Professional Treasures

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INTRODUCTION

In spring 2011 third year students from two courses, an Intermediate Architecture Studio [342 Studio], and a Professional Practice Elective Course called *Professional Treasures* [490 Practice] learned about the practice "secrets" of two non-faculty architects. The courses were structured to prepare undergraduate students for the subsequent Practicum Studio as well as the culminating Doctor of Architecture research year. The Interaction between students, the architects and their professional colleagues, including architects from their firms, community leaders, and client organizations was made possible in part by an NCARB Grant[1]. NCARB Grants are designed to help schools implement new programs that merge practice and education in a studio or classroom setting.

The primary NCARB Grant objective was to support "architecture schools' efforts to create academic initiatives that will have a long-term, ongoing impact on architecture students, faculty, and the curriculum, and raise awareness about issues central to practice." To achieve NCARB goals, the practicing architects collaborated with the instructor/Project Director to expose students to their unique practice skills. The results will be published in a report titled "Professional Treasures: Design as a vehicle for sustaining historic and cultural identity." The publication is in process. This paper is a preview of the NCARB Grant findings.

ORGANIZATION

The Arch 342 Studio consisting of thirteen students interacted with twenty four students, enrolled in the Arch 490 Practice course. The sixteen week semester was divided into two eight week parts. In collaboration with the faculty project director, Lorraine Minatoishi-Palumbo[2] taught Part I guiding students to conduct a Historic Preservation inventory process as a basis for Master planning a historic site for reuse. Robert Iopa and Mark Higa[3] from WCIT[4] taught Part II which focused on culture and place based conceptual sustainable planning and building design Processes.

Part IA: HISTORIC RESOURCES INVENTORY PROCESS: UHM BUILDING SURVEY

342 Studio and 490 Practice students collaborated on two projects - University of Hawai'i at Mānoa Campus (UHM) Building Survey and The Kunia Village Master Plan and Store Building Design. The UHM Building Survey project was an introductory exercise to acquaint students with basic field observation and measurement skills, documentation techniques, and analysis and report writing. They worked in teams comprised of students from both classes to complete analyses of selected UHM Historic Buildings. The 342 students were charged with the field measurement and drawings and the 490 students were responsible for data organization and writing of the team analysis. All were required to visit the site to understand the context and contribute to the summary report of the work. The learning about historic preservation field measurement and site analysis techniques was quite new to the students. They absorbed the basic historic preservation vocabulary and many wrote proficient analyses of their field measurements and site visit findings. Lorraine Minatoishi-Palumbo commented:

"I was pleasantly surprised to see the efforts that were made by the students at the start of the session with the "getting your feet wet" exercise of filling out two page building inventory sheets and simple sketches for buildings on campus. For many of these students, it was the first time they had dissected an existing building and analyzed its characteristics for what it is. We stressed the importance of appreciating what others had built before them, and the fact that these buildings have been standing for 80 years or so is s testament to their value in many cases."[5]

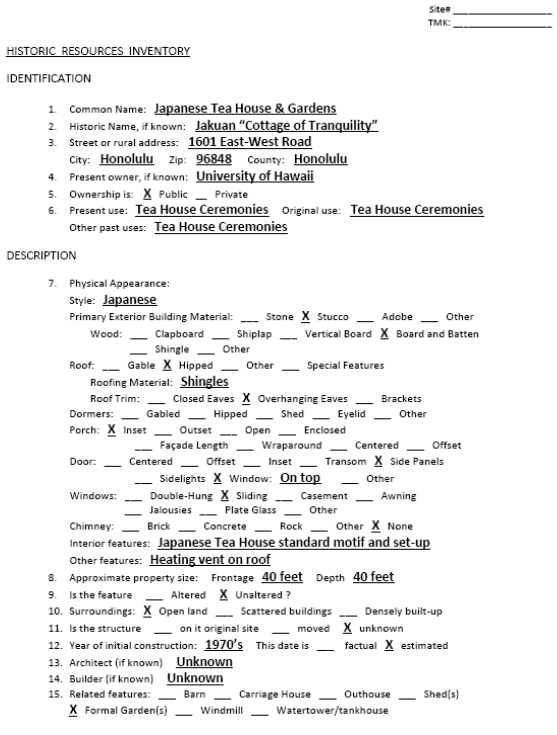
UH Manoa Campus Building Analysis

342 Studio	342 and 490 Site Visit	490 Practice
Photograph Building and Context		Photograph Building, Context
Measure Buildings		Complete Simple Inventory Form
Complete Line Drawings with dimensions and notes		Draft Report
	Analyze	
Complete Graphic Report, notes, photos, sketches		Complete Historic American Building Survey (HABS) Form
	Compile Team Report	

