



**UNIVERSITY OF HAWAII AT MĀNOA
CAMPUS HERITAGE REPORT**

PRODUCED BY

The Heritage Center

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CONTENTS

CHAPTER 1: Introduction

- 1.1 Overview
- 1.2 Scope of Work

CHAPTER 2: Methodology

- 2.1 Approach
- 2.2 Evaluation Methods

CHAPTER 3: Historical Context

- 3.1 Early Hawai'i
- 3.2 Mānoa Valley Legends
- 3.3 Early Agricultural Use
- 3.4 Archaeological Findings in the Mānoa Campus Area
- 3.5 Territorial Period 1907-1940
- 3.6 World War II and Post War Development 1941-1948
- 3.7 Early Statehood 1959-1970
- 3.8 Significant Designers
 - 3.8.1 Harry Sims Bent
 - 3.8.2 Gerald (Gerry) Carr
 - 3.8.3 Charles William Dickey
 - 3.8.4 Ralph Fishbourne
 - 3.8.5 Juliette May Fraser
 - 3.8.6 Loraine Kuck
 - 3.8.7 Kenzo Ogata
 - 3.8.8 Vladimir Ossipoff
 - 3.8.9 Ieoh Ming Pei
 - 3.8.10 Alfred Preis
 - 3.8.11 Mark Potter
 - 3.8.12 Joseph Francis Charles Rock
 - 3.8.13 Claude Albon Stiehl
 - 3.8.14 Richard Tongg
 - 3.8.15 George Walters & Julie Kimura Walters
 - 3.8.16 John Mason Young

CONTENTS

CHAPTER 4: Heritage Landscape Patterns

- 4.1 Narrative Description
- 4.2 Statement of Significance
- 4.3 Landscape Inventory and Condition Evaluation
- 4.4 State of Hawai'i Exceptional Trees
- 4.5 Memorial Trees
- 4.6 Trees of Note
- 4.7 Landscape Inventory and Condition Evaluation Samples
 - 2008 Landscape Inventory
 - 2008 Inventory of Rock Plantings (1957)

CHAPTER 5: Survey of Historic Buildings and Landscapes

- **Makai Campus**
 - 5.1 Music Building Complex
 - 5.2 Ka Papa Lo'i o Kānewai
- **Central Campus**
 - *Central Campus East*
 - 5.3 College of Education Complex
 - 5.3.1 Wist Hall
 - 5.3.2 Castle Memorial Hall
 - 5.3.3 University High School 1
 - 5.3.4 University High School 2
 - 5.4 Quad Building Complex
 - 5.4.1 Hawai'i Hall
 - 5.4.2 Hawai'i Hall Palm Garden
 - 5.4.3 Gartley Hall
 - 5.4.4 George Hall
 - 5.4.5 Dean Hall
 - 5.4.6 Crawford Hall
 - 5.5 Varney Circle and Fountain
 - 5.6 Miller Hall
 - 5.7 Engineering Quad
 - 5.8 Hemenway Hall
 - 5.9 Founders Gate
 - 5.10 Sinclair Library

CONTENTS

- 5.11 Bachman Hall, Terrace and Lawn
- 5.12 Andrews Outdoor Theatre

- *Central Campus West*
 - 5.13 McCarthy Mall
 - 5.14 Henke Hall
 - 5.15 Building 37
 - 5.16 Bilger Hall
 - 5.17 Keller Hall
 - 5.18 University Health Services
 - 5.19 Krauss Hall Complex
 - 5.20 East-West Center Complex
 - 5.20.1 Thai Sala and Banyan Grove
 - 5.20.2 Kennedy Theatre Grove
 - 5.20.3 Japanese Garden
 - 5.20.4 Jefferson Hall
 - 5.20.5 John F. Kennedy Theatre
 - 5.20.6 Hale Mānoa
 - 5.20.7 Lincoln Hall
 - 5.20.8 Hale Kuahine
 - 5.20.9 John A. Burns Hall

CHAPTER 6: LRDP Conflicts

- 6.1 Introduction

- 6.2 LRDP Goals and Objectives
 - 6.2.1 LRDP Major Themes
 - 6.2.2 Campus Building Blocks
 - 6.2.3 LRDP and UHM Campus Report Comparison
 - 6.2.4 LRDP and UHM Campus Report Conflicts

- 6.3 Projects in Conflict and Recommendations
 - 6.3.1 College of Education Complex
 - 6.3.2 Engineering Complex
 - 6.3.3 Henke Hall
 - 6.3.4 Bilger Hall

CONTENTS

- 6.3.5 Kennedy Theater
- 6.3.6 Music Complex
- 6.3.7 Gartley Hall
- 6.3.8 Dean Hall
- 6.3.9 Sinclair Library
- 6.3.10 Bachman Hall
- 6.3.11 Future Building at Sinclair Library
- 6.3.12 Andrews Amphitheater
- 6.3.13 Building 37
- 6.3.14 University Health Services
- 6.3.15 Krauss Hall Complex

- 6.4 Landscape Projects in Conflict and Recommendations
 - 6.4.1 The Quadrangle
 - 6.4.2 Sinclair Grove
 - 6.4.3 Varney Circle
 - 6.4.4 Banyan Grove
 - 6.4.5 McCarthy Mall

CHAPTER 7: Preservation Guidelines

- 7.1. Preservation and Maintenance of Historic Masonry
 - 7.1.1 Preservation and Maintenance of Historic Masonry
 - 7.1.2 Reappointing Mortar Joints in Historic Masonry
 - 7.1.3 Applying Waterproof Coating on Historic Masonry
 - 7.1.4 The Maintenance, Repair and Replacement of Historic Cast Stone
 - 7.1.5 The Preservation and Repair of Historic Stucco
 - 7.1.6 Removing Graffiti from Historic Masonry

- 7.2 The Preservation and Maintenance of Historic Wood
 - 7.2.1 The Preservation and Maintenance of Historic Wood
 - 7.2.2 The Exterior Paint Problems on Historic Woodwork

- 7.3 The Preservation and Maintenance of Building Exterior Architectural Metals
 - 7.3.1 The Preservation and Maintenance of Building Exterior Architectural Metals

CONTENTS

- 7.4 The Preservation and Maintenance of Historic Roofs
 - 7.4.1 The Preservation and Maintenance of Historic Roofs
 - 7.4.2 The Preservation and Maintenance of Historic Clay Tile Roofs
- 7.5 The Repair of Historic Wooden Windows
 - 7.5.1 The Repair of Historic Wooden Windows
 - 7.5.2 The Repair of Historic Steel Windows
 - 7.5.3 The Preservation and Repair of Historic Stained and Leaded Glass
- 7.6 Other Preservation Guidelines
 - 7.6.1 The Preservation of Historic Signs
 - 7.6.2 The Use of Substitute Materials on Historic Building Exteriors
 - 7.6.3 Dangers of Abrasive Cleaning to Historic Buildings
- 7.7 Appropriate Treatment
- 7.8 Guidelines for Renovations
- 7.9 Guidelines for Accessibility
- 7.10 Guidelines for Safety
- 7.11 Guidelines for Energy Efficiency
- 7.12 Guidelines for Landscape Preservation
- 7.13 Conclusion

CHAPTER 8: Appendix

- 8.1 Bibliography
- 8.2 Image Citation
- 8.3 Buildings Reviewed Listing

CHAPTER 9: Supplemental Material *CD-ROM*

- 9.1 Botanic Collection Maps:
 - 2008 Botanic Inventory of Rock Plantings (1957)
 - 2008 Botanic Condition Assessment of Rock Plantings (1957)
 - 2008 Botanic Inventory
 - 2008 Botanic Condition Assessment

CONTENTS

- 9.2 Botanic Collection Plant Data Sheets:
 - 2008 Rock Plantings (1957) Data
 - 2008 Collection Data

- 9.3 Heritage Building Original Construction Documents:
 - Bachman Hall
 - Castle Memorial Building
 - Engineering Quad
 - Hale Mānoa
 - Henke Hall
 - Keller Hall
 - Kennedy Theatre
 - Krauss Hall Complex
 - Miller Hall
 - Music Building Complex
 - Sinclair Library
 - University High School 1
 - University High School 2
 - Wist Hall

- 9.4 UHM Long Range Development Plan Document (03-03-2008)

CHAPTER 1

INTRODUCTION

1.1 OVERVIEW

The overall purpose of this Report is to collect information concerning the heritage resources of the University to allow for their use in the visioning and future master planning processes.

The project includes detailed research and physical examination of approximately 75 historic buildings; a careful survey and inventory of the University's unique botanic collection of specimen trees and shrubs developed with the foundation of the campus between 1914 and around 1920 by noted tropical botanist Joseph Rock (1884-1962); further documentation of several designed landscapes and landscape features both at the University of Hawai'i and the adjacent East-West Center and condition inventory of all plant materials on the campus. The project includes documentation in the format for preparation of National Register nomination forms for all significant landscape features and buildings on the campus. The resulting archive and data base are augmented by historic photographs, maps and other materials (including planting lists) to create a permanent archive on the campus. The archive, inventory, drawings and other research materials will inform the existing plan and serve as a source of information for future modifications of the plan.

The year 2007 was the Centennial Year of the founding of the University of Hawai'i, and as such the recognition of the heritage resources are a critical component for future planning. The University of Hawai'i began as a College of Agriculture and Mechanical Arts in 1907 with the first permanent building constructed in 1912 on 22 acres of farmland at the mouth of Mānoa Valley. Consequently, this next five-year planning period is an important one for visioning and appropriate recognitions of the unique heritage resources of the University of Hawai'i Mānoa campus.

Uniquely situated between East and West, the campus of the University of Hawai'i reflects the

diverse ethnic communities in the islands in its public art works, flora, and historic buildings. The campus landscape likewise is comprised of a diverse collection of botanic specimens, memorial and exceptional trees, and historic designed landscapes. The first campus plan was a version of a Beaux Arts scheme that centered on the historic Quadrangle, located just off the principal access road into the valley. The core buildings including Hawai'i Hall (1912), Gartley Hall (1922), and George Hall (1925), Dean Hall (1929) and Crawford Hall (1938) still remain today. These buildings form one of the most important assemblages of early 20th-century Neoclassical Style buildings in the Pacific islands.

Since several buildings are listed on the Hawai'i Register of Historic Places, they are protected under Chapter 6E of the Hawai'i Revised Statutes. However, all State properties are reviewed under Part 6E-8 when they are 50 years old. The state legislation defines "historic" as any property more than 50 years old. In late 2008 the State Historic Preservation Division required as part of the building permit process their review and approval of all work on buildings more than 50 years old. This Campus Heritage Report provides guidelines for this preservation work to be undertaken on the heritage resources, as well as recommendations for new additions. These guidelines should assist in the review process.

The campus also contains an exceptional collection of botanic resources. A plant inventory included on a CD at the end of this report provides detailed maps and listings of all the plants on the central campus. Many of the trees have been labeled with the origin, common, and scientific names. This living collection includes seven registered exceptional trees and 36 memorial tree plantings. Exceptional trees are designated by the City and County of Honolulu Arborist Committee as worthy of preservation by reason of age, rarity, location, size,

1 INTRODUCTION

1.1 OVERVIEW

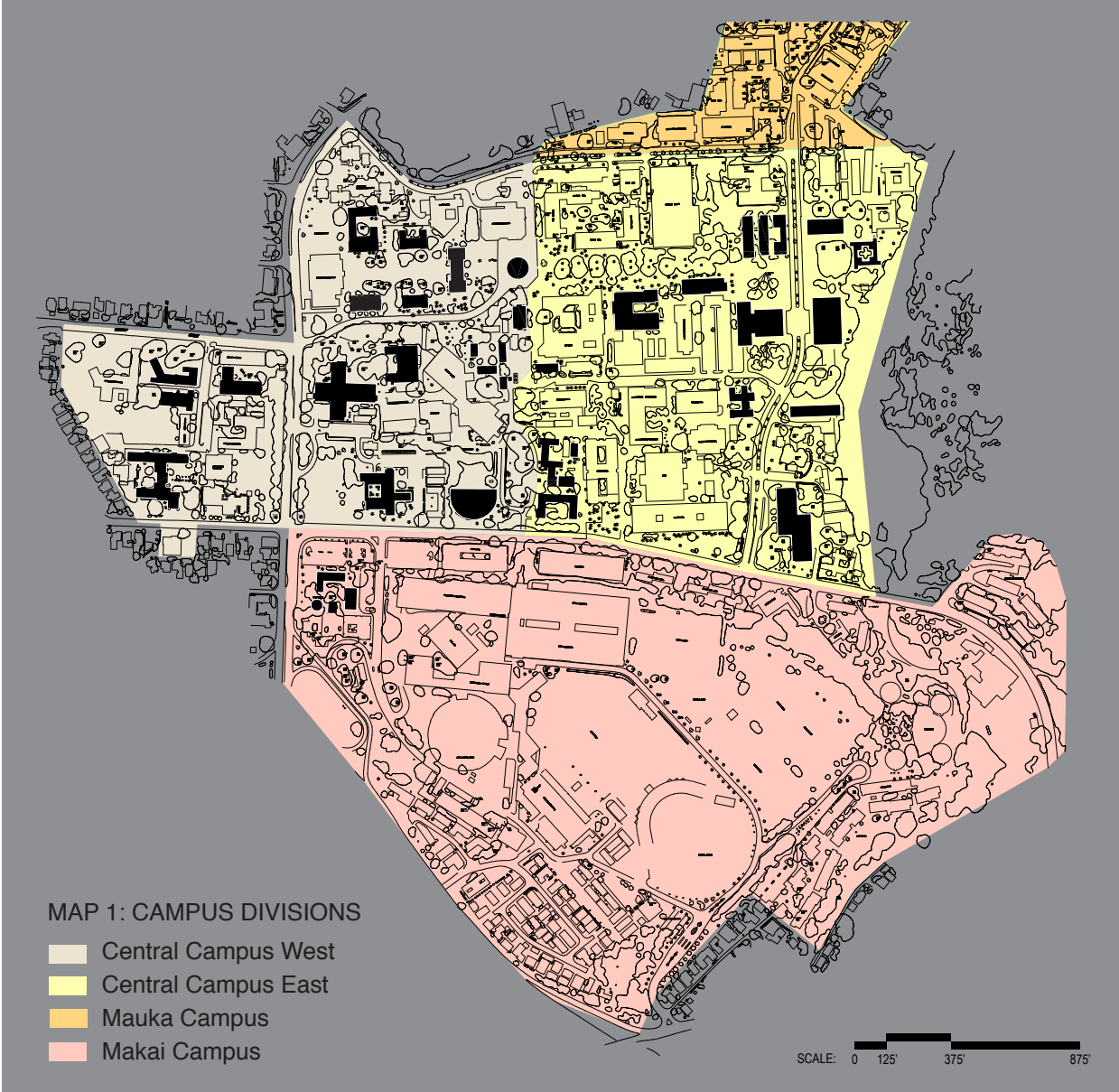
aesthetic quality, endemic status or historical and cultural significance.

In addition to the unparalleled botanic collection, the campus grew to include several important designed landscapes, including an ornamental palm garden forming the edge for the Andrews Outdoor Theatre, the nearby Krauss Hall Courtyard pond garden, both excellent examples of early to mid-20th century garden design by Richard Tongg, considered to be the first Chinese-American landscape architect. In 1963 Japanese landscape architect Kenzo Ogata created the Japanese Garden in the East-West Center Complex. This garden is considered to be among the 25 most significant Japanese gardens in America. In addition, there are the Hawaiian Studies Native Gardens including the Kanewa'i garden, illustrating the traditional method of planting taro in a terraced water garden or lo'i.

There are no designed landscapes on the campus nominated to the Hawai'i Register of Historic Places. There are seven recognized exceptional trees. The exceptional trees are protected by a County-wide ordinance. Seven Exceptional Trees are designated by the City and County of Honolulu Arborist Committee as worthy of preservation "by reason of age, rarity, location, size, aesthetic quality, endemic status or historical and cultural significance." State law requires that native Hawaiian plants be included in all new landscapes designed for all state owned buildings; these plants may be either botanic natives, endemic or indigenous, or plants brought by the pioneer Polynesian settlers. There is also a Tree Canopy Protection Plan adopted by the University as part of the 2007 LRDP to maintain the tree canopy coverage of the campus as well as the botanic diversity.



Fig 1.1: Hawai'i Hall, Hand Rendering



1 INTRODUCTION

1.2 SCOPE OF WORK

Several goals were identified for the Scope of Work for the Campus Heritage Report. These goals were as follows:

1. *Goal:* Gather existing documentation concerning resources.

Significance: Understand existing scope of documentation, address missing pieces.

- Develop precedent research into how other universities and comparable types of sites have developed heritage inventories, developed a historic preservation component, incorporated this component into their campus master plan, and in the process strengthened their overall master plan in visual, functional, and environmental responsibility aspects.
- Compile a set of the existing plans of the existing heritage buildings and heritage plantings inventory, and constructed landscape plans. Assemble drawings from the files maintained by the Facilities section.
- Gather historic resource documents from Hamilton Library, University Archives, Bishop Museum, and the State Archives photographic collections.
- Evaluate existing documentation against heritage and botanic resources in the field. Identify missing or inaccurate data.

2. *Goal:* Gather new information to determine heritage resources for the campus.

Significance: Provides appropriate data base for future work.

- Inventory all campus buildings, walkways, landscape features, and plantings more than 40 years old (from the 1957 landscape inventory).
- Include in inventory historic information, botanic and common name for plant materials, and information for integrity determination.
- Evaluate buildings, walkways, landscape features, and historic plantings using the National Register criteria for potential nomination to the National Register.
- Locate significant plant materials to enable proper management of the heritage plantings, making it possible to readily keep the inventory of the heritage plants and their condition up to date.
- Identify material condition for all plant materials.
- Meet with the Advisory Committee concerning any issues of Heritage Inventory Work.

3. *Goal:* Synthesize information to provide for appropriate decision making

Significance: Improves protection for heritage resources

- Format report in the style required for National Register documentation. Actual completion of the Nomination forms will be done after completion of the report and consultation with the University.
- Identify locations where the heritage buildings and landscape sections need to be better connected with the adjacent fabric of buildings and landscape to form a visually and functionally coherent whole.
- Develop advisory guidelines for facilities management and renovation or new work on historic buildings and landscapes.
- Identify potential areas of conflict between the Long Range Development Plan and Campus Heritage Resources
- Meet with the Advisory Committee concerning any issues of the historic preservation component and the long range development plan.

1.3 INTENT

The intent of the Campus Heritage Report is to provide information for future planning of the campus. The project developed a detailed inventory and data base of architectural and landscape features for the University of Hawai'i Mānoa campus and the adjacent East-West Center buildings and grounds. The research serves as a permanent reference for future modifications to the Long Range Development Plan and results in more informed decision-making among the campus planners, landscape architects and architects. In addition, Guidelines for the treatment of historic materials and resources both for buildings and landscaping have been provided. While the heritage resources are only one element in the decision making process, this report shows that they are a critical component in defining the character of the University of Hawai'i Mānoa campus.



Fig 1.2: *Founder's Gate*, Hand Rendering

CHAPTER 2

METHODOLOGY

2.1 APPROACH

Historic architecture, plantings, and landscape architecture of the 300-acre Mānoa campus and adjacent East-West Center were mapped, photographed, and archived comprehensively for the first time under a grant received by the University of Hawai'i at Mānoa. The \$100,000 project was funded by the Getty Foundation, the philanthropic division of the J. Paul Getty Trust. The Getty Foundation supports projects throughout the world that advance understanding and preservation. A specific program, the Campus Heritage Initiative, was “designed to assist colleges and universities in the United States in managing and preserving the integrity of their significant historic buildings, sites, and landscapes. Projects supported through this special initiative focused on the research and survey of historic resources, preparation of preservation master plans, and development of detailed conservation assessments. Since 2002, the Campus Heritage Initiative has supported preservation efforts for 86 historic campuses across the country; nationwide surveys of independent colleges and of historically black universities and colleges; and a national conference on campus preservation issues. The initiative has awarded grants totaling more than \$13.5 million” (J. Paul Getty Trust 2007: n.p.).

This one-year project undertook detailed research and physical examination of approximately 75 historic buildings, 10 historic landscape sites and an inventory of the campus' unique botanic collection of specimen trees and shrubs. The project was organized in an appropriate format for the future preparation of National Register nomination forms for all significant landscape features and as yet non-listed buildings on the campus. Conflicts with the Long Range Development Plan and the UHM Campus Heritage Report were noted. This should result in more informed decision-making among campus planners and architects.

Project Personnel

This project was undertaken by the Heritage Center of the School of Architecture, University of Hawai'i. The Principal Investigator was Professor Spencer Leineweber FAIA, Historical Architect. Adjunct Assistant Professor and campus landscape architect, Janet Gillmar, ASLA, assisted the students doing the field work and report writing related to the designed landscapes. Professor Richard Criley and Professor Kim Bridges assisted in the identification and field work for the botanic collection. Preliminary building research for approximately 10 buildings from a class project for AMST 628 was useful under the supervision of Professor William Chapman. Mr. James Cartwright, University Archivist assisted with locating the archival materials. Roxanne Adams, the University's Landscape Manager and a certified Arborist, contributed to the detailed tree condition analysis and landscape preservation information. Ms. Teri Skillman-Kashyap and Michael J. Thomas came up with the initial idea for a Campus Heritage grant and assisted with the initial grant request. Professors Bridges, Chapman, Chock, Criley, and Gillmar provided reviews of the various Drafts.

Architecture students funded by the Heritage Center undertook the fieldwork, research and report writing. These funded DArch Graduate Research Assistants were Laurence Barnardo, Corey Boss, Alissa Carson, Sean Connelly, Craig Copher, Tanya Davis, Shelley Hoenle, Nanako Imai, Claire Rohlinger, and Deirdre Stevens. Mashuri Waite was a Botany PhD. Graduate Research Assistant who updated the 2005 campus plant inventory and mapped the results. Ms. Stephanie Saephan from the Botany GIS Laboratory provided mapping assistance. To all who were a part of this Project, the Team says a heartfelt, “thank you”.

2 METHODOLOGY

Advisory Committee

The liaison with the interested parties of the Mānoa campus was done through an Advisory Committee to the Campus Heritage Report. The members of the Heritage Center team met with the Advisory Committee monthly during the project for progress reports and review of the work.

The members of this Advisory Committee were representatives from interested groups from the campus. The members included the Facilities Office (Ms. Carol Ogata, AIA historical architect), the Campus Planning Office (Dr. Jack Sidener, FAIA), the Landscape Advisory Committee and Campus Planning Office (Ms. Janet Gillmar, ASLA), and the Landscape Maintenance section (Ms. Roxanne Adams), Botany Department (Professor Kim Bridges), Tropical Plant and Soil Sciences Department (Professor Richard Criley), Vice Chancellor's Office (Mr. David Hafner), and Historic Preservation Certificate Program in the American Studies Department (Professor William Chapman).

Fieldwork

The fieldwork was performed in September 2007 through December 2008. Field investigations included visual inspections, verification of existing conditions and degree of modifications, the completion of building evaluation forms, and digital photographs of all buildings constructed before 1970 on the University of Hawai'i Mānoa campus. The identification and evaluation methods used in this study are outlined in a later section of this report. A list of all buildings reviewed is listed in the Appendix (Chapter 8). Buildings with significance were then evaluated.

Documentary Research Methods

The following depositories provided materials specific to the campus buildings:

- Hawai'i State Archives
- Hawai'i State Library
- Hamilton Library, University of Hawai'i
- University Archives
- Internet Resources
- University Facilities Files

Materials gathered during archival research to establish the historic context and significance of the sites included: historic photographs, architectural plans, maps, newspaper articles, general and specific background history reports, and previous historic research for University publications.

Original plans were located for 17 of the buildings designated as significant. The list of these buildings is in the Report Appendix and a digital copy of these drawing files is recorded on a CD as part of this Report. Reference material is listed in the bibliography. In addition to the Report, individual site forms were prepared for each building and landscape.

Disposition of Field Notes

Field notes, maps, plans and other relevant materials used in the compilation of this Report are filed with the University Archives as part of the "Getty Heritage Grant" Boxed Folders. In the investigation work it was determined that many files were spread out within the University without any cross-referencing of sources. The work from this Report will be keyed to a Finding Aid within the University Archives.



Fig 2.1: Quadrangle with Hawai'i Hall in background, 2007

2 METHODOLOGY

2.2 EVALUATION METHODS

The evaluation of all buildings and landscaped spaces followed the National Park Service (NPS) and U.S. Department of the Interior guidelines for the nomination of heritage resources to the National Register. The National Historic Preservation Act, Public Law 102-575 in 1966 authorized the Secretary of the Interior to expand and maintain a National Register of Historic Places composed of districts, sites, buildings, structures, and objects significant in American history, architecture, archaeology, engineering, and culture. “National Register properties are distinguished by having been documented and evaluated according to uniform standards. These criteria recognize the accomplishments of all peoples who have contributed to the history and heritage of the United States and are designed to help state and local governments, Federal agencies, and others identify important historic and archeological properties worthy of preservation and of consideration in

planning and development decisions” (National Park Service n.p.).

Three bulletins were utilized to determine significance and integrity in the various structures and landscaped spaces described in this report. National Register Bulletin #15: How to Apply the National Register Criteria for Evaluation discusses how to evaluate “the wide range of properties that may be significant in local, State, and national history. It should be used by anyone who must decide if a particular property qualifies for the National Register of Historic Places” (Shrimpton 2005: i). National Register Bulletin #16A: How to Complete the National Register Registration Form provides detailed information on how to complete the National Register Registration Form, including information on how to write the narrative description, statement of significance and narrative statement of significance. These descriptions



Fig 2.2: Aerial Photo of UHM Campus, 1926

were used to document designed landscapes and historic buildings in Chapters 4 and 5 of this report. National Register Bulletin #18: How to Evaluate and Nominate Designed Historic Landscapes “deals with designed historic landscape documentation, assessment, and other related issues” (Keller:n.p.).

Age of Resource

In order to qualify for the National Register a property needs to be 50-years old unless there is exceptional significance. By Hawai'i Revised Statutes Chapter 6E all state-owned resources that are 50-years old or more are considered to be “historic” by state law. It is prudent for the University to understand which of its resources qualify for the Hawai'i State Register of Historic Places or the National Register of Historic Places so that an appropriate planning approach can be undertaken. In order to give a certain lifespan to the work undertaken for this Report, all buildings constructed before 1970 were evaluated. Those with significance are included within this Report.

Determination of Significance

To measure the level of significance in historic properties and landscapes for this Heritage Plan, the National Register Criteria for Evaluation were used. Four Criteria were used to establish value and significance for the historic resources. They are: Associative value linked to an event (Criterion A), Associative value linked to a person (Criterion B), Design or construction value (Criterion C) and Information value (Criterion D). Each significant property or designed landscape in this Report was determined to be significant by meeting one or more of the National Register Criteria. These lettered

Criteria of the National Register are discussed below.

Events (National Register Criterion A)

To be considered for listing under Criterion A, a property must be associated with one or more events important in the defined historic context. For the listing of the University of Hawai'i campus buildings or landscapes, this criterion relates to the property's contributions to the development of the University, patterns of change for the University, broader historical issues such as, economic, educational, industrial, or other trends, and/or was an important activity in the University. While these events are part of the history of the University as a whole, they are also considered as formative events and consequently fall under this Criterion. The property must have an important association with the event and retain historic integrity so that association can be understood.

Persons (National Register Criterion B)

If the historic resource is uniquely and directly associated with an important historic person, it would meet the criteria for “persons”. Several sites in the University are known to be linked with famous historical figures but fewer are the only remaining property associated with such persons. “Naming opportunities” for buildings do not qualify as an association of a person with a specific building under this criterion.

2 METHODOLOGY

Distinctive Characteristics in Design (National Register Criterion C)

Distinctive characteristics are the physical features that recur in individual types, periods or methods of construction. To be eligible by type a property must be a good representative example of the typical features of the specific type, period, or method of construction. These characteristics can be expressed in terms such as form, proportion, structure, plan style, or materials. They can be general to a specific style or specific to a particular way they are combined for the building and landscapes. (National Parks Services 1995b:18).

Type, Period, and Method of Construction

Type, Period, or Method of Construction refers to the way certain properties relate to each other. If a resource is the only one remaining of its type in the state or county, it would qualify under this National Register criterion for type. Excellent or distinctive examples of a period of design or construction would be important resources using this criterion. Exemplary technological components of a heritage resource would qualify under this criterion.

Work of a Master

If a resource is a good example of the work of a recognized designer and/or builder or botanist in the nation, state or county it would be distinguished as the work of a master. The property must express a particular phase in the development of the master's career, an aspect of his or her work, or a theme in the work of the designer.

Fig 2.3: View across Mānoa Valley,
Circa 1930





Fig 2.4: Aerial Photograph of the UHM Campus, Circa 1945

High Artistic Value

This evaluation criterion is related to a site's overall design, or certain aesthetic elements. A property is eligible for its high artistic values if it so fully articulates a particular concept of design that it expresses an aesthetic ideal.

Distinguishable Entity

If a resource has an important feature or characteristic in its design or history which gives it a distinctive identity, and which is not recognized in other criteria, it should still be considered potentially as a distinguishable entity.

Information Content (National Register Criterion D)

This criterion is often used to value archaeological resources but it can be used to evaluate other heritage resources when there is a unique potential to yield important information that may contribute to the understanding of human history. This criterion notes that the property to be eligible under Criterion D must be or must have been the principal source of the important information.

Period of Significance and Historic Context

Properties and sites have a Period of Significance and Historic Context that are associated with the

2 METHODOLOGY

resource. A Period of Significance is “the length of time when a property was associated with important events, activities, or persons, or attained the characteristics which qualify it for National Register listing. Period of significance usually begins with the date when significant activities or events began; this is often a date of construction” (McClelland 1997: 42).

A historic context is defined as “information about historic trends and properties grouped by an important theme in the pre-history or history of a community, State, or the nation during a particular period of time. Historic contexts are organized by theme, place, and time, and they link historic properties to important historic trends (McClelland 1997: 4). The period of significance is indicated for each building by the time line at the beginning of each building description. The historic context is discussed in Chapter Three.

Determination of Integrity

To measure integrity in historic properties and landscapes for this Heritage Report, the National Register’s evaluation of integrity is used. The seven aspects of integrity are: Location, Design, Setting, Materials, Workmanship, Feeling and Association. National Register Bulletin #15: How to Apply the National Register Criteria for Evaluation explains that integrity is “the ability of a property [or designed landscape] to convey its significance” (Shrimpton 2005: 44).

Integrity of Location

Integrity of location relates to whether the resource has been moved from the original site. The relationship between a site and its location is

important to understand the broad historic context of the resource. No buildings evaluated had been moved from their original location.

Integrity of Design

Integrity of design concerns the continuance of the original design elements within the historic resource. Alterations to a potential historic property are considered part of the design history of the resource as they indicate the history of the building through time. If the design elements such as proportion, scale, shape, dimensions, style and ornament remain, the resource is evaluated with high integrity. Modifications that can be easily removed, such as portable ramps or jalousie windows impact the integrity slightly. If the original design has been significantly altered, especially by additions or replacements with a substantially different appearance, style, technology, or material, the integrity of the site has been compromised.

Integrity of Setting

Integrity of setting concerns the character of the environment of the resource, and whether changes in the setting compromise the relationship of the resource to its surroundings and an understanding of its character. The physical features that form the setting of a site can be man-made or natural, including nearby historic buildings and topographic features.

Integrity of Materials

Integrity of materials evaluates whether original materials used to construct the resource have been substantially altered by deterioration or replacement.

If there is more than one period of significance the materials of both periods are considered original and are evaluated. The integrity of material evaluation includes an understanding of the “intactness” of the material of the building or landscape.

Integrity of Workmanship

Integrity of workmanship concerns the type of craftsmanship as well as the methodology of assembly. A site would have high evidence of workmanship as an example of a skilled artisan’s labor. If the workmanship was obscured because of changes, the integrity of the workmanship would be impacted as well as the integrity of the resource.

Integrity of Feeling

Integrity of feeling concerns the embodiment of a sense of history and whether that quality is communicated by a structure or landscape. While this is one of the most subjective of the integrity criteria, it is usually related to the physical appearance. For instance, certain styles or specific design features appear and “feel” old.

Integrity of Association

Integrity of association relates to the interpretation of the resource in the context of historic periods, trends, or events. It requires the presence of physical features to convey the association, but it is more subjective than most of the other integrity criteria. Generally there is integrity of association if interpretation can be made by an informed observer.



Fig 2.5: Center for Hawaiian Studies, 2008

CHAPTER 3

HISTORICAL CONTEXT

3.1 EARLY HAWAII

The Hawaiian Islands are one of the most physically secluded land masses in the world. The first Hawaiians navigated by sea to Hawai'i from the Polynesian islands in the South Pacific. The date of the earliest Polynesian settlements in the Hawaiian Islands is still debated by archaeologists, with estimates ranging anywhere between 0 B.C. to 800 A.D. (*Hawaiian Timeline*: n.p.). The projected population at the time of Captain Cook is debated with Cook projecting 400,000 and modern day scholars projecting closer to 1,000,000. The early Hawaiians had no written language and perpetuated their history and lineage through mele (song) oli (chant) and hula (dance). Although lacking metals, a written language and the stimulus of contact with other peoples and products, the Hawaiians developed a complex and unique system of thought. This explained their world and how things in it interrelated with one another (Dudley 1990: 3). The population of 134,925 individuals was documented

by missionaries in the 1820's (Kame'elehiwa 1992: 81).

Land was divided into ahupua'a, "a strip of land stretching inland from the seashore [sic] into the forest and often to the top of the mountain" (Grant and Hymer 2000: 9). Since islands are roughly circular, "the traditional land divisions in Hawai'i resembled the slices of a pie. The island people were ruled by chiefs who were given units of land or kuleana, by the king, within set boundaries. Generally people did not live in villages: their homes were scattered over the area of the ahupua'a. Hawaiians had no money and did not barter. Society was based on generosity and communal concern. Fishermen gave freely, and farmers gave freely. And all flourished" (Dudley & Agard 1990:1-2). The ahupua'a system fostered interdependency by allowing island inhabitants to meet their basic needs in a communal fashion and the "inhabitants of each ahupua'a were provided a degree of economic independence" (Kelly 1982:5).



Fig 3.1: Hokule'a Contemporary Polynesian Voyaging Canoe, Honolulu Harbor, 2007

Each Hawaiian island was ruled by its own king until 1810, when King Kamehameha unified all the Hawaiian Islands into one kingdom. He was able to defeat the armies of the Kings of O'ahu, Hawai'i, Maui, Lana'i, and Moloka'i, and made a treaty with the King of Kaua'i and Ni'ihau. What followed was a long period of peace and prosperity for the native Hawaiians. In 1819, following the death of King Kamehameha, his son, Liholiho, ascended to the throne as Kamehameha II. The decision to break the long-standing kapu of eating with women, set aside the entire kapu system, and began a dramatic change of events that coincided with the arrival of the Protestant missionaries from New England. The missionaries brought goals of Christianity through education. "Schools throughout the islands spread, and by mid-century the Hawaiian Kingdom had one of the highest literacy rates in the world" (Grant and Hymer 2000:62).

3 HISTORIC CONTEXT

3.2 MĀNOA VALLEY LEGENDS

Mānoa, one of the most beautiful valleys of Hawai‘i inspired ancient Hawaiians to name this place “wide or vast.” Mānoa is associated with a Hawaiian legend – the story of a stunningly beautiful woman, Kahalaopuna, whose tragedy explains the frequent Mānoa rains. The fragrant Hala trees of Puna are a Hawaiian metaphor for human physical beauty. “Niniu Puna pō i ke ‘ala” (overwhelming is the perfume of Puna) suggests an unusually good-looking person. Kahalaopuna’s name was well-chosen; her beauty was known all over O‘ahu. Her home was in the area of what is now the University’s Lyon Arboretum – a fragrant, lush tropical forest area filled with the most beautiful plants found in the islands, along with many other species. Kahalaopuna’s mother was the Mānoa rain, Kauakuahine and her father was the Mānoa wind, Kahaukani.

Kahalaopuna was engaged while still a child to Kauhi, a young Kailua chief. His family often sent gifts of poi and fish to the young girl. As she matured, her beauty became known all over the valley and even inspired two ugly men to go down to Waikīkī wearing leis that they claimed were love gifts from the Mānoa girl. It happened that Kauhi was among the many ali‘i who gathered at Waikīkī when the surf of Kalehuawehe was high and heard the story being spread by the men. He was so enraged that he started out for Mānoa at dawn, intending to kill the fiancée he had never met for her infidelity. On his way he broke off a bunch of Hala fruit and carried it along with him. He found Kahalaopuna and persuaded her to follow him. Not far away, after accusing her of being unfaithful, he killed her by a blow to the head with the hala fruit and buried her on the spot. An owl god, a relative of the girl, had been watching, and it flew down and uncovered the body, and brushed the dirt away. He breathed

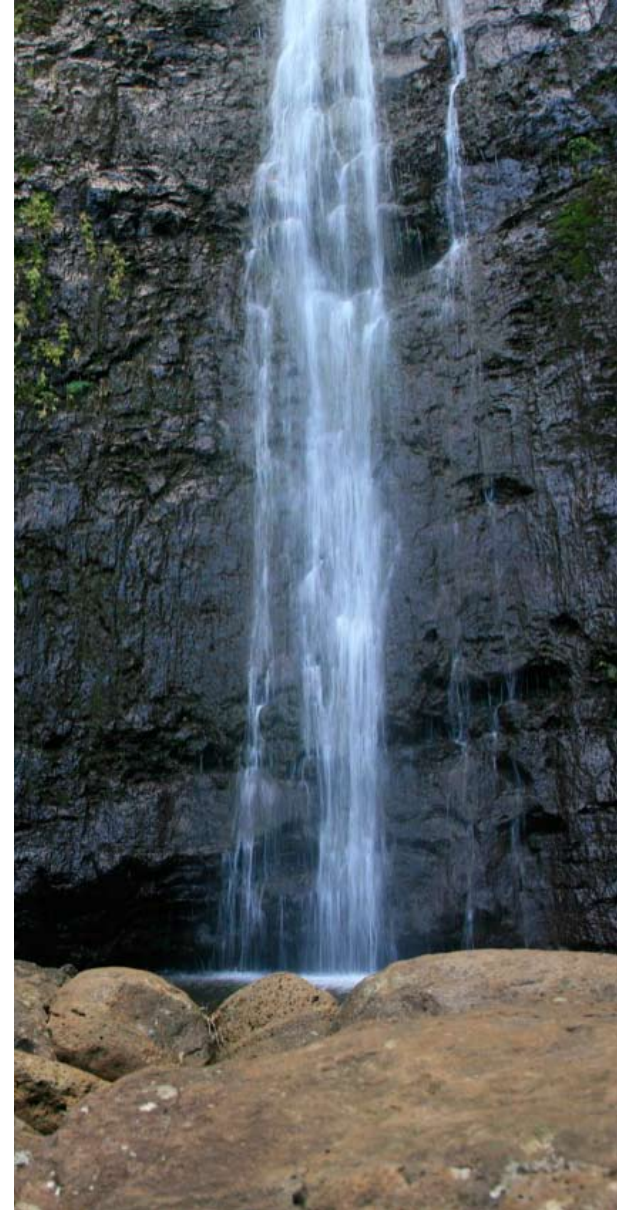


Fig 3.2: Mānoa Falls, Honolulu, Hawaii, 2007
(opposite)



Fig 3.3: Kukāo'o Heiau, Mānoa Valley, Hawaii, 2007

life into her and healed the bruise on her temple. The revived Kahalaopuna immediately went to find and plead with Kauhi. He told her to follow him again. This time he killed her at the top of the ridge separating Mānoa from Nu'uano, and again the owl revived her. This pattern continued, until the owl had revived Kahalaopuna four times. The fifth time, Kauhi buried the girl beneath a koa tree and the owl's claws became entangled in the roots and he could not save her. Another bird, the 'elepaio, had seen everything and flew to tell the girl's parents. Kahalaopuna's still warm body was found by a young chief who took it back to Mō'ili'ili, where the girl was revived by the healing waters of Mauoki – one of the famous underground pools of Mō'ili'ili. Her rescuer wanted to marry her, but Kahalaopuna remained faithful to Kauhi. The young chief tricked Kauhi into

wagering his life on the question of whether or not Kahalaopuna was still alive. Kauhi lost his wager and was escorted to a waiting imu where he was roasted alive. Kahalaopuna was given to the man who had saved her. During the night, a tidal wave swept the beach where Kauhi had been roasted. His bones were retrieved by the shark god who had caused the wave. Kauhi, in the form of a shark, killed Kahalaopuna for the sixth time as she swam in the ocean. When Kahalaopuna's parents heard of her final death, they transformed themselves into their namesakes, the Mānoa wind and rain. The father takes the visible form of a hau tree thicket, and the mother – Mānoa rain – is always with us. Mānoa people still say, oh here comes Hine with her tiresome tears! (Kobayashi 1983: 179-181).

3 HISTORIC CONTEXT

3.3 EARLY AGRICULTURAL USE

Though the exact date of earliest settlement in Hawai'i is still unclear, the pattern of development is well known. After navigation across the Pacific Ocean, Hawai'i's first inhabitants settled, "in fishing villages along the shores, near the mouths of streams." (Bouslog 1994: 7). Following additional migrations and increases in their own population, the people began to move up into the valleys, "clearing land, building houses, and planting taro and other crops. The water-rich lands of Mānoa Valley would have naturally attracted a large population of native farmers who would have cultivated taro, the islands staple food source, along the streams. As the population grew and taro cultivation expanded, the valley floor would eventually be terraced" (Bouslog 1994: 8).

By the time the first foreigners arrived at the end of the 18th century, "the valley floor was covered with hale pili (grass houses) and lo'i fed by 'auwai (irrigation ditches) leading from the streams. The banks of the lo'i were covered with ti, sugar cane and sweet potatoes. Captain George Vancouver described the agrarian community of Mānoa in 1792, "We found the land in a high state of cultivation, mostly under immediate crops of taro. The plains, if we may judge from the labor bestowed on their cultivation, seem to afford the principal proportion of the different vegetable productions" (*The Edinburgh Gazetteer* 1882: 419).

Because of the pleasant climate and bountiful valley, Mānoa was considered a favored retreat by ali'i. The fertile valley soil was used by Kamehameha I to grow the large amounts of food needed to sustain his army. Following his conquest to O'ahu in 1795, the land was given to the Mānoa chief Kame'eiamoku and passed down to his son, Ulumāheihēi, known

as Hoapili, and then granddaughter, Liliha. Liliha married the governor of O'ahu, Kamauleule (Boki), and brought to the marriage the "extensive lands of Mānoa Valley, which became one of their favorite retreats" (Bouslog 1994: 14). During the tumultuous 1820s Boki and Liliha's opposition of the spread of Christianity played a pivotal role in the social and political development of the Hawaiian Kingdom. This opposition became the root underlying the controversy surrounding the earliest commercial cultivation efforts in Mānoa Valley. Boki and a British business partner began to raise both sugar cane and the earliest coffee plants in Mānoa Valley, more than a decade before the plantation era. After heavy rains damaged the site, Boki transferred the operation into a liquor production – much to the chagrin of local missionaries and the ruling chiefess, Ka'ahumanu (Bouslog 1994: 14). The outraged Ka'ahumanu "gifted" the land to the missionaries to use as a base for their mission work. "Though short-lived and controversial, the Mānoa experiment was an important step in the maturation of commercial agriculture in Hawai'i. Seeds from the Mānoa coffee plants were used to start coffee growing on Kaua'i and in Kona on the island of Hawai'i" (Bouslog 1994: 15).

