconservationcorps

IDEO:
http://www.ideo.com/

Enterprise Community Partners:
http://www.enterprisecommunity.com/

Urban Land Institute:
http://uli.org/

City of Austin Watershed Protection Department: Environmental Integrity Index:
http://austintexas.gov/department/environmental-integrity-index

City of Austin Green Alley Initiative:
https://www.austintexas.gov/department/green-alley-initiative

City of Austin Watershed Protection Department: Watershed Map:
http://cherrywood.org/archive/map/42-Austin_watersheds.pdf

PublicInterestDesign: Publicinterestdesign.org

Lifeworks: http://www.lifeworksaustin.org/

Public Architecture: http://www.publicarchitecture.org/

Center for Urban Pedagogy: http://welcometocup.org/

Mayor’s Institute on City Design: http://www.micd.org/

Design Corps: https://designcorps.org/

SEED Certification Tool: http://www.seed-network.org/

Living Building Challenge: http://living-future.org/lbc

Sustainable Sites Initiative: http://www.sustainablesites.org/

Texas Bluebird Society: http://texasbluebirdsociety.org/index.php


Bat Conservation International: http://www.batcon.org

Lady Bird Johnson Wildflower Center, The University of Texas at Austin: Drought Resource Center: http://www.wildflower.org/drought-resource-center/


The Alley Flat Initiative: http://www.thealleyflatinitiative.org/

Seminar Bibliography

General


BRI (2001/2). “Special Issue: Post-occupancy Evaluation.” In, Building Research and Information, 29 (s): 89-174.

Usable Buildings http://www.usablebuildings.co.uk/.

Building Assessment Systems


Moore, Steven A.; Elizabeth Walsh, and Sam Dodd. 2012. “Beyond LEED.” In, Platform.


Other Building Assessment Systems

BREAM (BRE Global, www.bream.org)
CASBEE (Japan Sustainable Building Consortium (www.ibec.or.jp/CASBEE/english)
SBAT (Council for Scientific and Industrial Research, SBAT Tool (http://www.csir.co.za/Built_environment/Architectural_sciences/sbat.html)

Other Frameworks

One Planet Living Framework (http://www.oneplanetliving.org).
Biomimicry Laws of Nature (http://www.biomimicryguild.com/).

Post-occupancy Evaluation


**Civic Environmentalism**


Hempel, Lamont C. 1999. “Conceptual and Analytical Challenges in Building Sustainable Communities.” In Toward Sustainable Communities: Transitions and Transformations in Environmental Policy, edited by Daniel Mazmanian


**Expert /Local Knowledge**


**Public Interest Design**


**Social Learning**