Figure 1. 342 Studio and 490 Practice Course Activities for UHM Building Analysis Project

Figure 2. 342 Studio: UHM Building Analysis – Tea House

"The teacher divulged a crucial Aha!, moment . . . that the interior measurements, as well as doors and windows were based on the tatami mat. This allowed me to roughly measure the interior rooms and spaces by the grid pattern on the floor. This new information allowed me to get a better feel of the spaces, building and Japanese architecture."[6]



Site# _____
TMK: _____

HISTORIC RESOURCES INVENTORY

IDENTIFICATION

1. Common Name: Japanese Tea House & Gardens
2. Historic Name, if known: Jakuan "Cottage of Tranquility"
3. Street or rural address: 1601 East-West Road
   City: Honolulu Zip: 96848 County: Honolulu
4. Present owner, if known: University of Hawaii
5. Ownership is: X Public __ Private
6. Present use: Tea House Ceremonies Original use: Tea House Ceremonies
   Other past uses: Tea House Ceremonies

DESCRIPTION

7. Physical Appearance:
   Style: Japanese
   Primary Exterior Building Material: ___ Stone X Stucco ___ Adobe ___ Other
   Wood: ___ Clapboard ___ Shiplap ___ Vertical Board X Board and Batten
   ___ Shingle ___ Other
   Roof: ___ Gable X Hipped ___ Other ___ Special Features
   Roofing Material: Shingles
   Roof Trim: ___ Closed Eaves X Overhanging Eaves ___ Brackets
   Dormers: ___ Gabled ___ Hipped ___ Shed ___ Eyelid ___ Other
   Porch: X Inset ___ Outset ___ Open ___ Enclosed
   ___ Façade Length ___ Wraparound ___ Centered ___ Offset
   Door: ___ Centered ___ Offset ___ Inset ___ Transom X Side Panels
   ___ Sidelights X Window: On top ___ Other
   Windows: ___ Double-Hung X Sliding ___ Casement ___ Awning
   ___ Jalousies ___ Plate Glass ___ Other
   Chimney: ___ Brick ___ Concrete ___ Rock ___ Other X None
   Interior features: Japanese Tea House standard motif and set-up
   Other features: Heating vent on roof
8. Approximate property size: Frontage 40 feet Depth 40 feet
9. Is the feature ___ Altered X Unaltered ?
10. Surroundings: X Open land ___ Scattered buildings ___ Densely built-up
11. Is the structure ___ on it original site ___ moved X unknown
12. Year of initial construction: 1970's This date is ___ factual X estimated
13. Architect (if known) Unknown
14. Builder (if known) Unknown
15. Related features: ___ Barn ___ Carriage House ___ Outhouse ___ Shed(s)
    X Formal Garden(s) ___ Windmill ___ Watertower/tankhouse

Figure 3. 490 Practice Historic Resources Inventory

PART IB: THE KUNIA VILLAGE MASTER PLAN AND STORE BUILDING DESIGN.

Kunia Village was established in 1928 as a pineapple plantation camp for workers. In 2008 "the James Campbell Co., which owns the 119-acre property in Kunia, agreed to transfer ownership to the non-profit Hawaii Agriculture Research Center (HARC) for $1. This deal would ensure that the homes will remain affordable and preserve the historic plantation village lifestyle, a piece of Hawaii's history that has been declining as development grows."[7] Lorraine Minatoishi-Palumbo made possible the opportunity to help HARC with their long range planning process by developing design ideas for a master plan and country store rehabilitation.