The Great Mahele of 1848 would change the way that land was divided, maintained and legally owned in Hawai'i. The new laws divided land into four categories. First, there were large parcels of land set aside for the use of the ali'i. Second, a portion of land was set aside as Crown Land to be used by the ruling monarch. Third, were public lands that were available to foreigners to purchase. Small irregular parcels were carved out of the above three groups to create the fourth group, known as kuleana; which was land available to commoners. Typically this



Fig 3.4: Taro Lo'i Agriculture in Mānoa Valley, Circa 1890

land was considered highly productive and arable. More than 30 separate landowners were listed for the Mānoa valley area in 1847 records. (Bouslog 1994: 18). The land that would eventually become the University of Hawai'i was originally farmed or controlled by Hawaiians. Native Hawaiian ownership of the Hawaiian islands declined in the 1860s and 1870s as increasing death rates and displacement of the native population accelerated. By 1907 when land for the new college was being obtained, the few remaining Hawaiians were described as squatters on the lands who needed to be evicted (Bouslog 1994: 124). In 1917, botanist Vaughan MacCaughey described Mānoa greatly abundant with agricultural lands; which grew taro, bananas, vegetables, etc. (Bouslog 1994: 20).

Cattle farms and dairies also began to be established in Mānoa, with many stone walls built to control the foraging animals who ate vegetation and trees, with one such wall along Wilder Avenue and another at University and Maile Way (Bouslog 1994: 21).

With the move of the College to Mānoa Valley in 1909 and the population growth of the island in general, the need for housing began to outweigh the need for farming lands. Mānoa Valley was one of the first farming areas converted to more profitable housing land (Bouslog 1994: 22). There were, however, many "truck farms" in the area that were located makai of the Dole Street extension until after the end of World War II.

3 HISTORIC CONTEXT

3.4 ARCHEOLOGICAL FINDINGS IN THE MĀNOA CAMPUS AREA

“The presence of ancient Hawaiian civilization in Mānoa Valley may have nearly disappeared, but it mysteriously looms in the many caverns that lace the valley walls and were once used by the ancient Hawaiians as burial places for their honored dead” (Bouslog 1994:12). Archaeologists have found multiple sets of bones within the boundaries of the campus, indicative of the use of the area over extended periods of time as burial grounds.

The first formalized archaeological investigation in Mānoa was conducted by J.G. McAllister in 1930 and is detailed in his 1933 report “Archaeology of O‘ahu” (Cleghorn 2006: 1). One site identified in the report was the Kukao‘o Heiau, believed to be in the vicinity of the Quadrangle. The small heiau measured 50 by 40 feet and was said to have been built by the menehune, then overtaken and rebuilt by Kūali‘i (McAllister 1933: 79).



Fig 3.5: Mānoa Chapel, Circa 1855

In 1989 in situ remains were found “approximately three meters north of Keller Hall on the University of Hawai‘i campus. The burial was of a young adult in a flexed position and believed to be from the early to mid 1800s” (Cleghorn 2006: 3). Details of this burial are described in the Smith and Kawachi Report of 1989.

In 1990 archaeological surveys conducted, a burial site was encountered along Dole Street near Kānewai Field Park during trench excavations for a new water main. There were 18 individual sets of remains that were recovered along with artifacts and midden. The grouping of the remains and their flexed burial position indicate a pre-contact village cemetery (Cleghorn 2006: 1). Radiocarbon samples indicate at least a single burial that pre-dates to 1490, and “all of the burials may date to the 15th century” (Hammatt and Schideler 1991: 1).

In 1992, a series of investigations took place prior to construction of the Center for Hawaiian Studies at the University of Hawai‘i at Mānoa. Several pre-contact ‘auwai, along with taro pollen, were found and radiocarbon dated the items between 1443 A.D. and 1681 A.D, and “suggested a late pre-contact use and abandonment” (Cleghorn 2006: 4). Details of these findings are described in the Liston and Burtchard 1996 report.



Fig 3.6: Aerial Photo of UHM Campus, Circa 1920

3 HISTORIC CONTEXT

3.5 TERRITORIAL PERIOD 1907-1940

A zeal for universal literacy was instilled by the Protestant missionaries from New England (Kamins 1998: 3). At time of annexation (1898) there were 192 schools, 132 public school, and three private high schools on O‘ahu: Punahou, St. Louis, and ‘Iolani. Affluent families could afford to send their sons to universities on the mainland. A small but growing middle class of storekeepers, school teachers, book-keepers, supervisors, and mechanics had similar ambitions for their children (Kamins 1998: 3).

The origin of the College of Hawai‘i, the predecessor of the University, may be traced back to the 1862 Morrill Act funds for “land grant” colleges. The federal government could not grant land in Hawai‘i as it did for most other states, but there was a guarantee of \$25,000 a year for several years. Hawai‘i responded with a legislative action in 1901, but the law did not pass for several years. Resistance came primarily from leaders of the sugar industry who were concerned about the effect on their labor supply and their tax burden.

The final decision was made that an agricultural college would be engaged in “intensive research, not in extensive farming” and located near the Agricultural Experiment Station near Punchbowl on O‘ahu. Passage of the final bill was aided by the simultaneous passage of a bill in the U.S. Congress that amended the annual grants for agricultural colleges to \$30,000. In addition, the new bill allowed for an additional \$5,000 per year until the grant reached \$50,000 annually. The local legislature quickly allocated \$10,000 for college buildings and \$15,000 for salaries (Kamins 1998: 5).

“In 1907 Hawai‘i’s Territorial Legislature passed ‘An Act to Establish the College of Agriculture and Mechanic Arts of the Territory of Hawai‘i.’ The purpose of the College was to give thorough instruction in agriculture, mechanic arts and the natural sciences. A temporary site on Victoria Street between Beretania and Young Streets was selected for the new institution of higher learning. Willis T. Pope became the acting dean and classes commenced in 1908” (Bouslog 1994: 20).

A new, L-shaped wooden building was constructed on Young Street with classrooms, laboratories, offices and storerooms at a cost of \$4,320 (Kobayashi 1983: 4). Later this building would be moved to the Mānoa campus where it would serve as a chemistry laboratory. By September 1908 more than 40-acres in the Mānoa Valley had been acquired by exchange and territorial grant, with more than 20 additional acres under negotiation. Though the land itself had been acquired, it was in no condition for immediate building. Much of the land was covered with loose rock walls that had once outlined original fields. Other parts of the land were occupied by Hawaiians (Kobayashi 1983: 183). Preparing the Mānoa lands acquired for the campus took enormous toil. Clearing began in 1909 and would continue for decades as the school developed (Kamins 1998: 12). Frederick G. Krauss, who came to the college in 1910 to be the professor of agriculture, described the heavy labor.

When the college took over the tract of land that was to become the future [experimental] farm, it was all cut up into small stone-walled fields, ranging in area from one-tenth to one-fourth of an acre. These fields were farmed by individual Chinese and Hawaiian tenants. . . . Most of the tillage was done



Fig 3.7: Ko'olau Mountains, Mānoa Valley, Hawaii, 2007

with dynamite and crowbar! 5,000 cubic yards of stone was removed . . . from the stone walls alone. Besides that there was a large amount of surface and buried rock. 22-acres were cleared during the first 10 years. . . . The aggregated rocks made a pile at the future site of Hawai'i Hall five feet deep, spread over an acre. The rock was divided by quality and sold to builders, contractors and as ballasts for ships for ten cents a wagonload. Rocks covered with moss were considered 'high-class' building material and sold for 25 cents a wagonload (Krauss 1937: 20).

The first comprehensive campus plan was completed in February 1909 by John Mason Young (Kamins 1998: 13). He was born in Lewisburg, Tennessee and was educated at the University of

Florida and Cornell University (Kobayashi 1983: 22). In 1908, he came to Hawai'i to be the only engineering professor amongst 13 faculty when the College opened its doors (Kamins 1998: 9). Young's background was evident in his campus plan that mirrored the Cornell campus. The plan oriented buildings around a large quadrangle on an east-west axis that stretched from what is known today as University Avenue, all the way to Mānoa Stream and Wa'ahila Ridge. Buildings included were a law school, medicine, veterinary science, agriculture, chemistry and physics, a humanities hall, as well as a gymnasium, chapel, YMCA, power plant and other necessary campus services. While this plan was never built, its influence is seen in the Quadrangle at the heart of the campus and the primarily east-west orientation of most buildings.

3 HISTORIC CONTEXT

3.5 TERRITORIAL PERIOD 1907-1940

This quadrangle, like others found on college campuses all over the United States, was determined by the Morrill Act that required land grant colleges to occupy large squares or rectangles of empty government land and to be arranged along the cardinal points of the compass. This organization did not respond specifically to the land orientations of mauka (mountain) or makai (ocean) that are typically used in Hawai'i and was criticized as "straight rows of rectangular buildings that made no concession to the flowing contours of Mānoa Valley" (Kamins 1998: 9).

The first buildings constructed on the campus were simple and intended to be temporary structures although they lasted more than a decade. These included a poultry shed and a cow barn with an attached farm office in 1910. Two wooden structures were moved from Young Street to serve as a shop and chemistry laboratory. "Students in agriculture heard their lectures on Young Street but did their lab work on the Mānoa farm campus, helping with clearing, plowing and planting of the fields" (Kamins 1998: 13).

In 1911, the legislature shortened the name of the College of Agriculture and Mechanic Arts of the Territory of Hawai'i to its more common name, the College of Hawai'i and allocated \$75,000 for the first permanent building. The cornerstone for the Main Hall, or Hawai'i Hall as it was renamed in 1922, was laid on January 22, 1912 (Kamins 1998: 14). Main Hall provided lecture rooms for the more than 100 enrolled students and faculty offices. In addition, it housed "a library, dining, sewing, locker rooms, laboratories for cement, electricity, farm machinery, dairy production, home economics, bacteriology, entomology and zoology as well as English,

French, and German classes that were considered the nucleus of liberal education" (Kamins 1998: 14). Hawai'i Hall was the site of the tragic death of a student in a 1923 flag rush, which effectively ended upperclassman "hazing" of freshman on campus. Today, Hawai'i Hall houses the Chancellor's Office, the school of Social Work and the University Relations Office. The exterior of Hawai'i Hall was remodeled in 1980-81 and again, along with the interior in 2001-2002.

In May 1914, the Governor of Hawai'i appointed the first woman to the Board of Regents, Mrs. Clarence Ashford, wife of the first circuit court judge. As a former student of the College herself, she set about to improve the campus. She persuaded Joseph Cooke of Alexander and Baldwin to contribute \$1500 to clear and grade a large wild area of the campus and converted it into Cooke Field – the first athletic facilities on campus. The following legislative session, appropriations to the campus doubled and enrollment increased by more than 50%. There were no paved roads on the campus. Dirt paths were covered with gravel or mud from the plentiful Mānoa rain. The mud caused considerable problems for students and was dealt with in various ways: "The problem of removing mud that collected on one's shoes in excess quantities along Maile Way was solved practically by having sticks available at intervals that coincided with the ultimate mud that could be collected by one pair of shoes. These sticks were used to scrape off the mud, then stuck upright in the ground for the use of the next person" (Kobayashi 1983: 8).

President Dean himself used his horse and buggy to deliver faculty members to Hawai'i Hall in the wet season. Campus improvements continued

under the watchful eye of Professor Arthur Keller. “Keller proposed a research project in which an experimental road would be constructed on campus in order to test different kinds of road material. He got the City and County of Honolulu to loan its road machinery, and the Territory to contribute \$5000 for materials. The resulting paved road, complete with curbing, was 20 feet wide and ran 1,600 feet from Metcalf Street to Maile Way”(Kobayashi 1983: 8).

Keller and his students also completed a campus drainage and flood control system for lower Mānoa valley. After the disastrous campus flood of 2004, his portrait fell from the wall of Keller Hall where it had hung for 44 years, confirming the belief of some that Keller’s spirit haunts his namesake building.

With the clearing of the campus well underway, the attention of the administration turned to beautification of the campus. In 1914, Joseph Francis Rock was appointed to the Buildings and Grounds Faculty Committee and charged with the responsibility of developing 20 acres of campus into a botanical garden. Over the next four years he collected from around the world the starts and seeds of a great variety of plants, about 500 species in all, for ornamentation of the campus and the botanical instruction of its students (Kamins 1998: 15). Joseph Francis Charles Rock was a skilled, energetic & resourceful botanist. His “Notes upon Hawaiian Plants with Descriptions of New Species and Varieties” was the first research publication of the College. Before his death in 1962, Rock had gathered enough plants to create a campus-wide botanical garden. Unfortunately, by that time, the flora was being pushed aside by buildings that did not begin to match its beauty (Kamins 1998: 14).



Fig 3.8: UHM Campus, 1932

3 HISTORIC CONTEXT

3.5 TERRITORIAL PERIOD 1907-1940

The College of Hawai'i Campus was still in its early development when World War I broke out in 1914. Life in Hawai'i continued with very little indication that the rest of the world was at war. The war actually helped to stimulate the Hawaiian economy by virtue of the high price of sugar – the main industry of the islands. The only way to reach the islands at this time was by boat. The first transoceanic plane flight to Hawai'i would not occur until June, 1927 from Oakland, California to Honolulu, Hawai'i. Routine flight service to Hawai'i wouldn't come about until 1935 on Pan American Airways. The remote location of the islands compared to the front-lines did not, however, lessen anti-German sentiment found in Hawai'i. The German's were also a presence in the Pacific in Micronesia.

The regents of the college directed President Dean to send a letter to all faculty members requiring them to affirm their support for the United States. Two faculty members responded negatively: one opposed the war and the other was a German citizen who professed loyalty to her "conscience and not to any government at war." President Dean ultimately decided to ask for the resignation of one faculty member and the other one's contract was not renewed. German language classes would not be taught at the college again until 1927. The University also proposed military instruction for male students and requested rifles, bayonets, ammunition and a noncommissioned officer to train the students, but all was denied because the Army could not spare the equipment or personnel (Kamins 1998: 17).

The first building of a grouping that would eventually be known as the Young Engineering Quadrangle, was erected on campus in 1915. The five original buildings constructed between 1915 and 1928 are

among the oldest buildings in existence on campus and originally formed an "H" shape makai of Hawai'i Hall. They housed the first engineering department on campus and were designed by Arthur Keller who became Dean of the College in 1920. It wasn't until 1965 that the complex was officially named after John Mason Young, who was the first professor of Engineering on the campus.

From a College to a University

Local support for the college grew quickly following World War I. In 1919, the college reached a milestone – territorial appropriations to the school exceed federal grant money for the first time. There was increased enrollment in the new sugar technology program that prompted additional support from sugar developers in the legislature. An additional \$142,000 was appropriated for a chemistry, physics and sugar technology building, Gartley Hall. A local Hawai'i-born Chinese man, William Kwai Fong Yap, was influential in expanding the influence of the college. As a father of eleven children, he was concerned about the availability of higher education on the island and drafted a petition to expand the college into a university that could bestow graduate degrees (Kobayashi 1993: 25).

"Whereas, there is great need of opportunities for a broader education for our young men and women to fit them for lives of the greatest value to Hawai'i and our nation, and whereas, these Islands are located at a point where the civilization and commerce of the United States, the Orient and the Islands of the Pacific meet, and are therefore at the strategic point for a University unique in its opportunities, and whereas, a University of broad scope and facilities should attract students from the Mainland and act as



Fig 3.9: First UHM Faculty, Circa 1910

a promotion asset of the highest order. . . “ (Kamins 1998: 17-18).

Yap took his petition to the legislature in January 1919. The legislature decided they were not yet prepared to press the issue, but would give their support if the people of the territory were in favor of such a proposition. Yap collected 438 signatures, with many prominent business and community leaders among them. Support for the proposition was varied, with most vocal opposition coming from the plantation industry. Bill 76 was approved on April 29, 1919 and the College of Hawai'i became the University of Hawai'i. The University was now composed of two colleges: the College of Applied Science housed programs in agriculture, sugar technology, home economics, and engineering; the

College of Arts and Sciences offered bachelor of art degrees in a variety of subject areas including natural, physical, economic and political sciences, language, mathematics, history, literature and philosophy (Kamins 1998: 19-20).

Research opportunities for the new University developed quickly. In 1924, the University became the administrator for the research arm of the Hawaiian Pineapple Cannery Association (later called the Pineapple Research Institute or PRI) and laboratories located on campus in Krauss Hall. These research alliances helped the new University to flourish academically and in public opinion throughout the islands. In 1928 the Association of American Universities accredited the new programs, ensuring that University of Hawai'i degrees and

3 HISTORIC CONTEXT

3.5 TERRITORIAL PERIOD 1907-1940

course credit would be generally recognized throughout the academic world. The University's first doctoral program, in tropical agriculture, was in the planning stages and student enrollment exceeded 1,000 students. The expansion of the University was not only in terms of academics. In 1930 Governor Farrington set aside a 190 acre tract adjoining the University farm at the far end of the campus – tripling the size.

The University experienced many “firsts” over the next several years. The first campus cafeteria was built in 1921 near the back of George Hall. The first men and women's dormitories were built in 1921 and 1922 respectively. Their construction marked the growth in the number of outer island students entering the University (Kobayashi 1983: 30). The first swimming pool was constructed in 1921 on funds raised by student assessments and sandwich sales. Students paid a “hefty amount, \$25 each”

to fund the \$20,000 project, which replaced the trolley ride to Waikīkī for swimming lessons taught by a University professor (Kobayashi 1983: 30). Other permanent facilities began to spring up on campus during this time as well. Both Gartley and George Halls were built in the Quadrangle, between 1922 and 1925. Gartley Hall was built to be the new home for chemistry and physics, whose overcrowded programs found students trying to complete laboratory work in busy corridors.

George Hall was an exciting development for the budding campus – the first building to be devoted entirely to books – and originally named the Library Building. The new library took the place of an overcrowded room in Hawai'i Hall where books had overflowed into nearby offices, classrooms and any other available space. After the completion of Sinclair Library in 1956, the library building was remodeled into classroom and office space and



Fig 3.10: The Quad Buildings, 1937

renamed George Hall, after a former Dean of the College of Arts and Sciences.

Following a student petition, which garnered more than 600 signatures, the Hawai'i Territorial Legislature appropriated funds to build the first gymnasium in 1928, makai of the Quadrangle. In 1929 a new Biological Sciences Building was built to house facilities for zoology, botany, entomology, geology, and anthropology. Later the building was renamed Dean Hall after Author Lyman Dean, second president of the University. The University's first auditorium, Farrington Hall, opened in 1930 with a capacity of almost 500 students, at an estimated cost of \$30,000. It was here that many theatrical productions were staged for the community, including the University's first Kabuki performed in English. The architect, Ralph Fishbourne was also responsible for the design of other campus projects including Founder's Gate and Andrews Outdoor Theatre. In a time period of slightly more than a year, five buildings had been built on campus. With the expansion of academic programs, physical campus size and resources and buildings, the future of the newly created University was indeed bright.

Impact of Great Depression

Because of Hawai'i's geographical seclusion, the effects of the Great Depression were not immediately felt in Hawai'i, and took almost two years to become evident. In 1931, one of Hawai'i's largest industries – pineapple – began to falter in sales, with the price falling to less than operating expenses. Sugar production also decreased and warehouses of pineapple and sugar sat in Hawai'i, unshipped to the mainland. The University felt the pinch since Territorial budget appropriations were cut by 45

percent. Some faculty positions were eliminated and other faculty had their salaries reduced by at least ten percent and contracts were extended to 11 months instead of nine, at the same pay rate. Tuition increased from \$30 to \$100 a year and enrollment dropped by five percent. Construction came to a halt, with the exception of facility projects that were privately funded.

Privately funded projects included a men's dormitory and social center, paid for by the Atherton family who purchased a building across the street from the University. In conjunction with the YMCA, the building worked with the University to provide desperately needed housing for students. Additional campus beautification projects were built to honor the merger between the Territorial Normal School and the Teachers College, including Varney Circle and fountain as well as Founders Gate.

Free labor was also obtained from O'ahu Prison inmates who contributed to the construction of storm drains, stone retaining walls, sidewalks and other infrastructure around campus as well as lawn maintenance (Kamins 1998: 30). A single-story Fruit Fly Laboratory Building, known as Building 37, was erected in 1931 on the diamond-head side of the Engineering Quadrangle. The building was leased by the U.S. Department of Agriculture until 1973 when they moved off campus. The building also served as a cashier's office and today is the home of the Information Technology Services department.

Founding of the Teachers College

Even though the Depression was in full swing, the University expanded due to the merger with the

3 HISTORIC CONTEXT

3.5 TERRITORIAL PERIOD 1907-1940

Territorial Normal School in 1931. The training of elementary school teachers in Hawai'i was the responsibility of the Territorial Normal School, a separate entity from the new University. A 1920 federal survey had recommended a merger of the two, and the Prosser study of 1929 had a similar recommendation. Prior to 1931 a college degree was only required for those planning to teach in secondary education. When Benjamin Wist was appointed as principal of the Normal School in 1921, he resolved to substantially change the education of teachers throughout the state. He also wanted to reduce Hawai'i's dependence on mainland teachers by improving the education for local teachers (Kamins 1998: 35-38).

It was Wist's desire to have a closer affiliation with the University, and he understood that the best way to accomplish this was by relocating from the slopes of Punchbowl to a new facility near the campus (Kobayashi 1983: 51). A 15-acre plot, formerly a pig farm, on University Avenue between Dole and Metcalf streets was acquired. Architect C.W. Dickey designed an elaborate complex of buildings, of which only one was built and later named Wist Hall. In 1931, the University and Normal School officially merged, forming the Teachers College. Property of the Normal School, including Wist Hall, was transferred to the University (Kamins 1998: 38).

The new Teachers College had merged right in the middle of the depression and under strict budgetary constraints; consequently the college maintained rigid quotas to match the potential teaching jobs available locally in the Department of Public Instruction. The new college continued to assert itself on the growing campus, but was

often unable to garner the support necessary to fund the facilities and programs it required. The Teachers College relied on the ingenuity of its dean, Ben Wist and his successor, Hugh Everly to lobby political representatives to meet their needs. Often acceptance of children in the highly successful Lab school was directly tied to political benefit to the Teachers College (Everly 1991: 252-258).

Several features on campus were added to commemorate the merger of the Normal School and the University into the Teachers College, with the first being Founders Gate. Plans for the Gate's construction were formulated in the Spring of 1931 by students, faculty and alumni of both institutions, several months before the actual merger. Money for the Gate's construction was provided by private fundraising – much of it in the form of one dollar contributions by students, faculty and alumni – to raise the \$2,664 dollars needed. Contributions were limited to one dollar each to ensure that the Gate would truly be a University community project. Construction began in 1933 during the Depression years and was completed for the exact cost of the amount collected, \$2,664.

Varney Circle and fountain were added in 1934. They were paid for by the Normal School's class of 1929 and by subsequent classes after the school became part of UH. A bronze plaque on the fountain's rim memorializes Ada Susan Varney, longtime history teacher in the old Normal School (1911-1930) (Kamins 1998: 31). The Normal School dedicated the fountain to her following her death in 1930. Varney Circle divided the College (Quadrangle) from the College of Agriculture. At one time, Varney was the outskirts of the campus, where the University farms began. Today it is a



Fig 3.11: Mid Pacific Institute and the Quad Buildings Complex, 1939

central location, where the Hawai'i Hall Quadrangle meets the mall, the new part of campus (Kobayashi 1983: 57). The fountain is on axis with the very first campus building from 1912, Hawai'i Hall, as well as Miller Hall, constructed in 1939. McCarthy Mall was added in 1962 to the campus and emphasizes the alignment of the campus between the two major open spaces of the Mall and the Quadrangle (Kamins 1998: 95).

Varney Circle and its fountain have become a major University landmark, but was originally intended for another site - at the front of the Administration Building of the Normal School, located on the slopes of Punchbowl. When the school became a part of the University's Teachers College in 1931, a decision was made to locate the memorial fountain

its present location. The fountain has been a favorite site for many pranks: inking of the water, dumping soap powder, cars have been transported on top of the fountain, children have played in the fountain, cows drank from it, couples threw coins in for good luck, as well as being the site for campus gatherings and protests (Kobayashi 1983: 59).

Andrews Outdoor Theatre, a privately funded project was completed in 1935 on a site that had previously been used as a garbage dump. "With a seating capacity of 5,500, the bowl has 14 horse shoe rows of stone seat which surround a grassy lawn and face a stage area with a backdrop landscaped with Hawaiian flora. The stone used for the seat came from campus sites with additional quantities from quarries at Fort Ruger" (Kobayashi 1983: 59).

3 HISTORIC CONTEXT

3.5 TERRITORIAL PERIOD 1907-1940

The graduating class of 1935 was the first to hold commencement ceremonies in Andrews Outdoor Theatre. The lush landscaping on the stage was designed by Richard Tongg, former UH student and landscape architect.

The original Gilmore Hall was constructed in 1935 and was funded, in part, by the federal Public Works Administration. Gilmore, the agricultural building, was built on the edge of campus, at an angle to face both Hawai'i Hall and Farrington Hall between the main campus and the campus farms. The building was distinctive with its green and blue roof tiles, hand-made by pressing clay around the thigh to form arches.

The Student Union Building, or Hemenway Hall as it would come to be known, marked the first major campus building set aside for non-academic activities. The building was completed in 1938, with a total cost of about \$85,000. The money was raised in a unique fashion, with students contributing \$12,000, faculty and alumni \$10,000, but major funding came from the Board of Regents, many of whom made sizable personal donations, totaling \$60,000. The main room of the Student Union building housed kitchen facilities, a dining room and lounges. Student offices, including one for the Ka Palapala (yearbook), student government offices and the student council were found on the second floor.

Finally in 1938, Crawford Hall was built and the form of the Quadrangle began to actually take shape. Its doors opened for social sciences classes in the Fall of 1938. The building was completed at a cost of approximately \$35,000 and was also supported by federal funds.

By the close of the 1930s the effects of the Great Depression were starting to disappear. The campus was beginning to prosper, enrollment returned to its pre-1931 level and then surpassed it, approaching 3,000 students in 1940. Academic teaching positions were modestly filled to address depression vacancies and cutbacks. By 1940, several professors had been recruited who would become stalwarts on campus, teaching for many years, including: Bruce White, future dean of the Teachers College, philosopher Charles Moore, historians Ralph Kuykendall and Shunzo Sakamaki, and engineer W. J. Holmes. Buildings would later bear their names.

Programs that began during the Depression gained support and momentum, including nursing, social work, as well as the establishment of an Asian philosophy center. President Sinclair lobbied vigorously and persuaded regents and administration to create the Oriental Institute. "It is confidently expected that the Institute will be a potent force for international understanding and peace in the Pacific" (Kamins 1998: 40).



Fig 3.12: Makai view UHM Campus, 1945

3 HISTORIC CONTEXT

3.6 WORLD WAR II AND POST WAR DEVELOPMENT 1941 - 1948

Peace was shattered on the morning of December 7th 1941, when the Japanese launched a surprise attack on Pearl Harbor. The attack took 2,388 lives and wounded almost 1,200 more, destroyed five US battleships and 188 aircraft. Bombs and antiaircraft shells fell a mile from campus (Kamins 1998: 42). Martial law was declared less than three hours after the bombing and classes ceased for more than two months (Kobayashi 1983: 79). The campus ROTC, largely composed of Japanese-Americans, was immediately ordered into active duty. The Army commandeered the facilities and supplies required from the University and others across the island. Bruce White, then Associate Professor in the Teachers College, recalled that on December 8th an Army Sergeant, surveying the campus and Castle Memorial Preschool, noticed on the lanai of the newly completed building brand new plumbing fixtures, still in their boxes ready for installation. Overriding protests, he had the boxes

carted away as necessary for the war effort. After the boxes were opened and found to contain flush toilets and wash basins of kindergarten size, they mysteriously reappeared on the lanai (Kamins 1998: 42). On December 11th, Acting President Arthur Keller received a letter from the Corps of Engineers stating that they would be taking over Crawford Hall, Gartley Hall, Hemenway, Atherton, as well as Teachers College. These facilities were used as evacuation shelters, correspondence offices for the training of Army radio technicians, and even theatrical Army entertainment for troop morale.

Most profoundly affected by the war were those ROTC cadets, most of them Nisei (second generation Japanese Americans). "Radio announcements on December 7th had called them to arms and their first order of business was to watch for enemy paratroopers who might be on the ridges bordering campus. For two months they remained on duty



Fig 3.13: Pearl Harbor Bombings, 1941

defending buildings or areas on O’ahu selected by the armed forces command, becoming the only ROTC unit in the nation to serve actively in World War II” (Kamins 1998: 43). In January, without warning or explanation, all volunteers of Japanese ancestry were discharged from the military. “Their draft status became 4C – enemy alien. They petitioned the governor, offering their service to the nation in wartime, and a new unit was formed, ‘Varsity Victory Volunteers.’” They constructed bridges, strung barbed wire on beaches, blasted rock at the quarry until they were finally accepted into a special all-Nisei Army unit, the 100th Infantry Battalion.

The construction of Miller Hall started before the war, but only parts of the first and second floor were completed. Prior to the construction of Miller Hall, most of the home economics courses were held on the top floor of Hawai’i Hall. In 1958 the Home Economics Building was renamed Miller Hall in honor of Carey Miller and her many contributions to the field of nutrition at the Mānoa campus. As the outcome of the war began to look more positive, resources were allocated toward the completion of the building.

On the west side of campus, adjacent to the Teachers College, Castle Memorial Hall was constructed in 1941. In November 1939, the University was presented with a \$300,000 gift from the Samuel and Mary Castle Foundation for the building of a training center for kindergarten and nursery school teachers. Samuel Castle wanted a kindergarten “to be the embodiment of the best and most enlightened education” and approached his friend and leader in the field of education, John Dewey. Dewey had recently begun a laboratory



Fig 3.14: Newspaper Headlines December 7th, 1941

school in Chicago in association with the University of Chicago, and the school in Hawai’i was patterned after this precedent. The building with its wide lanais, spacious courtyards and open classrooms formed the basis for what would become one of the most progressive schools in Hawai’i.

As the laboratory school began to expand at the Teachers College, there was a need for additional space to house high school students. University High School 1 was the only civilian building added to the campus during the war. The building was constructed of wood – presumably because of the war time ration on metals that would have been necessary for concrete construction. The building was completed at a cost of approximately \$89,000. University High School 2 was completed in 1948,

3 HISTORIC CONTEXT

3.6 WORLD WAR II AND POST WAR DEVELOPMENT 1941 - 1948

again with wood construction, and was the first post-war building completed on campus. With the completion of these two buildings, it became possible to be a student on the campus from preschool through graduate school.

World War II Recovery

As the threat of another attack on Hawai'i began to decrease, following the American victory in the Battle of Midway in June, 1942, increased numbers of military personnel began to seek out classes at the University. New classes were added including chemical warfare, first aid, economics of warfare, the history of warring nations, nutrition, etc. Classrooms and laboratories that had been taken for military use were gradually restored to the campus, and courses like anthropology and zoology started up again.

As the enrollment and faculty numbers began to swell, a nagging concern reappeared on campus. Administration worried that faculty members, in each of the now 22 colleges, directed their courses and teaching particularly toward their own students and not necessarily to those of other colleges, for example "the English faculty in the Arts and Sciences did not necessarily relish teaching classes in composition for students in engineering, and vice versa, the engineering department didn't regard its math classes for students in the Teachers College to be as important as those for their own engineering students." New University President, Gregg Sinclair, appointed a faculty committee to study the problem. They proposed a solution involving reorganization of the entire campus, making departments subject to the University as a whole, rather than to individual colleges. The more complex administration system was unanimously approved by the Faculty Senate

Fig 3.15: Pearl Harbor Bombings, 1941



and the Board of Regents and was indicative of the campus change from a small school mentality to that of a much larger University (Kamins 1998: 49-50).

In 1945, Sinclair had a survey completed of the postwar needs of the University, including facilities and equipment. The study concluded that existing buildings and equipment could accommodate approximately 2,200 full-time students. With the expectation of more than 3,000 students, the administration lobbied the territorial legislature to provide funds for the construction of a new chemistry building, an administration building, six dormitories and a library. The legislature responded by endorsing a ten year building program and appropriated funds to purchase 111 acres of land adjacent to the campus (Kamins 1998: 51).

Returning veterans quickly boosted the University population to more than 3,000 full-time students. The GI Bill provided educational benefits for veterans including tuition at \$50/semester, books, supplies and enough cash for typical student life. The returning GI's did more than boost enrollment at the campus, they had a profound effect on the campus environment and on its future development. "The provincial quality of the campus was irreversibly changed by the vets. Before the war, only a rare and privileged student had experienced the world outside Hawai'i. Now most campus gatherings would include men, and often a woman or two, who had experienced the mainland, Italy and France, occupied Japan, or islands across the Pacific" (Kamins 1998: 52).

By 1948 enrollment had ballooned to a high of 5,000 students. Campus facilities were simply inadequate

to meet such a need. More than 60 former military barracks buildings were moved to the campus to house a variety of programs including "agriculture, art, ASUH offices, athletics, engineering, faculty housing, music, ROTC, snackbar, speech, teacher education, veteran's housing, and zoology" (Kobayashi 1983: 83). These "temporary" structures turned out to be not so temporary as classes more than two decades later were still in residence (Kamins 1998: 53).

Following the war, campus building projects focused on essentials: a much needed administration building, formal library and a chemistry building (Kamins 1998: 63). Because of the enrollment explosion on campus, the need for a new administration building on campus was immediately apparent. Plans for the University's first building in the Hawaiian Modern style was designed by architect Vladimir Ossipoff and was completed at a cost of \$379,600. Called simply the Administration Building, it was later renamed Bachman Hall in honor of Paul Bachman, the University's fifth President (Kobayashi 1983: 90). Bachman Hall was the site of several campus protests, including the May 1968 Oliver Lee student sit-in (Kobayashi 1983: 94-95).

President Sinclair had emphasized the need to provide a formal University library to replace what is now called George Hall, which was overcrowded and functioned poorly as a library. Following the war a \$4,000 loan was obtained to finance the design process and a local firm, Lemmon Freeth and Haines Architects was chosen. The architects and head librarian traveled to the mainland to visit libraries and conferred regularly over a year planning a facility that would best suit the site, the needs of the campus, and the budget. Budget

3 HISTORIC CONTEXT

3.6 WORLD WAR II AND POST WAR DEVELOPMENT 1941 - 1948

limitations necessitated the elimination of one floor of the cross-shaped building and shorter wings. Last minute changes in site and labor disputes caused additional delay, with the Sinclair Library finally opening for service in 1956 (Kobayashi 1983: 100). Campus expansion during this time was not limited to physical facilities. Several new programs emerged on campus between 1948 and 1951 including Social Work, Nursing, Business Administration, as well as Pacific and Asian Studies Programs (Kamins 1998: 61-62).

The new chemistry building was originally planned to be constructed adjoining Gartley Hall in the original Quadrangle. Leonora Bilger, chemistry professor, and others assessed the spatial requirements of an increased enrollment in coming years, and recommended building a new structure in the open space of the farmlands rather than between existing structures on the Quadrangle.

The physical campus continued to expand and change. The Lyon Arboretum consisting of 124 acres, was given to the University by the Hawaiian Sugar Planters' Association (HSPA) in 1953, with the provision that the land would only be used only as an arboretum and botanical garden for research, education and public service (Kobayashi 1983: 85). In addition, the 78-acre quarry area, makai of the campus, was purchased from the Bishop Estate in 1953. Quarry land immediately provided a site for a new gymnasium and a new outdoor athletic field, as well as additional space for future construction (Kamins 1998:64).

Adjacent to this new lower campus area was the proposed first segment of a freeway system for the island. The campus and surrounding neighborhoods

were drastically altered by the new freeway. The very first section of the freeway, that would eventually stretch across the entire island, was built makai of the University. Constructed in 1954, the freeway had entrance and exit ramps on University Avenue and Dole Street (Kobayashi 1993: 85).

In the mid-1950s the effects of budgetary restraint were beginning to become more evident around the campus. Holmes, Dean of Engineering, reported that "the University had the lowest physical plant investment per student of all land-grant colleges, and it looked it" (Kamins 1998: 67). The 1955 report of the Western Association of Schools and Colleges, responsible for college accreditations, warned that "an accredited university cannot continue to operate on such meager territorial appropriations." It found that the average operation cost per student in Mānoa - \$550, was the lowest of 18 western colleges of comparable size and program. Of all land grant schools in the United States at the time, only three – all colleges for African-American's in the South – received smaller legislature appropriations than the \$417 per student allotted to the University. None of the other land-grant colleges had as high a student-faculty ratio.

The addition of Henke Hall to the campus in 1956 marked the first joint-venture program between the University and the federal government. The building housed the Agriculture program, focusing on research and experimentation that would improve agriculture in Hawai'i. One-third of the University population at the time majored in agriculture and the demand for space was ever-increasing. The program became a joint-venture with the federal government in 1926, thanks to the expansion of the Smith-Lever Act. Passed in 1914, the act

had allowed for federal funding to be combined with state funding for land-grant universities for cooperative extension services in program areas such as agriculture, home economics and related subjects (Smith-Lever Act of 1914). Built mauka and diamond-head of Bilger Hall, Henke expanded the physical campus significantly. The facility was named for Louis Henke, University professor, who taught everything from animal husbandry to soil physics and fertility, and sugar cane production. Henke's research with sugar cane waste and pineapple bran led to low-cost feed for livestock which greatly reduced Hawai'i's dependence on imported feed, as well as provided a use for island waste products. In March 1957 at the University's 50th anniversary celebration, Henke Hall was dedicated by the U.S. Secretary of Agriculture, Ezra Taft Benson (Kobayashi 1983:103-104).

A resolution was introduced to the territorial legislature in 1955 asking for appropriations for a new men's dormitory, dedicated to the students who had died in WWII. The resolution noted that, "existing dormitory units in old WWII shacks were disgraceful and that 45% of the full-time student body was composed of students from neighbor islands, rural O'ahu, the mainland or other nations." An allocation of \$350,000 allowed for two dormitory units, with the first, Johnson Hall A, completed in 1957. The building was named after John A. Johnson, a captain of the 100th Battalion who died in Italy in 1944. A former Punahou and UH student, and a business and economics graduate, Johnson was active in student athletics and well respected across campus (Kobayashi 1983: 104).

A new athletic facility was proposed after a roof leak flooded the old gymnasium and led to the



Fig 3.16: Students on Hawai'i Hall lanai, Circa 1945

cancellation of a basketball game in 1956. The recently obtained quarry site was chosen for a new facility. The newly constructed Klum gymnasium was named after Otto Klum, a football coach for 19 years, and athletic director and chairman of the physical science department. Klum is credited with developing some of the greatest athletic teams in Hawai'i and was the first to take teams to the mainland by ship to compete. Klum gym and Hemenway Hall are remembered by students as the sites of long registration lines prior to the advent of computers (Kobayashi 1983: 170-71).

3 HISTORIC CONTEXT

3.7 EARLY STATEHOOD 1959 - 1970

Hawai'i's statehood in 1959 became a catalyst for growth. "With statehood, and coincidentally the advent of jet air travel, Hawai'i seemed to move a thousand miles closer to the mainland, to become more visible, easier to visit, more attractive for residence, work and investment. The island economy boomed and local government revenues swelled, helping sustain the University in a decade of enlargement and improvement" (Kamins 1998: 76). Statehood brought about a radical shift in the relationship of the University to the land it occupied. Under territorial government, the land was really on loan; the Territory held the title. The University became a corporate body and could hold the land in fee. The new state constitution stated, "The University of Hawai'i is hereby established as the state University and constituted a body corporate. It shall have title to all the real and personal property now or hereafter set aside or conveyed to it." One effect of such legislation is that the State may occasionally choose to lease land to the University, rather than set it aside, because once given, such land became University property (Kobayashi 1983: 184).

Statehood also brought seats in both houses of Congress, the House of Representatives and the Senate. These seats were able to bring more than two million dollars in grants to the University for support under the land-grant appropriations. "Federal funds were also appropriated to complete construction of the Hawai'i Institute of Geophysics, the University's first highly sophisticated research facility" (Kamins 1998: 76). There was literally a campus explosion of growth following statehood and coinciding with Laurence Snyder's five year term president from 1958-1963. "Number of students, courses, degree programs and the size

of the annual appropriation approximately doubled. The growth was most obvious on the ground, as building construction on an unprecedented scale sought to accommodate the growing student body and faculty. In five years 37 new buildings went up at Mānoa" (Kamins 1998: 70).

The area beyond Varney Circle, previously the University's dairy farm and home of the Tropical Agriculture program, opened for development and quickly became home for new programs and program expansions. "Abandoned was the Neo-classic symmetry of the Quadrangle on the western side of Hawai'i Hall; the architectural future of the campus was to be the pursuit of variety – unfortunately not always with the attainment of beauty or even utility in building design . . . many of the new buildings rose above the tree line, which had hitherto generally defined the height of campus construction" (Kamins 1998: 70).



East-West Center

The most dramatic consequence to the University from statehood was the creation of the East-West Center. “In 1960, the United States Congress established the East-West Center on the Mānoa campus whose purpose was to promote better relations among the peoples of Asia, the Pacific, and the United States, by promoting the interchange of ideas, and offering various educational and research programs for its participants” (Kobayashi 1983: 126). The idea began with a speech by Lyndon B. Johnson, Senate majority leader at the time, who discussed the need to foster understanding among nations. Johnson rhetorically asked, “why there should not be established in Hawai‘i an international institute where intellectuals of East and West could meet to exchange ideas.”

Because of earlier proposals of a similar idea that had been shelved during the war, the University was able to broker a quick response and the East-West Center was born, with a 10-million dollar initial federal appropriation, as well as \$800,000 from the Hawai‘i legislature. An amendment to the Mutual Security Act of 1960 allowed the center to be established in Hawai‘i (Kamins 1998: 77). The center was temporarily housed in the Hale Aloha dormitory building, while its buildings were under construction. Following the assassination of President Kennedy, the decision was made to name the theater building after him. The first five buildings were Abraham Lincoln Hall, Thomas Jefferson Hall, Hale Mānoa, Hale Kuahine, and John F. Kennedy Theatre. These facilities were designed by world-renowned architect, I.M. Pei in conjunction with local architects, and constructed at a cost of about \$8,000,000. Originally the theater was used by the East-West Center, but was later traded with the



Fig 3.17 (opposite) and Fig 3.18: Hawaii Statehood Ceremony at Iolani Palace, Honolulu, August 21, 1959

3 HISTORIC CONTEXT

3.7 EARLY STATEHOOD 1959 - 1970

University for ownership of the land on which the center was built. The drama and theater department took over the use of Kennedy Theatre.

The relationship between the East-West Center and the University, though at first congenial, became acrimonious. “East-West Road became more of a line of separation than of linkage between the two institutions. In 1975, by agreement between the State and Federal governments, the center was formally severed from the University. Mutual assistance continued, particularly through joint faculty appointments, but essentially the two institutions went their separate ways” (Kamins 1998: 79).

In addition to the expansion of the campus that included the East-West Center, other campus facilities were added during this time including Keller Hall, located Diamond Head of Varney Circle at the

far edge of campus, close to Kennedy Theatre. The 1959 hall was designed by Clifford Young and originally housed the Mathematics Department and included several large stained glass windows designed by art professor Murray Turnbull and his wife, Phyllis. The hall was named for Arthur Keller, one of the earliest civil engineering professors on campus, and the first Dean of the College of Arts & Sciences.

In 1960, the Physical Sciences Building was added makai of Keller Hall, connected by flying bridges. The building was innovative for its time, featuring automated louvered windows operated by a motor triggered by an outdoor photo sensor. The building is identified on campus by the mural painted on the side by art students depicting many of the various “crack-seed” treats available in the islands. Webster and the adjacent Spalding Halls were built in 1960-61, mauka of Varney circle, further defining McCarthy Mall. Originally called Classroom Buildings A and B, they were named after a mathematics professor and Regent, respectively. Snyder and Edmondson Hall were constructed in 1962, also along the mauka edge of McCarthy Mall. Snyder was built partially with federal funds and was originally called the Health Research Institute. Later the structure was renamed in honor of President Snyder, also an internationally known geneticist. Edmondson was a pioneer marine biologist who had an extensive specimen collection and was director of the Cooke Marine Laboratory. Gateway House, the University’s first co-ed dormitory, was completed in 1962 for graduate students.

Expansion of the campus continued south of the buildings adjacent to McCarthy Mall with the construction of the Hawai’i Institute of Geophysics



Fig 3.19: State Capital Building, Honolulu, 2007



Fig 3.20: Bachman Hall Vietnam War Protests, 1968

(HIG) and Kuykendall Hall. The “u-shaped” four-story Geophysics building was constructed in 1963 to house research laboratories, offices, and classrooms for studies in the earth sciences and meteorology (Kobayashi 1983: 119-134). Kuykendall, originally referred to as Classroom Building 3, was constructed in 1964 to provide classroom and office space for the English Department. The new building separated classrooms into a four-story wing with offices, and a seven-story tower.

of buildings that seldom evoked admiration and many times destroyed a semblance of order on the campus. More recently a veteran journalist put it bluntly: ‘I have long looked at the buildings of the campus as an example, indeed a virtual metaphor, for what’s gone wrong with development in much of Honolulu—a monument to poor planning and pork-barrel politics’(Kamins 1998: 63).

Neither University administrative personnel nor the Board of Regents had control of the construction of University facilities. Rather, it was the central government of Hawai‘i that controlled project planning, employment of architects, and letting of building contracts. The product was a succession

3 HISTORIC CONTEXT

3.8 SIGNIFICANT DESIGNERS

Several architects have designed buildings on the campus. A short bibliography of these architects follows specifically highlighting buildings designed off-campus. Section photographs illustrate some of these buildings.

3.8.1 Harry Sims Bent

Harry Sims Bent (1896-1959) acted as the architect of the Honolulu Park Board, where some of his work, such as the Banyan Court in Ala Moana Park, Mother Waldrom Park in Kaka'ako and Haleiwa Beach Park, was described as "playful architecture" (Salis 1985: 12-13).

Bent designed more than 150 residences and commercial buildings while he lived in Hawai'i (Pasadena City 2006: n.p.). Some of his houses were designed for Philip Spalding, Dr. F.J. Halford, and Governor George R. Carter. The Spalding

House now houses The Contemporary Museum of Honolulu. Gov. Carter's home "Lihuiwai" was listed on the State Register of Historic Places in 1982. It is the largest residence in the state. After World War II, Bent moved to California where he was recognized for the landscape plan for Hancock Park in Los Angeles and the 1950 master plan for the Arboretum of Los Angeles (Pasadena City 2006: n.p.).

3.8.2 Dr. Gerald (Gerry) Carr

A taxonomist and Emeritus Professor of Botany, Dr. Gerald (Gerry) Carr, directed a Plant Mapping survey of the University of Hawai'i at Mānoa by the Botany Department of the University in 2004. He later compiled a series of Plant Materials maps and lists for the University in 2005.

3.8.3 Charles William (C.W.) Dickey

Charles William (C.W.) Dickey is one of the most well known architects to practice in Hawai'i. His career spanned over 50 years in Hawai'i and California. He is significant as an individual since he is the first person raised in Hawai'i that received a classic architectural education in the United States (Jay 1992: 3). Though he only designed one building on the University campus, his work throughout the islands is significant to the state as a whole. Born in 1871 in Oakland, California, Dickey moved with his family to Maui when he was just two. His family was prosperous in the islands, with his father opening three general stores on Maui and introducing the telephone to local residents. Dickey was sent to Oakland for schooling and graduated from Oakland High School. He immediately enrolled at the Massachusetts Institute of Technology (MIT) in



Fig 3.21: Charles William Dickey, Circa 1900

1890 and earned his degree in architecture in 1894. Upon graduation, Dickey briefly returned to Maui before moving to Honolulu where he started his first architectural job at the office of Clinton Briggs Ripley (Jay 1992: 32-33).

Dickey's career spans from March 1896 to his death in 1942. Over the course of his 46-year career, he worked both in Hawai'i and the Bay Area of California in a time that spanned a "period of enormous changes in modern architecture" (Jay 1992: 3). His career can be described in three phases: the first from 1896 to 1904 when he worked in Honolulu with Clinton B. Ripley. After working with Ripley, he then worked for Edgar Allen Poe Newcomb, and finally on his own. The second phase of his career occurs from 1905 to 1924, when he moved back to Oakland and specialized in commercial and school construction. His business thrived on projects that were mostly located in the Bay Area of California,

with a few business contracts from Hawai'i. The third phase of his career occurred from 1925 to 1942, when he returned to Hawai'i. "It was during these years that Dickey formulated the stylistic characteristics for which he is best known today" (Jay 1992: 5).

Dickey was known throughout his career as an architect who reinterpreted "past traditions" rather than becoming a twentieth century modernist. One of his signature references in architecture is the "Dickey roof," which was associated with him regardless if he had or had not designed a building that featured the roof (Jay 1992: 4). "Famed for his subtle use of the double-pitched roof—a large roof that changed its angle as it sloped towards the earth, he designed such buildings as the downtown Alexander and Baldwin Building, the Halekulani Guest Cottage, the Baldwin Bank Building in Kahului, Maui and the W. M. Alexander and M. B. Alexander

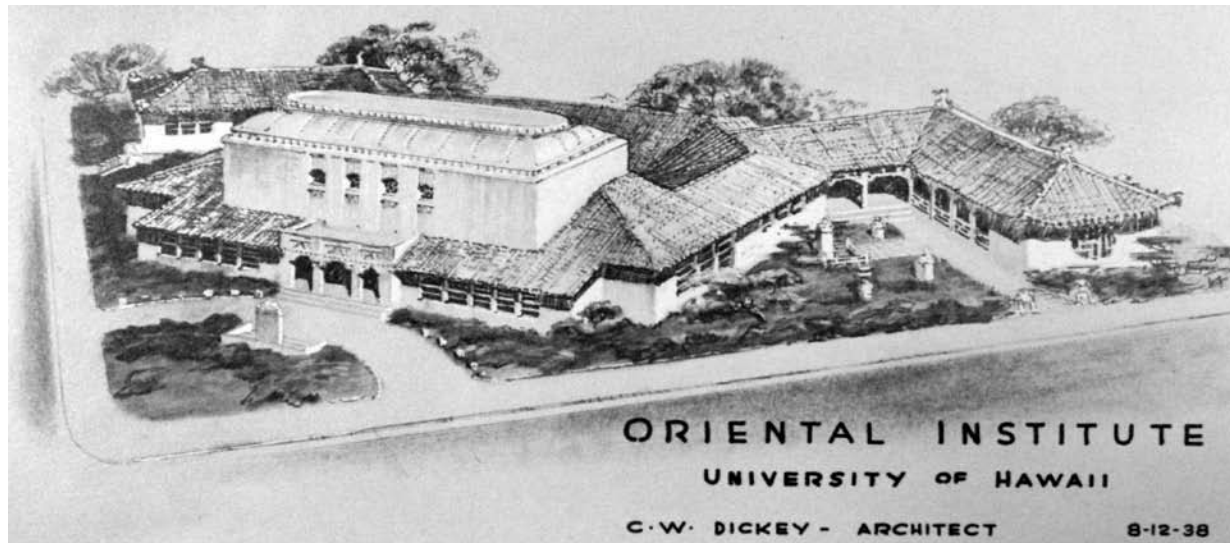


Fig 3.22: Oriental Institute Design Proposal by C. W. Dickey, 1938

3 HISTORIC CONTEXT

3.8 SIGNIFICANT DESIGNERS

residences. Dickey also designed Waikīkī Theatre 3 and the Toyo Theatre” (Kobayashi 1983: 50).

Dickey only designed and constructed one building on the University campus. The Territorial Normal School building, later renamed Wist Hall, was designed in late 1929 and completed in the summer of 1930.

3.8.4 Ralph Fishbourne

Ralph Fishbourne was a local Hawai'i architect who completed various projects on the University campus during his career. Fishbourne was born in Vallejo, California in 1883. After studying architecture in Paris, France from 1910-1912, he completed some work in San Francisco and New York before moving to Hawai'i in 1917. On the University of Hawai'i campus, Fishbourne designed Farrington Hall in 1930 (demolished) (Kobayashi 1983: 44), the original Fruit Fly Laboratory in 1931, Founder's Gate in 1933, Andrews Outdoor Theatre in 1935 and old Gilmore Hall in 1935 (demolished). Some of his most notable designs outside of the University campus include McKinley High School, the former New Princess Theatre in downtown Honolulu, old St. Francis Hospital and the 1924 Moana Hotel Annex (Kobayashi 1983: 27).

3.8.5 Juliette May Fraser

Juliette May Fraser (1887-1983) gave to Hawai'i an artistic vision of itself that was as authentic in spirit as it was creative in presentation. Fraser was born in Honolulu in 1887. After graduating from Wellesley College, she returned to Hawai'i to work as a teacher while saving up money to pursue her true passion — art. Her formal training came at the

Art Students League in New York, later a haven for other locally born artists. Her subdued yet powerful murals earned her the most acclaim, with commissions coming from all over the world.

In 1934, Fraser was approached by the Federal Work Progress Administration to paint a series of murals for the Hawai'i State Library. She worked for \$35 per week for three months until funds ran out. Undaunted, Fraser continued to work on the pieces until they were completed. The murals, still on display in the Edna Allyn Room, reflect Fraser's lifelong interest in Hawaiian legend and other Hawaiian themes, visually re-telling stories of Aukele the Seeker, Punia and the sharks, Ka'uki'uki the menehune, and other tales.

In addition to numerous venues statewide, Fraser's work also is displayed at the New York Metropolitan Museum of Art, the Library of Congress and the Smithsonian Institution. (*The Honolulu Advertiser*, 2006: n.p.).

3.8.6 Loraine Kuck

Loraine Kuck was a landscape designer in Hawai'i who designed the Japanese Water Garden in Krauss Hall in 1948 with Richard Tongg. She wrote various books on landscape architecture during her career in Hawai'i. A 1943 book by Kuck and Tongg, called “Hawaiian Flowers,” mentioned the University campus and its vast botanical resources. “A short distance beyond Kamanele Park is the campus of the University of Hawai'i. This holds many unusual plants and trees, including the famous Sausage Tree (*Kigelia pinnata*)” (Kuck & Tongg 1943: 16).

“Hawaiian Flowers” was published during World War II. In the preface to the book, Kuck and Tongg explained their purpose for publishing it at the time: “It is published at this time in the hope that some of these visitors may find it an hour’s escape from the strain and pressure of war. For, in spite of war, the flowers still bloom in Honolulu, often right over the bomb shelters that fill gardens and parks” (Kuck & Tongg 1943). Kuck also wrote, “Japanese Gardens and Landscaping: Origin in China, History and Philosophy and Modern Developments,” the first English-language book on Japanese gardens and their Chinese heritage and “One Hundred Kyoto Gardens.” She also wrote “The Modern Tropical Garden: Its Design, Plant Materials and Horticulture,” a collaboration with Tongg (*The Honolulu Advertiser*, 1967: A20).

3.8.7 Kenzo Ogata

Kenzo Ogata is viewed as one of Japan’s most successful landscape architects. He designed “Seien” (meaning “Serene Garden”), the Japanese Garden behind Jefferson Hall on the University campus (Kobayashi 1983: 128).

3.8.8 Vladimir Ossipoff

Vladimir Ossipoff, was a highly influential architect with a 65-year career in Hawai‘i. Ossipoff was born in Vladivostok, Russia in 1907, was raised in Japan until 1923, and was educated at the University of California, Berkeley. He moved to Hawai‘i in 1931, where he was hired as the head of the Theo H. Davies and Co. home building department. He then worked very briefly for C. W. Dickey and Claude Albon Stiehl before starting his own firm, Vladimir Ossipoff, Architect (Sakamoto & Britton 2007: 5-6).



Fig 3.23: Thurston Chapel, by Vladimir Ossipoff, 2006

3 HISTORIC CONTEXT

3.8 SIGNIFICANT DESIGNERS



After World War II, Ossipoff worked on many collaboration projects with various other architects on O'ahu under the firm name of "Associated Architects." "Associated Architects" was comprised of architects Phillip Fisk, Allen Johnson, Thomas Perkins, Alfred Preis and Ossipoff (Leineweber 2007: 63-64). Ossipoff designed Bachman Hall (with Associated Architects) on the University campus in 1948.

His other projects included many residences. His most important structures include the Outrigger Canoe Club, the Pacific Club, and Honolulu International Airport, all collaborations where he acted as design architect (Sakamoto & Britton 2007: 1-11). His other notable works throughout O'ahu include the Liljestrand and Pauling Houses; the Robert Shipman Thurston, Jr., Memorial Chapel and the Mary Persis Winne Classroom Units for the



Fig 3.24: Thurston Chapel Interior, by Vladimir Ossipoff, 2006

Punahou School; and the Davies Memorial Chapel at Hawai'i Preparatory Academy. His work is noted for the careful attention to site, culture and climate. "To establish the conditions of his design, Ossipoff used the natural resources of wind, light, water and sky" (Sakamoto & Britton 2007: 2).

"Ossipoff's building's evolved from the large eaves and gabled roofs of the Hawaiian vernacular to the use of a more open plan and Wright- and International Style- based architectural vocabularies" (Sakamoto & Britton 2007: 2). "This outlook informed Ossipoff's approach to design. He provided modern architectural responses rooted in the principles derived from the resources of a specific site, developing an adaptive practice that was also grounded in the condition set by individual clients and occupants. He sought not to hone for himself a precise, original, and recognizable design vocabulary but rather to produce the

most appropriate architecture for a given locale" (Sakamoto & Britton 2007: 3). Ossipoff transferred ownership of his firm to his younger partners in 1978. He still completed projects with the firm, now called "Ossipoff, Snyder and Rowland, Architects," with his last project completed in 1997. Ossipoff died in Honolulu in 1998 (Sakamoto & Britton 2007: 5-8).

3.8.9 Ieoh Ming (I. M.) Pei

Ieoh Ming (I. M.) Pei is an internationally known, Pritzker Prize-winning Chinese American architect (The Pritzker Architecture Prize 2008: n.p.). Pei was born in Canton, China in 1917 and came to the United States at age 17 to study architecture (Boehm 2000: 115). He was educated at Massachusetts Institute of Technology (MIT) and Harvard Graduate School of Design where he studied under Walter Gropius and received a Master's Degree in architecture in



Fig 3.25: Pyramide du Louvre by I.M. Pei, Paris France. 2007

3 HISTORIC CONTEXT

3.8 SIGNIFICANT DESIGNERS

1946. Pei became an American citizen in 1954 (Sinnott 2003: 109). Pei is a Founding Partner of Pei Cobb Freed & Partners/ I. M. Pei & Partners, New York in 1955. He has also served as an Assistant Professor at Harvard Graduate School of Design from 1945 to 1948. Pei later became a fellow of the AIA in 1964 (Boehm 2000: 115-116).

His work is known as Late Modernist, “but his works elude such simple categorization. In the Modernist tradition, he remains devoted to vigorous geometry and to the use of simple, often sculptural forms. Pei has known, studied, or taught with many of the great European and American figures of twentieth century architecture... Pei has brought to the mix the elusive ingredient of a sensibility formed during his upbringing in China” (Wiseman 2001: 11).

His projects include many institutional buildings with his most recent works including the Morton H. Meyerson Symphony Center in Dallas, the Grand Louvre in Paris, the Miho Museum in Shiga, Japan, the Schauhhaus at the German Historical Museum in Berlin and the Musée d’Art Moderne Grand-Duc Jean in Luxembourg (Pei CF & Partners, n.d.:n.p.). Pei retired in 1990, but has returned to his firm to occasionally assist in large projects such as the Rock and Roll Hall of Fame in Cleveland, Ohio (Sinnott 2003: 110).

Pei served as the Principal Architect of the five original East West Center complex buildings: Jefferson Hall, Kennedy Theatre, Lincoln Hall, Hale Mānoa and Hale Kuahine (Kobayashi 1983: 126). He has said of architecture, “The emotional response [in architecture] is intensified by the modulation of light and the movement of people in that space. Those two ingredients are essential to

Fig 3.26: Bank of China by I.M. Pei, Hong Kong. 2007



architecture. It is not just volume and space alone” (Boehm 2000: 81).

3.8.10 Alfred Preis

Alfred Preis was a well-regarded architect and planner with a long career in Hawai'i. Preis was trained as an architect in Austria and moved to Hawai'i in 1939. During his career in Hawai'i he served as a member of the American Institute of Architects (AIA) and “became a highly respected and influential leader in the development of the arts in Hawai'i” (Kobayashi 1983: 85). Two of his most notable architectural designs include the Arizona Memorial in Pearl Harbor and the First Methodist Church in Honolulu, for which he won a National AIA award. Preis also designed the Administrative Services Buildings 1 and 2 on the University of Hawai'i campus. In addition to maintaining his architectural career, Preis accepted a chairman position on the new Honolulu Chamber of Commerce Community Affairs Committee (Eagle, 1963: A6). Preis later served as the State of Hawai'i Planning Coordinator from 1963-1966 (Eagle, 1963: A1). He once said of planning, “Physical planning is an environmental art. Our job is to improve the cultural and physical environment of the state” (The Honolulu Advertiser, July 1, 1966: B9).

In 1965 he served as the first Director of the State Foundation on Culture and the Arts. During his planning and architectural career, he acted as “an outspoken champion of preserving natural beauty in the Islands, particularly the Nu'uuanu Pali and the profile of Diamond Head” (Eagle, 1963: A6).

3.8.11 Mark Potter

Mark Potter was a local Hawai'i architect who completed two major projects on the University campus during his career. Potter was born in 1896 in London, England and moved to Hawai'i in 1914. He became a licensed practicing architect ten years after his arrival. Throughout his career, he designed residences in Mānoa Valley and a 15,000 square foot home for the Wilcox estate in Kaua'i in 1935. All of his early residential work was built in the “regional Hawaiian Style,” with double-hipped roofs and lanai (Kobayashi 1983: 75-78). Potter designed Castle Memorial Hall in 1941 and Bilger Hall in 1951 on the University campus.

3.8.12 Dr. Joseph Francis Charles Rock

Dr. Joseph Francis Charles Rock is described best as “a skilled, energetic, and resourceful botanist”



Fig 3.27: Arizona Memorial by Alfred Preis, Pearl Harbor. 2007

3 HISTORIC CONTEXT

3.8 SIGNIFICANT DESIGNERS

(Kamins 1998: 15). “He was considered to be one of the world’s leading botanists and linguists as well as a ranking cartographer anthropologist and author” (*The Honolulu Advertiser*, 1962: A6). His work at the University helped to establish botanic education and his plantings on the University grounds have enabled the campus to become a unique space for botanic collections of specimens and trees.

Dr. Rock was born in 1884 in Vienna, Austria (Chock 1963: 89). Rock taught himself “systematic botany”, learned Chinese as well as remote tribal languages, and conducted numerous field studies in those areas as well as all the major Hawaiian Islands (Chock 1963: 92-95). With this background, he not only created “one of the best collections of Hawaiian plants that exists today” (Sohmer and Gustafson 1987: 18) but made significant contributions to bodies of knowledge of native Hawaiian plants and plants in western China and eastern Tibet unknown

in the Western world at considerable risks to life and limb (Chock 1963: 93-95). Because he was diagnosed with tuberculosis, he traveled to the United States in 1905 and to Hawai‘i two years later in an attempt to restore his health (Chock 1963: 91). He began working in Hawai‘i as a full-time teacher at Mills School (now known as Mid-Pacific Institute). His work there lasted until 1911 when he was one of the three faculty members at the time (Kobayashi 1983: 10).

In 1911, Dr. Rock joined the College of Hawai‘i as a faculty member. Upon his hiring, he brought a herbarium to the college that he had assembled from 1908 to 1911 with the Territorial Division of Forestry. He had served as botanical collector and assistant with the Division (Kamins 1998: 15). His herbarium was “the most complete collection in the world of the indigenous flora of Hawai‘i” (College of Hawai‘i Records, No. 9, Report of the Board of Regents to the Legislature, 1913 as cited in Kamins 1998: 197). During his time at UH, he published the first research document from the College, entitled, “Notes upon Hawaiian Plants with Descriptions of New Species and Varieties” (Kamins 1998: 15).

“Rock’s interest in tropical plants extended beyond the herbarium and courses in systematic botany, as is evident in a 1913 listing of the College’ needs where he advocated establishing ‘upon these grounds a Botanical Garden where all the plants of the tropics suitable to this elevation, climate and soil could be grown” (Kamins 1998: 197). In 1914, Dr. Rock became a part of a faculty Buildings and Grounds Committee of the University and was then tasked with developing 20 acres of the campus into his botanical garden. He took a sabbatical to help with the collection of plants and trees for



Fig 3.28: Palm Grove, by Dr. Joseph Rock. 2007

this botanical garden. The plants that he collected came from various countries and territories, including Hawai'i, Asia, Indonesia and the Americas (Kamins 1998: 197-198). Between 1914 and 1919, he conducted extensive research in Herbaria in museums at Harvard and in Berlin, Vienna and Paris and he made several plant collecting trips, at his own expense, to Australia, Ceylon, Cuba, Central and South America, Java, Mauritius, New Zealand, the Philippines, Singapore, southern California, Siam, and Malaya (Chock 1963: 91-92). He eventually collected about 500 species in four years to plant on the campus (Kamins 1998: 15).

Dr. Rock remained as a faculty member of the College of Hawai'i until 1919 (*The Honolulu Advertiser* 1962: A6). During his time at UH, he published over 50 research papers and books on Hawaiian and tropical plants and had developed acres of the campus as a botanical garden that was used in his classes and later throughout the years (Kamins 1998: 198). He wrote and illustrated with his own professional quality photographs two substantial books about Hawaiian plants, *The Indigenous Trees of the Hawaiian Islands* (1913) and *The Ornamental Trees of Hawai'i* (1917), which were published with funds raised by local subscribers.

After he left the University, Rock spent most of his time from 1920 to 1950 in active exploration and research in Asia for the U.S. Department of Agriculture, Harvard University and National Geographic Service; and assisting the U.S. Army Map Service during World War II (Chock 1963: 93-95), China studying and collecting plants. His other work in Hawai'i includes becoming "the first and only honorary member of the board of trustees of the Friends of Foster Garden. The organization

honored him for more than 40 years of service to Hawaiian botany." Later in his career, Dr. Rock introduced blight-resistant chestnuts to America from China and over 700 species of rhododendrons (*The Honolulu Advertiser* 1962: A6). Dr. Rock died in 1962 in Honolulu.

3.8.13 Claude Albon Stiehl

Born in 1902 in San Francisco, Claude Albon Stiehl was educated at the Chicago School of Architecture and the Art Institute of Chicago and the Armour Institution. He moved to Hawai'i in 1929, for a career in the Islands that started when he initially worked for Charles William Dickey (State of Hawai'i Department of Land and Natural Resources 1999: n.p.). Some notable projects that he worked on in Dickey's office include Kamehameha Schools and the Halekulani Hotel. Stiehl left Hawai'i during the Great Depression, and returned again to work another ten years. Stiehl then opened his own office in Honolulu, where he became "a shining star in the architectural firmament of Hawai'i, being one of the first to successfully design in the modern manner" (State of Hawai'i Department of Land and Natural Resources 1999: n.p.).

Some of Stiehl's most well-regarded designs in Hawai'i include the Church of the Crossroads, which he designed in 1935 as "Hawai'i's first interracial congregation;" the Convent of the Sacred Heart, now Hawai'i Baptist Academy; Kokokahi YWCA dining hall and the Castle Residence, now Maunalani Convalescent Home. His only project on the University campus is Hemenway Hall, a student union building that was completed in 1938 (State of Hawai'i Department of Land and Natural Resources 1999: n.p.).

3 HISTORIC CONTEXT

3.8 SIGNIFICANT DESIGNERS

Fig 3.29: Church of the Crossroads.
by Claude Stiehl, 2007



3.8.14 Richard Tongg

Richard Tongg was a landscape architect in Hawai'i who designed the Japanese Water Garden in Krauss Hall in 1948 with assistance from another local landscape architect, Loraine Kuck. Tongg and Kuck collaborated on various books during their careers in Hawai'i, including "The Tropical Garden: Its Design, Plant Materials and Horticulture" (1936), "Hawaiian Flowers" (1943), "The Modern Tropical Garden: Its Design, Plant Materials and Horticulture" (1955) and "Hawaiian Flowers & Flowering Trees" (1960) (*The Honolulu Advertiser* 1967: A20). In addition to designing the Krauss Happ Water Garden, Tongg was responsible for the Traditional Asian Gardens at Honolulu International Airport. The garden at the airport was dedicated to Sun Yat-sen, the founder of

the Republic of China who was a one-time Hawai'i resident. The garden complements the airport that was designed by Vladimir Ossipoff, a well known local architect who designed and built the airport from 1970-1978 (Sakamoto & Britton 2007: 102).

3.8.15 George Walters & Julie Kimura Walters

George Walters and Julie Kimura, both landscape architects, formed Walters, Kimura, and Associates (currently called Walters, Kimura, Motada, Inc.) on O'ahu. The landscape architecture firm completed various projects on the University campus. George Walters designed "University Park" in the existing Paradise Palms Café site near Hamilton Library in 1973 (Kobayashi 1983: 142). Unbuilt work that the firm proposed for the University campus also includes a 1976 plan for "a new Mauka-Makai Mall that would eventually link Varney Circle with Mō'ili'ili" (Kobayashi 1983: 117). Walters served as the president of the Hawai'i Chapter of the American Society of Landscape Architects in 1963 (*Honolulu Star-Bulletin* 1963b: 10). George Walters designed parts of the landscaping at East-West Center; including the tree scape of East-West Road median.

3.8.16 John Mason Young

John Mason Young was a highly influential engineering professor at the University. He was born in Lewisburg, Tennessee and was educated at the University of Florida and Cornell University (Kobayashi 1983: 22). In 1908, he came to Hawai'i to be the only engineering professor amongst 13-faculty when the College opened its doors (Kamins 1998: 9). Through the course of his career as a faculty member of the University, he taught approximately half of the engineering courses at a time when 80

percent of the College students were engineering students (Kamins 1998: 154). He served as Dean of the College when there was no president during President Arthur L. Dean's absence.

In 1920, Young became president of the Pacific Engineering Company and maintained part-time teaching status until he retired in 1938 (Kamins 1998: 154). Because of his expertise in Hawai'i, he was placed on a two person committee that was responsible for writing Honolulu's building ordinance (*Honolulu Star-Bulletin* 1947: 1). For over 30-years he taught structural design to all engineering seniors and "can truly be called the father of engineering education in Hawai'i" (Kamins 1998: 154). He is also noted for being instrumental in the creation of many of the structures on campus and throughout Hawai'i that can still be seen today. In February 1909, early in his career at the University, Young designed a "comprehensive plan" for the College of Hawai'i campus. "Young's design showed a large quadrangle aligned on an east-west axis running from what became University Avenue to Mānoa Stream. In geometrical array, buildings were squared to the cardinal points of the compass, the whole strongly resembling the quadrangle of the campus at Cornell, where Young had last served" (Kamins 1998: 13).

While this "comprehensive plan" was never built, it did form the basis for the existing quadrangle on the campus, which consists of four buildings that he assisted with by designing and supervising construction. As the college engineer, he completed the first general outline map for the college campus (*Honolulu Star-Bulletin* 1938: 6). He was a primary participant in development of the University campus development plan and he designed and supervised the construction of four campus buildings: Hawai'i



Fig 3.30: Hawai'i Theatre Interior, Circa 1922

Hall (designed the floor plans under architect Clinton Briggs Ripley), Miller Hall, Dean Hall and Crawford Hall (Kobayashi 1983: 19-22).

John Mason Young was also well known for his commercial work within the community. He designed the First Hawaiian Bank Building on Bishop Street, now demolished. He was the structural engineer for the Hawai'i Theatre "double cantilever support for the balcony [which] eliminated the need for pillars and allowed unobstructed views from every seat" (Hawai'i Theatre Center 2007: n.p.).

CHAPTER 4

HERITAGE LANDSCAPE PATTERNS

4.1 NARRATIVE DESCRIPTION

An exceptional collection of heritage landscapes endows the broad, low-sloping plain of Mānoa Campus with a mature tree canopy and a significant diversity of native to exotic flora. The beauty of these landscapes softens the urban characteristics of the campus, whose buildings and vehicular accesses are often considered to lack cohesiveness and aesthetic appeal. Natural geographic features, such as Mānoa Stream and the Koʻolau mountains, complement the informal groupings of tropical and sub-tropical botanic collections that compose the heritage landscapes. In many places, a substantial area of surface roots, particularly the Chinese Banyans, is left unplanted thus emphasizing a rural and “natural” sense of place. The contrast between building and landscape weaves the fabric of the Mānoa campus, providing most areas with shade, comfort, aesthetic pleasure, pride, and educational value.

The plants of the heritage landscapes have been selected specifically for the tropical climate of the Mānoa Campus. Suitable growing conditions benefit from an abundance of fertile soil and a well-watered environment, typical of most valley settings in Hawaiʻi. Nearly every morning, the Kuahine rain shrouds the lush and green campus in a delicate mist. Frequent tradewinds, cooled as they glide over the Koʻolau, create a comfortable, outdoor environment throughout most of the year. Many of the plants, some for their beauty and other for their usefulness, have sparked botanical interests in the campus over decades, transforming the University into a noteworthy botanical garden.

Nearly 20,000 to 30,000 faculty, staff, students, and surrounding community members pass through the heritage landscapes daily. Broad tree canopies along most major walkways provide relief from the

frequent rains and the hot, humid summer weather. Class seminars are often held on grassy areas. In most open spaces of the campus, treetops frame views of the Koʻolau mountain ridges, Leʻahi (Diamond Head), and the skyline of Waikīkī. The overall informal arrangement between landscape and building allows for pedestrians to easily move throughout the campus.



4 HERITAGE LANDSCAPE PATTERNS

4.2 STATEMENT OF SIGNIFICANCE

The heritage landscapes of Mānoa Campus could be considered historic, by definition of the U.S. Department of the Interior National Park Service. The NPS defines a historic landscape as one that was “consciously designed or laid out by a landscape architect, master gardener, architect, or horticulturist according to design principles...a recognized style, or tradition,” that contain “a variety of natural and cultural resources,” or have “evolved through use by the people whose activities or occupancy shaped that landscape” (Birnbaum, 1994: 2). Despite expansion pressures typical of growing, urbanizing universities, Mānoa campus retains 18 historic landscapes.

The heritage landscapes mentioned throughout this report are evaluated according to their significance, based on the criteria of age, event, person, distinctive characteristics, information content, period and historic context, and integrity of location, design, setting, materials, workmanship, feeling, and association. These include an ornamental palm garden at Andrews Outdoor Theatre, Krauss Hall Courtyard pond garden, Founders Gate, Varney Circle, Bachman Lawn & Terrace, Orvis Music complex plantings, McCarthy Mall, the Japanese Garden, Kennedy Theater Grove, and the Banyan Grove. In addition, the Ka Papa Lo‘i o Kānewai, a partial restoration of a traditional irrigated taro terrace, illustrates the traditional method of planting taro in a water garden.

Composing the heritage landscapes are original plantings by distinguished botanist Joseph Rock and prominent visitors, including David Starr Jordan (first president, Stanford University), Carl Sandburg (poet), Thornton Wilder (playwright) and Arthur Hays Sulzberger (founder, New York Times). The Joseph Rock individual plantings, as well as Sinclair Grove and the Hawai‘i Hall Palm Garden, follow the long established European tradition

of scientific botanic collections, such as the Orto Botanico at Padua, Italy (1545), and the Botanic Garden at Oxford, England (1621) (Jellicoe 1987: 153). This exceptional collection of tropical and subtropical trees on the Mānoa campus has long been regarded as a special asset to the University for both aesthetic and educational purposes. Many of the campus trees are either designated as a memorial tree or protected by the State of Hawai‘i as an exceptional tree. The following list of heritage landscapes, grouped by time period, are described in “Chapter 5: Survey of Historic Buildings and Landscapes” within this report.

Pre-contact

- Ka Papa Lo‘i o Kānewai

Territorial Period (1907-1940)

- Botanic Collection
- Joseph Rock Plantings (overview)
- Hawaii Hall Palm Garden
- Sinclair Grove
- The Quad
- Andrews Outdoor Theater
- Krauss Hall
- Founders Gate
- Varney Circle
- Sinclair Grove

WWII Impact (1941-1958)


- Bachman Lawn & Terrace
- Orvis Music Complex

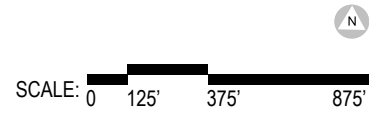
Early Statehood (1959-1970)

- McCarthy Mall
- East West Center
- Japanese Garden
- Kennedy Theatre Grove
- Banyan Grove

MAP OF HISTORIC LANDSCAPES



- | | | | |
|---|--------------|---|-----------------|
|  | PRE-HISTORIC |  | TERRITORIAL |
|  | WORLD WAR II |  | EARLY STATEHOOD |



4 HERITAGE LANDSCAPE PATTERNS

4.3 LANDSCAPE INVENTORY AND CONDITION EVALUATION

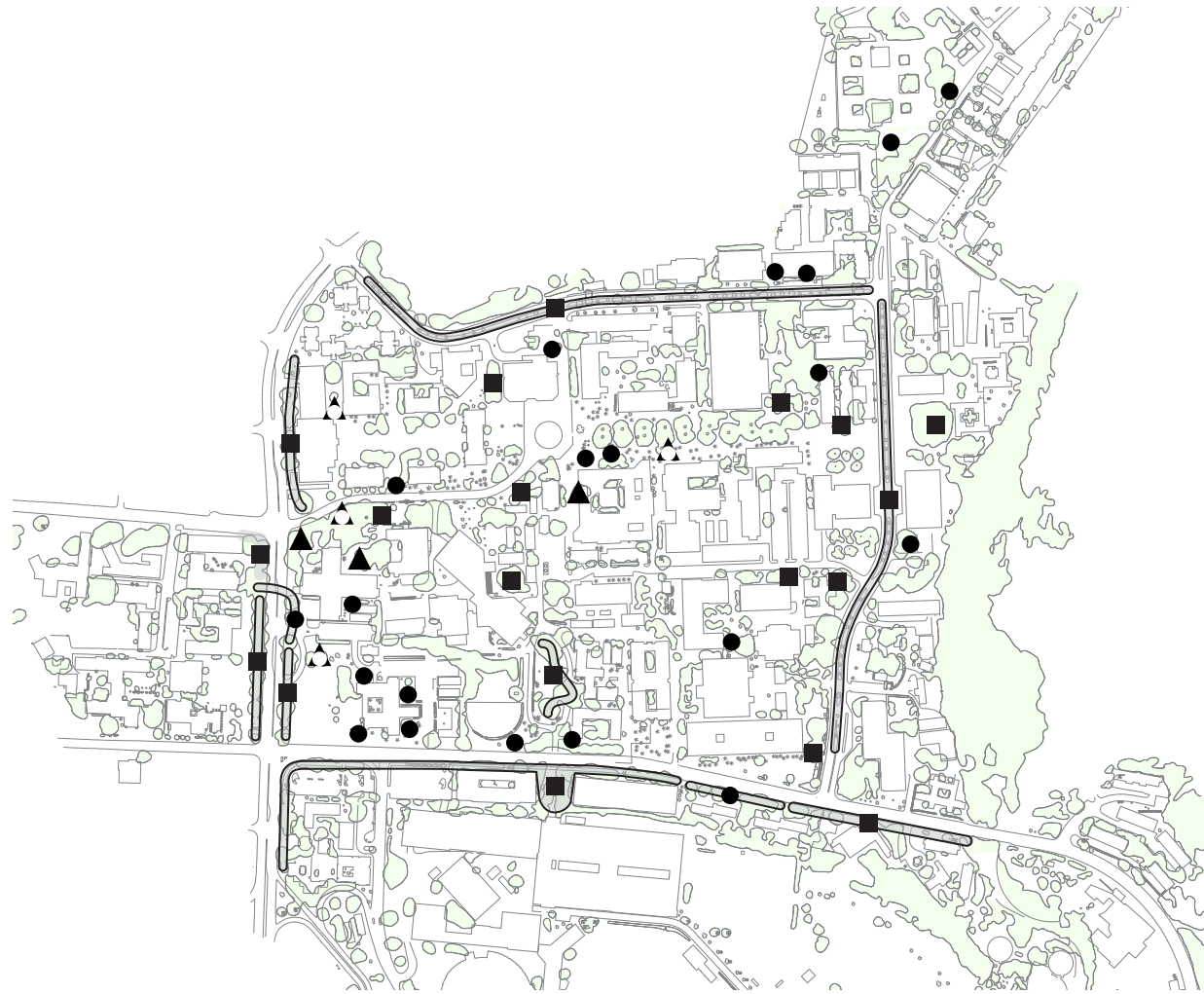
Vegetation forms an inherent feature of all heritage landscapes of the Mānoa Campus. Over the past five decades the significant collection of plantings have been identified and documented. The first mapping occurred in 1957, documenting 173 species of trees covering approximately 200 acres. Since then, publications of the campus plants brochure have featured photographs and maps, recording the historic continuum of botanical plantings that remain popular amongst the faculty, students, community and visitors for over 50 years.

A second mapping conducted in 1962 by Joseph Rock and two university botany professors, Harold St. John and V.J. Krajina (a visiting professor), also included shrubs and herbaceous plants in addition to the trees. At this time, 500 trees and other plant species grew within the Mānoa Campus (Campus Trees and Plants brochure). In 2005, the (now retired) head of the Botany Department, Gerald Carr, mapped all the plants in the central academic areas of the expanded campus, which include the Joseph Rock plantings. Approximately 600 exceptional species of plants now exist on the Mānoa Campus. The identification and documentation of campus landscapes, spanning more than 50 years, provide the framework for the Heritage Landscape Inventory (included on the CD in the report). The inventory documents the continued presence of individual trees and species that appear on the 1957 Rock Landscape Inventory as well as the 2005 Gerald Carr Landscape Inventory. The Inventory was conducted by a PhD. in Botany candidate, Mashuri Waite, supervised by the current chair of the Botany Department, Kent Bridges. Dr. Bridges brought special historical knowledge of the campus trees as he has been on the campus first as a student, then faculty member continuously since the 1960s.

All landscape features are evaluated as to their existence, location, and health. A preliminary assessment of the current condition of the trees was made at the time they were mapped, and the condition of all the trees was noted. Several trees required an additional evaluation and were evaluated by the current manager of the Landscaping Office, Roxanne Adams, who is a certified arborist as well as a graduate of the University's horticulture program. Forms with the standard protocol of the International Society of Arboriculture were prepared for these trees in question.

An example of this mapping has been included within this chapter to show the types of information indicated on these images. Four maps of a portion of the campus follow. These maps indicate a reference number for the landscape material which is keyed to an excel spreadsheet. The excel spreadsheet indicates the Plant ID number, family, sub family tribe, genus, species, cv/var/ssp, common name, habitat, description including general size or special features, and location. The condition is noted on another map indicated by symbols, a triangle indicates "dead"; a square indicates "poor" and a circle indicates "good." These plantings were recorded in GIS format with the assistance of the Botany GIS Lab and Stephanie Saephan.

MAP OF CAMPUS TREES



- ▲ EXCEPTIONAL & MEMORIAL
- ▲ EXCEPTIONAL
- MEMORIAL
- TREES OF NOTE
- GROUPING



SCALE: 0 125' 375' 875'

4 HERITAGE LANDSCAPE PATTERNS

4.4 STATE OF HAWAI'I EXCEPTIONAL TREES

The most exceptional of the Mānoa Campus trees are protected by The Hawai'i State Legislature Act 105, which designates an Exceptional Tree as “a tree or stand or grove of trees with historic or cultural value, by which reason of its age, rarity, location, size, aesthetic quality, or endemic status has been designated by the county committee as worthy of preservation.” Through this act, The Hawai'i State Legislature recognizes that “beyond their aesthetic worth and cultural significance, trees perform an important role in maintaining ecological balance, in increasing soil conservation and natural oxygen production, as windbreaks for necessary plant species, and in retarding flooding, erosion, siltation, lateral distribution of air pollution, and noise” (State of Hawai'i Department of Natural Resources n.d.: n.p.).

Act 105 requires each county to establish an Arborist Advisory Committee to research, recommend,

and document exceptional trees as well as review actions that may endanger the exceptional trees. Currently, over 150 exceptional trees have been recognized on the island of O'ahu; eight are located on the Mānoa Campus. Some exceptional trees are also designated as memorial trees based on the significance of the person by whom it was planted. The following list identifies Exceptional, memorial, and outstanding trees located on the campus (numbers correspond to plant ID number on the CD excel sheet).

Banuyo, *Wallaceodendron celebicum* (#411)

Joseph H. Rock Memorial

Located between Sinclair Library and Campus Road, this tree is native to Indonesia and the Philippines. It is a relative of the Monkey Pod, producing similar flowers and foliage. The tree is also a memorial to Joseph Rock, noted botanist discussed elsewhere in this Report.

Baobab Tree, *Adansonia digitata* (#66)

Located near the Art Building, this tree is one of the largest on campus. Native to Africa, it dominates the landscape with its enormous trunk. Many useful products can be created from this tree. From the fruit comes an exotic drink and from the roots, a red dye. The bark, can be made into rope and medicine (Belknap 1982: 23).

Cannonball Tree, *Couroupita guianensis* (#82)

Thornton Wilder Memorial (1933)

Planted in 1933 by the playwright Thornton Wilder on the makai side of Sinclair Library, the Cannonball tree is nearing extinction in the wild. Native to northeastern South America, the tree is named for the dozens of round, rust-colored grapefruit-like 'cannonballs' clustered around the trunk, which



Fig 4.1: Cannonball Tree, *Couroupita Guianensis*, 2008



Indian Rubber Tree, *Ficus elastica* (#591)
 David Starr Jordan Memorial (1922)
 Located between Sinclair Library and Campus Road, the Indian Rubber tree is native to the areas between northeast India and south Indonesia.

Jack-in-the-box Tree, *Hernandia ovigera* (#21)
 The waxy lantern-like fruits give this tree its name (University of Hawai'i at Mānoa 2006: n.p.).

Skunk Tree, *Sterculia foetida* (#64)
 Liberty Hyde Bailey Memorial (1928)
 Native of the tropics, the wine-red, orange and yellow flowers of this tree emit a strong unpleasant odor. The tree, located on the 'ewa-mauka corner of the Quadrangle, was planted in 1928 in honor of the eminent horticulturist and botanist, Liberty Hyde Bailey, who was a world-renowned authority on palms. It has an unusual fruit with black seeds resembling olives. (Belknap, 1982, 16).

Fig 4.2: Baobab Tree, *Adansonia digitata*, 2008

crash down to the ground when ripe, releasing a pungent unpleasant odor. When first in bloom, highly fragrant salmon-colored flowers emerge in clusters around the trunk of the tree. These bloom for only one day before transforming into the 'cannonballs,' which takes about 18 months to mature (Belknap 1982: 40).

Hutu, *Barringtonia asiatica* (#84)
 Rufus C. Harris Memorial (1952)
 Located on McCarthy Mall near Bilger Hall, this tree has broad leaves, large woody fruits, and white flowers that resemble shaving brushes. In some areas of the Pacific, the seed is crushed, mixed with water and thrown into tidal pools or quiet streams to stun fish for easier catching (University of Hawai'i at Mānoa 2006: n.p.).



Fig 4.3: Skunk Tree, *Sterculia Foetida*, 2008

4 HERITAGE LANDSCAPE PATTERNS

4.5 MEMORIAL TREES

In addition to the trees designated as exceptional, 29 trees are designated as Memorial Trees, based on the importance of the individual or event accompanying its planting. According to a updated inventory performed by the UH Mānoa Landscape Advisory Committee in 2004, the following trees have been designated as Memorial Trees.

Hong Kong Orchard, *Bauhinia blakeana* (#347)

Planted in 1990 on the mauka side lawn of the Art building, in memorial of Dianne Goldenberg.

Lunalilo Yellow Shower Tree, *Cassia x nealiae* (#353)

Planted by the wife of the University President, Makai of BioMed Building. The date and person recognized are unknown.

Autograph Tree, *Clusia rosea* (# 58)

Planted on April 2, 1951 on the Diamond Head side of Bachman Hall, in memorial of Daniel L. Marsh.