The Kunia Project was larger in scope and schedule than the UHM Historic Buildings Analysis exercise. Different student teams from both classes were formed. 342 Studio teams completed the field measurements, site documentation and analysis then developed a site master plan. Finally the students completed individual programs for adaptive reuse designs for the Village Country Store based on their team's master plan and the reports completed by the Arch 490 class.

The 490 Practice students worked in teams and were responsible for the Site and Existing Country Store Building Conditions Analysis and Historic Structures Analysis Report which were summarized and incorporated into the design program. Each team was tasked with a part of the Store Building and was required to conduct a critical analysis of their part in detail, then present repair solutions based on the Department of Interior Rehabilitation Standards. For example, one team was assigned the floor plan and interior elevations, another recorded and analyzed the North and East elevations.

> "I was impressed by the high level of product that was presented by most of the groups- good graphics and good writing. The site design section was a pleasure to see. The students were so creative and fun. They were tasked with determining an intent and based on that intent, formulate their design concepts. Concepts of "healthy lifestyle" where a team designed jogging paths and rest stations along existing roads, with the store functioning as a healthy place to hang out and drink smoothies was one of my favorites. There was also a "history lives" concept that used the main store as a museum and trolley station where small tours would take visitors through the plantation camp on an open-air trolley.
>
> The individual store design projects were fun, too. Based on the groups' team concept, each individual team member would design the store to function as a component of the site design. The drawings were nicely done- some were hand drawn which I was encouraging students to do. And the use of scale, color, and drawings techniques was integrated well- especially for third year students."[8]

PART I STUDENT LEARNING

Interaction with practicing architects as instructors brought the reality of architecture to the studio and classroom. Students responded positively to Lorraine Minatoishi-Palumbo who shared her knowledge of historic preservation techniques without reservation. Preservation is relatively new in the U.S. Students learned about three types of building inventory processes:

KUNIA VILLAGE MASTER PLAN AND STORE DESIGN		
342 Studio	342 and 490	490 Practice
In class concurrent with 490	Client Interview	In class concurrent with Arch 342
Photograph Site, Buildings, Context Measure Store Buiding	Site Visit, Interviews	Document Site, Buildings, Context Interview client, tenants
Develop Master Plan and Village Store Building Program	Analyze, Design	Compile data. Draft site analysis and Historic Structures Analysis Report
Finalize Master Plan and Village Store Building Design	Finalize	Site Analysis and Historic Structures Analysis Report

Figure 4. 342 Studio and 490 Practice Course Activities for Kunia Village Master Plan and Store Design Project