Indian Rubber Tree, *Ficus elastica* (#392)

Planted on May 4, 1956, between Sinclair Library and Hemingway Hall, in memorial of J.E. Wallace Sterling.

Chaulmoogra, *Hydnocarpus* (#85)

Originally planted near Farrington Hall for King Prajadhipok of Siam in 1935, the tree was relocated to Bachman Hall in 2000, and dedicated to Alice Ball, who did research on the tree-oil effectiveness to cure leprosy.

Sun Sapote, *Licania platypus* (#105)

Planted on March 25, 1957 makai of Sinclair Library in honor of the 50th Anniversary of Manoa Campus.

Phoenix Palms (grove), *Phoenix roebelinii* (#479)
Planted in 1985 along Dole Street and Krauss Hall in honor of the 40th Anniversary of the United Nations.

Plumeria, *Plumeria* (#386)

Planted in 1933 on the Diamond Head side of the Queen Lili'uokalani in memorial of Mary Ku'ulei Kuikainahaole.

Ponga/Indian Beech, *Milletia pinnata* (#464)

Planted makai of Bachman Hall on March 25, 1955 in memorial of Harry David Gideonse.

Monkey Pod, *Samanea saman* (#115)

Plantings one through seven are planted along Dole Street near Johnson Hall.

1. Theodore Anderson (Carnegie Visiting Professor) March 19, 1959.
2. H. Harvard Arneson (Carnegie Visiting Professor) March 19, 1959.
3. Lester V. Chandler (Carnegie Visiting Professor) March 19, 1959.
4. Robert E. Fitch (Carnegie Visiting Professor) March 19, 1959.
5. William B. Sarles (Carnegie Visiting Professor) March 19, 1959.
6. Laurence H. Snyder (New UH President) March 19, 1959.
7. Dael Wolfle (Charter Day Keynote Speaker) March 19, 1959.
Plantings eight through twelve are planted along University Avenue.
8. Avenue of the States; Torlief S. Aashelm (Extension Director of Montana) April 8, 1960.
9. Avenue of the States; Carl E. Frischknecht (Extension Director of Utah) April 8, 1960.

10. Avenue of the States; Carl Svinth (Extension Director of Washington) April 8, 1960.
11. Avenue of the States; George Starr (Extension Director of Wyoming) April 8, 1960.
12. Avenue of the States; A.E. Triviz (Extension Director of New Mexico) April 8, 1960.

Gold Tree, *Tabebuia donnell-smithii* (#251)

1. Planted in 1994 near Henke Hall in memorial of David Quinn.
2. Planted in 1959 in memorial of the Extension Directors F.G. Krauss, H.H. Warner, H.S. Wadsworth, and Y.B. Goto.
3. Two trees (originally three) planted in 1978 near HIG Building in memorial of Gary Niemeyer, Bob Harvey, and Mike Allen (Missing with research ship).
4. Planted Mauka of Hamilton Library in memorial of Joyce Watson.

Pink Tecoma, *Tabebuia heterophylla* (#329)

Planted in 1991 in memorial of Herbert B. Weaver.

Pink Trumpet Tree, *Tabebuia impetiginosa* (#255)

Planted in 1994 near the Art Building in memorial of Martin Luther King. Original tree was a Clitorea, which blew down in 1933.

Teak, *Tectona grandis* (#229)

Planted in 1947 near Andrews Outdoor Theater in memorial of Harlow Shapley.

Kukui/candle nut tree, *Aleurites molocana*

(#157)

Planted Diamond Head side of BioMed building.

Giant Crape-Myrtle, *Lagerstroemia speciosa*

(#134)

Planted 'ewa side of St. John Building in memorial of James Wildern.



Fig 4.4: View of Quadrangle planting, 2008

4 HERITAGE LANDSCAPE PATTERNS

4.6 TREES OF NOTE

Fig 4.5: Chinese Banyan, *Ficus Microcarpa*, 2008

Although not officially an exceptional or memorial tree, many other trees contribute to the quality of the campus. The following list includes trees of special note, simply for their aesthetic quality and contribution to the tree cover of the campus.

Baker's Shower Tree, *Cassia bakeriana* (#405)

Located at the entrance of Hamilton Library, this is an ornamental tree from Asia. Once in danger, this tree has been petitioned by a group of students and supported by the Chancellor for its preservation.

Bo Tree, *Ficus Religiosa* (#35)

Once designated as an exceptional tree, the Bo specimen on campus suffered from extensive pruning to accommodate the construction of the Student Services Building. It was removed from the list of exceptional trees. Although no longer an official exceptional tree, it remains on the Campus Heritage list as a reminder of the importance of proper maintenance procedures.

Planted in 1912, by the first graduating class of the University of Hawai'i at Mānoa, this Bo tree is the sacred tree of Buddhism; Prince Gautama is said to have sat under a specimen of this tree until reaching enlightenment. The oldest known specimen grows in what is now Sri Lanka, transplanted there from India in 288 B.C. The Mānoa campus Bo tree was planted from a cutting from the largest Bo tree in the United States, planted in downtown Honolulu. The Honolulu tree was a small rooted cutting from the original 288 B.C. specimen in Sri Lanka (Belknap 1982: 30).

Chinese Banyan, *Ficus microcarpa* (grove, #33)

Near Andrews Outdoor Theatre, around Kennedy Theater, and throughout the East-West Center



stand groves of Chinese Banyan trees. This is one of the few fig trees in Hawai'i that produce viable seeds. Specific pollinating wasps were imported by Harold Lyon into Hawai'i to allow this fig to spread readily into deforested hillsides. This effort was so successful that now this tree is considered an invasive species in Hawaiian forests. When a seed sprouts in the crevice of another tree, the Chinese banyan grows aggressively, eventually strangling its host (University of Hawai'i at Mānoa 2006: n.p.).

Banyan, *Ficus sp.* (#544)

Located near the Student Health Building, this Banyan suffered from a poor pruning and maintenance. The canopy spans nearly a 100 foot diameter. It is part of Joseph Rock's original arboretum.

Banyan, *Ficus Rumphii* (#435)

Located between Hemmengway Hall and Campus Road, this tree, an original Rock planting, is notable for its large buttressing trunks and willow-like canopy.

Gold Tree, *Tabebuia donnell-smithii* (#251)

Planted Makai of Henke Hall on the Diamond Head side of McCarthy Mall. This tree aligns with the east-west axis of the planted Monkey pods of the Mall.

Gold-fruit Benjamin Fig, *Ficus benjamina* (#435)

Located near the engineering quad, notable for its large, artistic-like branches.

Monkey Pod, *Samanea saman* (#115)

In addition to the eight memorial trees along Dole Street, this species contributes to the cohesive colonnade of trees near the Law School and Johnson Hall and along University Avenue.

Rainbow Shower Trees, *Cassia x nealiae* (#121)

These trees burst into bloom to remind the campus that spring has arrived. The Rainbow Shower Tree is a hybrid produced in Hawai'i between the *Cassia javanica* (#119) and the *Cassia fistula* (#120). There are three named cultivars of this hybrid on campus. Down the middle of East-West Road is the "Queen's Hospital White." Down the median of Maile Way is the "Whilhelmina Tenney." The third, with yellow flowers, is the "Lunalilo Yellow."

Sausage Tree, *Kigelia pinnata* (#526)

Alongside Miller Hall, this tree can be identified by its sausage-like fruit. Native to Africa, the 'sausages' hang like pendulums from long stems. They may reach three feet in length, weigh up to 15 pounds, and can be made into a black dye. At night, reddish purple flowers bloom and emit an unpleasant odor. (Belknap 1982: 59). This is an original Rock planting that appeared on old University postcards.



Fig 4.6: Sausage Tree, *Kigelia Pinnata*, 2008

4 HERITAGE LANDSCAPE PATTERNS

4.7 LANDSCAPE INVENTORY AND CONDITION EVALUATION SAMPLES (Please see Appendix CD-ROM for Complete Works)







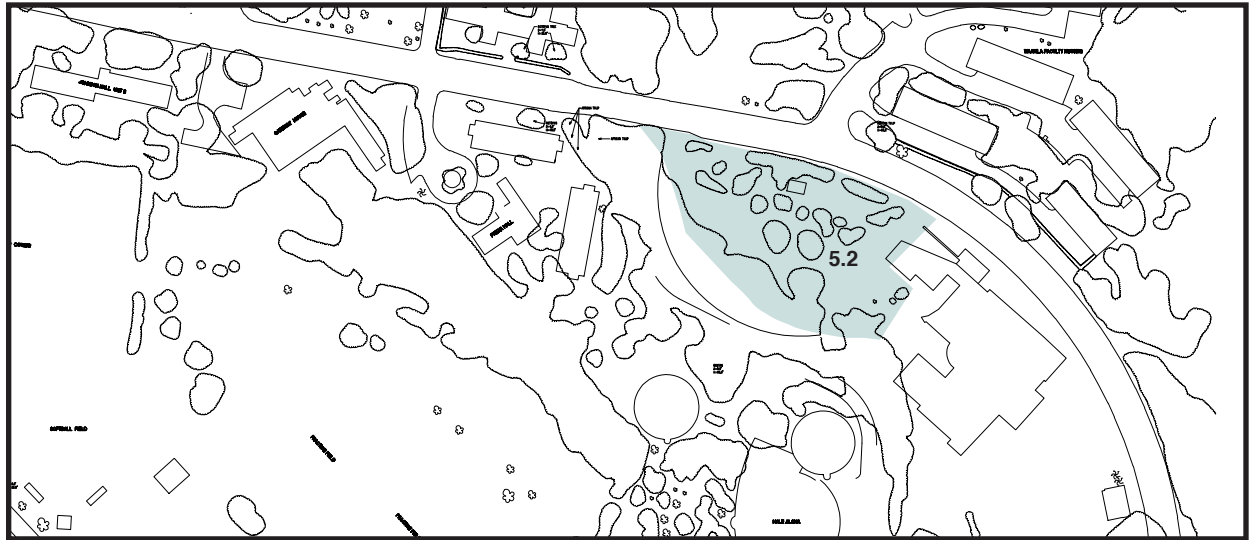
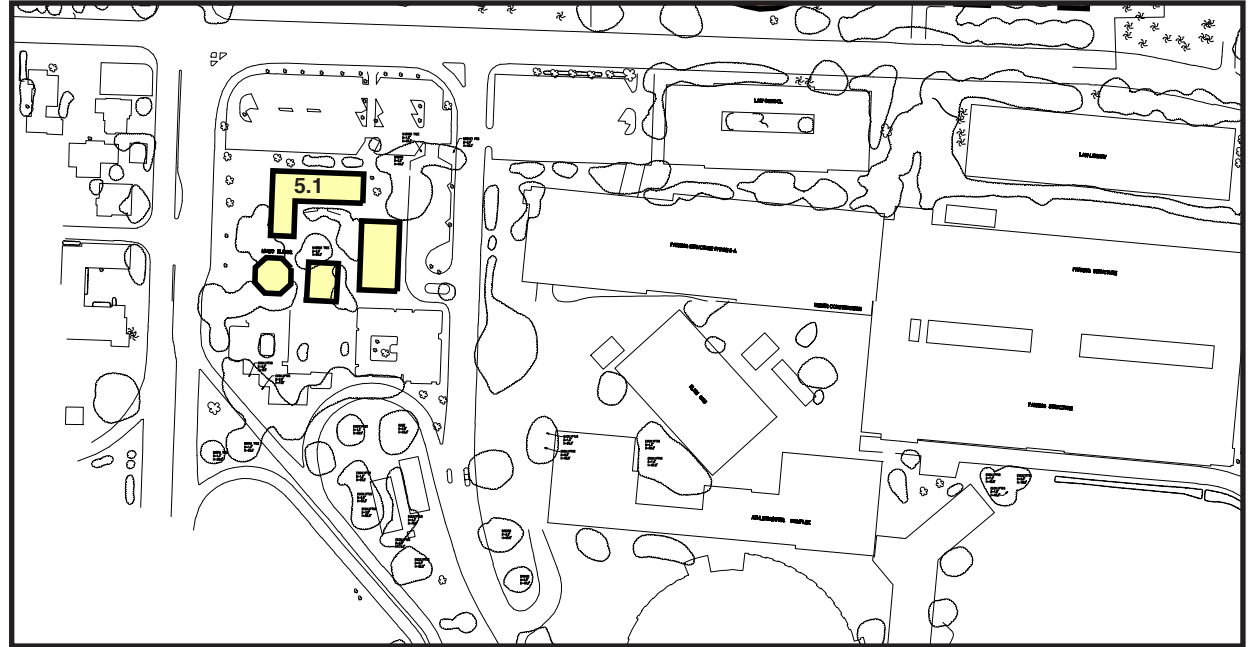
CHAPTER 5

MAKAI CAMPUS



Makai Campus:

- 5.1 Music Building Complex
- 5.2 Ka Papa Lo'i O Kānewai



MAKAI CAMPUS MAP

Pre-Territory Period (<1907)

Early Statehood (1959-1970)

5.1 MUSIC BUILDING COMPLEX



The Music Building Complex, which includes the Mae Orvis Auditorium, is significant under Criterion A, events, as the site of a pioneering music course and the first Hawaiian Chorus. It is also significant under Criterion C for its architectural design in the International Style and for its innovative structural design. The Auditorium features a Baroque pipe organ by Schlicker and a mural by Edward Brownlee.



5.1 MUSIC BUILDING COMPLEX

NARRATIVE DESCRIPTION

Narrative Description of the Setting and Landscape

The Music Complex, a series of buildings separated by courtyards and open-air hallway spaces, is located at the corner of Dole Street and University Avenue. The entire complex measures approximately 320 feet by 315 feet. The complex can be entered at various points, although the northeast corner serves as the primary entrance as the most accessible direction from the parking lot and main campus. Moving through the complex from mauka to makai, the buildings transition from wood to concrete; this change in material defines the overall character of the complex.

Bordering the northeast corner on only two sides of the complex, the main music buildings create an “L-shaped” open space. The concrete walkways

of the open space include a ramp and terraced stair that descends into a courtyard surrounded by perimeter beds planted with low ground cover. A colorful ceramic tile square planter occupies the center of the concrete surfaced space. The planter is titled “Neumes o Hawai‘i” and was designed by Susie Pleyte Horan (Kobayashi 1983: 118).

Proceeding in the makai direction and to the west, the next courtyard space and the entrance space are joined at the corners. An outdoor loggia connects the two spaces, entered from the first courtyard and lines with the entire north edge of the second courtyard. The second organizational space is a rectangular courtyard surrounded by buildings on four sides. The central area of this second yard is a green lawn sloping in the makai direction. The concrete walkway eventually becomes stairs on the west side. The courtyard green space is punctuated by a single Banyan tree in the southwest corner, which is balanced by a sculpture piece in the opposite northwest corner, titled “Sumotori,” sculpted by Greg Clurman in 1975 (Kobayashi 1983: 110).

The third courtyard, which is furthest makai, is a concrete amphitheater. The glass façade of the Barbara B. Smith Amphitheater and Ethnomusicology Wing is articulated with two large sliding glass doors serving as the backdrop to the amphitheater space. When open, these doors link the interior and exterior spaces. The amphitheater has concrete terraced seating areas with bricks inlaid at the edges. A wall of concrete masonry units (CMU) between the buildings and an access driveway screens the amphitheater



Fig 5.1: Courtyard and Landscaping, 2008



from the walkway. The rotation of the CMU, so that the cavities face the user of the space, creates a “honeycomb” effect, permitting light and airflow in the space.

Concrete walls also define two smaller courtyards flanking the main amphitheater. Although partial-height dividing walls along the ramped walkways separate these three distinct outdoor spaces, all three remain visually linked. The smaller courtyard serves to organize circulation; a planter occupies its center, leaving only a perimeter walkway space. The courtyard along the amphitheater space on the east side is the central organizing element of the Dorothy M. Kahananui Wing. The concrete courtyard contains planters and has a café-type



Fig 5.2: Courtyard and Landscaping, 2008

Fig 5.3: Small Courtyard, 2008

seating area, making the space suitable for student gatherings. The upper level of the building has a view into this space from open exterior hallways on the second floor, adding a vertical tier of movement into the space. The Mae Zenke Orvis Auditorium Music Complex is organized by these outdoor spaces, which facilitate the transition in grade change as well as introduce daylight into the complex.

5.1 MUSIC BUILDING COMPLEX

NARRATIVE DESCRIPTION

Narrative Description of the Building

The Music Building Complex consists of a series of one to three story buildings built in the International Style of the Modern Movement. The complex is located on the southwest edge of campus and bordered by University Avenue to the west and Dole Street to the north. The Music Building, Music Practice Building, Choral Rehearsal Building and Mae Zenke Orvis Auditorium form a grass-covered courtyard. Located directly south of these buildings are the Dorothy M. Kahananui Wing and the Barbara B. Smith Amphitheatre and Ethnomusicology Wing.

The Music Building is a one-and-a-half-story reinforced concrete structure clad with wood paneling. The two rectangular volumes forming the “L-shaped” open space compose the music building. It features a unique concrete exoskeleton that suspends each music studio, isolating them

from each other for best acoustic performance. A covered exterior walkway leading to the individual entries of each of the music studios surrounds the building. All of the facades are similar with ribbon windows of three or four panes adjacent to each studio entry. The north façade walkway is sheltered from the adjacent parking lot by artistic embossed and painted concrete panels. Several of the building’s walls are canted to improve interior acoustics.

The Music Practice Building is a one-story reinforced concrete structure with wood cladding. The building forms an octagon volume with individually sized practice rooms situated around the perimeter of the building. The main entry is accessed by a covered walkway that connects this building to the Music Building and the Choral Rehearsal Building. At the center of the building is an eight-foot diameter open oculus in the roof that lets natural light and air into



Fig 5.4: Entry Courtyard, 2008



Fig 5.5: Secondary Entry, 2008

the interior of the building. A large circular planter is located in the center of the building under the opening with seating wrapped around.

The Choral Rehearsal Building is a one-and-a-half-story reinforced concrete structure with wood cladding. The building is a rectangular volume and, like the previous buildings, features the concrete exoskeleton structure. The building interior is one large rehearsal room with a sloped floor. Entries into the room are located on the north, east and west facades. The north façade entry consists of three oversized sliding doors that open up the majority of the façade to the adjacent grass court. Protecting this unique entry is a cantilevered curved overhang.

The Kahananui Wing and Ethnomusicology Wing border the open-air Barbara B. Smith Amphitheatre on the east, south and west sides. A concrete breeze-block wall forms the north façade of the amphitheatre. The rectangular volume is an open-air space that is accessed by a double-height covered walkway surrounding the amphitheatre on the north, east and west sides. The walkway features exposed pre-stressed concrete beams. The stage is at the south side of the amphitheatre and the concrete floor slopes up to the north with curved concrete risers for audience seating.

The Ethnomusicology Wing is a two-story rough board-formed concrete structure with large curved corners. A large rectangular volume and two smaller rectangular volumes form an interior courtyard.

5.1 MUSIC BUILDING COMPLEX

NARRATIVE DESCRIPTION

The main entrance is located on the north façade leading into the courtyard where exterior concrete stairs access the second level. The façades are all similar featuring equally spaced narrow vertical windows. The Kahananui Wing is similar to the Ethnomusicology Wing in appearance, structure and layout. An open courtyard is at the center of this rectangular volume and is accessed by an opening in the building form on the north façade. Inside the landscaped Kahananui courtyard is a large board-formed concrete elevator shaft that project out into one end of the courtyard. Matching the Ethnomusicology Wing, the façades feature equally spaced narrow vertical windows.

Mae Zenke Orvis Auditorium is a three-story reinforced concrete structure built in the International Style of the Modern Movement. The building is located next to Music Building Complex near the corner site of Dole Street and University Avenue.

The auditorium, along with the Music Building, Music Practice Building and Choral Rehearsal Building, form a grass-covered courtyard. Orvis Auditorium is rectangular in volume with the main entry on the building's north façade facing Dole Street.

The north façade is composed of three structural bays each approximately 16 feet wide each with the entry located in the central bay. The façade on this side appears to be two stories tall, while the rest of the facades are three stories tall due to the site, which slopes towards the south. The north façade has no windows, but has two sets of double doors that lead to the interior lobby. The double doors are located on either side of the central box office windows. A large wood horizontal overhang that extends about 20 feet from the building edge protects the entry. This roof is supported by a smaller version of the concrete exoskeleton that the surrounding buildings feature.



Fig 5.6: Artwork at Entry, 2008



Fig 5.7: Covered Access Ramp, 2008

The east and west façades are similarly built and consist of seven structural bays, each about 12 feet wide. There are no windows placed on either façade. The first floor of the building serves as the base of each of the façades and consists of smooth concrete walls and exposed concrete columns. Resting on the columns is the façade of the upper floors that is clad in wood paneling and is flush with the column face. Above the second floor, a two to three foot thick concrete parapet wraps the building concealing the roof. Each of these façades has a few doors located on the south end, which appear to be used for private access to the auditorium.

the sloping grade. The rest of the façade is made of smooth concrete with equal vertical and horizontal cuts about every five feet. A single set of double doors is located on the first floor level, with no steps or landing visible at the façade to access these doors.

The south façade is the only façade with windows. Six low windows run the length of the basement level of which only about five feet is visible due to

5.1 MUSIC BUILDING COMPLEX

STATEMENT OF SIGNIFICANCE

The Music Building Complex was initially constructed between 1958 and 1959 (Kobayashi 1983: 107). Previously music classes were taught in a variety of locations including the swimming pool locker room where the first band class was taught in 1927. In the 1930s, music classes were held at the Teachers College (Kamins 1998: 215) and were moved in the 1940s to a wood building now called Bachman Annex 2. In 1947, the University Music Department was officially established (Kobayashi 1983: 107) with the help of Norman Rian who came to the University a year prior specifically for this purpose (Kamins 1998: 216). One year later in 1948, the Music Department moved to an old Army bungalow, at the current site of the KHET TV station, and a theatre shared by the adjacent University Elementary School. The bungalow and the theatre, known to the education students as “the Barn,” was the home of the Music Department until it finally received its own facilities at the Music Building Complex in 1959 (Kobayashi 1983: 107).

The new location for the Music Building Complex was on previously undeveloped campus land. Originally, this site was used by generations of local farmers to grow and sell flowers and vegetables (Kamins 1998: 70). The original building complex consisted of four buildings that included an administrative building with classrooms and teaching studios, a practice room building, a choral building and a band building (Kobayashi 1983: 107). The building cost was a total of \$285,000 (Kamins 1998: 217). Noticeably lacking a recital hall, the Orvis Auditorium was added to the complex site in 1961.

This addition was made possible by a private donation of \$180,000 from Dr. Arthur E. Orvis in honor of his wife Mae Zenke Orvis, who was a former

opera singer (Kamins 1998: 70). Due to rapidly increasing enrollment, in 1975 the band building was demolished to allow room for a new music complex. The new \$2.4 million complex included wing additions directly south of the Practice Room Building and Orvis Auditorium. They are called the Ethnomusicology Wing, the Dorothy M. Kahananui Wing, and the Barbara B. Smith Amphitheatre. These new spaces offer music rooms as well as dance studios and a performance area for Indonesian gamelan performances (Kobayashi 1983: 107-109).

The original Music Building Complex consisted of four buildings that included an administrative building with classrooms and teaching studios, a practice room building, a choral building and a band building. These buildings offered the first permanent home to the University Music Department (Kobayashi 1983: 107). The Orvis Auditorium was

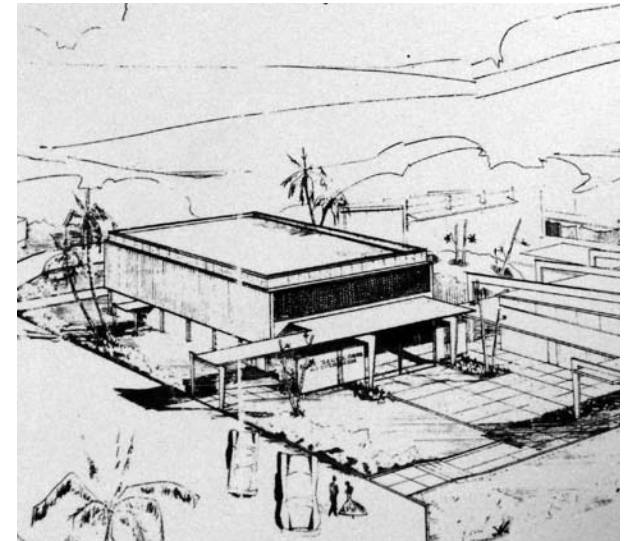


Fig 5.8: Orvis Auditorium Hand Rendering, Circa 1960



Fig 5.9: Music Complex Hand Rendering, Circa 1960

added to the complex in 1961 to fulfill the need for a performance hall (Kamins 1998: 70) In 1975, due to rapidly increasing enrollment, the band building was demolished to allow room for a new music complex. The new complex expanded the existing facilities with two new wing additions and an outdoor amphitheatre. These new spaces, designed by Sam Chang and Associates and constructed by Ralph S. Inouye, Co., Ltd., offered music rooms as well as dance studios and a performance area for Indonesian gamelan performances (Kobayashi 1983: 107-9). The wings and the new amphitheatre are named in honor of significant persons to the school: Dorothy M. Kahananui and the Barbara B. Smith. Kahananui was the first UH music instructor and the first Native Hawaiian to have an academic building named in her honor and Smith was

responsible for introducing ethnic music courses to the University (Kamins 1998: 215-218).

Criterion A: Significance for Events

The Music Building Complex is significant under Criterion A (Events) based on it being a place where noteworthy advancement was made in the music of Asia and the Pacific. Barbara B. Smith, who had taught the first class in the nation focusing on non-Western music prior to the Music Complex, created with instructor Dorothy Gillett another pioneering music course. In 1959, the same year that the Music Complex was completed, Smith and Gillett taught this summer class that focused on teaching music instructors from across the nation about Pacific and Asian music and dance, called

5.1 MUSIC BUILDING COMPLEX

STATEMENT OF SIGNIFICANCE

“Pacific and Asian Music in Education.” Smith and Gillett’s contributions made the University a leader among American universities in teaching Asia and Pacific music and integrating multiculturalism into teacher preparation. Their stimulation of the study and practice of the music of Asia contributed to the establishment of a several Masters degrees and eventually a Ph.D. with an emphasis on ethnomusicology and research in cross-disciplinary areas of music, dance, drama, and Asian and Pacific studies. The first Hawaiian Chorus was also established by Gillett in 1972 within the complex, which helped to connect the school to the traditional Hawaiian Choral singing that occurred in Hawai’i during the mid-19th Century (Kamins 1998: 216-220).

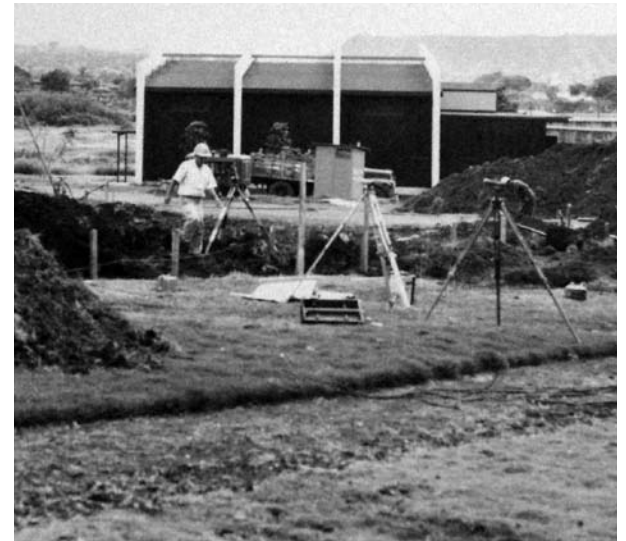
Criterion C: Significance for Architectural Design

The 1958-1959 original buildings on the complex are built with a unique structural design that specifically meets the requirements of the music buildings where transfer of sound is undesirable. The buildings stand out as a collection as the structural system is a distinguishing architectural feature from the exterior of the buildings that was specifically designed for these structures. The structure is visible as a concrete exoskeleton, which allows the studios to be suspended. This design allows the buildings to be acoustically independent of one another without creating large separation walls or using continuous floor slabs which can transmit sounds between rooms (Kobayashi 1983: 108).

The Orvis auditorium was built in the International Style by architect Haydn H. Phillip, AIA and acoustical consultant Iwao Miyake, a UH physics professor

(Kobayashi 1983: 107). The building, which holds an audience of 400, has architectural significance as being one of a collection of buildings that utilize a unique structural design to minimize the transfer of sound for music purposes. Within the auditorium is a small baroque pipe organ built by Schlicker and on the exterior entryway wall is a mural designed by Edward Brownlee. The mural shows antique musical instruments and is composed of copper and iron (Kobayashi 1983: 107).

Fig 5.10: Construction Site, Circa 1960



NARRATIVE STATEMENT OF INTEGRITY

The setting for the original buildings in the Music Complex has been slightly altered due to the demolition of the original band building and the addition of several larger buildings in the 1970's. The design elements of the exo-skeleton are easily interpretable as a necessity due to sound isolation, and the feeling of the period of construction is clearly expressed in the forms and detailing of the buildings that comprise the complex.



Fig 5.11: Courtyard Sculpture, 2008

Fig 5.12: Music Complex East Facade, 2008

5.2 KA PAPA LO'I O KĀNEWAI



This special site is listed on the State Register #: 50-80-14-4498 as determined by the research conducted by the International Archaeological Research Institute, Inc. in conjunction with the University of Hawai'i Hawai'i inuiākea School of Hawaiian Knowledge (Burtchard 1996: 1, iii). "Prehistoric irrigation features, in the form of major auxiliary irrigation ditches ('auwai), were identified in three of the four garden area trenches. Taro (*Colocasia*) pollen was found in the paleoenvironmental sample. Combined stratigraphic and radio carbon data from the central 'auwai suggest a period of prehistoric use, followed by a period of abandonment and eventual reconstruction during early historic times" (Burtchard 1996: iii).



5.1.1 KA PAPA LO‘I O KĀNEWAI

NARRATIVE DESCRIPTION

Narrative Description of Setting and Landscape

Situated along the wooded east bank of Mānoa Stream, the Ka Papa Lo‘i O Kānewai is located adjacent to the Hawai‘i nui kākea School of Hawaiian Knowledge, east of the main campus, south of Dole Street. A house (hale), several small structures and a collection of taro patches and native trees compose the site. The space, approximately 360 feet by 270 feet, provides an exterior extension to the lower interior spaces of the Hawaiian Studies building. The Lo‘i is an integral part to the Hawaiian Studies curriculum. Monthly volunteer programs extend the use of the Lo‘i to the community.

The space of the Lo‘i, although adjacent to Dole Street, has a private and rural atmosphere due to a steep topographical separation between the site and the street. Trees planted within this separation screen views of the street from the garden. Mānoa Stream, the courtyard, and high-pitched roofs of the Hawaiian Studies building become the primary views. The overall composition of the site conveys a natural landscape contrasted by the manmade right angles of the Lo‘i and garden plots. An ‘auwai, a traditional method of irrigation from a stream, creates a constant movement of water through the site. The site combines agricultural, educational, and cultural land uses.

Criterion C: Significance for Distinctive Characteristics in Design

The significance of this site extends to traditional Hawaiian accounts that recall a freshwater spring named Kānewai. *Sites of O‘ahu* (Sterling & Summers 1978: 281), provides an early description of the pool: “Kānewai was the name of a large underground

pool on the mauka side of King Street, near what is now the quarry. Its waters, the ‘healing waters of Kāne,’ were much sought by the Hawaiians. Queen Lili‘uokalani was much interested in the pool. The ancient Hawaiians said that wise fish from the sea used to swim up to this pool, overhear the plans of the native fishermen, who frequented the vicinity, and then float back to the ocean to warn their finny friends” (Sterling & Summers 1978: 281). According to Hawaiian legend, the pool was created by Kāne and his friend and companion god, Kanaloa as a source of water to brew their ‘awa” (Westervelt 1915:36). The ‘ili, or land area, was therefore named Kānewai meaning “waters of Kāne” (Burtchard 1996: 23).

The restoration of the pre-historic Lo‘i provides an excellent and distinctive example of a period of design and construction, and thus provides an important resource to the current community. Archaeological “...and historical information from Kapapa Lo‘i o Kānewai provide clear evidence of both historic and prehistoric period irrigation features. Earliest use of the ‘auwai plausibly dates to the mid-15th century when it probably functioned as part of a larger irrigation system general to the Kānewai area” (Burtchard 1996: 63).

Narrative Statement of Integrity

The Lo'i perpetuates the Hawaiian culture and traditional land use and agricultural practices for the area. Well-watered, fertile, and relatively level Mānoa Valley, at the head of the Waikīkī plain, was also of great importance to wetland taro cultivation. As Handy wrote: "In upper Mānoa the whole of the level land in the valley bottom was developed in broad taro flats. The terraces extended along Mānoa Stream as far as there is suitable land for irrigating. ...About 100 terraces are still being cultivated [in 1931], but these do not constitute more than one tenth of the total area capable of being planted" (Sterling & Summers 1978: 282). The Hawai'i State Register of Historic Places has recognized the integrity of the Ka Papa Lo'i O Kānewai.



Fig 5.13: Hawaiian Studies Building, Lo'i in foreground, 2008



Fig 5.14: Students maintaining the Lo'i, 2008

CHAPTER 5

CENTRAL CAMPUS WEST



Central Campus West:

- 5.3 College of Education Complex
 - 5.3.1 Wist Hall
 - 5.3.2 Castle Memorial
 - 5.3.3 University High School 1
 - 5.3.4 University High School 2
- 5.4 Quad Building Complex
 - 5.4.1 Hawai'i Hall Palm Garden
 - 5.4.2 Hawai'i Hall
 - 5.4.3 Gartley Hall
 - 5.4.4 George Hall
 - 5.4.5 Dean Hall
 - 5.4.6 Crawford Hall
- 5.5 Varney Circle and Fountain
- 5.6 Miller Hall
- 5.7 Engineering Quad
- 5.8 Hemenway Hall
- 5.9 Founders Gate
- 5.10 Sinclair Library and Grove
- 5.11 Bachman Hall, Terrace and Lawn
- 5.12 Andrews Outdoor Theatre



CENTRAL CAMPUS WEST MAP

- Territorial Period (1907-1940)
- World War Impact (1941-1948)
- Early Statehood (1959-1970)

5.3 COLLEGE OF EDUCATION COMPLEX



The College of Education property on the west edge of campus has a long collaborative history with the University of Hawai'i. Currently called the "College of Education", it serves the University Laboratory School and the Curriculum Research and Development Group (CRDG), a K-12 school and a research unit of the College of Education that develops new teaching materials and curricula for faculty and students. The school originally began as "The Honolulu Normal Training School." It was located at a separate site in Honolulu where it specialized in teaching only pre-school and elementary school students in 1895 (*The Honolulu Advertiser* 1957: 4). In 1905, when Hawai'i became a territory of the United States, the school was renamed "Territorial Normal Training School" (Curriculum Research & Development Group 2008, n.p.).

COLLEGE OF EDUCATION COMPLEX

5.3.1 WIST HALL (1930's)

5.3.2 UNIVERSITY HIGH SCHOOL 1 (1940's)

5.3.3 UNIVERSITY HIGH SCHOOL 2 (1940's)

5.3.4 CASTLE MEMORIAL HALL (1940's)



5.3 COLLEGE OF EDUCATION COMPLEX

NARRATIVE DESCRIPTION

In 1920, the school first began offering an option to study education and psychology (Kamins 1998:35). Its main purpose was to facilitate the training of elementary school teachers. Up until 1920 The University of Hawai'i had been known as the College of Hawai'i. On July 1, 1920, the Hawai'i legislature officially launched the University of Hawai'i. During this transition, the University began offering an option to study education and psychology, which led to the suggestion in a 1920 Federal Survey Report that the Territorial Normal Training School (which primarily functioned to train elementary school teachers) merge with the University campus (Kamins 1998:20). Again in 1929, a Prosser study recommended that the two schools merge (Kamins 1998:35-38).

In 1930, the Territorial Normal Training School moved from their Honolulu location to the 15-acre campus on University Avenue, adjacent to the University of Hawai'i (Curriculum Research & Development Group 2008, n.p.). The merger of these two schools was a sign of the changes that were occurring on the University campus. The 1930s marked a decade when the University was shifting from a focus of mainly agricultural research and training to a "bustling embryonic University" (Kamins 1998:32). The first building on the site was built in 1930. Wist Hall was named for Benjamin O. Wist, a principal of the Territorial Normal School in 1921 (Kamins 1998:229-230). Wist Hall was the only building that was built from a master plan for the area by architect C. W. Dickey (Sanborn 2008, n.p.).

Due to the merger of the two schools in 1930, the Territorial Normal Training School was now known as "Teachers College" (Kamins 1998:32). The addition

of the Teachers College allowed professional careers to continually become available to the diverse cultures and races of people who attended the University (Kamins 1998:308). Additionally, the University's enrollment almost doubled in the year that the Teachers College began (Kamins 1998:230). The property that the Territorial Normal Training School had acquired before this merger was transferred to the University (Kamins 1998: 38). The next building to be built on the Teachers College campus was University Elementary School in 1936 (which burnt down in 2006). Castle Memorial Hall was then built in 1941 to specifically teach younger children (Kamins 1998:42).

The school expanded in the 1940s with one building built during World War II. University High School 1 was built for the specific use of teaching intermediate school students. In 1948, University High School 2 was built to teach high school students. "It was now possible for a student to be on the Mānoa Campus from kindergarten through graduate school" (Kobayashi 1983: 82). Additional buildings on the Teachers College campus include University High School 3, built in 1957 (Kobayashi 1983: 82); The Multipurpose Building, built in 1963; and Everly Hall (Wist Hall Annex), built in 1963 (Kamins 1998: 70-90). Everly Hall was named for Dr. Hubert V. Everly, a Dean of the school in 1959, who lobbied to allow the Teachers College to accept all qualified applicants during his tenure. "One result was the opening of opportunity for more young people of Japanese ancestry. For them, teaching remained the shortest route to a profession and an escape from the plantation and the cannery" (Kamins 1998: 71).

In 1951, the lab school was described as different from regular schools in three ways. The class sizes were small with children that were “representative of the population of the Territory.” The student teachers learned by teaching a group of children for a single semester, and permanent staff stayed with the same group of children for two years to “hold the entire pattern together and provide for correction of weaknesses.” Lastly, new methods of supervising and teaching were used. “The laboratory school situation provides opportunity for experimentation. This is always conducted under careful supervision and always with careful precautions that pupils do not suffer educationally. A good deal of pupil training is acquired through active participation and acceptance of responsibility” (Fern 1951: 4).

In 1959, the Teachers College was renamed “College of Education” as it began to prepare school administrators and counselors (Kamins 1998: 71). Today, the College of Education serves as a K-12 lab school with training for teachers, counselors and administrators. “The history of University High School is necessarily tied in with the history of Teachers College. For all classes are taught by student teachers, who are college seniors majoring in education. They get their first teaching experience at University High” (*The Honolulu Advertiser* 1957: 4).



Fig 5.15: Wist Hall, 2008

5.3 COLLEGE OF EDUCATION COMPLEX

5.3.1 WIST HALL

Benjamin O. Wist Hall is significant under Criterion A, events as the first structure that helped to establish the Teachers College, now known as the Lab School and the UH Department of Education and under Criterion C for its architectural design as the only Spanish Eclectic Revival Style building on the campus.

Narrative Description of Building

Benjamin O. Wist Hall is a two-story wood and stucco building with a double-pitched clay tile roof and an octagon tower built in the Spanish Eclectic Revival Style. The building is L-shaped in plan and is part of a complex of buildings comprising the University Laboratory School (ULS) campus. The ULS includes Everly Hall, Wist Annex 1, Castle Memorial Building, Multi-Purpose Building, and University High School 1, 2 and 3. Wist Hall is directly connected to Everly Hall by a mechanical

room, which creates a three-sided garden court between the buildings.

Entries to the building are located on the south, east and west façades. The main entry is centrally located on the east façade. Above the recessed glass double doors is an arch relief with a Hawaiian inspired wood-cut mural. Historic light sconces are mounted to the façade on both sides of the entryway. A wood girt runs directly below four vertical window openings on the upper level.

The south façade consists of three equally placed windows at each structural bay. All windows on the building are metal frame non-original windows with a long narrow window on either side of a wider window. This pattern repeats itself on both the lower and upper levels of the building. A wood belt runs along this façade, similarly to the east façade. An accessible entrance has been added



Fig 5.16: Wist Hall Gardens, 2008



Fig 5.17: Wist Hall Gardens, 2008

to this façade. An arch relief is located above this accessible entrance.

The west façade has a central entryway, with windows placed at each bay similarly to the south façade. An accessible entryway and ramp are located at the mechanical room addition to Wist Hall.

The north façade is similar to the south façade in window placement. The interior of the building consists of an open stairwell at the main entry and a racetrack hallway at each floor that connects to the offices and classrooms. The smaller length of the L-shaped plan houses a media center. At the junction of the two rectangular volumes is a three-story open atrium with aluminum metal framed windows on

the third level, which is the octagon tower viewed from the exterior. A staircase wraps the perimeter of this space leading to the second level walkway that overlooks the first floor. Perimeter seating and a rock and sand sculpture occupy this area. The interior finish materials include vinyl composition tile (VCT) floors, gypsum wallboard walls and acoustical ceiling tiles (ACT) ceilings. There are no decorative finishes of note, as the building has been remodeled.

5.3 COLLEGE OF EDUCATION COMPLEX

5.3.1 WIST HALL

Narrative Statement of Significance

The first building built for the University Lab School or “Teachers College” campus was The Teachers College Building, which was built in 1930 (Kobayashi 1983: 82). The Teachers College Building was renamed Benjamin O. Wist Hall in 1951 (*The Honolulu Advertiser* 1951: 1). The building holds classrooms, a media center and offices for the current UH College of Education.

Criterion A: Significance for Events

Wist Hall was built at an influential time in UH history. The 1930’s “marked the real changing of the small, agriculturally oriented college into a bustling embryonic university” (Kamins 1998: 32). Wist Hall was built just one year before the Territorial Normal School, which functioned to only train elementary school teachers (Kamins 1998: 35-38). The building

was built for the University to become “Teachers College,” now known as University Laboratory School (Kamins 1998: 32). All property that was associated with the Normal School therefore became UH property, which substantially expanded the very small agricultural campus (Kamins 1998: 38). Dr. Hubert V. Everly, said of the high school program, “The purpose of this is to give the cadet teachers a chance to familiarize themselves with students who represent the children of Hawai’i” (Chee 1948: 20).

Criterion C: Significance for Architectural Design

The original 15-acre Teachers College campus was designed by C. W. Dickey (Sanborn 2008: n.p.), a recognized and influential architect in Hawai’i during the Territorial Period. Wist Hall was originally meant to be part of a larger complex designed by Dickey,



Fig 5.18: Wist Hall Entry, 2008

Fig 5.19: Wist Hall, 2008



yet all other buildings on the site were later designed by others. Dickey referred to Wist Hall as a “slightly off pure white” building that blended harmoniously with the rest of the UH campus with its “Hawaiian atmosphere” (Kobayashi 1983: 50).

The building is designed in the Spanish Eclectic Revival Style, which is unique for the current UH campus. The Spanish Eclectic Revival Style is characterized as having low-pitched roofs clad with red roof tiles, small overhanging eaves or the absence of eaves entirely, plain stucco siding and the use of arches. Wist Hall exhibits the main characteristics of Spanish Eclectic Revival Style with its use of off-white stucco walls clad over a reinforced concrete shell, a low-pitched red tile roof and the use of arches to illustrate the entryways on each façade.

Narrative Statement of Integrity

The setting of Wist Hall along University Avenue has been modified by the addition of Everly Hall on the mauka side, but the original setting, with lawn dotted with palm and monkey pod trees, is still perceivable. Wist Hall is intact to its original design with minor reversible changes to windows and doors. While the interior finishes have changed on the interior the organizing element to the plan, race track corridors connected to a central staircase space lit by the belvedere, is intact.



Fig 5.20: Wist Hall Parking, 2008

5.3 COLLEGE OF EDUCATION COMPLEX

5.3.2 UNIVERSITY HIGH SCHOOL 1

University High School 1 is significant under Criterion A, events, as one of the many buildings that comprised the original Teachers College, or University Lab School, which helped shape early childhood education in Hawai'i.

Narrative Description of Building

University High School 1 is a one-story post and pier building with single-wall wood construction. The roof is a gable-on-hip-roof with composition shingles built in the early Territorial Style. The building is roughly "J" shaped in plan with a 45 degree extrusion and a small courtyard enclosed on three sides. The building is part of a complex of buildings comprising the University Laboratory School (ULS) campus including Everly Hall, Wist Hall, Wist Annex 1, Castle Memorial Hall, Multi-Purpose Building, and University High School 2 and 3. The building is raised off the ground to

accommodate the sloping site, with the highest elevation (about six feet) occurring on the west end and sloping toward the northeast where part of the building is a slab on grade. The foundation area of the building is concealed with two inch horizontal slats spaced about three inches apart, with occasional cross-bracing.

There are entry locations on the south, north, west and northwest ends. The walls of the building are six inch vertical tongue and groove wood boards with wood-cased, double-hung windows.

The north facing façade is a combination of three distinct building sections. These sections are rotated around a garden space, creating the "J" shape of the building in plan. The main entrance on this façade is a centered double door entry that is accessed by a low set of wood stairs. Two secondary entryways are located on the west and east ends of



Fig 5.21: University High School 1, 2008

Fig 5.22: University High School 1, 2008



the façade. The north elevation is clad with six inch vertical tongue and groove wood boards. The main recessed entryway is flanked on either side by three banks of double hung windows, some with lower transoms. The west building section of the north façade extrudes in a northwest direction at a 45 degree angle. This façade includes four banks of windows which include double-hung windows above and hopper windows below. Six large Kiawe trees border the building on the north side. Boxwood and flowering hedges cover the elevated base of most of the building.

The walls of the west façade are also made with six inch vertical wood boards and seven panels of windows with wood louvers centered on a single vent. There are no entry doors on this façade.

The south façade is roughly 180 feet long with two entry alcoves each accessed by a low set of stairs. Windows are placed throughout the rest of the façade in a pattern, with two distinct types: a short double-hung wood four panel window and a long double hung four panel window over a hopper window.

The east end of the building is made of six inch vertical wood boards with a single entry door and two sets of vertical windows and horizontal wood louvers. The building appears to be severely deteriorated as it exhibits peeling paint, wood rot and damage from insects and rodents, lack of repair.

5.3 COLLEGE OF EDUCATION COMPLEX

5.3.2 UNIVERSITY HIGH SCHOOL 1

Narrative Statement of Significance

University High School 1, built in 1943, was the only civilian building built on campus during World War II (Kobayashi 1983: 82). This was due to the inconsistent use of the campus during the war. When the bombing of Pearl Harbor occurred in 1941, the entire University was shut down. “The instructional program immediately stopped, not to be resumed for two months. The Mānoa ROTC unit was ordered into active duty. Quickly, as martial law was declared, the Army came to supervise the digging of bomb shelters on the campus and to commandeer facilities it required” (Kamins 1998: 42). The building was originally designed as an intermediate school but now houses several College of Education classrooms, an art studio, offices of the Dean of College of Education, College of Education faculty offices, University Lab School (ULS) Science classrooms and storage.

Criterion A: Significance for Events

UHS 1 is significant under Criterion A (events) based on the building being part of ULS, which was renamed the College of Education in 1959 when school administrators and counselors also began to be trained there (Kamins 1998: 71).

UHS 1 was the first building on campus that allowed for the teaching of intermediate students with the methods of the Teachers College. The intermediate school was first called Teachers College Intermediate School, and it became officially known as University High School in 1947. High school classes were added in 1948 to 1951 under the same name. UHS was obtained by the Teachers College as a “laboratory” for their teacher training program, which means that “the history of University High School is necessarily tied in with the history of Teachers College” (*The Honolulu Advertiser* 1957: 4).



Fig 5.23: University High School 1, 2008

Narrative Statement of Integrity

The University High School 1 has a different setting than the original campus layout as several newer buildings have been added. The basic form of the building is intact to the original construction. The organizing elements of the plan have been changed with classroom spaces. The essential character of the building is intact with wood walls, windows and strong hipped roof.



Fig 5.24: Lanai, 2008



Fig 5.25: Outdoor Space, 2008

5.3 COLLEGE OF EDUCATION COMPLEX

5.3.3 UNIVERSITY HIGH SCHOOL 2

University High School 2 (UHS 2) was built in 1948 as an additional teaching building on the Teachers College campus. The lab school eventually expanded the number of students being taught when it built University High School 1 in 1943 as an intermediate classroom space on the current College of Education site adjacent to the University of Hawai'i. University High School 2 was the first high school building on the University Lab School campus. The building now houses offices for The Curriculum Research and Development Group (CRDG) faculty. All of the interior offices were historically used as classrooms.

Narrative Description of Building

University High School 2 is a one and a half-story single-wall wood construction building designed in the Early Territorial Style. The plan is T-shaped with a gable-on-hip-roof. It is raised off the ground

to accommodate the southwest sloping site with a grade change of approximately five feet. The structure of the building sits on a post and pier foundation, which is concealed with two-inch horizontal wood slats. The wood frame construction supports the roof. The gable-on-hip-roof is clad with composition shingles. The building is part of a complex of buildings comprising the University Laboratory School (ULS) campus including Wist Hall, Castle Memorial Building, Multi-Purpose Building, and University High School 1 and 3.

Low wood staircases lead up to the four main double door entries that are centered on each of the four facades. These entries lead to intersecting corridors of the building that connect to all of the interior offices. The main entry to the building is located in the center of the east façade. The east façade of the building is composed of six inch vertical tongue and groove wood boards. This end of the building



Fig 5.26: University High School 2, 2008

includes the portion of the plan that is the top of the “T” shape. This façade has five bays of wood framed windows each composed of three panels and covered with metal screens. The entry door is recessed into the building. Wood framed slats are located above the entry doors to provide natural ventilation. A small roof overhang with exposed rafters projects over the central staircase that leads to the entry. The building is raised approximately five feet on this façade from the natural site slope. Large windows are located on either side of the recessed wood framed entryway. The wood framed openings are composed of double-hung and hopper windows. The windows are covered on the exterior with metal screens.

The south façade of the building has a basement level on the west end of the façade. The north end of the façade consists only of the raised first floor. A double door entry is recessed and centered on the south façade. A pattern of windows run the length of the first floor on either side of the central entry. A small roof awning with exposed rafters on the west end of the façade protects the double-hung window openings on the basement floor. This awning wraps around the building to the west façade.

The west façade of the building has an entryway centered and recessed from the main façade. A small roof overhang with exposed rafters projects over the central staircase that leads to the entry. This double door entry is accessed from a flight of stairs that lead to the first floor. No windows are located on the first floor of this façade. The property slopes down to the south of the façade with a set of concrete stairs. Because of this slope, there is a basement level on the south side of this façade. The basement roof awning on the south façade wraps around to this façade and is located above



Fig 5.27: University High School 2, 2008

a single wood door that is located on this corner of the façade.

The north façade of the building is a single story. A central double door entry is recessed into the façade and accessed by wood stairs, similar to the other three façades. A patterned set of wood framed double-hung and hopper windows runs along the façade while the rest of the façade consists of six inch vertical tongue and groove wood boards.

Some bays of windows on all four façades have been covered with metal security screens. These vertical windows wrap all of the façades of the building. The building appears to be severely deteriorated as it exhibits peeling paint, wood rot and damage from insects and rodents and lack of repair.

5.3 COLLEGE OF EDUCATION COMPLEX

5.3.3 UNIVERSITY HIGH SCHOOL 2

Fig 5.28: University High School 2, 2008



University High School 1 is significant under Criterion A, events, as one of the many buildings that comprised the original Teachers College, or University Lab School, which helped shape early childhood education in Hawai'i.

Criterion A: Significance for Events

UHS 2 was the first post-World War II building on campus. It was designed as classroom spaces for high school students, making it “possible for a student to be on the Mānoa Campus from kindergarten through graduate school” (Kobayashi 1983: 82). The “primary purpose of this laboratory school is to train cadet teachers who are seniors at the University of Hawai'i, to better cope with the problems of teaching high school students” (Chee 1948: 20).

Dr. Hubert V. Everly, who was the principal of the high school when UHS 2 was built, said of the high school program, “The purpose of this is to give the cadet teachers a chance to familiarize themselves with students who represent the children of Hawai'i” (Chee 1948: 20).

Narrative Statement of Integrity

The University High School 2 has a different setting than the original campus layout as several newer buildings have been added. The basic form of the building is intact to the original construction and most windows and doors are original. Air conditioning equipment has been added in some windows impacting the visual form.



Fig 5.29: University High School 2, 2008



Fig 5.30: University High School 2, 2008

5.3 COLLEGE OF EDUCATION COMPLEX

5.3.4 CASTLE MEMORIAL HALL

The Henry and Dorothy Castle Memorial Hall is a state-owned, elementary school building dating to 1941. The building is significant under Criterion A, events, as the site of the original Teachers College which helped to shape modern education as a model facility for educators throughout the United States in the 1940s. It is also significant under Criterion C for its architectural design, an example of Hawaiian Territorial architecture with elements that are adapted to the buildings first occupants, which were mainly small children.

Narrative Description of Building

Castle Memorial Hall is a one story, irregular H-shaped, wood structure building on the College of Education grounds just west of the main university campus. The building is bordered by various College of Education and University Lab School buildings within the College of Education property. With a double pitched roof and broad overhanging eaves, wide lanais and the use of many windows which contribute to the merging of indoor and outdoor space, the building is an example of early Territorial Style architecture for Hawai'i. These features identify the building as a Hawaiian Territorial Style, a term that derives from the time period in which the building was erected, when the Hawaiian Islands were still a territory of the United States (Ogata 1991: n.p.).

The east center façade is the main entrance to the property as marked by two rock columns that formally supported a trellis system extending to the main entrance doors. This trellis was removed in 1976. Access to the building is by a wide flight of several stairs on both sides of the center section. Double doors mark the entrance to the building with

decorative wood grillwork on top of the doorways. The east elevation is characterized by large single-hung windows ranging in size from eight feet in height to smaller one foot by four foot single-hung windows. The roof appears to transition from a double-pitched roof to a shed roof on the south end of this elevation. A shallow wading pool is located near the entrance of the building on this elevation. A long façade on the east end of the building features a classroom space that opens onto a wide lanai with tall wood and folding glass panel doors (Ogata 1991:n.p.).

Each of the building's 16 major facades have similar qualities, but differ in size or content. The windows used predominantly throughout the building vary from eight foot tall single hung hopper windows to six foot single hung windows.

The foundation of the building is visible on the south elevation, which consists mostly of lava rock masonry. The south façade features a long lanai that is supported by four inch by four inch wood columns. A single entry door is centered on the façade and accessed by a staircase on the east side of the façade. The openings on this elevation are mostly composed of small single-hung and hopper windows. Two other window openings are covered with wood jalousies. The south boundary of the building consists of a six foot chain-link fence set atop a rock masonry wall.

The west side of the building is accessed through central wood folding doors with open geometric grillwork opposite from the east entrance. The foundation on this elevation is visible as concrete masonry unit blocks and lava rock masonry. The west

Fig 5.31: Castle Memorial Hall, 2008



elevation is characterized by large window openings, as in the other elevations. A shallow wading pool is located near the entrance of the building on this elevation similar to the east elevation. A long façade on the east end of the building features a classroom space that opens onto a wide lanai with tall wood and folding glass panel doors similar to the east elevation (Ogata 1991: n.p.).

The north façade of the building is the largest of all the facades. It consists of 50 openings using single-hung and hopper windows. The majority of the windows are eight feet in height which allow natural light to enter the interior classroom spaces. The north boundary of the building is marked by a sloped roadway and low lying plants along the north façade. There are three entryways on this

façade, but the main entry is centrally located and marked by decorative wood grillwork on top of the doorways.

Castle Memorial Hall is already listed on the Hawai'i State Register of Historic Places. All the materials of the building are original, with the exception of the roof. Minimal changes have been made since the 1980s. The changes made at that time were internal, located in between the "Captain's room" or the CRDG Director's Office and secretary's office at the center of the building. The interior wall with windows separating these two rooms was altered, changing the windows to jalousies (Young 2007: n.p.).

5.3 COLLEGE OF EDUCATION COMPLEX

5.3.4 CASTLE MEMORIAL HALL

Narrative Statement of Significance

The Henry and Dorothy Castle Memorial Hall, originally called The Henry and Dorothy Castle Kindergarten, was established in 1899 as a private kindergarten in Honolulu. Funded by Samuel Northrup and Mary Castle, the school was named in honor of their son, Henry, and his daughter, Dorothy, who were lost at sea in 1895. The facility, which was then part of the Territorial Normal School, was part of the 1931 merger with the University to become “Teachers College” (Kamins 1998: 32). As the amount of kindergarten students grew, the need for a larger facility was needed. The Castle Foundation funded a new building for early childhood education on the University campus. In 1941 Castle Kindergarten moved and became the pre-school and early childhood education division of the “Teachers’ College” in the newly completed Henry and Dorothy Castle Memorial Hall. Originally, two buildings were constructed with the name Castle Memorial



Fig 5.32: Castle Memorial Hall, 2008

Hall: the main building and a smaller structure used as the caretaker’s building. The caretaker’s building burned down in the 1980s and is currently replaced by the CRDG services building.

Criterion B: Significance for Persons

Castle Memorial Hall is significant under Criterion B, persons, based on the design of the school curriculum with elements adapted to and catering towards small children. Mary Castle hired family friend John Dewey, who was an influential American philosopher on progressive education, to incorporate a kindergarten training program to the school. Dewey patterned the school after a laboratory school that he had just started at the University of Chicago. In addition, Dewey sent a teacher, Miss Florence La Victorie, who was personally chosen and taught by him, to teach at the school (Kobayashi 1983: 75).

Criterion C: Significance for Architectural Design

Architect Mark Potter designed the building in the Hawaiian Territorial Style, which was an architectural style prevalent during the time when Hawai‘i was still a territory of the United States. He had influence on the design from various preschool authorities, the University’s Dean Arthur Keller and Dean Benjamin Wist, and the University of Chicago’s John Dewey (Kobayashi 1983: 78). The building was designed to take advantage of the indoor-outdoor lifestyle made possible by the warm climate of Hawai‘i. The building had elements to the structure that were made to accommodate the kindergarten children who first occupied the space. Special features in the building include “shallow wading pools in the large, open [‘ewa and Diamond Head facing] courtyards, and the one-foot high toilets (suitable



Fig 5.33: Castle Memorial Hall, 2008

for small children) made Castle Memorial Hall a model facility for educators throughout the United States in the 1940s” (Ogata 1991: n.p.).

The Hall was originally built to hold two to five year olds. It was divided into three sections: the mauka wing housed facilities for four and five year olds, the makai wing held workrooms and playrooms for the two and three year olds, and a middle section housed a library, lecture room, health center and administrative offices and conference room (Ogata 1991:n.p.). Currently, the makai wing consists of childcare services for faculty and students, run by UH Student Services, art education for kindergarten through 12th grade in the mauka wing, and administrative offices of the Curriculum Research and Development Group (CRDG) in the middle section of the building.

Narrative Statement of Integrity

The setting for Castle Memorial Hall has newer buildings added through time, but the layout and relationship to open space which was a characteristic of the original plan can still be easily perceived. The essential character of the building is a wood frame, simply detailed Hawaiian Territorial Style building. The windows and doors are essentially intact with some air-conditioning units installed in windows that have been replaced on the rear elevation. The character of the building with strong hipped roofs and groupings of windows signifying classrooms is typical of school buildings in Hawai'i for nearly forty years.

5.4 QUAD BUILDINGS COMPLEX



The Quadrangle is significant in the history of the University as the first five buildings of the Quadrangle were part of the first building phases on the campus (Kobayashi 1983: 41). These buildings were the realization of a modified version of Young's 1909 master plan for a campus quadrangle. Originally these buildings served the needs of the early College but evolved as the College became a University and as the campus grew in size to serve increased enrollment. Today, Hawai'i Hall houses the Chancellor's office, and various administrative offices (Kim, 2003: n.p.). Gartley Hall's function changed to house the psychology department while George Hall serves the Travel Industry Management (TIM) School and Speech Department (Kobayashi 1983: 35). Dean Hall's role shifted slightly and holds the Biology Program along with the archaeology part of the Anthropology Department (Kobayashi 1983: 41). Crawford Hall is now occupied by the Academy for Creative Media and the School of Communications.

QUAD BUILDINGS COMPLEX

5.4.1 HAWAI'I HALL (1912)

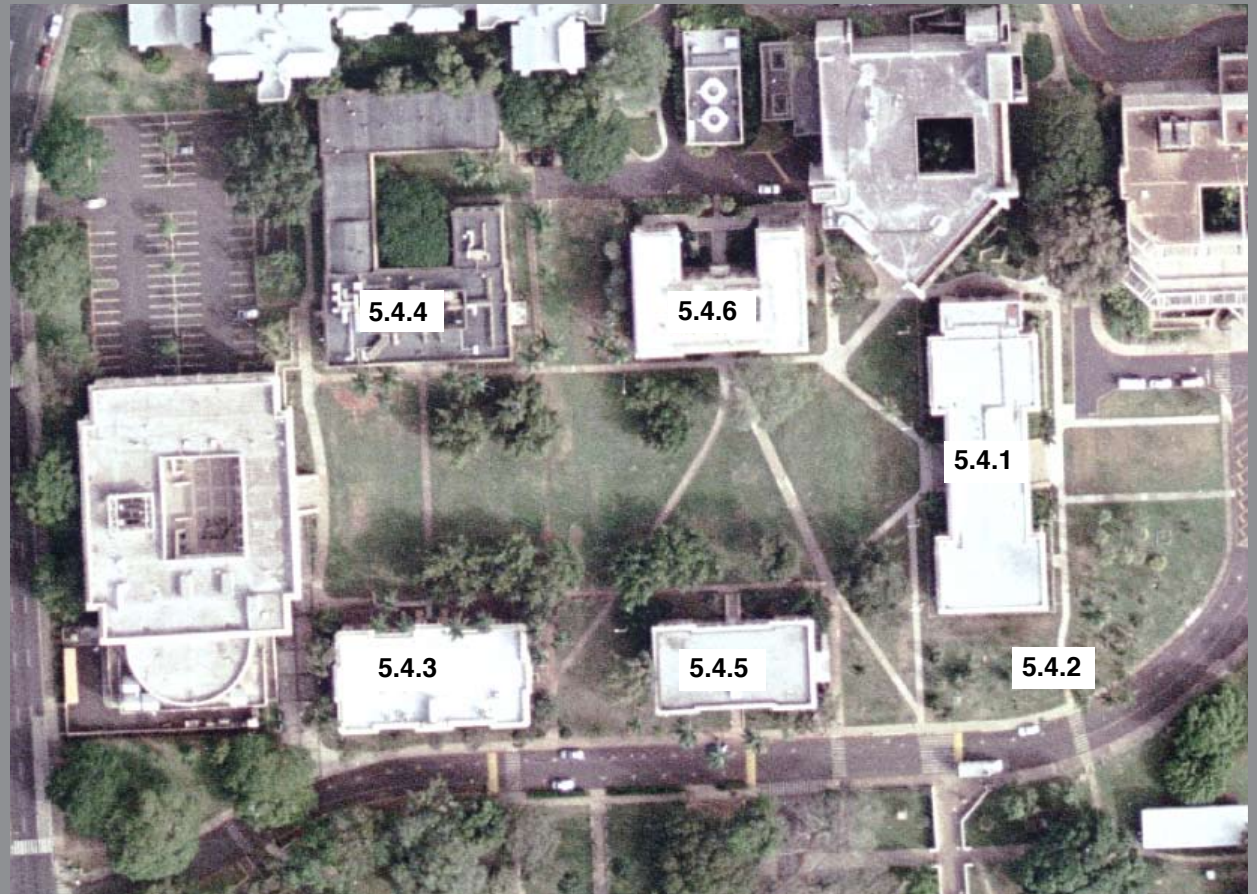
5.4.2 HAWAI'I HALL PALM GARDEN (1918)

5.4.3 GARTLEY HALL (1922)

5.4.4 GEORGE HALL (1925)

5.4.5 DEAN HALL (1928)

5.4.6 CRAWFORD HALL (1938)



5.4 QUAD BUILDINGS COMPLEX

NARRATIVE DESCRIPTION

In 1909, Professor John Mason Young designed a “comprehensive plan” for the future campus, which included buildings for schools of law, medicine, veterinary science and agriculture. Young’s design formed a large quadrangle aligned on an east-west axis running from what is now University Avenue to Mānoa Stream. The buildings were oriented to be in line with the cardinal points of the compass. The geometry set the pattern for future campus development realized on a much smaller scale. The formation of what is referred to as the “Quadrangle” began in 1912 (Kobayashi 1983: 10) and was finally completed in 1995 (Kamins 1998: 131-2). The Quadrangle is located on the northwest side of campus bordered by University Avenue to the west, Campus Road to the south and Varney Circle to the east.

The Quadrangle consists of six buildings designed in the Neo-Classical Style: Hawai‘i Hall, Gartley

Hall, George Hall, Dean Hall, Crawford Hall and the Architecture School. Hawai‘i Hall was built in 1912 and was originally known as the Main Building. It was the first permanent building on campus and is located on the east side of the Quadrangle adjacent to Varney Circle. It serves as one of two anchors to the completed Quadrangle. At the time of its construction, the building served most of the College’s early operational needs (Kobayashi 1983: 10). Following Hawai‘i Hall in the Quadrangle formation was Gartley Hall in 1922. This building is located in the southwest corner of the Quadrangle bordered by Campus Road to the south. Originally this building was known as the Laboratory Building as it was used for chemistry and physics classes (Kobayashi 1983: 35) and the sugar technology program (Kamins 1998: 17). Three years later in 1925, George Hall was built on the northwest side of the Quadrangle directly across from Gartley Hall. The building initially served as the College’s library



Fig 5.34: Quad Building Complex, 1939



Fig 5.35: Back of Mānoa Valley, Quad Building Complex in foreground, 1932

and therefore was named the Library (Kamins 1998: 23). The name changed once the building was remodeled into a classroom and office use (Kobayashi 1983: 35) for the European Languages Department (Kamins 1998: 65). Another three years later in 1928, Dean Hall was built directly to the east of Gartley Hall. This building was initially named the Biological Sciences Building since it held including zoology, botany, entomology, geology and anthropology classes (Kobayashi 1983: 41). After Dean Hall, it was quite a few more years until the next Quadrangle building was completed. In 1938, Crawford Hall, known then as the Social Science Building, was constructed across from Dean Hall and adjacent to George Hall (Kamins 1998: 35). At that time, the building was home to the History Department (Kobayashi 1983: 66). After

the construction of Crawford Hall, the Quadrangle remained incomplete for a significant period of time. In 1995, the Architecture School was built at the west end of the Quadrangle (Kamins 1998: 131-2). This building faces Hawai'i Hall and serves as the other anchor to the Quadrangle.

5.4 QUAD BUILDINGS COMPLEX

NARRATIVE DESCRIPTION

Narrative Description of Setting and Landscape

The Quadrangle is one of the most deliberately formal rectilinear organizational spaces on campus. The approximately 170 feet by 440 feet rectangular lawn provides spatial organization between six academic and administrative facilities at the Northwest end of campus. The massing of the surrounding six facilities and tree canopies screen University Avenue. The primary landscape feature of the Quadrangle is lawn, which slopes gently from the Northwest corner to the southeast side with an approximate 10 foot overall drop. The overall spatial volume formed by the rectangular lawn and surrounding academic buildings has a human scale with an approximate 1:4.5 ratio between the height of the building façades and the width of the Quadrangle.

The six academic buildings surrounding the Quadrangle act as walls to the space. However, there is a sense of permeability and interaction between the buildings and the perimeter walkways. For example, the lanai of George Hall serves as an outdoor space, informally extending a covered space into the Quadrangle. The buildings are each raised a half level above the ground plane creating a containing wall. The vertical hardscape of these foundations is softened with a variety of shrubs, some flowering, adding to the visual color palette of a predominately green lawn and earth tone buildings. Mānoa Valley's Wa'ahila ridge serves as a backdrop to the view of Hawai'i Hall on the East end of the Quadrangle. This "borrowed landscape" acts as a visual extension to the space.

The east-west orientation of the Quadrangle's long-axis creates a bright daylight space throughout the day. Emphasis on this axis is heightened because

it remains clear of tree canopies or any other visual intrusions, keeping the center of the long-axis open to the sky.

The perimeter concrete walkways are bordered on one-side with a grouping of mature shade trees providing a sheltered outdoor corridor. The shade trees filter sunlight and cast shadows between the buildings and open lawn over the pedestrian route. Clusters of Kamani trees (*Calophyllum inophyllum*) are found closest to the entrances of Gartley, George, Dean and Crawford Halls, providing dense cover over the walkways. Cuban Royal Palms (*Roystonea regia*) tower in front of George and Gartley Halls. They also flank the sides of George and Crawford Halls, creating a visual extension of the green space toward the Shidler College of Business. A single tamarind tree (*Tamarindus indica*) stands at the corner of Dean Hall. Its counterpart is a Kiawe tree (*Prosopis pallida*) in front of Crawford Hall across the Quad.



Fig 5.36: Joseph Rock's Palm Grove, 2007

NARRATIVE STATEMENT OF SIGNIFICANCE

Criterion A: Significant for Events

The Quadrangle landscape space is significant as the lawn in front of Hawai'i Hall was the site of early graduation ceremonies.

Criterion B: Significant for Landscape Design

The Quadrangle landscape space is significant for its landscape architectural design as the space that anchors the collection of five historic buildings around it. The primary building anchor at the East end of the Quadrangle is Hawai'i Hall. The entrance is flanked by two towering Sealing Wax Palms (*Cyrtostachys renda*) planted as natural columns majestically marking the entrance to the 1912 structure. The palm trunks in front of George and Gartley Halls as well as this building tie the Neo-Classical column and pilaster architectural features to the natural features of the space. The overall feeling to the Quadrangle and the buildings within the space is inviting formality. The Neo-Classical façades of the buildings flanking the space are visually symmetrical. Each building is aligned with the facing building. Entrances matched on axis and facing façades are of nearly equal widths. This setting remains intact. The historic feeling of the original campus can be easily interpreted.

NARRATIVE STATEMENT OF INTEGRITY

The Quadrangle is remarkably intact. The location, design, setting, materials, workmanship, feeling and association can all be easily understood by an informed observer. While the 1995 Architecture Building is a new addition to the Quadrangle to complete the initial design intent.



Fig 5.37: Hawai'i Hall with Palm Grove in foreground, 2007

5.4 QUAD BUILDINGS COMPLEX

5.4.1 HAWAI'I HALL

Hawai'i Hall is a three-story reinforced concrete structure with plaster finish built in the Neo-Classical Style. The building, along with five other Neo-Classical structures, creates a formal quadrangle on the campus bordered by Campus Road to the south. Hawai'i Hall is a terminus building on the Quadrangle opposite the Architecture building. Due to the building's placement on the Quadrangle, the building has two main entrances centered on the east and west façades. The east entry faces Varney Circle and the west entry leads to the Quadrangle. Hawai'i Hall reads as four rectangular volumes due to its H-shaped floor plan. The north and south wings of the building extend out beyond the central volume. The north wing features an addition to the original wing that is a vertical circulation lobby connecting all of the floors. Circulation within the original framework of the building is organized in a cross-shaped layout connecting the main entries to a perpendicular corridor that runs the north-south

length of the building. Vertical circulation within the building is organized by a centrally located stairwell as well as a stairwell located in each of the north and south wings.

The four rectangular volumes are distinguished on the west façade of the building. The north addition is recognized by separating the original wing and the addition with a vertical window that extends from the base to the cornice. A three-bay wide staircase leads to the main building entry on the second second floor as the building's first floor is partially underground. At the top of the stairs is a grand lanai organized by a colonnade of round Doric columns and balustrade that extends the length of the central volume creating seven bays. The building is grounded by the first floor base that is denoted by the change in finish color and the simple string course that wraps the façades. Near the corners of the wings, ornamented square Doric pilasters



Fig 5.38: Hawai'i Hall, 2008

extend from the base to the simple entablature featuring an unadorned cornice with integral dentils. Above the cornice at the central volume is a stepped decorative parapet and at each of the wings is a pediment. Within the central volume, a series of narrow, aluminum-framed fixed windows with upper awning are spaced evenly at each level. They sit upon pronounced individual exterior window sills. Each wing has similar windows but the pattern is two pairs flanking a single window, which is repeated at every level.

The north façade has three sets of double door entries at ground level into the addition housing a circulation lobby that has stairs and an elevator leading to the different floors. Dividing each of the entries from the transoms is a continuous cable-suspended curved horizontal overhang. In line with the entries are ornamental details on the upper level. The details are the width of the double door entries below and feature the same crisscrossing aluminum frame pattern of the doors below.

The east façade is almost identical to the west façade. The main difference is that the central section has a larger colonnade and lanai creating nine bays. In addition, the wings feature a series of three paired windows at each level as there are no pilasters present on this façade. Lastly, the stepped parapet is unadorned.

The south façade continues the window pattern of the east wing in a series of seven paired windows at each floor.

During the renovation of Hawai'i Hall in 2002, the interior was demolished. The new finishes were selected and designed to match the original interior design within the second floor corridor.



Fig 5.39: Hawai'i Hall, 2008

5.4 QUAD BUILDINGS COMPLEX

5.4.1 HAWAI'I HALL

Narrative Statement of Significance

Hawai'i Hall, which was known as the Main Building for ten years, was built in 1912, making it the first permanent building on campus and the first building of the Quadrangle (Kobayashi 1983: 10). The design architect was Clinton Ripley, however, preliminary design drawings were created by Professor John Mason Young (Kobayashi 1983: 11). The construction contract was awarded to Lord Young Engineering Co., who had underbid rival Pacific Engineering Company, John Mason Young's company, by \$25 (Kobayashi 1983: 19). The building originally housed most of the College's early operations including administration, the library, animal husbandry laboratory, classrooms, an art studio and an athletic locker room (Kobayashi 1983: 10). In 1980-81, the building was remodeled but it still needed further repairs due to significant termite infestation (Kobayashi 1983: 19). In 2002-03, the building underwent a complete renovation that included demolition and reconstruction of the entire interior of the building; only the façades and some of the original distinctive interiors were maintained as part of the original structure. Today, it is occupied by the Chancellor's Office, Arts and Sciences Student Academic Services and the offices of the Dean of Social Science and Dean of Arts and Humanities (Kim 2003: n.p.).

Criterion A: Significance for Events

Hawai'i Hall is significant under Criterion A (Events) based on it being the first permanent building on the College of Hawai'i's campus (Kobayashi 1983: 10). It was a symbol of the College that denoted the permanence of the College within Hawai'i. For many decades, the building was the center of campus

activities. The year it was built, the first College commencement was held on the steps of the Hall that face the future Quadrangle (Kamins 1998: 14). In 1923, the building also played a role in the offer of Honolulu's government to install electric lights on campus to serve faculty and students staying on campus after sundown. Hawai'i Hall was the first to be illuminated (Kamins 1998: 23). Hawai'i Hall was also the location of a tragedy that resulted in an accidental death of a student and the banning of all hazing activities at the University (Kobayashi 1983: 21).

In 1923, traditional hazing activities prohibited freshman from entering Hawai'i Hall through the front door. One morning, a group of 25 freshman boys attempted to gain access to the building through the front entry causing a "tussle" between the freshman and sophomore boys. It got extremely rough and students were tumbling down the steps. One freshman boy fractured his back and died as a result. The University took action and prohibited all future hazing (Kobayashi 1983: 21).

Criterion C: Significance for Architectural Design

The building is designed in the Neo-Classical Style and is part of a collection of buildings that share this style. Together, these buildings were the realization of a modified version of Young's 1909 master plan for a university quadrangle. Hawai'i Hall was the first building to be built in the quadrangle and was the focal point of this space for most of the campus' life until the Architecture School was completed at the other end of the Quadrangle. This building was and continues to be a prominent symbol of the University and the building is frequently used as a



Fig 5.40: Hawai'i Hall, Circa 1925

representation of the University's image (Kobayashi 1983: 12).

The architecture of the Neo-Classical Style is exemplified by the use of a colonnade of Doric columns and balustrade and the cornice with integral dentils. The large lanai are representative of a design element frequently used in Hawai'i due to the favorable climate year round. Although the building was completely renovated, it was done so in accordance with the State Historic Preservation Division guidelines. The exterior was left nearly unchanged and the interior was reconstructed. Some of the original distinctive interior features were preserved, refurbished and reinstalled into the building (Kim 2003: n.p.).

Narrative Statement of Integrity

Hawai'i Hall has integrity of location and setting. The exterior is intact with the exception of new aluminum windows. The interior materials were replaced in 2002 renovation. The renovation impacted the overall integrity of design, which can be interpreted by a knowledgeable observer. The association and feel can easily be understood.

5.4 QUAD BUILDINGS COMPLEX

5.4.2 HAWAI'I HALL PALM GARDEN

The Hawai'i Hall Palm Garden, also known as the Joseph Rock Palm Garden, is significant under Criterion B, person. It is a product of the vision, pioneer botanic field work in Hawaiian native flora and extensive international collecting efforts of botany professor Joseph Rock.

Narrative Description of the Setting and Landscape

The Hawai'i Hall Palm Garden is situated at the administrative center of the campus between the east and south façades of Hawai'i Hall and Campus Road. The triangular shaped garden site is flanked by three concrete pedestrian walkways with the southeastern side bordered by the sweeping curve of Campus Road.

Spatially, the public garden serves as a screen and transitional space between the Campus Road



Fig 5.41: Hawai'i Hall with Palm Grove in Foreground, 2007

corridor and the neoclassical Hawai'i Hall. The garden topography is nearly level and consists of 28 palm trees with shrubs and flowering plants serving as lower level ground cover arranged asymmetrically. The space is formal, intentional, and deliberately sculpted as an accent to Hawai'i Hall. The palm trees in the garden become architectural elements as two palm trees flank the main Hawai'i Hall entrance, aligned with the white columns placed across the building façade. Although the garden is permeable, the concrete walkways are around the perimeter rather than through the grove and the density of the palm groupings are both solids and voids. The two concrete benches placed in the garden have a view into Varney Circle, the center of the campus.

The flowering plants such as Day lilies and lower height plants such as Loulu palms, Hiptage, and Hala (*Pandanus*) contribute color and variety to the garden. The following listing gives an idea of the range of palm tree varieties found in the garden: Coconut, Carribean, Royal palm, Gru Gru palm, Sagisi palm, Florida Thatch palm, Cabbage palm, Foxtail palm, Barbados Silver palm, Blue latan palm, and Mexican Fan palm. The plants are grouped in mulch beds surrounded by lawn, allowing the towering palm trees to serve as a landmark and focus in the space. J.F. Rock planted seeds from several new species of Loulu (*Pritchardia* sp.) in the area surrounding Hawai'i Hall (Beccari & Rock 1921). Unfortunately, some of them were destroyed or removed when the building was reconstructed in 2002-03.

Narrative Statement of Significance

The Hawai'i Hall site was still part of dairy farm in 1911 (Kobayashi 1983: 10). This rural land was converted into an element in the campus wide botanical garden plan through the work of the first botany professor, Joseph Rock who became internationally renowned for his work in China and Hawai'i. "If one ever comes across biological specimens with the species name of *Rockii* or the genus name of *Rockia*, that plant or bird is named after the founder of the botanical garden which is the Mānoa Campus" (Kobayashi 1983: 10). Approximately half of the trees remaining today were planted by Prof. Rock.

Criterion B: Significance for a Person

The Hawai'i Hall Palm Garden, also known as the Joseph Rock Palm Garden, is significant because its plantings were conceived by an internationally renowned botanist, Joseph Rock. In his career at the University Rock personally collected the seeds and propagated the seedlings on campus. He supervised their planting as the core of the collection. Together with numerous other trees on campus, the botanic collection he assembled has inspired every generation to continue his vision and protection of the botanic collection.

NARRATIVE STATEMENT OF INTEGRITY

The integrity of the Palm Garden was negatively impacted when many plants were destroyed as part of the renovation of Hawai'i Hall. The intent of the original garden planting has been maintained. The Palm Garden is a mixture of plants grown from seed by Joseph Rock and later generations of Rock palms brought from other locations and replanted in the Rock Palm Garden.



Fig 5.42: Palm Grove at Hawai'i Hall, 2007

5.4 QUAD BUILDINGS COMPLEX

5.4.3 GARTLEY HALL

Gartley Hall is significant under Criterion A, events, as the funds appropriated for the building design and construction were a milestone in history of local support for the college (Kamins 1998: 17). In addition, its role in the war efforts following the bombing of Pearl Harbor is significant in history. The Hall is significant under Criterion C for its architectural design in the Neo-Classical Style, by its design architect, J.H. Craig (Kobayashi 1983: 35). It is also significant as one of a collection of buildings that compose the University Quadrangle.

Narrative Description of the Building

Gartley Hall is a three-story reinforced concrete structure with plaster finish built in the Neo-Classical Style. The building, along with five other Neo-Classical buildings, is part of a formal quadrangle on the campus bordered by Campus Road to the south. The building is composed of five rectangular volumes with the central volume and two wing

volumes protruding a few feet to the north and south beyond the inner volumes. The main entryway is located on the north façade, which faces the historic quadrangle. The circulation within the building is in a cross-shaped layout starting at the main entry leading to a perpendicular corridor that bisects the building. At the intersection of the short and long corridors, is the vertical organizing element, a central staircase.

The main façade features the five distinct volumes as well as the main entry. The first floor of the building is partially underground. A main staircase perpendicular to the building leads up to the second floor. The entryway has a double glass doorway with transom and is inset creating an alcove on this façade. The entryway is additionally highlighted by three sets of flanking columns. At the edges of this pronounced volume is a set of engaged two-story Doric columns with decorative wall torches. Directly next to these columns is a set of round Corinthian two-story columns. Right behind the Corinthian columns are a set of square one-story Doric columns that create the frame of the entryway along with a balustraded false lanai above. The lanai wall has three adjacent jalousie windows that fill the opening. The first floor acts as the base of the building that the columns rest upon and is distinguished by a simple string course and change in finish color. The column pattern at the main entry repeats on the east and west ends of this façade, with the exception of the one-story entryway columns, where the rectangular volumes are also pronounced. In between these columns are three adjacent jalousie windows at each level. Within the inset bays of the building are two sets of recessed window openings with paired jalousie windows almost one story tall. Above the windows and columns is a simple entablature featuring



Fig 5.43: Gartley Hall Entry, 2007

an unadorned cornice with dentils that wrap the building. This façade has been impacted with the addition of an exterior, portable metal ramp for accessibility. The ramp runs parallel to the building and ends with a landing that bridges over a portion of the main staircase leading to the main entrance.

The east façade is similar in design to the north façade. It features a pyramid or three-sided staircase leading up to a second floor double door glass entry. Again, the main entryway column pattern is repeated. The corners of this façade feature the large square Doric columns and within the bays are three adjacent jalousie windows at each level similar to the north façade. This façade has been modified from its original state with the addition of an exterior steel fire escape staircase descending from the center of the second floor. The west façade is identical to the east façade.

The south façade facing Campus Road is almost identical to the north façade with a few exceptions. The central volume of this façade does not have an entry into the building but is filled with jalousie windows instead. Also, to allow roof access, a recessed triangulated parapet is located at the center of this façade. The base of the building is also more exposed on this façade due to the south sloping site. The interior of the building contains many original finish materials. A grand staircase at the merger of the interior corridors is original and features a wood banister and railings. Wood wainscoting runs along all the corridor and classroom walls.



Fig 5.44: Gartley Hall as seen from Campus Road, 2007

5.4 QUAD BUILDINGS COMPLEX

5.4.3 GARTLEY HALL

Narrative Statement of Significance

Gartley Hall, which was originally known as the Laboratory Building for a few months, was built in 1922, making it the third permanent building on campus after Hawai'i Hall and the Engineering Materials Testing Laboratory. The Regents planned to name the building after George B. Carter, the Territorial governor who had signed the act that established the College of Hawai'i in 1907. However, they decided against this as they felt it would antagonize some of the Hawaiians. As a result, the building was named after Alonzo Gartley, the first chairman of the Board of Regents who had died the previous year. The design architect of the Gartley Hall was J.H. Craig and the building became the new home for chemistry and physics courses (Kobayashi 1983: 35).

Gartley Hall was also used for the sugar technology program (Kamins 1998: 17). In 1964, the building was remodeled and now houses the psychology department (Kobayashi 1983: 35).

Criterion A: Significance for Events

Gartley Hall is significant under Criterion A (Events) based on how the building was funded. In 1919, it was the first time the territorial appropriation to the school was larger than its federal grant, proving to be a milestone indicating the local support of the college. The funds appropriated for Gartley Hall were included in this year and were largely due to the increased enrollment of the new sugar technology program that pleased the industry as well as its proponents in the legislature. Gartley Hall's significance during World War II is based on its use during that time. On December 11, 1941, Acting President Keller received a letter from Lieutenant



Fig 5.45: Gartley Hall Entry, Circa 1945

Colonel Theodore Wyman stating that the Corps of Engineers would take over several of the University's buildings for use as shelters, operations facilities and to train military personnel (Kamins 1998: 42). The buildings taken for military use were returned for University use in 1945 (Kamins 1998: 50).

Criterion C: Significance for Architectural Design

The building is designed in the Neo-Classical Style and is significant as part of a collection of buildings that share this style and created the Quadrangle, a smaller version of Young's 1909 master plan for a University Quadrangle. Gartley Hall was the second building to be built in the Quadrangle after Hawai'i Hall and is located on the south side of the Quadrangle. The building features Neo-Classical design characteristics including Corinthian and Doric columns and an entablature with integral dentils.

Narrative Statement of Integrity

Gartley Hall has integrity of location, setting, materials, and workmanship. Modifications to the interior have changed the design although many original finishes remain; the exterior is remarkably intact with reversible modifications to windows, fire stairs and signage.



Fig 5.46: Gartley Hall Entry Column Detail, 2007

5.4 QUAD BUILDINGS COMPLEX

5.4.4 GEORGE HALL

George Hall is significant under Criterion A, events as it helped expand the library collection for the University being the first campus building to be devoted solely to the purpose of storing books. Also, it housed the first language laboratory for the school and was one of the first buildings to be electrically illuminated. George Hall is significant under Criterion C for its architectural design in the Neo-Classical Style, by its design architect, Arthur Reynolds (Kobayashi 1983: 35). It is also significant as one of a collection of buildings that compose the University Quadrangle.

Narrative Description of Building

George Hall is a three-story reinforced concrete structure with plaster finish built in the Neo-Classical Style. The building, along with five other Neo-Classical buildings, is part of a formal Quadrangle on the campus bordered by Campus Road to the

south. George Hall is perceived as being one large rectangular volume however it is comprised of several rectangular volumes due to its “G” shaped plan. This layout forms an interior courtyard. The circulation of the building is organized by the plan shape and the main entry located on the south façade facing the Quadrangle. The building sits on an upward sloping site towards the north. The north wing of the building is stepped up one full story from the rest of the building to the south. This wing is accessed by staircases that lead up to it on both the east and west sides of the building.