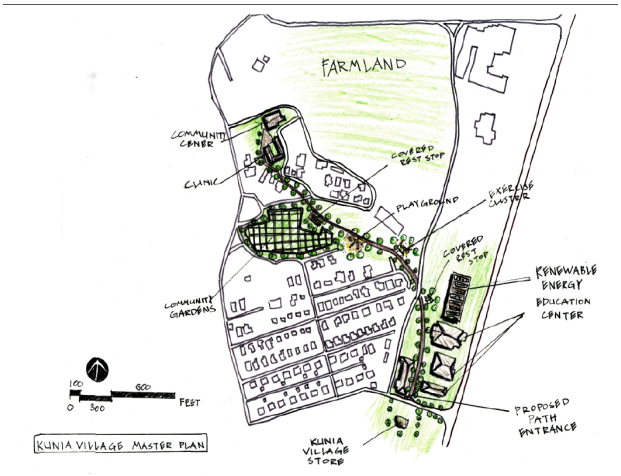


Figure 5. 342 Studio: Kunia Village Master Plan

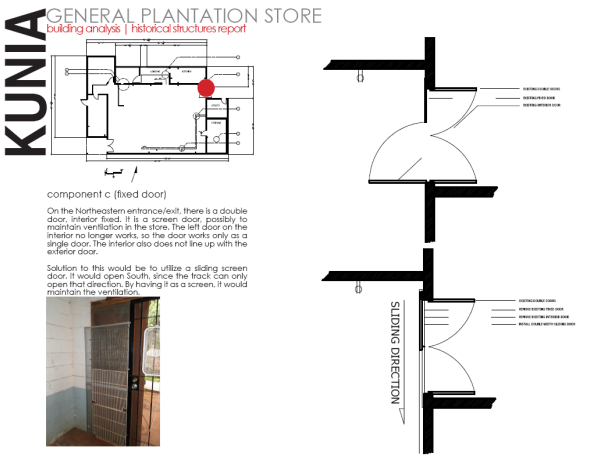


Figure 6. 490 Practice: Kunia Store Historic Structures Analysis

1. The simple Historic Resources inventory
2. Historic American Building Survey (HABS)
3. Historic Structures Report

Students learned to analyze a building on several different levels

1. Record-written and graphic expression
2. Historic-why a building is important, why its setting is important, what does integrity mean?
3. Rehabilitation-how to best repair a structure to retain its special parts, and bring a building back to its original allure

More detailed description of the submittals would reveal much more than this paper can explain. Lorraine Minatoishi-Palumbo states

> "The ability to analyze a building and see what has worked well and what had not, and how to fix it without losing the integrity of the original structure is what builders and architects face daily. Most architects are not good problem solvers when it comes to rehabilitation work because of lack of training. Thus I am glad that I was part of this Professional Treasures endeavor."[9]

The interaction with HARC and the Kunia Village Master Plan and Store Design exposed the students to the history of the pineapple plantations and the cultural and historic value that their designs will have on the people of the Village.

Part II CONCEPTUAL MASTER PLAN DESIGN and FRAMEWORK FOR CULTURE BASED DESIGN AND SUSTAINABILITY

For the second part of the semester, the classes worked on separate projects.

The first 342 Studio class exercise for Part II initiated student encounter with Hawaiian culture and place by assigning each student at random two Hawaiian terms. One word described a value for 'managing with Aloha' and the other word described an object or structure that defines 'place'. Students were required to write a narrative of each relating to sensual responses to the object word such as sight, sense, touch smell, beauty proportion, color and more, and describing a memory emotion, related to people, time and place evoked by the value word. The results of their research and writing were a free hand sketch of an image, a diagrammatic model in 2D, and a quick 3D model. This exercise was to help students to think "Hawaiian'.

342 Studio then applied the learning from this first assignment to develop a conceptual master plan design to restore the wetlands at Heeia, Oahu for Kāko'o 'Ōiwi a community based non-profit organization that has entered into a 38 year lease with the Hawai'i Community Development Authority (HCDA) to implement Māhuahua 'Ai o Hoi, a project to restore the currently fallow land into a living communi-

ty including areas for Hawaiian agriculture, healing, and teaching skills.

Arch 490 Practice worked in teams to develop a framework for a conceptual design process based on Hawaiian traditions, culture, place, land use, and spatial needs. They tested the framework on case studies of existing buildings in Hawai'i.

Figure 7. 342 Studio Hawaiian Concepts

The difference between the course work allowed the students to approach the goals from different aspects. 490 Practice developed a design framework based on place and cultural values along with codes and entitlement issues. 342 Studio focused on understanding the essence of site and its historical and cultural values and master plan concepts.[10]

342 Studio

The 342 Studio students responded exceptionally well in linking the brief Hawaiian culture exercise with their Heeia Master Plan and Building Design project as demonstrated by the example shown. The triangle motif is prevalent in Hawaiian tapa. In this case the student related it to the word Pali, meaning cliff, and used the form to shape the volumes and roof shapes to emulate the mountains that are a backdrop to the site of the Heeia wetlands.