The south façade is the most decorated façade and features the main building entry within a long central rectangular volume flanked by two square volumes. The first floor of the building provides the base of the structure and is denoted by a change in finish color and a simple string course that wraps the façades separating it from the upper floors. A centralized cascading staircase leads up to the covered entryway alcove that is composed of three adjacent single-story archways. The second and third floors are lined with Doric order pilasters and columns that create 15 bays each approximately eight feet wide. The first floor has a square awning window divided into nine panes located within each bay. Above the first floor, the three end bays on either end of this façade include vertical multi-pane awning windows within each bay of the square pilasters. These windows extend up to the third level and each feature a decorative concrete label mold at the top and a prominent sill at the bottom. The nine bays in the middle of the façade include round Doric columns and low glass railings sheltering a shallow lanai. The lanai is accessed from the second floor through glass doors with Palladian transoms. Above the transoms



Fig 5.47: George Hall, 2007



Fig 5.48: View of George Hall from the School of Architecture, 2007

are punched clerestory windows with decorative metal screens. At night, the double-height lanai is illuminated by pendant lamps suspended in the center of each bay. The entablature of this building features a frieze with paired two feet by two feet decorative grills within the bays at the end volumes and circle reliefs directly above the columns in the central volume. An unadorned cornice wraps the building with integral dentils on this façade.

The west facing façade continues a similar design aesthetic as the south facing façade but with less decoration. The façade is composed of four volumes. The two end volumes are square while one of the middle volumes is a long horizontal rectangular shape and the other is a short and tall rectangular shape. The façade steps in from the end square

volumes and with this the building façade becomes less decorated. A series of staircases parallel and perpendicular to the building at the north volume provide access into the building's second floor through a double door entrance. The entry has a multi-pane transom above as well as a decorative curved metal awning. Located at the third floor is a multi-pane window with a prominent sill. Flanking the entry ensemble are square Doric pilasters creating three bays with multi-pane windows. The bottom windows are double the height of the upper windows and both have prominent sills. In between the windows is a horizontal rectangular relief. This window and relief pattern is continued in the main volume of this façade where a series of equally spaced windows runs its length.

5.4 QUAD BUILDINGS COMPLEX

5.4.4 GEORGE HALL

The central volume features a simplified cornice without dentils and no decorative grills. The third narrow volume is stepped out slightly from the central volume and has ornamentation, although not as much as the final volume. It relates to the end volumes with its dentiled cornice and square Doric pilasters creating one bay with a multi-pane window. It connects to the central simple volume with the placement of a small window multi-pane window above the other window. The fourth volume at the southern end of this façade is an extension of the south façade.

Five bays are created by a combination of the square Doric pilasters and round Doric pilasters. Three round pilaster bays are flanked by a square pilaster bay, which features the double-height label molded windows. Within the central bays, smaller multi-pane awning windows are centered. Above the bays, the decorative grills are featured as well as

the cornice with dentils and a pedimented parapet. Below the bays within the base of the building, square awning windows are placed matching the pattern on the south façade. In place of several of these windows in the central volume are access doors to mechanical spaces and an open-air tunnel that provides access through the first floor level into the interior courtyard.

The north façade consists of three two-story high volumes. The two end volumes are square in shape with a long rectangular volume in between them. The two end volumes are identical and feature square Doric pilasters at the corners and a simple cornice with integral dentils. Within the single bay the window pattern is similar to that on the west façade but features a set of windows. The lower level has two tall multi-pane awning windows that are twice the height of the upper awning windows. They are separated vertically by a rectangular



Fig 5.49: Side of George Hall with Gartley Hall in background, 2007

relief and horizontally by a narrow spiral Corinthian order column. The central volume is simplified and features the same window and relief pattern with the exception of the Corinthian columns.

The east façade is identical to the west façade except that it is truncated. It is composed of three volumes instead of four. It includes the square decorated volume that is an extension of the south façade, the narrow slightly less ornamented transition volume and half of the unadorned central volume of the west façade.

The interior courtyard is primarily concrete paved with a small sloping grass area. There is a low, curving wall used for seating that borders the soft ground cover and the concrete courtyard. The façades of the interior courtyard continue the simplified design aesthetic of the north façade with the exception of the courtyard's north-facing façade. The entire façade features a repeating pattern of narrow, three-story tall multi-pane windows separated by square Doric pilasters.

The interior of the building appears to be changed extensively from its original appearance. Interior doors and finish materials appear to have been replaced fairly recently. The main entrance lobby appears to be renovated with two sets of interior staircases on either end of the lobby and a low ceiling supported by a single column in the center of the space.



Fig 5.50: George Hall, Circa 1950

5.4 QUAD BUILDINGS COMPLEX

5.4.4 GEORGE HALL

Narrative Statement of Significance

In 1925, architect Arthur Reynolds' design of George Hall, originally named the Library, was constructed by Young Engineering Co. In addition to serving as the library, the building was used to hold student dances in the library lobby since there was no gym or auditorium on campus (Kamins 1998: 23). In 1936, a new wing was added (Kobayashi 1983: 27). Later, in 1956, architect Hayden Phillips remodeled the facility when the building no longer functioned as a library but as a classroom and office building (Kobayashi 1983: 35). At that time, it housed the European Languages Department (Kamins 1998: 65) and part of the Art Department featuring an art exhibition gallery (Kobayashi 1983: 39). Today it is used by the Travel Industry Management (TIM) Department and Speech Department. At the time of the remodel, the building was renamed George Hall after William H. George, the Dean of College

of Arts and Sciences from 1930 to 1938 (Kobayashi 1983: 35).

Criterion A: Significance for Events

George Hall is significant under Criterion A (Events) for several reasons. George Hall was the first campus library that was completely devoted to books, relieving the overcrowding atmosphere that occurred at the previous library within Hawai'i Hall (Kobayashi 1983: 35). The building also played a role in the offer of Honolulu's government to install electric lights on campus to serve faculty and students staying on campus after sundown. Hawai'i Hall was first illuminated and once George Hall was built, the size of the illuminated campus was effectively doubled (Kamins 1998: 23). The building is also significant based on it housing the first language laboratory on the campus. Dorothy Aspinwell, the chair of the European Language



Fig 5.51: George Hall as 'the Library', Circa 1940

Department in the 1950s, developed the laboratory based on her research monitoring teaching methods at other universities with a grant in 1955. The language laboratory consisted of 39 “semi-soundproof” booths establishing a high-tech area for teachers to tape record language lessons that changed the way language classes were taught at the University. Teachers at the University of Hawai‘i and across the nation at other innovative campuses revealed a lucrative new market to textbook publishers. The laboratory was used in George Hall until 1961 when it was moved to a larger space in Webster Hall (Kamins 1998: 65).

Criterion C: Significance for Architectural Design

The building is designed in the Neo-Classical Style and is part of a collection of buildings that share this style and form the Quadrangle on campus. George Hall was the third building to be built in the Quadrangle after Hawai‘i Hall and Gartley Hall. It began the formation of the north side of the Quadrangle. The Neo-Classical building maintains integrity on the exterior with the use of a dentiled cornice, string courses and Doric columns. The building also features a large lanai at the first level that is a covered outdoor design element used frequently in Hawai‘i. George Hall also implemented the spatial arrangement of a separate reading area to prevent overuse of the interior library resulting in a reading balcony on the second floor overlooking the Quadrangle. This architectural idea was later incorporated in the design of its successor, Sinclair Library (Kobayashi 1983: 38).



Fig 5.52: George Hall Entry. Circa 1950

Narrative Statement of Integrity

George Hall has had several modifications on both the exterior and interior which impact its integrity of design, workmanship, and materials. Its location, setting, and most associations are intact. The overall building can be easily interpreted.

5.4 QUAD BUILDINGS COMPLEX

5.4.5 DEAN HALL

Dean Hall is significant under Criterion C for its architectural design in the Neo-Classical Style, by its design architect, John Mason Young. It is also significant as one of a collection of buildings that compose the University Quadrangle.

Narrative Description of Building

Dean Hall is a three-story reinforced concrete structure with plaster finish built in the Neo-Classical Style. The building, along with five other Neo-Classical structures, creates a formal quadrangle on the campus bordered by Campus Road to the south. Due to the building's placement on the Quadrangle, two main entrances are centered on the north and south façades, one facing the Quadrangle and the other facing Campus Road. Dean Hall is perceived as a rectangular volume, but its plan is H-shaped as the east and west wings of the building extend a few feet to the north and south

beyond the inner structural bays. The circulation is organized in a cross-shaped layout starting at the main entries leading to a perpendicular corridor that bisects the building. At the intersection of the short and long corridors, a central staircase is the vertical organizing element, .

The north façade highlights three rectangular volumes as the central volume is slightly recessed compared to the two smaller volumes located to either side. The building's first floor is partially underground creating a stacked entry into the building on the north façade, allowing access to both the first and second floors. A main narrow staircase perpendicular to the building leads up to the second floor, while two flanking staircases parallel to the building lead underneath the main stair. These stairs pass through archways to an entry directly below the second floor entry. The second floor entry is protected with a concrete



Fig 5.53: Dean Hall basement entry, 2007



Fig 5.54: Dean Hall as seen from Campus Road, 2007

horizontal overhang supported by decorative brackets. A wrought iron grill detail is located above the entryway opening preceding the entry doors that are recessed to create a small alcove. The first floor is treated as the base of the build, and is distinguished by a simple string course and change in finish color. Square doric pilasters extend from the base and to the simple entablature, featuring an unadorned cornice with dentils. The pilasters organize the façade into five double-height bays, each approximately 25 feet wide. Each bay has three rows of three aluminum-framed paired jalousie windows. The first floor windows have screens and the second and third floor windows also have a fixed horizontal transom above the paired jalousies. The windows replacement windows.



Fig 5.58: Dean Hall Eastern Facade. 2007

5.4 QUAD BUILDINGS COMPLEX

5.4.5 DEAN HALL

The east façade is a rectangular volume with the same architectural elements and window pattern as the north façade, with the exception of pilasters.

This façade is divided into two bays separated by a vertical line of fire exit doors and offices that have replaced previously existing windows on the second and third floors. These exits lead to an exterior steel fire escape that crisscrosses this façade altering its overall appearance. In addition, a ground floor window has been removed, and a low wood fence has been attached to the building at the south corner to conceal a dumpster.

The south façade mirrors the north façade, except for the main entry. The centrally located entry on this side is slightly below grade and provides access only to the first floor by a ramp. The entry is protected with an overhang that matches the north entry and also has the same wrought iron grill in the

entryway that leads to a recessed entry alcove.

The west façade mirrors the east façade except for the elements that are not original to building. Throughout the interior of the building, many of the original materials and finishes remain including wood doors, glass doors, transoms, floor coverings, marble and wood bathroom stalls and tiles, railings, and stairs.

Narrative Statement of Significance

In 1928, the construction of Dean Hall, originally named the Biological Sciences Building, was completed. The hall was renamed to honor Arthur Lyman Dean, the second president of the University, from 1914 to 1927. Dean is known for his success in refining Chaulmoogra nut oil after initial preparatory work done by Anna Ball, used in the treatment of Hansen's disease (leprosy). Dean Hall was part of



Fig 5.55: Dean Hall, Circa 1950

the first building spurt on the campus that included five new buildings (Kobayashi 1983: 41). The building design and supervision of its construction was completed by Professor John Mason Young, who was also the president of Pacific Engineering Company (Kamins 1998: 154). The building initially housed facilities for zoology, botany, entomology, geology and anthropology. Today, it is occupied by the Biology Program along with the archaeology part of the Anthropology Department (Kamins 1998: 41).

Relief map models now in the Lobby of St. John Hall were in Harold S. Palmer's Office (Professor of Geology, Dean Hall 9. These models of the Hawaiian Islands were made in the 1930's under the WPA Program (Chock 2008: n.p.)

Criterion C: Significance for Architectural Design

The building is designed in the Neo-Classical Style and is one of six Neo-Classical buildings that form the Quadrangle, which is a modified version of Young's 1909 master plan. Dean Hall was the fourth building to be built in the Quadrangle after Hawai'i Hall, Gartley Hall and George Hall and it completed the south side of the Quadrangle. The Neo-Classical design elements it features include Doric columns, string courses, decorative brackets and an entablature with integral dentils.

Narrative Statement of Integrity

Dean Hall is intact with regard to setting, feeling and association. Minor reversible changes have impacted the design, materials and workmanship.



Fig 5.56: Dean Hall main entry, 2007

5.4 QUAD BUILDINGS COMPLEX

5.4.6 CRAWFORD HALL

Crawford Hall is significant under Criterion A, events, as it was used in the war efforts following the bombing of Pearl Harbor and Criterion C for its architectural design in the Neo-Classical Style, by the design architect, John Mason Young. It is also significant as one of a collection of buildings that compose the University Quadrangle.

Narrative Description of the Building

Crawford Hall is a three-story reinforced concrete structure with plaster finish, built in the Neo-Classical Style. The building, along with five other Neo-Classical buildings, is part of a formal quadrangle on the campus bordered by Campus Road to the south. Crawford Hall is comprised of three rectangular volumes that are more pronounced at the rear of the building due to its off-centered, H-shaped plan. This shape creates a small, sunken courtyard area on the north side.

The circulation is organized by a centralized main entry on the south façade and an entry directly opposite it on the north side. Within the building, the circulation follows the plan in an H-shaped form.

Within the central volume on the south façade, a staircase leads to the main building entry and the first floor. The double door entry is protected by a concrete horizontal overhang supported by decorative brackets. The first floor is distinct from the upper floors as it represents the base of the building. This is distinguished by a change in finish color for the bottom third of the level's façade and a simple string course that wrap the façades separating it from the upper floors.

The upper floors of the central volume are composed of five bays delineated by four double-height circular Roman Doric pilasters. These pilasters extend from the base to the simple entablature featuring



Fig 5.57: Crawford Hall as seen from Hawai'i Hall's Lanai, 2007



Fig 5.58: Crawford Hall Entry, 2007

an unadorned cornice with integral dentils. Above the wrapping cornice is a vertically scored concrete parapet that also wraps the building. Within the bays at all of the levels are punched vertical windows featuring three equally spaced awning panes. The flanking wings each have ornamented square Roman Doric pilasters at the corners, also extending the two stories to the entablature. Between the pilasters are a series of three matching vertical awning windows at each level.

The west façade continues the same aesthetic as the south facing wing façade with square Roman Doric pilasters creating four bays approximately 15 feet wide. Each bay has two vertical windows per floor level, which are identical to the windows placed around the entire building. The east façade mirrors

the west façade, with the exception of a single-door entry that is accessible by a ramp.

The north facing façades are similar to the rest of the building with the use of a string course above the first floor and equally placed windows within each bay created by the Roman Doric pilasters. A flight of stairs provides access to the sunken landscaped courtyard and the rear entry. Similar to the front entry, a concrete horizontal overhang with decorative brackets protects this double-door entry. A single door entry has been added to each of the north facing wing façades where windows once existed. These entries lead to fire exit stairs within the building. Low walls are used within the courtyard to define landscaped areas from walkways, ramps and stairs that provide access to the building entries.

5.4 QUAD BUILDINGS COMPLEX

5.4.6 CRAWFORD HALL

Narrative Statement of Significance

Crawford Hall, originally called the Social Science Building, was constructed in 1938 (Kamins 1998: 35). The building was renamed in 1954 to honor David Livingston Crawford, the third president of the University, from 1927-1941. At the age of 38, he became one of the youngest university presidents in the nation. Later in his career, he developed the University's summer school program that became one of the largest in the United States (Kobayashi 1983: 66). Crawford Hall's design and the supervision of its construction was completed by Professor John Mason Young who was also the president of Pacific Engineering Company (Kamins 1998: 154). The building initially housed the History Department and the "Shunzo Sakamaki Library-Lounge" was dedicated in 1975 in honor of the historian and summer session dean who died in 1973 (Kobayashi 1983: 66). Today, it is occupied by

the Academy for Creative Media and the School of Communications.

Criterion A: Significance for Events

Crawford Hall is significant under Criterion A (Events) based on its use during World War II. On December 11, 1941, Acting President Keller received a letter from Lieutenant Colonel Theodore Wyman stating that the Corps of Engineers would take over several of the University's buildings for use as shelters, operations facilities and to train military personnel (Kamins 1998: 42). The buildings taken for military use were returned for university use in 1945 (Kamins 1998: 50).

Criterion C: Significance for Architectural Design

The building is designed in the Neo-Classical Style



Fig 5.59: Crawford Hall, Circa 1950

and is one of a collection of buildings that share this style and form a smaller version of Young's 1909 master plan for a campus Quadrangle. Crawford Hall was the fifth building to be built in the Quadrangle after Hawai'i Hall, Gartley Hall, George Hall and Dean Hall. It filled the hole of the horseshoe-shaped quad on the north side. With this new building, "the Quadrangle that was the heart of the Mānoa campus for the next quarter century had been formed" (Kamins 1998: 35). "The five gleaming white buildings of reinforced concrete, flat-roofed and unpretentiously neoclassical, were all low-rise structures. Against the background of green provided by the visible slopes of Mānoa Valley, for a time the straight-lined Quadrangle gave a sense of connection, of quiet and harmony, for the people of the campus (Kamins 1998: 35).

Narrative Statement of Integrity

Crawford Hall has integrity of location, setting, materials, exterior design, and workmanship. The association and feeling can be interpreted by a knowledgeable observer.



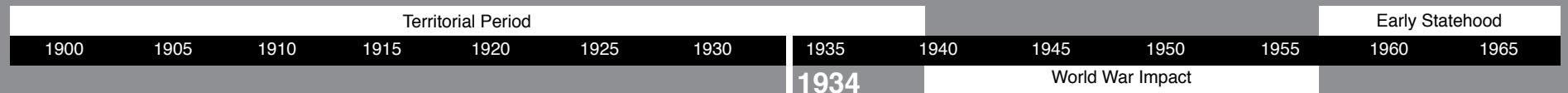
Fig 5.60: Crawford Hall Eastern Facade, 2007

Fig 5.61: Crawford Hall Courtyard, 2007

5.5 VARNEY CIRCLE AND FOUNTAIN



Built in 1934, Varney Circle and Fountain demarcate the visual center of the campus as the crossroads between the east/west and north/south spines (Kamins 1998: 31). Varney Circle serves primarily as an organizational node, linking and transitioning between major facilities, pedestrian and vehicle routes on campus. Varney Circle and Fountain are significant under Criterion C, landscape architectural design, for their relationship to several historic buildings and landscape spaces as well as the central organizing element for pedestrian circulation.



5.5 VARNEY CIRCLE AND FOUNTAIN

NARRATIVE DESCRIPTION

Fig 5.62: View across Varney Circle with the Art Building and Miller Hall in Background, 2007
Fig 5.63: Students at the Fountain, Circa 1945



Narrative Statement of the Setting and Landscape

To the west of the site is Hawai'i Hall, to the north is Queen Liliuokalani Center for Student Services, to the east is McCarthy Mall, and to the South is Miller Hall. The approximate radius of the space is 50-feet meaning the overall circle is 7,850 square feet. The surrounding topography is nearly level. The ground plan of the space is a traffic circle planted with a manicured lawn with a 36 foot diameter circular fountain in the center and a raised curb at the other edge. The boundary of the overall space is visually defined by the facades of the aforementioned surrounding facilities. The overall feeling of the space is an open public landmark serving as an organizational and circulation node. The quality of



the circular space is non-directional. The space is a void punctuated with the solid form of the fountain, occupying the very center. The primary circulation in the space is around the traffic circle. Varney Circle provides an organizational axis aligning the Engineering Quad, Miller Hall with Hawai'i Hall and McCarthy Mall.

The central fountain is supported by a wall with a pattern of Hawaiian figures created out of cast stone and repeated eight times. The fountain artwork was designed by art instructor Henry H. Rempel and Cornelia McIntyre Foley (Kobayashi 1983: 57). The major materials in the space are lawn, stone of the fountain, and hardscape concrete walkways and asphalt roads. The absence of overhead cover makes the space bright and open to the sky.

STATEMENT OF SIGNIFICANCE

Funding for Varney Circle and Fountain was raised by the Normal School class of 1929 (Kamins 1998: 31). As a centralized space on campus, the fountain serves as an organizational node for the major axes of campus as well as a landmark. The centralized siting makes the Varney Circle an attractive gathering space, such as the chosen site of the noon daily silent protests against the Vietnam War (Kamins 1998: 95). The clear axial layout reflects a pattern representative of the City Beautiful Movement early in the twentieth century and many American Campuses.

Criterion C: Significance for Landscape Design

Varney Circle and Fountain are significant for their central role in organizing the circulation system on campus and axial relationship to Hawai'i Hall, the first permanent building on campus, the Quadrangle, and Miller Hall.

Narrative Statement of Integrity

The integrity of the Varney Circle and Fountain are intact to the original design as an organizing element to the different axes of the campus. The connection of the Circle and Fountain with the other campus organizing elements can be easily perceived. The existing alignments to campus heritage buildings and landscapes are key to the association, setting and feeling.



Fig 5.64: Fountain Detail, 2007

5.6 MILLER HALL



Miller Hall is significant under Criterion A, events, for its role during World War II and as the site of pioneering research in tropical agriculture. It is also significant under Criterion C for its architectural design in the Neo-Classical Style by its design architect, John Mason Young.



Territorial Period							Early Statehood						
1900	1905	1910	1915	1920	1925	1930	1935	1940	1945	1950	1955	1960	1965
							1939	World War Impact					

5.6 MILLER HALL

NARRATIVE DESCRIPTION

Miller Hall is set partially below the grade of Varney circle and is approached across a bridge to the front entry. The entry very carefully aligns on a north/south axis with Varney Circle directly to the north.

The overall form of the building consists of one central rectangular volume that has a smaller rectangular volume attached at each of its ends. The whole structure is protected by a ceramic tile hipped roof. The circulation of the building is organized by a central corridor connecting the main and rear entrances of the north and south façade. Interior staircases at both of these entries access the upper floors.

Miller Hall is a three-story reinforced concrete structure with plaster finish built in the Neo-Classical Style. The north entrance exhibits two of the three rectangular volumes and the top two floors of the building. The first floor is partially underground on this side due to the change in grade. A walkway leads to the central protruding volume that features a double height entry alcove for the main entry. The recessed entry consists of a pair of glass doors with sidelights and transoms. Above the doorway at the second floor, are three adjacent vertical operable windows. The entry alcove is highlighted by a set of two-story Doric columns that rest on the base of the building that is distinguished by a simple string course and change in finish color. Surrounding the entry alcove volume is the main building mass that is recessed to align with the recessed entry. The two sides of this volume are identical in their simple aesthetic. The building base and an unadorned cornice wrap the building. Above the base at each of the floor levels is a single recessed multi-lite window.



Fig 5.65: Miller Hall Facade, 2007



Fig 5.66: Miller Hall Rear Façade, 2007

The east façade displays the three rectangular volumes with the main mass being the most prominent and flanked by the smaller two entry volumes. The largest area of the façade has three rows of louver windows, one row at each floor. Individual windows at the perimeter flank five sets of double windows for a total of 36 rectangular windows on this facade.

The south façade is similar to the north façade in terms of volume. It features the central entry volume that extends out beyond the main volume. From this side, the first floor is completely exposed and the entry accesses this floor. This entry is less formal than the main entry with only a concrete awning providing protection to the double doors. Flanking the doors are punched multi-lite casement

windows that repeat in a pattern of three on each floor above the entry. The main volume features the same windows in a paired pattern on each floor to either side of the central mass. The west façade mirrors the east façade with the exception of window type. Instead of the louver windows, it has the multi-pane windows that are used on the other façade. The façade of Miller Hall has undergone slight modifications that have occurred over time with the greatest modification occurring due to the installation of window air conditioning. The entry ways were altered to accommodate the Americans with Disabilities Act (ADA) specifications of accessible ramps. Within the building, the staircases retain their original wrought iron railings with wood handrails and polished concrete stair treads.

5.6 MILLER HALL

STATEMENT OF SIGNIFICANCE

Miller Hall, originally known as the Home Economics Building, was built in 1939 and formally opened with a ceremony on March 15, 1940 (Kamins 1998: 154). The architect of the building was John Mason Young, a professor of engineering at the University. The building's contractors were Walker and Olund and the overall cost of the construction was \$68,000. In addition to Territorial Funds, federal funds were provided by the Public Works Administration totaling \$34,000 (*Ka Leo o Hawai'i* 1919: 3). Contributors to the building's design were Home Economics Professor Katherine Bazore Gruelle and Carey D. Miller, Chief Planner of the building and a pioneering nutritionist who became the department chairperson in 1940.

In 1958, after Miller's retirement, the Hall was renamed in her honor for her significant research contributions to the University in the development of tropical agriculture. Miller studied local and native Hawaiian fruits and vegetables to determine their nutritional value (Kobayashi 1983: 72). She was the first to work on vitamin content of pineapple, guava and papaya, proving that local produce could meet nutritional needs (Ernst 2005: n.p.). She, along with Katherine Bazore and Mary Bartow, wrote *Fruits of Hawai'i*, which was published in 1936, that explained the nutritive values of these foods and presented recipes that are still used today (Kobayashi 1983: 72). Miller Hall played an important role in housing the nutrition education programs and tropical agriculture research, which continues to support the College of Tropical Agriculture and Human Resources as well as the Family Education Training Center.

Criterion A: Significance for Events

Miller Hall is significant under Criterion A (Events) based on its role during World War II. At the time of construction, funds were insufficient to complete the entire building. Therefore, only the main, second floor and part of the basement were built initially. During the war, the military used the unfinished dirt floor basement to store canned food for emergencies. After the war, the building was completed with additional classrooms at this level (Kobayashi 1983: 72). The building is also significant as the home to Miller's pioneering tropical agriculture and nutrition research. She found that the dietary needs of non-Caucasians were ignored and therefore analyzed and wrote about the basal metabolism and diets of Polynesians and Asians. She also increased awareness on the dangers of diets too high in sodium and sugar by challenging soup and baby food companies to reduce additives in their products. Miller wrote over 70 publications regarding her research and findings (Ernst 2005: n.p.).

Criterion C: Significance for Architectural Design

The building is designed in the Neo-Classical Style and is also significant as part of a collection of campus buildings constructed at this time that share this style. The design of this building was undertaken by engineering professor John Mason Young (Kobayashi 1983: 72). The building features Neo-Classical design characteristics including Doric columns, string courses and a simple cornice. The double-height columns frame a recessed entry creating a prominent entry alcove that faces Varney Circle.



Narrative Statement of Integrity

Miller Hall has integrity of location, design, workmanship and materials. The integrity of feeling and association are easily interpreted. Changes on the interior have impacted the original design but the historic elements can be understood by an informed observer.

Fig 5.67: Miller Hall Main Entry, 2007

5.7 ENGINEERING QUAD



The Young Engineering Quad is significant under Criterion A, events, as it contains some of the oldest buildings of the University that reinforced the permanence of the school, for the use of the buildings during World War 1, and for significant material testing for concrete used at Pearl Harbor. The Quad is significant under Criterion C for its architectural design as a collection of buildings in an understated Neo-Classical Style, by its design architect, Dr. Arthur Keller (Kobayashi 1983: 21).



5.7 ENGINEERING QUAD

NARRATIVE DESCRIPTION

Narrative Description of Setting and Landscape

The Engineering Quad complex consists of four one-story buildings built in the Neo-Classical Style. This complex is located directly north of the Campus Center. The Beau Press building, Board of Publication building, Duplicate Services building and Student Support Services building are the remaining buildings of the original five buildings. Originally the five buildings formed an H-shaped layout on the site, but today it appears as the shape of the number four since the southwest building was demolished. Several of the original monkey pod and banyan trees from the original layout of structures still exist today. While the landscape has no formal designed aesthetic, the shade provides an area for students to gather outside the buildings.

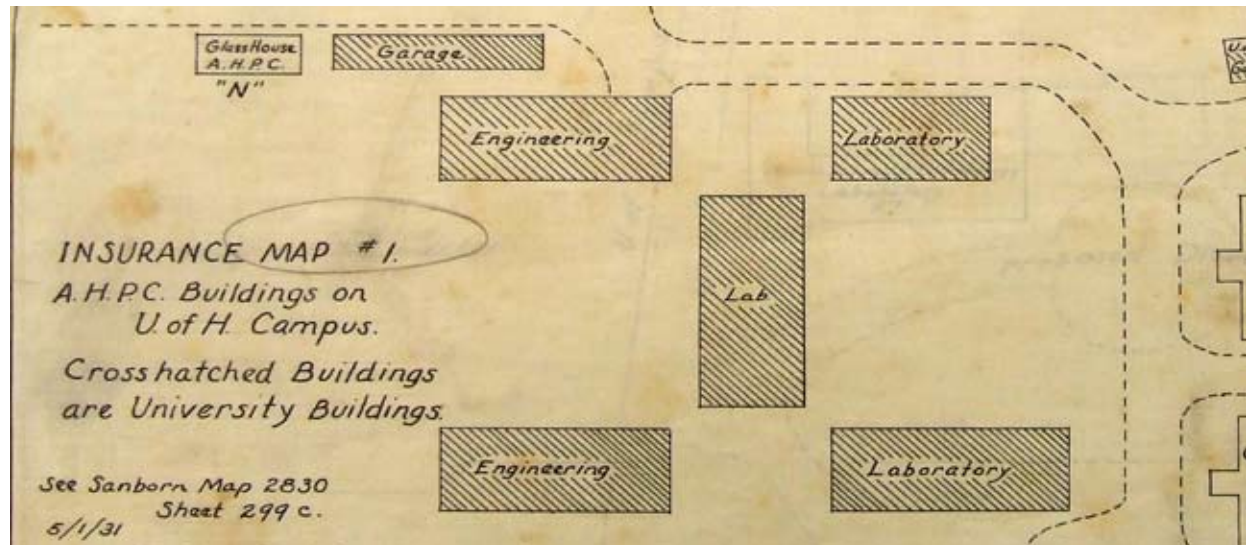


Fig 5.68: Engineering Quad. 2007

Fig 5.69: Insurance Map for Engineering Quad, 1931



Fig 5.70: Engineering Quad. 2007

Narrative Description of the Buildings

The Beau Press building is a reinforced concrete structure with plaster finish. This structure is located at the center of the complex and is rectangular in volume. The main entry to the building is on the south façade. This façade is symmetrical with nine slightly recessed bays that create the look of pilasters sitting on a protruding base. Within the central bay is the front door at the center; four recessed windows are dispersed on each side of the door. Above the door is a multi-pane fixed transom. The surrounding windows are rectangular with wood trims and metal double-hung multi-paned sash. Above each of the multi-pane windows is a matching fixed transom. A short parapet runs along the top of the building as a decorative detail. A raised portion of the parapet

articulates the entryway. The west, north and east façades are similar in aesthetic to the south façade. The west façade has three matching recessed windows displayed symmetrically. The north façade mirrors the south façade with the exception of a doorway. In its place is an additional window. The east façade features a large metal rolling door in the central recessed bay. Above this bay, the parapet is elevated signifying an entry. The interior of the building is an open floor plan with exposed steel beam structure.

The Board of Publication building has similar characteristics as the Press Building: one-story, rectangular shape, plaster walls, symmetrical façades, a flat roof with parapet and double-hung sash windows. This building sits at the southeast

5.7 ENGINEERING QUAD

NARRATIVE DESCRIPTION

corner of the Quad complex and its front door is located on the west façade. This façade consists of six slightly recessed bays creating pilasters resting on a protruding base. Within the second bay from the left, is the double-door entry recessed into an entry alcove. The other bays hold double-hung multi-pane windows with fixed transoms matching the Press Building. At the center of each bay at the cornice is a small rectangular opening to assist natural ventilation within the building. A small ramp has been added to this side to make the facility accessible. The other façades continue the elevation design featuring windows in all of the recessed bays with the exception of the south façade. This side does not have bays but does display two windows, one at each corner. Within the building, the volume is primarily an open plan with a small room located near the entry.

The Duplicating Services building shares the same design aesthetic as the previous two buildings. It is a rectangular reinforced concrete structure. The front door is located on the west façade, which features nine recessed bays. The single door entry is located within the second bay from the left. A double door entry is located in the central bay and appears to have been the original entry as the parapet is elevated at this bay and the immediately adjacent bays. The main entry likely changed when the accessible ramp was added to the single door entry. The windows match the other buildings' windows identically and the cornice has the open vents on the east and west facades. The north façade features the same windows however a small rectangular wood-clad electrical room was added to this side overlapping a portion of two of the three bays. Other modifications to this side include the central window being boarded up and



Fig 5.71: Engineering Quad window detail. 2007



Fig 5.72: Engineering Quad façade with 'roll-up' door. 2007

the left window's transom was removed and filled with plaster. The east façade is similar to the west façade.

A double door entry is in the bay farthest to the left and is accessed by a short steep ramp. The other bays hold windows with the exception of the third bay from the right, where the window was boarded up to allow for installation of mechanical equipment. The south side has three bays but features different windows than the rest of the building. A pair of small multi-pane casement windows is placed at the top of the central recessed bay. Another difference is the addition of a rectangular concrete volume with perforated vents to enclose mechanical equipment.

The Student Support Services building is also rectangular in shape and is designed to complement the other quad buildings. The main entries are located on the east façade and serve different offices within the building. The east side consists of nine recessed bays. Within the central bay and the bay farthest to the left, are the entry alcoves providing the separate entries. The other bays feature windows that match the other quad buildings. The south façade is similar to the Duplicating Services south façade and has three bays with the small casement window pair. The west façade consists of nine bays all with windows. The north façade has three bays with windows placed only in the two end bays. The flat roof is hidden behind a projected parapet that is elevated over the three center bays on both the east and west façades.

5.7 ENGINEERING QUAD

STATEMENT OF SIGNIFICANCE

The Young Engineering Quadrangle was designed by Dr. Arthur Keller and built between the years 1915 and 1928. Dr. Keller later became the first Dean of the College of Applied Sciences in 1920. The original complex consisted of five rectangular single-story buildings arranged in an H-shaped layout. These buildings are some of the oldest structures on campus and contributed to the beginning era of the University. The Engineering Materials Laboratory, now known as the Beau Press building, was the second permanent building on campus constructed in 1915 (Kobayashi 1983: 21). The building was necessary when the College moved to Mānoa because the engineering laboratory equipment could not be installed in the already crowded Hawai'i Hall building. The most important piece of equipment to be housed in the new building was a 150,000-pound Reihle Universal Testing Machine that "not only served its nominal function of demonstrating to engineering students the behavior of materials under stress but also provided facilities for testing much of the construction material of Hawai'i, including the concrete for the Pearl Harbor dry dock" (Kamins 1998: 155). Territorial funds were provided for this structure through a special appropriation of \$8,000. Ten years later, two more buildings were completed followed by the last two structures of the quadrangle in 1928. It was not until 1965 that the complex was formally named after John Mason Young, the first engineering professor of the College (Kobayashi 1983: 21). Over the years, these buildings provided a home to the expanding engineering department until 1972 when a new facility, Holmes Hall, was built. The buildings continue to be in use as the Beau Press building, Board of Publication building, Duplicate Services building and Student Support Services building.

Criterion A: Significance for Events

The buildings of the Engineering Quad are significant under Criterion A (Events) based on the buildings being some of the University's oldest buildings and the role they played during World War 1, as well as the important material testing undertaken in the buildings. Built in 1915, the Engineering Materials Laboratory was the second permanent building on the campus after Hawai'i Hall. It further strengthened the permanence of the College and, along with agriculture, engineering shares the distinction of being the progenitor of all higher education in Hawai'i. This honor is bestowed upon the engineering discipline because "when the College of Agriculture and Mechanic Arts of the Territory of Hawai'i opened its first full academic year in September 1908, four of the five regular students were engineering students, but John Mason Young was the only engineer in a faculty of thirteen" (Kamins 1998: 154). He later went on to teach half of the engineering classes, served as Dean of the College and as acting President during President Arthur L. Dean's absence. Young is remembered as "the father of engineering in Hawai'i" (Kamins 1998: 154). The function of the buildings changed during the World War 1 to support the war efforts. Enrollment in the Student Army Training Corps (SATC) increased by 50 percent and part of the engineering testing laboratory served as the SATC mess hall.

Criterion C: Significance for Architectural Design

The design of the Engineering Quad buildings in a simplified Neo-Classical Style signifies a complex of buildings undertaken by Dr. Arthur Keller (Kobayashi

1983: 21). The idea behind the design of these buildings was to maximize space utilization in order to get the most functional space for least amount of the money spent. The resulting design of each of the buildings is essentially one large room that does not have any corridors, closets or plumbing. One toilet was partially concealed in the storage room of the engineering materials laboratory (Kamins 1998: 156). Also due to the limited budget, the design aesthetic of the building was kept very simple. The buildings express the Neo-Classical Style that was characteristic of the first buildings completed on the campus, but with little ornamentation. The architect used creative strategies to create the Neo-Classical design elements while not escalating the cost of the buildings significantly. For example, recessed window bays were used to create the notion of pilasters along the facades without the need for any additional ornamentation. The design also made use of simple bases and unadorned parapets that were raised over the entryways to add distinction without additional cost. The windows featured in the buildings are multi-pane and operable keeping in line with the Neo-Classical Style and their use for allowing daylighting and natural ventilation.

Narrative Statement of Integrity

The setting of the Engineering Quad buildings has changed as one of the Laboratory Buildings was demolished. The original sense of the “H” layout can still be interpreted from the remaining structures. A sense of the events that have occurred there can be interpreted easily as the structures have no interior partitions and the single large space is easily perceived as a testing and laboratory area. The building has an understated Neo-classical Style as there are minimal decorative elements. The



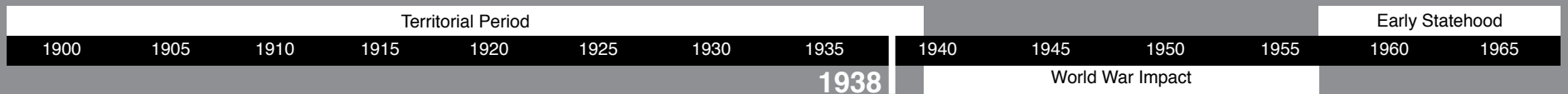
Fig 5.73: Kā Leo Printing Equipment. 2007

organizing element of the plan is a single interior volume which remains in most buildings. The use of window air-conditioning units on several façades impacts the integrity in a reversible way. The spaces remaining between the buildings have been filled with new pathways and hedge landscaping but the original design intent can still be perceived.

5.8 HEMENWAY HALL



Hemenway Hall is significant under Criterion A, events, for its role as an evacuation center during the first two months after the bombing of Pearl Harbor (Mitchell 2002: n.p.). The building is also significant under Criterion C for its architectural design by architect Claude Albon Stiehl in the Territorial Style.



5.8 HEMENWAY HALL

NARRATIVE DESCRIPTION

Hemenway Hall is a two-story, reinforced concrete building designed in the Territorial Style. The building is set back from Campus Road by a small landscaped space. Hemenway Hall is U-shaped in plan. A low concrete wall on the west end of the building creates a semi-enclosed interior courtyard which faces Sinclair Library. The roof shape is Gablet on Hip, with overhangs ranging from three to six feet on each façade. All original windows are metal framed awning in sets of four horizontal sections.

Two main entrances are located on the north façade, which faces towards Campus Road. This façade is composed of three major bays and two minor bays. The two minor bays serve as ground floor inset building entrances. These entrances are defined by decorative cast-stone pilasters, running from ground to soffit. Vertical compositions of pierced breeze blocks are located on the second

level above each recessed ground floor building entrance. Vertical double-hung windows are equally placed on the three major bays on both levels of this north façade. A single painted metal door is located along the east end of the ground floor. There are few decorative elements on the painted concrete façades, with the exception of decorative cast-stone pilasters flanking the building entrances and breeze-block concrete panels which span between some of the pilasters.

The east façade consists of three major bays, and two minor bays, similar to the north façade. The minor bays serve as secondary building entrances. Decorative pilasters and breeze blocks flank these entrances. Vertical double-hung windows are equally placed on the three major bays on both levels of this façade. Most of the east façade, however, is not visible due to mechanical equipment, duct work, and other building equipment that is attached to



Fig 5.74: Hemenway Hall Courtyard, 2007

the wall and protrudes approximately 12 feet from the building edge. There are no distinguishable structural bays on the south façade of the building. A tall elevator tower is located towards the center of the façade. The roof shape is broken only by an elevator tower on the makai [or seaward] side of the building which was added onto the original construction. The tower, which is not original, is composed of painted stucco over reinforced concrete with no openings. The upper portion of the tower cantilevers towards the makai direction and is capped with a standard hip roof above the main building roof line. Two sets of double doors are located on the ground floor, leading to a theatre space. An open passageway leads to the building's interior courtyard. The second floor consists of an outdoor walkway with a concrete and iron railing. Double-hung windows are equally placed along this façade. The roof extends about six feet past the building edge on this façade.



Fig 5.75: Hemenway Hall Southern Façade, 2007

The west façade consists of two volumes flanking a semi-enclosed interior courtyard. Both volumes on either end of the courtyard have two decorative stone pilasters running from ground to soffit, which flank the original and non-original central metal window openings. The makai end has four double hung windows on both the lower and upper floors. The mauka [or towards the mountains] end has eight original casement windows on both the lower and upper floors. A low concrete wall with iron railings and decorative iron arched gateways encloses the courtyard. The courtyard holds outdoor table seating. The interior of Hemenway Hall has been changed significantly due mostly to a 1974-1979 renovation of the building (Kobayashi 1983: 68).



Fig 5.76: Hemenway Hall Western Facade, 2007

5.8 HEMENWAY HALL

STATEMENT OF SIGNIFICANCE

Charles Reed Hemenway Hall, originally called the Student Union Building, was constructed in 1938 to serve as the new student activities building (Wilson 2006, n.p.). It was the first building on the campus that was built completely for non-academic reasons. Buildings such as this, which were dedicated to students, helped to attract other students to the University and ultimately helped the University grow to be the institute of higher education that it is today. UH President Arthur Dean said in 1927, “We have reached the limit of our space for classroom and laboratory purposes... There is no space where [the student body] can be gotten together for any kind of a public address, except outdoors” (University of Hawai‘i Quarterly Bulletin 1927: n.p.).

Hemenway Hall was originally built to house the student union and a cafeteria. When the building first opened, functions included a kitchen, dining hall, lounges and offices for students and alumni, the yearbook, the Associated Students of U.H., and the student council. The lounge space was often used for school dances and other social activities (Kobayashi 1983: 68). An addition, known as the Makai Wing, was added in 1948 (Kobayashi 1983: 68). After World War II, second floor lounges and first floor cafeteria were popular gathering places for students between and after classes. Today it is the home of a restaurant and bar, a bank, the University leisure activities center, a barber shop, the University radio station, and several meeting rooms.

In 1940, the building was renamed Hemenway Hall for Charles Reed Hemenway, the chairman and member of the University Board of Regents for 30 years (Wilson 2006: n.p.).

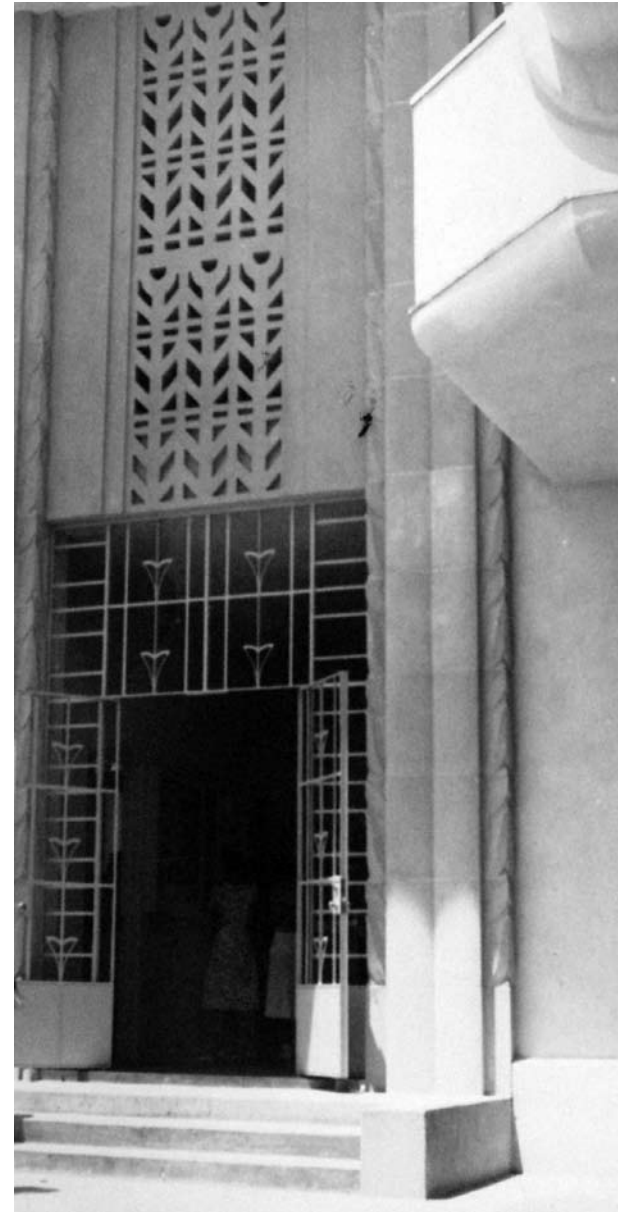
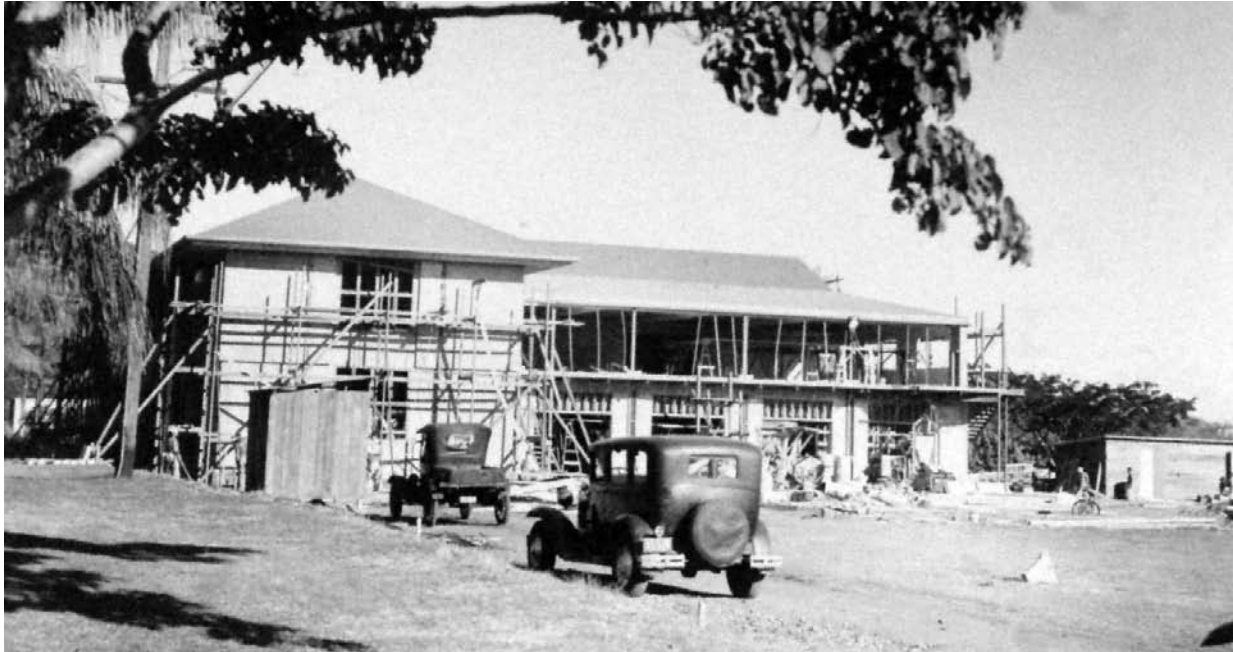


Fig 5.77: Hemenway Hall Entry, Circa 1945

Fig 5.78: Hemenway Hall Construction, 1938



Criterion A: Significance for Events

Hemenway Hall is significant under Criterion A (Events) based on the role that the building played in World War II. In the days and months immediately following the bombing of Pearl Harbor, many different evacuation centers were set up on the island of O'ahu. In 1941, two buildings on the University campus served as evacuation centers: Klum Gym and Hemenway Hall (Mitchell 2002:n.p.). "Hemenway Hall was designated as a shelter for people evacuated from their homes by the [Pearl Harbor] bombing attack of December 7 [1941] and others that might follow. When few evacuees showed up, Hemenway was used for a variety of purposes, including operation of the U.S. Armed Forces Institute, which provided correspondence

courses to servicemen in the Pacific theatre of operations throughout the war" (Kamins 1998: 42).

Criterion C: Significance for Architectural Design

The building was designed in the Territorial Style, which was used by many Hawai'i architects in the 1920s and 1930s (State of Hawai'i Department of Land and Natural Resources 1999: n.p.). One architect in particular, C.W. Dickey, created a new aesthetic which combined the different cultural influences affecting local architecture with the specific needs created by the local climate. Dickey is often referred to as the most important architect in the history of Hawai'i (State of Hawai'i Department of Land and Natural Resources 1984: n.p.). Claude

5.8 HEMENWAY HALL

Fig 5.79: Hemenway Hall with Diamond Head in the background, Circa 1945



Albon Stiehl, the architect of Hemenway Hall, was trained by Dickey and carried on the style created by Dickey after starting his own practice.

Stiehl's architectural style is characterized as modern while being adaptive to the Hawaiian climate by including "Hawaiian" or Art Deco detailing. "He designed each building with the client, site and climate in mind. Stiehl reveled in the opportunities to make each project unique, and he noted in an article he wrote for *California Art and Architecture*, 'That is one of the most pleasant features of practicing architecture in Honolulu. No two settings are alike, no two conditions are the same.'" Hemenway Hall is the only building on the University campus that was designed by Stiehl (State of Hawai'i Department of Land and Natural Resources 1999: n.p.).



Fig 5.80: Hemenway Hall Courtyard, 2007

Narrative Statement of Integrity

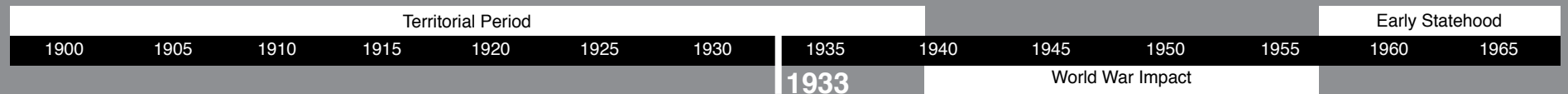
The location and setting of Hemenway Hall are intact to the original design with the exception of the major volumetric addition of the elevator tower. A sense of the events that have occurred there can be interpreted by a knowledgeable observer. The building has an understated aesthetic for the Art Deco decorative elements, which is typical of the Territorial Style. The organizing elements of the plan are the separate entry bays of the north elevation. There appear to be no original spaces or finishes on the interior. These changes do not impact the exterior integrity of the building which is intact from its primary public viewing locations. The rear of the building has been negatively impacted by the elevator tower addition. The use of mechanical

equipment for air conditioning on the east façade greatly impacts the integrity of the aesthetic on this elevation. This equipment greatly detracts from the simple detailing and proportions of the structure. The courtyard space has a variety of changing landscape and furniture which is not considered significant.

5.9 FOUNDERS GATE



Founders Gate is an area that spans the width of University Avenue just north of the intersection of Dole Street and University Avenue. The matching pair of gates is at grade, level with the road and sidewalk, although the support of the west gate is embedded in the slope rising toward Bachman Hall. The gate area is public in nature, signifying the entrance into the campus area along University Avenue.



5.9 FOUNDERS GATE

NARRATIVE DESCRIPTION

The space defined by the Founders Gate is beyond the footprint of the structure itself and includes the roadway and major intersection because of its visibly prominent position at this crossroads. The gate is comprised of two cast stone arches each with a bench curving out from the archway structure in a quarter circle next to the sidewalk. These benches create a sculptural aspect to the gate as curved arms embrace the approaching traffic. The arches are at a pedestrian scale, spanning over the sidewalks on both sides of University Avenue. The roof of the space is open sky with the east gate being shaded by the first tree in a row of mature monkeypod trees aligned along University Avenue. The west gate is shaded by a single Monkey Pod tree.

The overall feeling of the place is urban. The Dole Street and University Avenue intersection is the

primary gateway to and from Mānoa Valley where University Avenue has 3 lanes of traffic traveling in each direction and Dole Street has two lanes in each direction (with a bicycle lane and sidewalks). The sight lines from the Founders Gate include Mānoa Valley to the north, Bachman Hall to the east, Mo'ili'ili and Wai'kīkī high rises to the south, and residential scale buildings to the west. The gate indicates both entry to Mānoa Valley and entry to the University. It links the community and the University, offering an architectural marker for the community. The most significant view from the Founders Gate is that of Bachman Hall. Although the gate does not frame this view, the sense of entry is reinforced by the wide expanse of lawn and setback of Bachman Hall.

The material of the gate is cast stone, serving as a permanent material, appropriate for signifying the endurance of an academic institution. The



Fig 5.81: Founders Gate at the Intersection of University Avenue and Dole Street, as Viewed from the South, 2007

remainder of the area is primarily asphalt road and concrete sidewalks. The adjacent street trees and lawn of Bachman Hall soften the urbanization of the space, introducing the element of nature.



Fig 5.82: Founders Gate, West Side of University Avenue, 2007

Fig 5.83: Founders Gate, East Side of University Avenue, 2007

5.9 FOUNDERS GATE

STATEMENT OF SIGNIFICANCE

The plans for Founders Gate were developed in 1931 (Kobayashi 1983: 54). The Gate was funded by charging “all students, faculty members, alumni and interested friends” \$1 per person (Allen 1931: 4). The gate designer was architect Ralph Fishbourne of Vallejo, California, who had studied architecture in Paris from 1910-1912 (Kobayashi 1983: 27). The gate is described as a “memorial to the men who fathered the development of the University of Hawai‘i and the territorial normal school...” (*Honolulu Star-Bulletin* 1933: 3). “A box containing the names of contributors to the gate fund and historical data was placed in the cornerstone by Ralph Fishbourne, architect” (*Honolulu Star-Bulletin* 1933: 3). At the time of construction, the gate flanked University Avenue which was a one-lane road at the time (Kamins 1998: 31). The gate brought together the University east of University Avenue and the 1896 Territorial Normal School on the west side (Kobayashi 1983: 54). Lorna H.

Jarette served as the Normal School Founder’s Gate Committee chairman (Kobayashi 1983: 54).

The Founders Gate dedication ceremony in September 14, 1933 was a significant event, attended by over 1,000 people (Kobayashi 1983: 54). The inscription on the west gate reads “Maluna a’e o no lahui opau ke ola ke kanaka” (‘Above all Nations is Humanity’) which is a quote from Goldwin Smith of Cornell (Kobayashi 1983: 57,7). The inscription on the opposite east gate reads “Dedicated to All Those Through the Many Years Fostered the Cause of Public Education in Hawai‘i (‘Hoolaaia No Na Poe Apau No Na Makahiki Lehulehu I Ho’oka Wowa I Ka Ho’ona’auao Akea Ma Hawai‘i Nei)” (Kobayashi 1983: 57). During the 1933 dedication speech by President Crawford, he stated ‘...let only those who enter here come with hunger to learn and with determination to use aright their learning for the good of mankind’ (Kobayashi 1983: 57). The Founders’ Gate has continued to be considered a point of passage as well as inspiration. During Dr. Kalidas Nag’s visit from Calcutta, India, he referenced the Founder’s Gate by titling his commencement speech “Maluna a’e o no lahui opau ke ola ke kanaka” in 1936 (Kobayashi 1983: 7).

Photographs indicate that at one time the original lanterns were replaced with frosted globes, but the current lamps appear to be similar in style to the original lanterns (Kobayashi 1983: 56).



Fig 5.84: Founders Gate, Circa 1940

NARRATIVE STATEMENT OF INTEGRITY

Although the location of the Founders Gates has changed slightly as they were moved further apart when University Avenue was widened, the original delineation of the gates as the entry to the campus can be perceived. The setting is intact with the lawn of Bachman Hall on one side and the views to the mountains along University Avenue maintained. The design elements including the archways across the sidewalk and the benches embracing the pedestrian are intact.



Fig 5.85: Founders Gate Hand Rendering



Fig 5.86: Founders Gate at the Intersection of University Avenue and Dole Street, as Viewed from the North, 2007

5.10 SINCLAIR LIBRARY



Gregg M. Sinclair Library is significant under Criterion C for its architectural design, which is an adaptation of the International Style, by its design architect, Lemmon, Freeth & Haines, and the use of local materials and design techniques to take advantage of natural ventilation and light in a library building. The building was originally one of the largest library structures in the United States to function without air conditioning. The building is a modern response to designing for the Hawaiian climate without the use of mechanical air conditioning (Kobayashi 1983: 100).



Territorial Period										1956	Early Statehood		
1900	1905	1910	1915	1920	1925	1930	1935	1940	1945	1950	1955	1960	1965
World War Impact													

5.10 SINCLAIR LIBRARY

NARRATIVE DESCRIPTION

Narrative Description of the Setting and Landscape

The Sinclair Grove occupies the land south of Campus Road and east of University Avenue, just north of Sinclair Library. The surrounding land use is predominately pedestrian circulation between campus buildings. University Avenue, a public route, is shielded by topography changes and green lawn. Due to this relationship with the public boundary, the area is used by students as an entry point into campus. These uses create an informal node of passage and gathering. The landform of the actual grove is fairly level, with the topography dropping down to street level to the west of Sinclair Library. The grove is primarily rectangular. The north edge is defined by the curve of Campus Road as it joins University Avenue. The spatial volume of Sinclair Grove is permeable, with sidewalks cutting obliquely through the planted

areas. The grove gives a sense of enclosure to the space with the tree canopy overhead also providing shade. The grove is asymmetrical and informal. Site lines are obscured by the plantings, other than the direct walkway to the Sinclair Library entrance. The informal arrangement of the grove gives it a natural quality, although the variety of the plantings reveals the uniqueness of the grove. The main circulation through the space is the link between the Quad area and Sinclair Library, and another east-west route between the Student Center and University Avenue. There are multiple bench areas and a popular message board contributing to the gathering space quality of the area.

The plantings around the Sinclair Library are diverse. The Mindanao Gum tree (*Eucalyptus deghipta*) is found in New Guinea and the Phillipines. The remarkable trunk is striated with green, orange, and yellow strips of bark. This species in the Sinclair Grove, is flanked by two Spindle Palm trees (*Hyophorbe verschaffeltii*) native to the Mascarene Islands. In the same grove stands a Bhoo Palm (*Livistona rotundifolia*) which comes from the Phillipines and Malaysia. To the west of the Sinclair Library is an Opiuma (*Pithecellobium dulce*), which is found throughout the Pacific Coast of Mexico and Central America. In the same area of plantings, stands a Macadamia Nut (*Macadamia integrifolia*) tree from Queensland. There is a wall which extends from the entrance of Sinclair Library and continues along the glazed west entrance wall of the building. The separation between these two walls of glass and masonry creates a courtyard-type space, most easily viewed by library patrons from the inside of the building. Within this space are three Princess Palm trees (*Dictyosperma album*) from the Mascarene Islands.



Fig 5.87: Sinclair Library Main Entry, as Lookingout to the Garden, 2007

To the left of the Sinclair Library entrance, in a stone lined planter is a Magnolia (*Magnolia grandiflora*) as found in the Eastern United States. Along the left front façade of Sinclair Library is a Madagascar Money Tree (*Dracaena marginata*). Standing in the lawn area to the east of Sinclair Library is a Variegated Indian Rubber Tree labeled with a placard reading “*Ficu elastica* c.v. Doescher; J.E.W. Sterling Tree 1956; India to Java”. In the same lawn area stands a Brazilian Ironwood (*Caesalpinia ferrea*) and a Queensland Kauri (conifer) (*Agathis robusta*). On Makai side stands a Sansapote (*Licania platypus*) planted to honor the 50th anniversary of the University. The diversity of plant species and trees provides variation in color, canopies, trunk structure, foliage and flowers all contributing to the overall character of the space, similar to that of a botanical garden.



Fig 5.88 Vegetation at Main Entry, 2007

5.10 SINCLAIR LIBRARY

NARRATIVE DESCRIPTION

Narrative Description of the Building

Sinclair Library is a four-story brick, Waiānae sandstone and reinforced concrete building built in the International Style of the Modern Movement (Kobayashi 1983: 101). The building is set back from Campus Road with University Avenue to the west. The building is organized on the ground floor as a cross (in plan), with the entry located just northeast of the center of the cross. The second and third floors are rectangles in plan, with the longest facades facing north and south, while the fourth floor is smaller and centered on the second the third floor plan. The center of the cross is where building's vertical organizing elements are located (stairs and elevators).

The entry is set back along the north façade, with a covered walkway entry into the building from paved walkways surrounded by landscaping along

Campus Road. The north façade is covered in glass jalousies along all three levels with thick horizontal concrete bands running along the entire façade at each floor. This façade is made of 18 structural bays that are about 12 feet apart. There is a large, curving wall made of sandstone to the west of the entrance on the ground floor. Red brick is located along the east and west ends of the north wing on the ground floor. A wide, concrete parapet band runs around the entire perimeter of the building.

The east façade consists of two main volumes. The main east volume consists of painted red brick with small windows running along the ground floor. The secondary volume is made only of concrete panels.

The site slopes down to the south, with a partial basement area located along the south façade. The south façade is considered the back of the



Fig 5.89: Sinclair Library Main Entry, 2007



Fig 5.90: Vegetation at Main Entry, 2007

building, with no public entrance; it is made of three main volumes: a horizontal, three story volume runs along the entire façade, with covered walkways on each floor. A four story red brick and glass vertical volume is placed center on the façade, while the south wing of the ground floor cross juts out towards a parking lot just to the south of the site. This volume extends out with painted wood jalousies located along the south end that provide ventilation to an interior computer lab.

The west façade faces University Avenue, and is made primarily out of red brick, similar to the east façade.



Fig 5.91: Sinclair Library Interior, 2007

5.10 SINCLAIR LIBRARY

STATEMENT OF SIGNIFICANCE

Sinclair Library was designed in 1951 by Lemmon, Freeth & Haines, contracted to Ben Hayashi, and opened on campus in 1956. The library was built because George Hall, the previous library on the historic Quadrangle had outgrown its use and was outmoded and no longer could accommodate a growing student body. The Territorial Legislature of the Hawaiian Islands eventually funded the library project for the University (Kobayashi 1983: 100). Land for Cooke Field was cleared under the direction of Mrs. Clarence Ashford, the first woman on the Board of Regents in 1915 (Kobayashi 1983: 8). Sinclair Library was built on this Cooke Field site in 1956 (Kobayashi 1983: 35).

The building was originally known as the “New Library,” but soon after its completion it was renamed for Gregg M. Sinclair, the fourth president of the University during 1942-1956 (Kobayashi 1983: 100-103). He was influential in developing the University during and after World War II, bringing many

construction projects and buildings on campus to support the growing University population. One of his main accomplishments was constructing Sinclair Library to serve as the main library on campus.

Criterion C: Significance for Architectural Design

The design of the library, by Lemmon, Freeth, & Haines, was in the International Style of the Modern Movement, but it was influenced also by the Hawaiian Climate and restrictions established by the University. The architects were tasked with following four principles in the design: adapt to the Hawaiian climate without air conditioning, arrange the interior spaces efficiently, keep the interior as flexible as possible for future changes, and allow books and research material to be accessible to students, faculty and the public (Kobayashi 1983: 100).



Fig 5.92: Open Reading Lanai with Diamondhead in background, Circa 1965

The University chose Lemmon, Freeth & Haines as the architect for the new library based on Cyril Lemmon's previous design experience working with the well-known local architect C.W. Dickey in the 1930s. Lemmon, Freeth & Haines had previously only completed houses and small apartment buildings before starting the library design, so this building was one of the first large commissions for the firm. Lemmon traveled to the United States mainland with the University's head librarian before starting the design to understand the needs of a major University library. The design of Sinclair Library helped establish the firm as the largest in Hawai'i in 1969 and 1970. Renamed "Architects Hawai'i, Ltd" in 1969-1970, the firm continues to be one of the largest in the Hawaiian Islands while specializing in large and small scale projects (Haines 2008: n.p.).

When it was completed, Sinclair Library was a large, naturally ventilated space for research and study. The building was not air-conditioned since no other buildings on campus were mechanically air-conditioned at that time. With over 500,000 volumes (Haines 2008: n.p.), the library helped to establish the University as a major educational institution and "a truly Pacific University" (Kobayashi 1983: 100).

Narrative Statement of Integrity

Sinclair Library has essentially the same design, workmanship, and materials as originally executed. Mechanical equipment on the exterior wall detracts from the appearance but is reversible. The remarkable botanic setting is intact. The feeling and associations of the original use are easily interpretable.



Fig 5.93: Sinclair Library with Diamondhead in background, Circa 1965

5.11 BACHMAN HALL, TERRACE AND LAWN



Bachman Lawn and Hall are significant under Criterion A, events, as the site of several important sit-ins at the University President's Office and Criterion C for its architectural design and artwork, an adapted Hawaiian Modern Style, by its design architect, Vladimir Ossipoff, and by its muralist, Jean Charlot. The building is primarily intact to its period of significance with minor changes to the interior layout.



5.11 BACHMAN HALL, TERRACE AND LAWN

NARRATIVE DESCRIPTION

Narrative Description of the Setting and Landscape

The Bachman Hall, Terrace, and Lawn are setback from the corner of Dole Street and University Avenue. This space serves as the visual entrance and public façade to the campus. Reinforcing this sense of entry is one of the pair of Founder's Gate structures, located at the public street corner on the Southwest corner of the lawn. The surrounding land use includes academic facilities on the campus side of the building public bus corridors with a major bus stop at the Northwest corner of the lawn. The primary functions in Bachman Hall include the University of Hawai'i Foundation offices on the lower level, Senior Vice President for Legal Affairs and University General Counsel, and the President's Office for the University of Hawai'i Systems and Board of Regents. Due to the public nature of these offices, users of the space also include distinguished

members of the state and local community. The approximate size of the Bachman Hall Lawn and Terrace is 300 feet by 320 feet.

Bachman Lawn slopes gently toward Dole Street and University Avenue at a constant three percent grade until it nears Dole Street where it becomes a grassed bank about 30 inches high, which is caught by the quarter circle bench curving out from Founders Gate. This subtle grading provides a platform for the building appropriate for its location without being over bearing. The overall shape of the lawn in front of Bachman Hall is rectangular. The green space of the lawn and terrace extends visually into Bachman Hall in the form of the square central courtyard surrounded by a permeable loggia. The lawn space and terraces facing the road are formal, open, and public. The courtyard in Bachman Hall is both an introspective and formal space with a spiritual nature due to the Hawaiian cultural elements within the court.



Fig 5.94: Bachman Hall Courtyard, 2007

The primary path through the space from the street to Bachman Hall is by stairs linking the expansive lawn with the terrace and the building. This creates an approach to the building from the side and brings the pedestrian into the interior green courtyard open to the sky. This approach has a definitive order but does not follow traditional western architectural ideas of formal central axes and symmetry. This shift in the axis reveals the courtyard as somewhat of a surprise. The courtyard garden emphasizes the strong connection between interior and exterior spaces.

The change in grade and contrast between the vast green lawn and the flowering orange lantana (*Lantana camara*) shrubs along the burnt sienna

colored terrace wall lettered with “University of Hawai‘i at Mānoa” draw attention to the University sign. The sequence of spaces steps from the public spaces of Dole and University Streets, to the span of green lawn, to the low terrace wall clearly separating the two landscape spaces, to the terrace lawn and concrete walkway leading into the exterior courtyard space of Bachman Hall. This courtyard is also at the highest level in this hierarchical sequence of spaces, adding to its prominence.

Narrative Description of the Building

Bachman Hall is a two-story reinforced concrete with brick infill structure built in the Hawaiian Modern Style. The entry is set within a courtyard enclosure made by two flanking single story wings. “The landscaped forecourt or courtyard is the ordering element of the plan. The tall columns complete the lines of the building, bringing a lightness to the mass and a simplicity to the overall composition. The [open] roofed space supported by these columns encloses the courtyard in a manner that provides a smooth transition from exterior space to semi-enclosed courtyard to enclosed interior space. A double-story wall of aluminum mullions and glass separates the exterior volume of the courtyard from the similar volume of the lobby. The building is grounded into the open field by a reflecting pool and open corridor along part of the front of the building” (Leineweber 2007: 64). Additional elements on the western façade are a northern single story volume with concrete brise soleil with two foot by two foot openings set in front of a wall of awning windows.

The north façade consists of two volumes on either side of a side entry to the interior courtyard. To the east is a concrete volume defined by concrete two

and a half foot by four foot panels. A second story lanai, which is part of the University President’s Office, aligns with the three bays of jalousie windows and a door made of amber colored glass. The volume to the west of the courtyard opening is a one story brick volume. A small garden covered by a latticed concrete ceiling is located to the side of the lanai entrance. The ceiling is pierced with three foot by three foot openings to let light into the garden below.

The east facade is the rear of the building. Window bays are equally placed on each façade with horizontal concrete overhangs. The southernmost top window on this façade has been removed and in-filled with painted bricks that match the rest of the façade. The middle ground floor façade has air conditioning units in the jalousie window openings. The east façade is partially covered with mechanical equipment.

The south façade faces Dole Street. Two distinct volumes make up this façade. The eastern volume is two stories with three bays of windows on each level. The windows are protected overhead by horizontal concrete overhangs. The middle bay on the ground level has a door that leads onto a small lanai. The western volume is a one story façade with three bays of random windows that are all fixed. A second story plane is setback from the lower elevation and is a concrete screen with pierced openings that semi-enclose the upper level of the central courtyard below.

5.11 BACHMAN HALL, TERRACE AND LAWN

STATEMENT OF SIGNIFICANCE

Bachman Hall, originally named the University of Hawai'i Administration Building, was designed in 1948 by Associated Architects, with Vladimir Ossipoff as the design architect. It was constructed in 1949 by Pacific Construction Company. "The location of the new administration building shifted the locus of the campus makai [or seaward], away from the Neoclassical buildings of the Quadrangle, and provided the opportunity to showcase a modern structure as emblematic of the University's new direction" (Leineweber 2007: 63). The building held the entire administration staff of the University for several years after it was built and has continually been the office of the President of the University system. The building was named after Paul S. Bachman (1901-1957) who was the campus' fifth president from 1955-1957, a few years before Bachman Hall was completed. The building was named for him (after his death) on the University's 50th anniversary celebration (Kamins 1998: 68).

Criterion A: Significance for Events

Bachman Hall is significant under Criterion A (Events) based on protests held in the building that were against Presidential and Regent decisions. As the University President's Office for nearly 60 years, it has been the site of many protests including a 10-day 1968 student and faculty sit-in to protest the Vietnam War and University governance (Kamins 1998: 97-101). The University regents had denied tenure to a faculty member, Oliver Lee, who had previously acted as a mentor for an anti-war student group. The sit-in lasted for days while students camped out inside the building as well as on the front lawn. The event resulted in the students renaming the building "Liberation Hall" during the protest. Several students were arrested during this non-violent event.

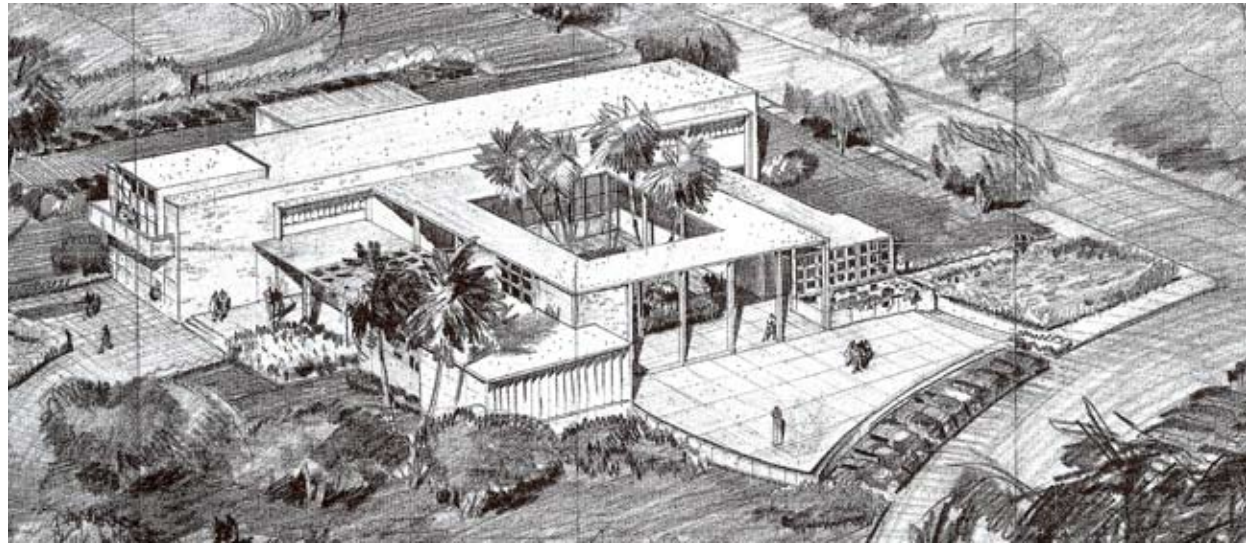


Fig 5.95: Bachman Hall hand-rendering,
Circa 1948

Additional protests have taken place at Bachman Hall in 1995, 2005 and 2006. The 1995 protest included a faculty teach-in and march on October 9 on the Bachman Hall front lawn. Protestors challenged a \$9 million appropriation cut for the University that threatened some UHM programs. The cut was proposed by then Governor Benjamin J. Cayetano, who was trying to avoid a state budget deficit (Kamins 1998: 128-131). A 2005 protest included a seven-day student, faculty and supporters sit-in at the President's Office on the second floor of Bachman Hall. The sit-in was against a proposed University Affiliated Research Center (UARC) that would receive \$50 million funding from the US Navy. The sit-in was a response by protestors who disagreed that money should come from the Navy to fund Navy-proposed projects at the University that could be classified research (Gima 2005: n.p.). The March and April 2006 protest at Bachman Hall was in response to the University's genetic tampering and patenting of taro, "In early Hawai'i, taro was a highly-prized food staple and was often used as medicine and in ritual. Hawaiian myth holds that taro was the elder brother of man and therefore has a very sacred role in the culture" (Bishop Museum 2008: n.p.).

Criterion C Significance for Architectural Design and Landscape Architecture

The building is designed in the Hawaiian Modern Style, an adaptation of the International Style. The design was undertaken by Associated Architects, a collaboration of architects Phillip Fisk, Allen Johnson, Thomas Perkins, Alfred Preis and Vladimir Ossipoff. "The design of the University of Hawai'i's Administration Building was the culmination of many of the ideas that Associated Architects used



Fig 5.96: Bachman Hall, Circa 1955

on their smaller commissions: spatial arrangement appropriate to climate and context, detailing to lessen the sun's impact and increase the winds movement, and the use of concrete, a locally available material, as a decorative finish" (Leineweber 2007:63-64).

The building is the most direct and open of the Associated Architects projects and clearly a statement about formulating a modern architectural language for Hawai'i: careful proportioning of geometric forms, detailing appropriate to climatic conditions, and showcasing locally available materials (Leineweber 2007: 64). Associated Architects was a collaboration of architects who worked together for six years after World War II. One architect was selected by internal design competition to be the lead architect, and another was chosen

5.11 BACHMAN HALL, TERRACE AND LAWN

to critique the design. This collaboration produced a series of very carefully designed buildings. The design Architect was Vladimir Ossipoff and the design critic was Phillip Fisk (Leineweber 2007: 64). This same collaboration also undertook the work for Kalihi-Palama Public Library.

The Administration Building marked Ossipoff's first collaboration with Jean Charlot (1898-1979), a leading artist of the Mexican mural renaissance, who painted two frescoes on the walls of the lobby spaces. The relationship was not instantly a cooperative one, as it took time for Ossipoff to recognize the strengths that each person, both architect and artist, could bring to the design table. (Leineweber 2007: 66). With a reflection on the memory of the reasons for his work in Mexico, "one must remember that a mural painting is painted for the people at large and not for a few collectors or critics" (Charlot 1949:4). The first mural, painted

in 1949 by Charlot, is on the ground floor of the interior lobby, and it is named, "The Relationship of Man and Nature in Old Hawai'i." The second mural, called "Commencement," is located on the second floor of the interior lobby and was painted in 1953 (Kamins 1998: 63 and Kobayashi 1998: 92). Charlot's Aztec-French heritage gave him a certain continuity and presence of history (Neogy, 1974:29), which he immediately transferred into his work for the first floor mural. He was greatly attracted to the culture of the native Hawaiians, just as he had been interested in the indigenous peoples of Mexico (Klobe 1994: 24).

Charlot had to consider the differences in perspective afforded the wall, as the right half can be seen from the long view from the courtyard and the view of the left half is contained by the cantilevered stairs. The diagonal of the stairs also had to be counteracted by opposing diagonals in the composition. "As always with murals the architectural setting is all important and determines the composition. A mural is made to be seen along normal lines of traffic within the building." (Charlot 1949:3) Part of the propriety of a mural is its union with the architecture. As a slight tongue in check, the trunks of the palm trees in the mural are positioned to continue the grid of the building columns, their scale and color mimicking the stainless steel column at the base of the stairs (Leineweber 2007: 66).

The designer of the Bachman Lawn and Terrace area was Thompson and Thompson Associated Architects (Gillmar 2008b: n.p.). Bachman building was built on Wise Athletic Field, which was the first facility to be named after someone of Native Hawaiian blood (Kobayashi 1983: 83).



Fig 5.97: Jean Charlot with his mural at Bachman Hall, 1949

Narrative Statement of Integrity

The location and setting of Bachman Hall Terrace and Lawn are intact to the original design and a sense of the events that have occurred there can be interpreted by a knowledgeable observer. The form volumes and spatial qualities of the original controlled aesthetic of the building are remarkably intact. The central organizing element of the plan, the two story volume of the lobby, is the focus of the interior spaces and still retains its original finishes. The two large Charlot Murals visually join the first and second floor lobby spaces. The curving and cantilevered concrete stair dramatically joins these two spaces. Minor changes have been made to the interior spaces including rearrangement of the office partitions and changing of finishes. These changes do not detract from the overall understated aesthetic of the building.

The building is an excellent example of the mid-career work of Vladimir Ossipoff, FAIA. While he is most well known for his residential work, Bachman Hall is his best commercial design open to the public. His other exemplary commercial structures are private clubs, the Pacific Club and the Outrigger Canoe Club. It is also the best example of the work of Associated Architects, a group of leading architects practicing together in Hawai'i after World War II. Their work is typified by responsiveness to climate and inventive use of locally available materials.

The Charlot Murals in the second floor lobby spaces are excellent examples of the work of Jean Charlot, (1898-1979) a leading artist of the Mexican mural renaissance. He was invited to create a fresco at the Administration building in 1949 as a gift to the University from the graduating classes of 1949,

1950, 1951 and 1952. Four years later he painted the second floor mural as a gift from an anonymous donor.

The courtyard space has a variety of changing landscape; currently a Native Hawaiian rock altar is set within the space. While this element provides a certain grounding of the native Hawaiian culture and the building, the original design included tall coconut palms complimenting the tall columns of the loggia. This drama is no longer evident in the courtyard space. The original courtyard planting was replaced in 2007 with a Hawaiian-themed design that includes plants of cultural significance and ahu.

The use of room air conditioners set in some windows, and many large air-conditioning ducts and equipment are exposed on the flat roofs of the building.



Fig 5.98: Jean Charlot with drawing for mural, Bachman Hall, 1949

5.12 ANDREWS OUTDOOR THEATRE



The theater has served for ceremonial gatherings throughout the history of the campus. The first class to use Andrews Outdoor Theatre for commencement was the class of 1935 (Kobayashi 1983: 59). Other notable graduations have also occurred. “The members of the graduating class of 1942 who were still present in Honolulu marched into the Andrews Outdoor Theater in black caps and gowns, with khaki gas masks slung over their shoulders.” (Kamins 1998: 47-49).



5.12 ANDREWS OUTDOOR THEATRE

NARRATIVE DESCRIPTION

Narrative description of the Setting and Landscape

While Andrews Outdoor Theatre is located along the public thoroughfare of Dole Street, strategic use of topography and screening with vegetation shield the Outdoor Theatre from clear visibility between this special space and the road. The surrounding land uses include: a major pedestrian spine just to the east of the Outdoor Theatre; Dole Street bordering the south edge; Bachman Hall annexes on the west side; and the service access side of the Campus Student Center toward the north side. The Outdoor Theatre site was originally used as a refuse dump (Kamins 1998: 31). It is comprised of two distinct roughly equal-sized portions each of which is symmetrically arranged around a north-south axis. The horseshoe shaped seating area and the roughly rectangular raised lawn “stage” area are embraced by generous garden space.



Fig 5.99: Andrews Outdoor Theatre seating, Circa 1940

The approximate size of the space is 200 feet wide by 300 feet long. The curve of the Outdoor Theatre portion has a sweeping 60 foot radius. The Outdoor Theatre seating is partially sunken into the ground, with the stage area set below grade. The 25 foot by 35 foot concrete surface at the center of the raised stage gives way to lawn, used as an extension of the formal stage. The lawn is bordered by heavily planted terraces around the perimeter, that slope upward toward grade level on the east, west, and north sides of the space. The stepped and ramped terraces are a design echoing the seating areas.

The edges of the space to the south are defined by the solid eight foot high curved wall supporting the upper half of the seating area. Two gated openings facing Dole Street and trees beyond. The eastern boundary to Andrews Outdoor Theatre is the park-like landscape along the major north/south walkway leading to the center of campus. The north garden side of the Outdoor Theatre is framed by a low textured concrete wall and walkway, which gives way to a parking lot on the northwest corner and four story campus center building due north. The boundary is screened with shrubs and a vine covered fence allowing only snippets of views of pedestrian activity through the gated openings. The roof of the space is open sky framed with the planted edges providing a shaded overhead canopy. This visual separation from the campus and Dole Street contributes to a sense of enclosure and privacy despite the occupancy capacity of the space and public uses. The planted terraces create a feeling of an organic park-like garden meeting with the more formalized semi-circular seating area.

The most significant division in the space is the east-west cross axis between the seating area and

the stage area terrace. The main public entrances and exits are symmetrically located between the north ends of the curved stone wall supporting the seating and the south ends of the garden along the stage lawn. The materials used for the Outdoor Theatre seating area are concrete for the seat surface with an irregular cut “blue rock” basalt stone face. The mortarless natural “moss rock” lava rock walls support the garden terraces behind the stage. The foliage between Dole St and Andrews Outdoor Theatre includes Monkey Pod Trees (*Samanea saman*) and a single Teak Tree (*Tectona grandis*) as well as a Cerbera Tree (*Cerbera tanghin*). A Pink Oleander (*Nerium oleander*) hedge hugs the curved stone wall Outdoor Theatre perimeter on the Dole Street side. Wide-spreading Chinese Banyan (*Ficus microcarpa*) trees informally frame the walkway in the lawn to the east of the Outdoor Theatre, providing a broad shade canopy.

Inside the garden half basalt retaining walls support terraces with groves of Elaeodendron trees (*Elaeodendron orientale*) which define the space to the east and west of the stage. The remainder of the perimeter on the east side is lined with a Panax (*Polyscias guilfoylei*) hedge. Just inside the hedge stand two Coconut trees (*Cocos nucifera*) and a Manila palm (*Adonidia merrillii*) grove. As a backdrop to these trees, on the north side, is a Blue Latan Palm (*Latania loddigesii*) grove. The north perimeter fence is softened with Red Trumpet (*Campsis radicans*) vine and Heliconia (*Heliconia psittacorum*). The north end of the space inside the fence has numerous Macarthur palms (*Ptychosperma macarthurli*), and three Fan palms (*Pritchardia remota*). Recent plantings of taro and `uala (sweet potato) line the sloping pathway in the northwest corner of the space. Two Macaranga



Fig 5.100: Andrews Outdoor Theatre Stage, 2007

(*Macaranga mappia*) trees line the grass ramp and a short hedge of Surinam Cherry (*Eugenia uniflora*). The grass ramp is also lined with new Akia (*Wikstroemia uva-ursi*) and red Ti and flanked by a Weeping Bottle Brush tree (*Callistemon viminalis*) and two Hala (*Pandanus tectorius*) at the top of the grass ramp slope. The east side of the space has a Plumbago (*Plumbago auriculata*) hedge to the north, which spreads toward two mock orange trees. Six fan palms are grouped by the east perimeter. A grove of Elaeodendron trees leads up to the stairs separating the garden lawn space from the stage and seating space. The variety of plantings provides color, texture, visual interest, and screening of the space from the surrounding campus functions.

5.12 ANDREWS OUTDOOR THEATRE

STATEMENT OF SIGNIFICANCE

The Andrews Outdoor Theatre is a major amenity of the campus and qualifies under Criterion C for Architectural Design. It was completed in 1935 (Kamins 1998: 31). The University provided \$5,213 (cost of materials) and \$50,000 was provided by the Federal Emergency Relief Administration (Kabayashi 1983: 59). Funding was made possible by this program, part of Franklin D. Roosevelt's "New Deal" depression project funds (Kobayashi 1983: 27). The Outdoor Theatre was designed by Ralph Fishbourne and Professor Arthur R. Keller served as the consulting engineer (Kobayashi 1983: 27,59). The landscape designer was a noted landscape architect in Hawai'i, Richard Tongg. A native son, he earned a degree in horticulture from the University in the 1920s and then worked for well-known landscape architect in the Santa Barbara area, Ralph Stevens, for several months before returning to Honolulu. The caretaker of the grounds, integral to the execution of the plan, was

Allan A. Bush (Kobayashi 1983: 59). The structure was designed with a 5,500 person seating capacity with some of the stone material for the seating coming from Fort Ruger (Kobayashi 1983: 59).

Originally the structure was called Andrews Amphitheatre, but President Gregg Sinclair renamed it "Arthur L. Andrews Outdoor Theatre" in an attempt to use the proper descriptive vocabulary since "Amphitheatre" refers to a structure that wraps all of the way around the stage (Kobayashi 1983: 59). The actual dedication of Andrews Outdoor Theatre, was not until the 34th Commencement on 12 June 1945 (Kobayashi 1983: 59). In the 1970's there was discussion of adding a retractable roof in order to guarantee dry events, but these ideas were terminated in favor of keeping the garden design preserved and open to daylighting (Kobayashi 1983: 113).



Fig 5.101: Andrews Outdoor Theatre seating with Diamondhead in the background, Circa 1940

Criterion C: Significance for Architectural and Landscape Design

Andrews Outdoor Theatre is significant under Criterion C, Architectural and Landscape Design, as a “borrowed landscape” view of the Ko’olau Mountains and as a background for planted landscape scenery for the stage. Its use of basalt stone masonry further reinforces its Hawaiian sense of place. The landscape design in the Hawaiian Modern Tropical Landscape Style was by noted local landscape architect, Richard Tongg.

Narrative Description of Integrity

The setting of Andrews Outdoor Theatre is intact to the original design. The setting of an open performance space within a backdrop of tropical foliage is unique within the University campus. Minor non-contributory intrusions such as ticket booths or maintenance facilities are easily reversible. The organizing element of the plan is the semi-circular seating balanced by the tropical landscaping of the rear stage area. Some plantings have been added recently behind the stage pavement and surrounding lawn and inside the North perimeter fence.