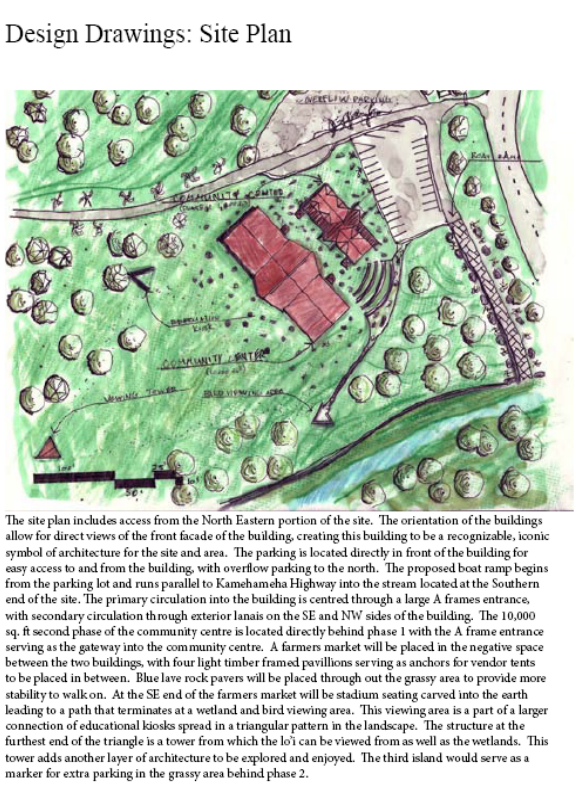


Figure 8. 342 Studio: Heeia Community Center

Figure 9: 342 Studio and 490 Practice Work Day

Figure 10: 342 Studio Presentation to Heeia Clients

490 Practice: Framework for Building Design for Culture and Identify

Framework for Development in Hawaii: Site and Culture Based Sustainable Design					BUILDING DESIGN	
SECT	ITEM NO.	CHECKLIST ITEM / REQUIREMENT	WHY IMPORTANT?	HOW?	APPLICATION TO HAWAII - SPECIAL REQUIREMENTS & CONSIDERATION	RATING (3,2,1)
C	BUILDING DESIGN					
	1	Encourage use of Local/Island Materials	Reduce carbon footprint/more Hawaiian appearance	Use local manufactures	Identify recyclable materials. Encourage use of local materials. Identify regional materials. *Additional credit for other	3
	2	Maintain views	Share and maintain view as natural gifts to each specific site	By not disrupting views of existing or future buildings (blg codes)	Zoning, LUO's,	1
	3	Proportion & Scale	Aesthetics, relation to context, building function, sunlight/shading affecting surrounding environment	Building Code, Building-to-Open space ratio, property size+setbacks	Maintain human scale, view channels toward ocean,	2
	4	Building Orientation	Religious connection, Maximize natural ventilation, Practice passive strategies, View Corridor/Viewports, Space use	Research in archives, site analysis, case studies, Existing projects in vicinity, Natural features on site	Orientation based on historic remains, ahupuaa, solar path	3
	5	Natural site integration	Minimize impact on the environment	Incorporate systainable design	With passive systems	3
	6	Maximize Natural ventilation and sunlight. Encourage exterior covered walkways/eaves/overhangs/ lanai	Hawaii has comfortable weather year round, sustainable design, maximize use of space inside and out	Incorporate systainable design, curculation	Maintain exterior appearance, sustainable reports	3
	7	Appropriateness to architectural context	Urban VS Suburban VS Rural	Neighboring sites	The context changes within miles eg. 'ahupua'a	2

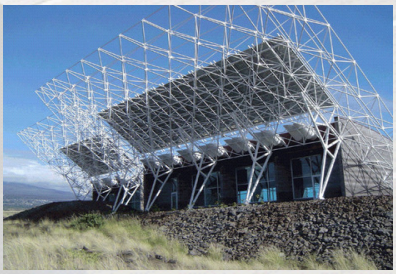
Figure 11: Section C Building Design Framework

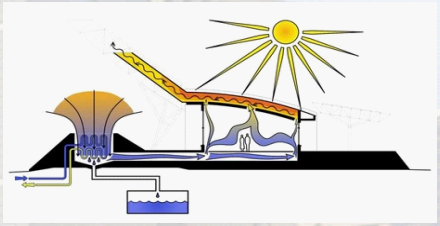
Arch 490 Practice students collaborated in teams and concluded that five major aspects of design should be addressed to sustain historic and cultural identity. The five areas are History and Culture, Context-Site, Building Design, Urban Design, and Systems and Sustainability

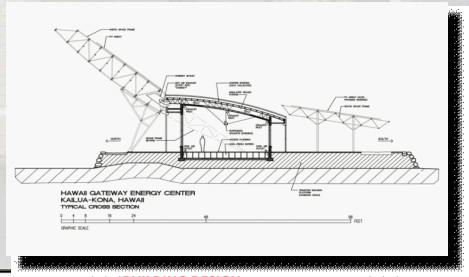
Building Design Item/Requirement #4

Hawaii Gateway Energy Center

-Natural Ventilation
-Shading
-Solar Array
-Space Use
-Passive Systems







Framework for Development in Hawaii: Site and Culture Based Sustainable Design					BUILDING DESIGN	
SECT	ITEM NO.	CHECKLIST ITEM / REQUIREMENT	WHY IMPORTANT?	HOW?	APPLICATION TO HAWAII - SPECIAL REQUIREMENTS & CONSIDERATION	RATING (3,2,1)
C	BUILDING DESIGN					
	4	Building Orientation	Religious connection, Maximize natural ventilation, Practice passive strategies, View Corridor/Viewports, Space use	Research in archives, site analysis, case studies, Existing projects in vicinity, Natural features on site	Orientation based on historic remains, ahupuaa, solar path	3

Figure 12. 490 Practice Framework Building Design Item 4 Building Orientation

Arch 490 Practice: Case Studies

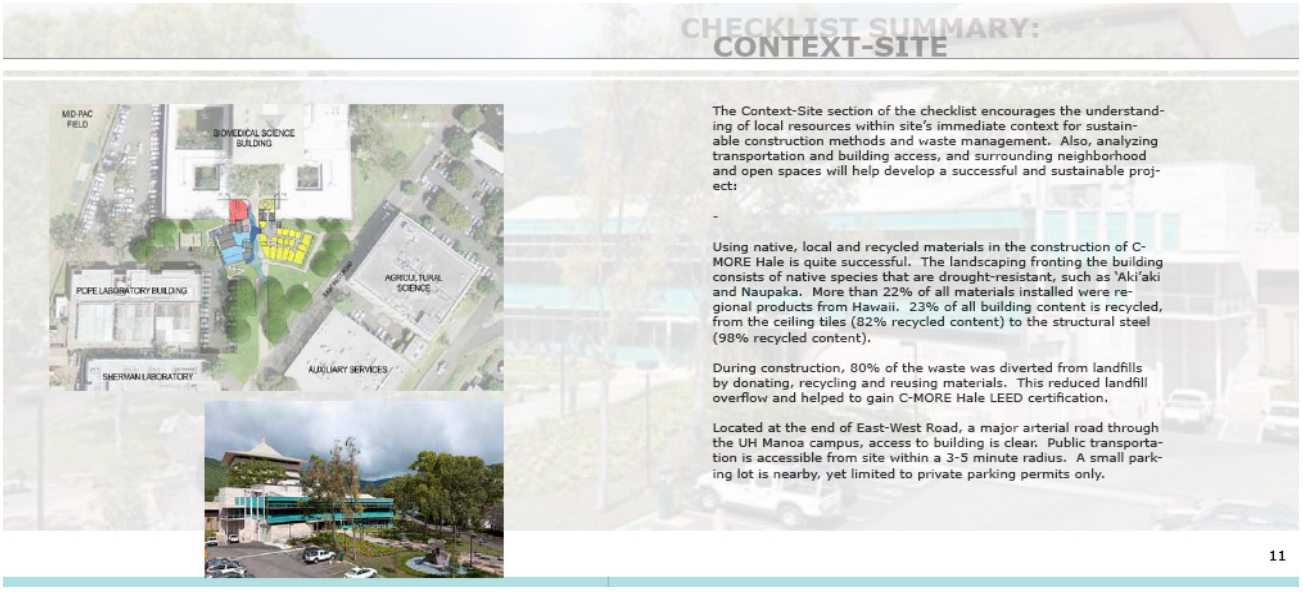


Figure 13. Arch 490 Case Study C-More Hall

Figure 14. Arch 490 Framework Presentation

Figure 15. Arch 490 Presentation Reviewers

Arch 490 Practice: Analysis and Reviews

To test the validity of the Design Framework developed by the class, students were required to investigate buildings in Hawai'i as case studies by applying each of the five (5) aspects identified by the checklist. Assessment included rating the performance of the building for each area as well as recommendations for improvement.

Students concurrently enrolled in Arch 342 were required to assess their concept designs for the Heeia Wetlands Community Restoration Project. Feedback was provided via interim and final reviews conducted by the architect instructors, other WCIT architects, Advisor from Hawaii to the National Trust for Historic Preservation, Hawaiian Homestead Technology Board Member, Director of Hawaiian Homelands Department. The student work has generated much interest.

PART II STUDENT LEARNING

The question "What is a Hawaiian sense of place?" may never be answered. However, students and professionals engaged in the Professional Treasures adventure have rekindled their interest in developing meaningful design guidelines.

342 Studio literally got their feet wet during the Heeia Loi Workday. For most, learning about the process of manufacturing poi from the taro plant was a first experience. Both classes enriched their Hawaiian vocabulary in their conversations with the "kupuna" (elders) of the Heeia Community. Interaction with community elders regarding design aspirations was also a first, providing a forum for diverse viewpoints. The one work day was a step toward global practice for a few students.

The design process for both classes have been enriched by the interaction with practicing architects and community leaders. Students were surprised to meet developers, attorneys, government department heads for cultural issues all eager to discuss the student design ideas.

REFLECTIONS

The original intent was to create a seamless collaboration opportunity between the studio class, the professional practice class and practicing architects as instructors.

For Part I this was accomplished by both classes working on the same projects. Advantages of working on the same projects included: 1) The practicing architect lectured to the combined classes, rather than having to address the classes separately, 2) Both classes worked on the same projects but were required to complete different tasks. 3 The Arch 342 Studio class was charged with the field work including site investigation as is typical for studio classes and because studio contact hours are almost three times that of a lecture course. 4) The 490 Practice students interacted with the 342 Studio students in the studio. 5) Students from both classes were included in teams formed to complete the group work.

Ironically disadvantages were attributed to working on the same projects, primarily because

clarity of student roles within the teams was not achieved. Also ten students from the 342 Studio class were also enrolled in the 490 Practice class. The expectation that this would reinforce communication was achieved to some extent. However, the ten students seemed to carry more of the load than the 490 Practice students. One could conclude that the integration expectation was too complex to manage with two classes.

"Architecture and design are means of storytelling through generations. In a place as unique as Hawai'i, recognition of historical events, architecture, cultural traditions, means of living, previous land divisions, ownership and uses are all things that can influence design. Much like oral or written history and communication through art, architecture is a canvas o which one can convey a message through design and affect one uses and experiences a space. It is up to the design, how much this will influence the building or site, however the fundamentals of identifying and understanding these past principles as a basis is imperative design, particularly in Hawaii."[11]

As stated earlier the issue of design for culture and identify is of vital importance today. Evidence of interest can be attested to by the prestigious reviewers who gave their time to review and discuss the student work. They included an advisor to the National Trust for Historic Preservation, President's Advisory Council on Historic Preservation Appointee, Chairman of the Hawaiian Homes Commission, and Historian for the State Historic Preservation Division.

The community organizations which participated as clients are non-profit entities with aspirations to preserve culture and place while exploring existing and future site and building developments. The Executive Director of HARC, [Hawaii Agriculture Research Center] an internationally recognized agricultural research center, acted as client for their project which is poised to preserve a plantation village while developing an agricultural research facility. The second client was a community based non-profit organization that has an agreement with HCDA [Hawaii Community Development Authority] Resultant student work includes Historic Building Analyses as well as a Framework for Development: Site and Culture Based Sustainable Design.

ENDNOTES

1 NCARB. 2010 Grant Recipients. http://www.ncarb.org/News-and-Events/News/2011/01-NCARB-Grant.aspx (accessed June1 - September8,2011)
2 (Lorraine Minatoishi-Palumbo. 2010-2011. e-mail messages to author)
3 (Mark Higa. 2010 - 2011. e-mail messages to author)
4 WCIT Architecture. 2011. Buzz. http://www.wcitarch.com (accessed June – September 2011)
5 (Minatoishi-Palumbo 2011)
6 (Aaron Geer. 2011. CD-ROM)
7 (Minatoishi-Palumbo 2011)
8 (Minatoishi-Palumbo 2011)
9 (Minatoishi-Palumbo 2011)
10 (Higa. 2011)
11 (Higa. 2011)