Fig 5.102: Andrew’s Outdoor Theatre Landscape, with Mānoa Valley in the background, Circa 1950
Fig 5.103: Andrews Outdoor Theatre Landscape, 2007



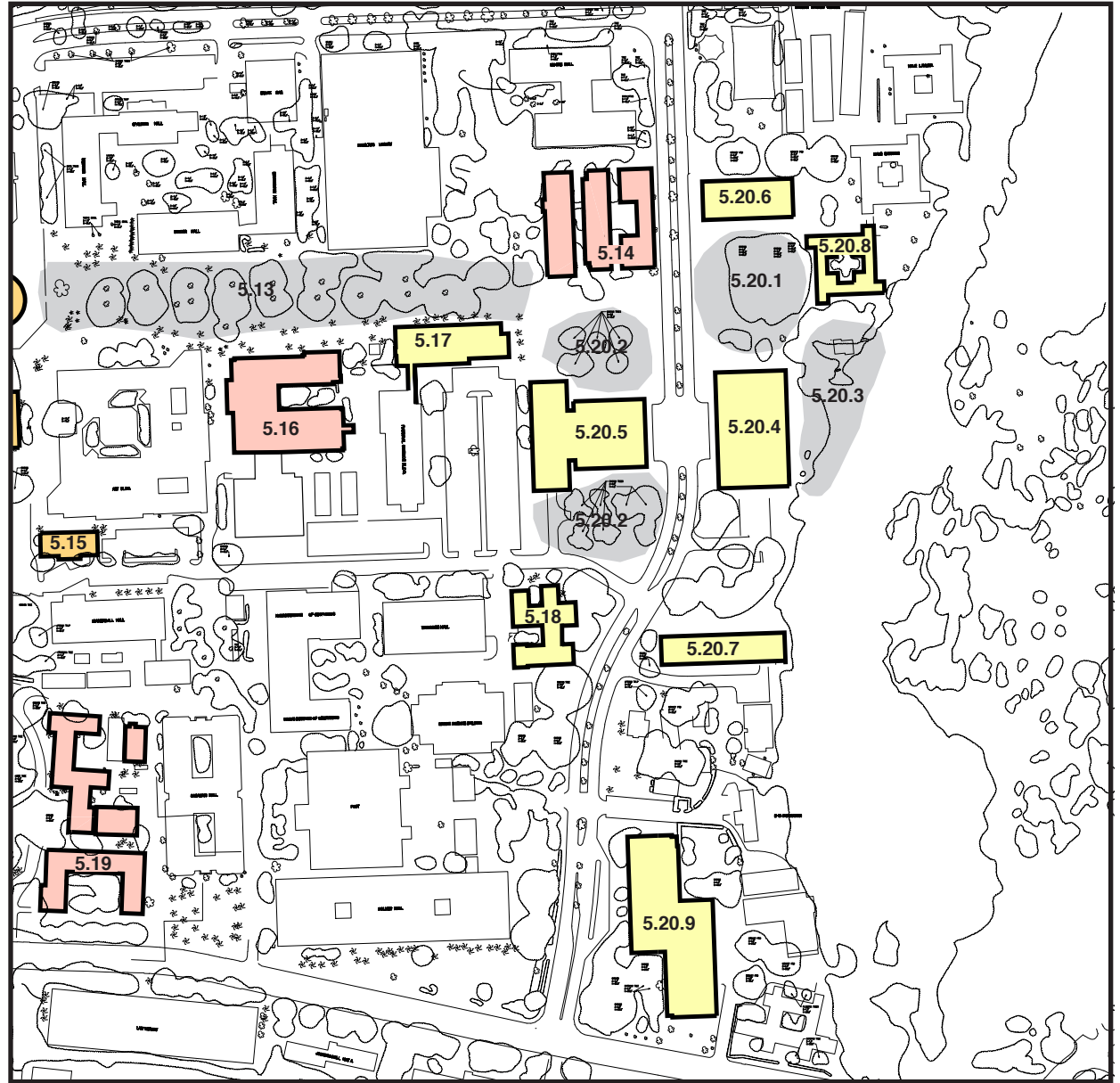
CHAPTER 5

CENTRAL CAMPUS EAST



Central Campus East:

- 5.13 McCarthy Mall
- 5.14 Henke Hall
- 5.15 Building 37
- 5.16 Bilger Hall
- 5.17 Keller Hall
- 5.18 University Health Services Mānoa
- 5.19 Krauss Hall Complex
- 5.20 East-West Center Complex
 - 5.20.1 Banyan Grove
 - 5.20.2 Kennedy Theater Grove
 - 5.20.3 Japanese Garden
 - 5.20.4 Jefferson Hall
 - 5.20.5 Kennedy Theatre
 - 5.20.6 Lincoln Hall
 - 5.20.7 Hale Mānoa
 - 5.20.8 Hale Kuahine
 - 5.20.9 Burns Hall



CENTRAL CAMPUS EAST MAP

Territorial Period (1907-1940)

World War Impact (1941-1948)

Early Statehood (1959-1970)

5.13 McARTHUR MALL



The success of this designed space was articulated by University of Hawai'i President, Dr. Laurence Snyder, in 1963, "What he [Snyder] singled out with particular pleasure among the creations of his administration was not a building, however, but a space between buildings. In 1961-1962 a pedestrian mall, generously broad at his urging, was laid out from Varney Circle to East-West Road" (Kamins 1998: 80).



5.13 McCARTHY MALL

NARRATIVE DESCRIPTION

Narrative Description of the Setting and Landscape

McCarthy Mall is a well-shaded pedestrian corridor on axis with the Quadrangle through the central node of campus, Varney Circle. Seven major facilities line the Mall, with Varney Circle at Campus Road terminating the west end and the Banyan Grove terminating the east end. Hawai'i Hall and the East West Center Thai Pavilion are the focal points within these termini. Other than these bookends, the space is exclusively pedestrian with large shade trees and lawn spreading between the two main parallel walkways and bordering buildings. The approximate dimensions of McCarthy Mall are 1100 feet by 145 feet. The topography has a slight downward slope from the west to east direction dropping 8 feet in 400 lineal feet and then ascending 20 feet over 700 lineal feet creating an overall dip in the topography in the middle. The overall shape of McCarthy Mall is a long,

wide, promenade edged with the bold, institutional concrete facades of academic buildings constructed in the 1960's. The space is broad and open to the sky, but the expanse of the space is reduced to a human scale by the shade trees, creating a cool canopy over the primary walkway. The trees also serve as a screen providing visual relief to the adjacent building massings.

There are two parallel pedestrian walkways for approximately half the length of McCarthy Mall. The primary twelve foot wide path is on the northern side of the Mall and is flanked by regularly spaced pairs of circular concrete planters holding mature Monkey Pod (*Samanea saman*) trees. The supplemental eight foot wide walkway serves three buildings on the south side of the Mall. Secondary walkways balance and organize the ground plane. These connecting walkways are joined to the spine with graceful arcs creating planters at the intersections.



Fig 5.104: Students on McCarthy Mall, Hamilton Library steps in background, 2007

The placement of the monkey pod trees at the major intersections of these walkways creates a rhythm of space and light. The spine of the primary walkway is straight until it jogs at Henke Hall. The primary views within the space are green tree canopies, with glimpses of sky and buildings slowly revealed as the pedestrian moves along the mall.

McCarthy Mall is primarily a circulation space but is wide enough and pedestrian traffic is at a slow enough pace to allow for pauses, meetings, conversations, and places offering respite. A large black metal abstract angular sculpture entitled “The Fourth Sign” by Tony Smith is in front of the Art Building, and adjacent to the pedestrian walkway. The sculpture was installed in 1976 with funding from the State Foundation on Culture and the Arts (Kobayashi 1983: 118). The Mall walkway material is primarily poured concrete pavement with concrete block circular planters. Where the walkway bends around Henke Hall at the east end, the surface is asphalt. The lawn and trees create the expression of form, light, movement, and color in the space. The landscape palette uses, in addition to the Monkey Pod trees, towering Niu, (Coconut palm trees - *Cocos nucifera*) near Varney Circle and along the south edge. Other plantings grouped at entrances to buildings, include the Thurston’s Palm (*Pritchardia thurstonii*), Blue Latan Palm (*Latania loddigesii*), Naio (Bastard Sandalwood - *Myoporum Sandwicense*), Hala, (*Pandanus tectorius*), Barringtonia (Fish Poison Tree - *Barringtonia asiatica*), Formosa Koa (*Acacia confusa*), and Loulu (*Pritchardia affinis*). The Loulu is considered the only palm species endemic to Hawai‘i. In addition to these trees is an array of flowering and green shrubs screening the buildings foundations and adding color at eye level.



Fig 5.105: McCarthy Mall tree planter detail, 2007

5.13 McCARTHY MALL

STATEMENT OF SIGNIFICANCE

Originally, McCarthy Mall was a road serving University agricultural plots. The land east of Hawai'i Hall was farmland comprised of small fields divided by rock walls into 1/10 to 1/4 acre plots (Kobayashi 1983: 7). After World War II, construction activity began with academic buildings along McCarthy Mall road. Photographs of the campus in 1957 show construction on the makai side while the mauka side of McCarthy Road still remained as vacant land (Kobayahshi 1983: 7). The transformation of McCarthy Road into a pedestrian mall was Stage One of the Campus Beautification Program of the early 1960s (UH Archives). McCarthy Road had become centered on automobile traffic. "McCarthy Road has always been the center of the 'noyance'—has always been teeming with the motor status-symbols of students..." (Campus Beautification 1961?: 1).

The Mall design work was carried out by the Department of Accounting and General Services,

headed by Mr. Michael Miyake, and was intended "...not only to alleviate pedestrian-vehicular tensions but also to attain a sorely needed feeling of order. The construction of a system of logical and convenient walkways will serve that end" (Campus Beautification 1961?: 1). Juli and George Walters, a notable local landscape architect, were the consultants (Gillmar 2008: n.p.). Tani Construction Co was selected for executing the work (Campus Beautification 1961?: 1). The preservation of old and rare trees was taken into account during facility construction - such as the art building, which was designed around a mature Baobab Tree (*Adansonia digitata*) (Kobayashi 1983: 115). "In place of the hard-top of McCarthy Road, the eye will eventually span a shady avenue of Monkey Pods, selected for their umbrella shape. For seasonal color, there will be a ribbon of poincianas, and, to break up the formality of line, coconut trees, relocated from the campus" (Campus Beautification 1961?: 2). The five coconut trees were a memorial to a family and



Fig 5.106: Axis view through to Varney Circle and Hawai'i Hall, in background, 2007

required relocation as a unit (Campus Beautification 1961?: 2).

The design intention for the lighting and materials composition are described as: “In order to create a feeling of clarity, simplicity will be emphasized in the landscaping. Subtle lighting will be installed to underlight the trees. The main sidewalk paths (28,000 square feet of them) will be gray asphalt with pebbles, and a secondary walkway which ties into existing ones will be of concrete base with coral chips” (Campus Beautification 1961?: 2).



Fig 5.107: Walkway Canopy of Trees, 2007

Fig 5.108: Students sitting on tree planter, 2007

5.14 HENKE HALL



Henke Hall is significant under criterion A, events, as the site of various research events that led to the development of agriculture sciences and the commercial agricultural economy in Hawai'i. The building is also significant under criterion C, for its architectural design, as the only example of commercial work by its design architect, Theodore A. Vierra. Vierra was respected as staff architect for the Hawai'i Sugar Planters Association (HSPA) in Hawai'i (Riznik 1999: 145).



5.14 HENKE HALL

NARRATIVE DESCRIPTION

Narrative Description of the Setting and Landscape

The building is set back from Dole Street on its eastern edge and bordered by McCarthy Mall on its southern edge. The overall plan of Henke Hall is in an “E” shape and is comprised of three rectangular buildings situated length-wise and aligned running west to east in rows connected by an attached covered walkways between the buildings. The property sits on a gently sloping site with the highest side along the eastern edge of the property.

Narrative Description of the Building

Henke Hall is a one-story brick and hollow-tile cement block with reinforced concrete and stucco complex built in the Hawaiian Modern Style. The western and central roof volumes of Henke Hall are composed of a combination of shed and flat roofs. A

clerestory with venting windows is part of the shed roof design. The eastern roof volume is composed of a gable roof. A lanai runs along the length of the western façade of the central volume with wooden double hung windows and doorways opening to this shaded exterior corridor. The covered walkways running perpendicular to the buildings make them all accessible between each other.

The main entry is located on the west painted brick façade of the western-most wing. A double-door recessed entry is articulated with tapered brick walls on either end of the entry. Awning windows are equally placed in groups of four along the west and east façades of this volume. Secondary entries to the building are located centrally on the north, east and south facades.

The central volume of Henke Hall is made of painted brick on the east and west facades with reinforced



Fig 5.109: View along East-West Road, 2007



Fig 5.110: Henke southern facade, 2007

concrete and stucco on the north and south façades. Similarly placed awning windows are located along the west, north and east façades on this volume, with entries on the east and west facades. The north façade has minimal windows, while the south façade has no window openings, and only mechanical equipment.

All three sections of the building have classrooms and offices on either side of this corridor. The building is currently in poor condition with changes to the facades that include the addition of window air-conditioning units and several alterations of the interior from research laboratories to classroom and office spaces.

The eastern volume of Henke Hall is made of painted brick on the east and west facades with reinforced concrete and stucco on the north and south facades. The entry in this volume is located on the west façade. Awning windows flank the east and west facades of this volume.

All three volumes in Henke Hall are designed with a long double-loaded corridor running north to south.

5.14 HENKE HALL

STATEMENT OF SIGNIFICANCE

The University has a history in agricultural sciences since its inception in 1907. Through the 1960s the east end of campus had large sections of land segregated for agriculture and animal husbandry research. The post-WWII years and Statehood brought increased recognition for the importance of agricultural research and agricultural economy in Hawai'i. In 1950, the Hawai'i State Legislature established House Joint Resolution 101 allocating one million dollars for the development of a new College of Agriculture building at the University of Hawai'i in an attempt to foster agricultural research and the economic stability of Hawai'i. The Hawai'i Legislature. House Joint Resolution 101 was drafted by Charles Kaukane, representative from the 5th district and William Fernando, representative from the 6th district.

With the new funding, the University commenced development for the new College of Agriculture

building in September of 1951. The location of Henke Hall was chosen for its close proximity to the agricultural science experiment fields (Wadsworth 1951: n.p.). Henke Hall was designed between 1951 and 1952 and constructed between 1952 and 1956 (Sinclair 1952: n.p.). Sinclair approved Vierra's plans after several months of negotiation regarding budgetary constraints and design changes at the request of the University. Currently, Henke Hall serves as the facility for the University of Hawai'i at Mānoa School of Social Work.

The new building was dedicated and named after Professor Louis Henke in January of 1957. Professor Henke was at various times the Acting Director, Assistant Director and Associated Director of the Agricultural Experiment Station during his career at the University. His retirement in 1954 marked an end to his leadership and influence in developing the Agricultural Experiment Station at



Fig 5.111: Walkway between Buildings, 2007



Fig 5.112: Henke southern façade, 2007

the University (Wadsworth 1951: n.p.).

Criterion A: Significance for Events

The period from 1957 through the late 1960s brought about significant advances in agricultural sciences. In 1968, R.A. Hamilton perfected the cross-breeding of the “Sunrise Solo” papaya in the building, which has become the “most widely grown export papaya in the world” (Mitchell 2002: n.p.).

Criterion C: Significance for Architectural Design

Henke Hall was constructed in a clean, modern style, with minimal decorative elements illustrating the economical design aesthetic of architect, Theodore A. Vierra. Architectural elements include

the single-story design, asphalt tile flooring, concrete foundation, and hollow-tile cement block walls. The property is one of the few non-residential examples of Theodore A. Vierra, whose work was primarily plantation housing for HSPA (Riznik 1999: 145).

The University of Hawai‘i and the HSPA had established a relationship in sugar cane research. Vierra was trained in architecture at Harvard University and graduated in 1929 (Riznik 1999: 145). Upon his return to Hawai‘i, Vierra became a colleague and contemporary of Hawaiian architects C.W. Dickey, Hart Wood, and Bertram Goodhue. Vierra entered employment with HSPA in 1936.

During the mid-1930s, Vierra began to revolutionize labor-force residential architecture. In 1925, as a

5.14 HENKE HALL

STATEMENT OF SIGNIFICANCE

Fig 5.113: Entryway, 2007

Fig 5.114: Basalt rock platform, 2007



response to public outcry over the derelict quality of plantation worker housing, the HSPA hired an industrial relations consultant firm to analyze the housing situation and offer solutions. The Industrial Relations Consulting Firm was called Curtis, Fosdick, and Belknap. The firm suggested changing the housing development from a “camp” into a “village” by hiring an architect and in-house planner .

Vierra incorporated this new thinking, on HSPA’s behalf, and developed planned communities for various sugar plantations across the islands. The new housing utilized standardized design for single family homes with modern amenities, e.g. electricity, toilets, showers, and laundries. To mark the change in plantation architecture, Vierra co-organized

an exhibit at the Honolulu Academy of Arts that celebrated the plantation designs of thirteen fellow architects (Riznik 1999: 141-148).

Vierra had mastered the economical, standardized home design which was influential in the development of middle income housing in Hawai’i. His use as the architect for Henke Hall further illustrates the close link between UH and HSPA. The building retains the scale and proportions of many of his housing complexes developed for plantation communities.

NARRATIVE STATEMENT OF INTEGRITY

The setting of the Henke Hall is now impacted by the much larger and adjacent Moore Hall. The building initially was a low rise administrative facility set within the experimental fields of the agricultural research station. It is difficult to interpret that setting from the current environment. The design and proportions of the building are intact to the original design but are perceived as a series of buildings without the initial strong design aesthetic because of haphazard additions and mechanical equipment. Window air-conditioning equipment is now installed in various locations filling in windows and cutting new holes in walls. The clerestory vent for natural ventilation in one of the modules is still intact. A complete abandonment of maintenance procedures has negatively impacted the building's integrity. The integrity of the critical historical associations would be difficult except by the most informed observer.



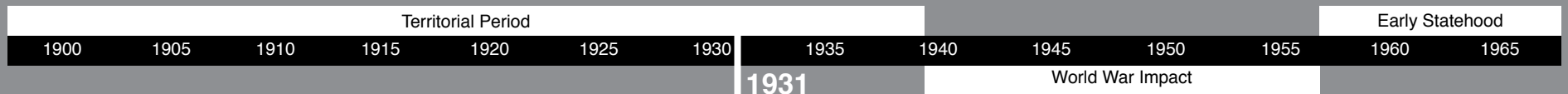
Fig 5.115 and Fig 5.116: Air-conditioning retrofit, 2007



5.15 BUILDING 37



Building 37 is significant under Criterion A, events as the site of significant research that took place within the building.



5.15 BUILDING 37

NARRATIVE DESCRIPTION

Building 37 is a one-story structure reinforced concrete structure with stucco finish built in the Territorial Style. The building is located between the Art Building to the north and Kuykendall Hall to the south. The building is primarily a rectangular volume with a double-pitched roof. The main entrance is located at the center of the south façade. The original circulation was organized in a cross-shaped layout starting at this main entry leading to a perpendicular corridor that bisects the building and leads to exit doors at the west and north façades.

The south façade is considered the front of the building. It is the long side of the structure and appears as a main rectangular volume with an additional rectangular volume that protrudes slightly from the main building mass at the center. The central section is approximately 30 feet long as are the lengths of the flanking bays. The main entry is a centered double door entrance with a decorative

terra cotta grill transom to allow natural ventilation. On each side of the doorway is a vertical window evenly spaced on the central portion of the façade. The main volume that sits slightly behind the central portion is mirrors itself. Each side has four paired jalousie windows about four feet tall. The façade steps out about six inches after the first two windows to create a transition between the main and central volumes. Two of the windows have been removed and filled with stucco.

The west façade is the narrow side of the building at about 30 feet long. It has a centered recessed single door entry with decorative terra cotta vent above. Two small windows were placed on each side of this center door that are about one and a half feet wide and four feet tall. However, one of the windows has been removed and filled in with stucco to allow for mechanical/electrical equipment. Small palms hide this equipment from view.



Fig 5.118: Building 37 Main Façade and Entry, 2007



Fig 5.119: Building 37 Context, 2007

The north façade is one volume and, similar to the south façade, has double doors at the center of the façade. Unlike the front, this entry is recessed about three feet into the building and features two Doric order columns built into the wall at the front of this entry alcove. The windows on this facade are identical to the window sizes on the south façade but the only remaining windows are located within the central area of this façade near the entry. The two outer windows on both ends of this facade have been removed and filled in with stucco. Two six-foot tall wood fences enclose HVAC equipment attached to this façade. The east façade has only two remaining windows of the original four that were equally spaced.

The interior of the building was demolished in 1982 due to termite infestation and damage. The renovations created an open floor plan to allow for cubicle partitions, a dropped ceiling and new finish materials. The only operable door is the main entry on the south façade.

5.15 BUILDING 37

STATEMENT OF SIGNIFICANCE

Building 37, originally known as the Fruit Fly Laboratory from 1931 to 1973, was used by the United States Department of Agriculture (USDA) for 42 years. The laboratory is part of the Hawai'i Agricultural Experiment Station, which was a set of experiment stations established in at least four Hawaiian Islands beginning in 1901 (Mitchell 2002). The building was also part of a set of campus facilities that helped to expand the UH campus during the Great Depression. The Fruit Fly Laboratory was built near the same time that the University's first auditorium (Wist Hall) and Normal School (College of Education) were finished in 1930. The building was also finished during the campus' highest enrollment period at the time (1931-1932), when 1,353 people were attending the University (Kobayashi 1983: 27). The Fruit Fly Laboratory was established on the UH campus shortly after the 1929 outbreak of Mediterranean Fruit Fly in Florida, which caused a great deal of damage to agriculture crops. Because of this outbreak, in 1930, the Bureau of Entomology

and Plant Quarantine of the U.S. Department of Agriculture arranged to have the laboratory built for additional entomologists and chemists to "further research on Fruit Fly control" (U.S. Department of Agriculture 1973: 2). The building was completed in 1931 at a cost of \$15,000 (Kobayashi 1983: 54).

The building was no longer used as a laboratory in 1973, when the Fruit Fly Laboratory was moved to a larger complex of four buildings on the upper Mānoa campus (Kobayashi 1983: 54). At this time, the building was slated for demolition as part of the University's master plan for campus reconstruction, but it was instead retained (U.S. Department of Agriculture 1973: 3). In 1982, the interior of the structure was demolished since most of the wood interior was eaten by termites. The interior was rebuilt (while the exterior walls and foundation remain) and housed the cashier's office for a few years. The building currently is used for Information Technology Services (ITS) offices.



Fig 5.120: Building 37 Window Detail, 2007

Narrative Statement of Integrity

This building has had very unfortunate renovation work that has impacted its integrity. The design of the simple roof form and massing of the building remain intact, while the setting and feeling have changed due to the addition of large surrounding buildings. The openings have been changed. The interiors are no longer original. The association with historical events would be difficult.

Criterion A: Significance for Events

Building 37 is significant under Criterion A (Events) based on the research completed within this structure that helped establish Hawai'i's agriculture industry. This research, which first began in 1912



Fig 5.121: Building 37, Circa 1940

in downtown Honolulu, was in response to the Melon Fruit Fly and Mediterranean Fruit Fly; both were introduced to Hawai'i in 1895 and 1912, respectively. In 1944, the Oriental Fruit Fly was introduced in Hawai'i. This made the state the only place where three types of Fruit Flies exist together and attack over 200 hosts (U.S. Department of Agriculture 1973: 1). Because of this, additional fruit fly laboratories were established on the islands of Hawai'i (The Big Island), Maui and Lana'i (U.S. Department of Agriculture 1973: 2). There are two significant research methods introduced to control Fruit Flies that were discovered in Building 37. Commodity Treatments were developed in the 1930s to work as a disinsecting agent. Vapor heat was used to produce vaporized ethylene dibromide, which disinsects Hawaiian papayas, which allowed

papayas to then be shipped outside of Hawai'i (U.S. Department of Agriculture 1973: 6). Male Annihilation was another research method used to control Fruit Flies. Wafers saturated with male lure and insecticide was used to kill male flies that resulted in the eradication of the Oriental Fruit Fly in Saipan and Tinian (U.S. Department of Agriculture 1973: 14). These two research methods helped reduce Fruit Flies in Hawai'i and other countries, as well as opening up the Hawaiian papaya export industry. Many other research methods were also discovered during the 42 years that the USDA conducted research in the Fruit Fly Laboratory. The original building had a narrow "moat" with water around it to keep out dust and other insects since this building was used as a quarantine facility (Koboyashi 1983: 54).

5.16 BILGER HALL



Bilger Hall is significant under Criterion A, events, as the site of pioneering research and development of marine natural products and chemistry. It is also significant under Criterion C for its architectural design in the International Style as adapted to the Hawaiian climate by its design architect, Mark Potter (Kobayashi 1983: 96) and for the two frescoes within the building by Juliette May Fraser.



5.16 BILGER HALL

NARRATIVE DESCRIPTION

Narrative Description of Setting and Landscape

Bilger Hall is located at the center of the south side of McCarthy Mall, which runs along an east-west axis. The Art Building sits to the west and Keller Hall to the east of Bilger Hall. The main entrance to Bilger is on the north side facing the pedestrian mall. The overall form of the building consists of a series of rectangular volumes that create a C-shaped plan. The C-shape is a narrow rectangular volume that connects the original building and an addition.

Narrative Description of Building

Bilger Hall is a three-story reinforced concrete structure built in a modified International Style of the Modern Movement. The massing of the north façade consists primarily of one rectangular volume. The three-story volume runs the length of this façade and has ten structural bays. At the east side

of this façade is a small rectangular volume three bays wide that protrudes a few feet out from the main façade. This design feature created a lanai at the third floor that overlooks McCarthy Mall.

The main entrance is located off-center in the fourth bay from the west. The entry alcove consists of recessed doors that are accessed through a double door wide entryway flanked by single door entryways. The entry is denoted further by a change in material and inscriptions. The material is cast stone and has the names of great chemists and significant quotations inscribed in the stonework. Also surrounding the entry are small depictions carved into the stone of the six significant stages of chemistry development. The entire entryway is protected by a projecting overhang and vertical fins at the sides. The windows of this façade and the rest of the building are a series of wide metal-framed awning windows that fill each bay between the narrow concrete columns. Each pane is three foot by one foot and is arranged in a vertical group of six panes. Above the windows at each level is a concrete horizontal shading device. The windows and columns rest on a thick horizontal concrete band that wraps the building. The concrete bands and windows repeat at each floor resulting in the alternation between solid and void. At the top of the structure is the concrete parapet that is the same height as the other bands to continue the aesthetic effect.

The east façade of the building features three rectangular volumes that create the C-shaped floor plan and a three-sided courtyard. The design aesthetic is consistent with that of the front of the building although this façade also has a six foot wide stairwell that projects out a few feet.



Fig 5.122: Bilger Hall, as seen from McCarthy Mall, 2007

The south façade reveals the setback of the third floor of the east façade. This façade also highlights the exterior walkway at the first floor that terminates to the east with a set of doors accessing the auditorium. The window pattern on this side is similar to the other façades. At the west end is the link that connects the original building to the addition.

The west façade of Bilger consists of three rectangular volumes. The main building volume is three stories and is set back the most. Projecting out at the middle of this façade is a tiered volume that steps up from one-story to two-story where it connects to the main volume. The stepped façade created lanai at the various levels. However, this area has been converted into mechanical and storage rooms. As a result, the second floor lanai is no longer usable and the windows of the first floor are filled. Projecting from the first floor is another smaller one-story building with large window-sized vents, which is a later addition. The side also has the loading dock at the first floor. While the second and third floors maintain the building's consistent window pattern, the first floor is punctuated by single-pane-wide windows, single and double doors and various ramps and staircases.

To the north of the tiered volumes is the three-story stack that filled in the original courtyard in the 1980s. The window pattern is similar to that of the rest of the building, but here the windows are divided by round concrete columns resting on the horizontal concrete bands. At the first floor, a concrete block planter filled with bushes projects from an open recessed interior area that was part of the original courtyard. From ground level on this facade, stairs located to



Fig 5.123: Bilger Hall Entry, 2007

the south of the planter lead down to the basement. At the north end of the planter, stairs lead up to the recessed area and a ramp leads downward to another basement opening. Beyond the ramp to the north, the facade extends, windowless, to the front of the building, as in the original plans.

5.16 BILGER HALL

STATEMENT OF SIGNIFICANCE

Bilger Hall, originally known as the Chemistry Building, was completed in 1951 but was not formally named until 1959 due to a controversy regarding Dr. Linus Carl Pauling, head of the chemistry department of the California Institute of Technology, who was to initially present the dedication speech. Within twenty-four hours of the dedication, President Sinclair postponed the ceremony due to new information that Pauling was a member of groups considered to be subversive by the California Un-American Activities Committee (Kobayashi 1983: 91). A few months later, Pauling was cleared and he went on to win two Nobel Prizes for his work on molecular structure and chemical bonds and for his work calling for a ban on all nuclear testing through an international pact. Eventually, Bilger was named in honor of Dr. Leonora and Earl Bilger. Leonora was a professor of chemistry and in 1943 she assumed chairmanship of the department. Her husband was also a chemistry professor and

worked with her closely in the development of the department (Kobayashi 1983: 96).

The need for Bilger Hall was evident by a critical shortage of space in Gartley Hall, the original home to the chemistry department. Enrollment in chemistry courses had increased nearly fourfold, from 162 per semester in 1922-3 to 422 in 1942-3 (University of Hawai'i Archives, HBM 1943: n.p.). In a letter to Dean Arthur Keller, Leonora Bilger requested funds to improve the building, noting that she had already cut the desks in half so that each student could have his or her own and suggesting that the roof could be used for lecture rooms and labs. She warned that the University would have to limit freshman registration in chemistry to 330 students, which would be undesirable because so many programs of study depended on the completion of a year of chemistry before the sophomore year. She asked in particular for facilities for courses in chemistry that



Fig 5.124: Bilger Hall, Circa 1960

were related to agricultural and engineering aspects of sugar and pineapple training and lamented that the relevant equipment was now standing in the basement corridor (University of Hawai'i Archives, Bilger 1943: n.p.).

In the meantime, President Sinclair, with Mrs. Bilger's support, had been working to acquire \$300,000 from the Territorial Legislature to construct a new chemistry building (University of Hawai'i Archives, Sinclair 1943). Its cost was estimated as \$1,050,000 (University of Hawai'i Archives, *Chemistry Building* n.d.: n.p.). However, the Legislature had appropriated only \$888,000. Various cost-cutting measures were considered by the architect Mark Potter and Leonora Bilger: elimination of interior paint, the elevator, the makai wing, half of the central wing. Potter and Bilger agreed that the last alternative was preferable both structurally and architecturally, because it could be added later (University of Hawai'i Archives, Bilger 1943: n.p.). However, in the end the Legislature approved funds to cover the shortage (University of Hawai'i Archives, Pratt 1948: n.p.). By the time construction was more than 50% complete, the cost of the completed building was estimated to be \$1,152,000 (*The Honolulu Advertiser*, 1950: n.p.). The contractor was the Pacific Construction Company under the supervision of the Territorial Department of Public Works. Over the years, Bilger has been the home to the chemistry department providing them with lecture halls, laboratories and faculty and student offices.



Fig 5.125: Bilger Hall Mural by Juliette May Fraser, 2007

Criterion A: Significance for Events

Bilger Hall is significant under Criterion A (Events) based on it being the site of scientific discovery. Bilger Hall gained distinction as the site of important achievements in marine natural products chemistry. This field of scientific investigation was pioneered by Dr. Paul Scheuer and further developed by Dr. Richard Moore, who was a postdoctoral fellow in Scheuer's lab. Receiving his PhD in 1950, Scheuer became an Assistant Professor in UH's Chemistry Department in Bilger Hall. First focusing on natural products from indigenous Hawaiian plants, he soon realized that Hawai'i's unique marine flora and fauna was a previously unexplored resource for natural products (Habermehl 2003: 221). The term "marine natural products" was first used

5.16 BILGER HALL

by Scheuer in his 1973 monograph and refers to organic compounds that have been isolated from marine organisms. The number of compounds thus identified has grown from 200 in 1973 to over 8000 now. Among these compounds are powerful toxins, cardiotonins that speed or retard heart rate, anti-cancer substances, and many others that have influenced the course of chemical ecology, pharmacology and drug development (Okuda 2000: vii-viii). Scheuer wrote over 300 scientific papers, a five-volume book *Marine Natural Products – Chemical and Biological Perspectives*, and the series *Biorganic Marine Chemistry* in his 53-year career. He retired in 1983 but continued to work in his lab until his death in 2003 (Habermehl 2003: 221). An emeritus professor in the Chemistry Department identified Moore's work, in addition to Scheuer's, in marine products chemistry as the most important achievement to take place in Bilger Hall, commenting, "[Moore's work] is still recognized as a tour-de-force in organic structure determinations" (Bopp 2007: n.p.). Throughout his work he pioneered new techniques, particularly NMR, for the elucidation of molecular structures (Gerwick 2002: 1). Moore is now Professor Emeritus, but the work of their students and colleagues continues on in Bilger Hall and in labs all over the world.

Criterion C: Significance for Architectural Design

The building is designed in the International Style by architect Mark Potter. The hall followed the typology of a "lanai" structure that took "full advantage of the Hawaiian climate by having no interior corridors. All of its laboratories and rooms open directly onto wide verandas that border upon two courtyards nestled between its wings" (Kobayashi 1983: 96).

In many respects Potter designed a building in the International Style, following its tenets of volume rather than mass, emphasis on space enclosed by thin planes or surfaces rather than the suggestion of mass and solidity, regularity rather than axial symmetry, and a minimum of applied decoration (Hitchcock & Johnson 1966: 36). However, he added design elements that are appropriate to the Hawaiian climate. He utilized wide lanai and courtyards to provide rooms that receive natural daylight and ventilation from two sides through broad bands of operable windows oriented to catch the trade winds. Potter also incorporated cultural elements including four frescoes that grace the first floor courtyards of the building. Potter also considered the use of the building in its design references. The entrance to the building is designed in cast stone and features the names of great chemists and significant quotations regarding the basic ideas of science. The front of the building at the entry also highlights the six significant stages of chemistry development through small carvings into the stone wall: "Lavoisier's famous apparatus, Dalton's atoms and molecules, Berzelius' balance, Kekule's space formula for benzene, Mendeleev's periodic table and Lewis' atomic models" (Kobayashi 1983: 96).

The building also has examples of two frescos by Juliette May Fraser (1887-1983). Juliette May Fraser gave to Hawai'i an artistic vision of itself that was as authentic in spirit as it was creative in presentation. Fraser was born in Honolulu in 1887. After graduating from Wellesley College, she returned to Hawai'i to work as a teacher while saving up money to pursue her true passion — art. Her formal training came at the Art Students League in New York, later a haven for other locally born artists. Her subdued yet powerful murals earned her the most acclaim,

with commissions coming from all over the world (*The Honolulu Advertiser* 2006: n.p.).

Narrative Statement of Integrity

The design integrity of Bilger is good; the original proportion and scale elements can be perceived easily despite some unattractive mechanical additions. While McCarthy Mall is a later addition to the campus, the setting of both Palm and large trees with the dappled sunlight in the foreground compliments the tropical elements of the lanai spaces. The workmanship presented in the cast stone work is excellent and the murals by Juliette May Fraser are intact with the exception of an unfortunately placed water fountain in the middle of one mural. The scale of the structure and the materiality clearly exemplify the sense of history of post World War II architecture in Hawai'i. The association of the building with Chemistry and the pioneering work that went on in the building is easily interpretable by the continuation of this use, and the "Chemistry" graphics as part of the decorative theme. The reading of the laboratory spaces on the exterior because of the window spacing and proportions, also clearly are understandable.



Fig 5.126: Bilger Hall, as seen from Correa Road, 2007

5.17 KELLER HALL



Keller Hall is significant under Criterion C, for the simple International Style building with stained glass windows by artist, art professor, and one time acting Dean of the College of Arts and Sciences, Murray Turnbull (Nickerson 1959: B9).



5.17 KELLER HALL

NARRATIVE DESCRIPTION

Narrative Description of Setting and Landscape

Keller Hall is a four-story reinforced concrete structure built in the International Style of the Modern Movement. The building is set on the south side of McCarthy Mall, a large landscaped pedestrian walk that is a central feature of the upper Mānoa campus. Keller Hall is linked to the Physical Science Building to the South.

Narrative Description of the Building

The main entry is accessed directly from the Mall with a four-story high entry vestibule, with the main form of the structure running parallel to the Mall. A three-story stained glass mural is located directly over the entry doors illuminating the interior with shades of red, blue, green and yellow. Square, four-story tall columns support the roof above the building entrance, accentuating this entryway and stained glass mural.

Adjacent to the entryway on the north façade are four levels of double-loaded corridors that hold classrooms and labs in a building designed to originally hold the Engineering Department (Kamins 1998: 158 and *Honolulu Star-Bulletin* 1956: 7). An architectural element on the classroom and lab corridor is the continuous horizontal rows of jalousie windows that run along the north and south façades. Structural bays break up the expanse of the horizontal window with columns similar to those fronting the entryway. An additional four-story volume at the end of the classroom and lab volume holds an internal stairwell and is partially lit with openings two to four feet wide with stained glass similar to the main entryway.

The east façade is composed of a large concrete volume with concrete panels and a single entryway leading to the second floor.



Fig 5.128: Keller Hall facade, as seen from McCarthy Mall, 2007

The south façade is similar to the north façade, but the jalousies are covered with operable, vertical aluminum fins that provide shade and direct ventilation. The south façade is characterized with a tall four-story concrete volume holding an internal stairway and lit with randomly placed, stained glass windows. The building can also be accessed from the south façade, opposite the north entryway. Keller Hall is joined to the Physical Science Building, built in 1960 (Kobayashi 1983: 119), by an open-air, reinforced concrete walkway accessible on all levels.

Three rectangular concrete volumes make up the west façade. The northernmost façade is a four-story rectangular volume made of concrete panels and jalousie windows. In front of the jalousie windows are vertical white metal fins similar to the facades of the attached Physical Science Building. These fins move to regulate air and sunlight into the classrooms (Kobayashi 1983: 119-122). The central rectangular volume on this façade is four and a half stories tall. This volume holds an internal stairwell and is partially lit with small openings two to four feet wide with stained glass similar to the east façade. The third volume is four stories tall and made entirely of reinforced concrete.



Fig 5.129: Keller Hall Entry and Stained Glass Façade, 2007

5.17 KELLER HALL

Fig 5.130: Keller Hall Western Façade, 2007



Criterion C: Significance for Architectural Design

Keller Hall was designed and constructed in 1959 by architect Clifford F. Young for the Engineering Department offices, labs and classrooms (Kobayashi 1983: 110). The building's location on McCarthy Mall was a shift in the campus' overall design plan from the historic Quadrangle. The buildings on McCarthy Mall were built during a "building boom" on campus when multiple International Style buildings were constructed to meet the high demand from increased numbers of students entering the University.

A significant part of the design for the building was the use of stained glass murals throughout the building's façades. Designed and constructed by UH art professor Murray Turnbull in 1959, the untitled stained glass window above the entry of Keller Hall and smaller windows around the internal stairways were part of Turnbull's experimentations with light in his artwork (Nickerson 1959: B9). The Keller Hall mural was created by Turnbull with traditional methods of creating stained glass murals by joining pieces of glass with lead. The overall size of the three-story tall glass mural above the building's entry helps to accentuate the large four-story tall vestibule of the building. Turnbull's work on Keller Hall "stimulated his imagination" and enabled his research on stained glass to continue. Turnbull's other research at the University upon the completion of the Keller Hall mural included creating a "'filling' of colored glass between a 'sandwich' of two other pieces of glass" and "fusing pieces of solid color glass together, creating blends of color where they are joined" (Wright 1959: 20). Turnbull's mural greatly adds to the architectural presence of Keller Hall.

Keller Hall is primarily significant for the stained glass window of the interior lobby. This glass is one of the few remaining examples of the work of Murray Turnbull, art professor.

Narrative Statement of Integrity

The setting for Keller Hall is intact to its original design along the major axis of McCarthy Mall. The design characteristic of the building, the rectilinear façade with an expressed structural module, has been preserved on its primary elevations. This façade clearly expresses the function of the building and the interpretation of its use as laboratory facilities is not difficult. Mechanical equipment including window air-conditioners, a back-up generator, fuel storage tank, and plumbing has negatively impacted the rear elevation. The stained glass window by Murray Turnbull is one of the few remaining works of this well-known and respected faculty member. The stained glass through out the building is intact and the experimentation undertaken by Turnbull in the presentation of this glass can be easily interpreted from the existing work.



Fig 5.131: Stained Glass Façade, 2007

5.18 UNIVERSITY HEALTH SERVICES



University Health Services Mānoa is significant under Criterion C for its architectural design in an adapted Hawaiian Modern Style, by its design architect, Herbert Matsumura.



5.18 UNIVERSITY HEALTH SERVICES

NARRATIVE DESCRIPTION

Narrative Description of Setting and Landscaping

The building is set below East-West Road to the east. The building is H-shaped in plan with three major wings projecting to the west. The building appears square in plan due to the concrete open grilles (breeze-block) connecting the wings and creating interior courtyards.

A large Ficus species stands between Student Health Services and Correa Road with a trunk more than five-feet in diameter and a canopy spread of nearly 100-feet. It's one of the more remarkable trees on the campus. This Ficus tree and the Sausage tree near it are believed to be a part of Joseph Rock's original campus arboretum.

Narrative Description of the Building

The University Health Services building is a one-story, reinforced concrete and breeze-block structure built in the adapted Hawaiian Modern Style. The main entrance to the Health Services Building is on the east façade, where a covered concrete walkway with square concrete columns leads to the main entrance. The entry consists of an exposed post and beam structure with floor to ceiling windows and jalousies.

The south façade consists of a plain, reinforced concrete wall with two concrete breeze-block screens. The west façade is composed of three projections, resulting in two U-shaped courtyards. Green glass windows run along the length of the three bays. Each courtyard is filled with plants and small trees. A double-door entry is located within one of the courtyards. The north façade is composed of reinforced concrete walls with a decorative breeze-block screen that shelters an open courtyard.



Fig 5.132: University Health Services, 2007



Fig 5.133: University Health Services Courtyard, 2007
Fig 5.134: University Health Services Screen Detail, 2007



5.18 UNIVERSITY HEALTH SERVICES

STATEMENT OF SIGNIFICANCE

Fig 5.135: University Health Services Entry, 2007



University Health Services Mānoa was a much needed building on the University campus when it was constructed in 1963. The building was the first to allow twenty-four hour infirmary care on campus (Verploegen 1963: 1-B). In the first few years of the building's operation as a health center, it was described as "a far cry from the band aid-and-aspirin operation that preceded it" (*Honolulu Star-Bulletin* 1967b: C1). The Student Health Service was established in 1963 by Dr. Earl D. Lovett (*Honolulu Star-Bulletin* 1967b: C1). The building was built from \$296,000 in State funds, which included some money for medical equipment (Verploegen 1963: 1-B). Today, the building is still used as a health center for students and faculty.

Criterion C: Significance for Architectural Design

The small, single story Hawaiian Modern Style building was built during a campus building boom, which TIME magazine called, "an empire on which the cement never sets" (Kamins 1998: 90). The building has two wings: an infirmary and a dispensary out-patient clinic, which are joined with a reception area. "The dispensary-out-patient wing of the new building has a nurses (sic) station, two doctors' offices, nine examination rooms, an emergency treatment room, five out-patient rooms, laboratory, drug rooms, X-ray rooms and physical therapy room" (Verploegen 1963: 1-B).

Narrative Statement of Integrity

The building is intact to its original setting, set slightly below the main road and surrounded with tropical landscaping. The design aesthetic of the 1960s construction is clearly evident. The design vocabulary is an exposed structural system similar to the adjacent East-West Center but in a more restrained scale. The courtyards as the organizing elements of the plan are intact. The interior of the structure appears to have many original features, including a lobby area and small clinical rooms, and the finishes appear to have been minimally changed. While some changes have been made to the interior, the original finishes and arrangement of rooms can be easily interpreted. It is an excellent example the understated design aesthetic of Herbert Matsumura.



Fig 5.136: Eastern Façade, 2007



Fig 5.143: Entry from East-West Road, 2007

5.19 KRAUSS HALL COMPLEX



Krauss Hall is significant under Criterion A, events as the second University site for the Pineapple Research Institute, an early Hawai'i agriculture research station, and Criterion C for the design of the water garden by local prominent landscape architect Richard Tongg and designer Lorraine Kuck.

Krauss Annex 2 is significant under Criterion A, events as the original University site for the Pineapple Research Institute, an early Hawai'i agriculture research station, and Criterion C for its architectural design, a Plantation-Style building, by its design architect Harry Sims Bent. The building is also the oldest wood structure on the University campus.



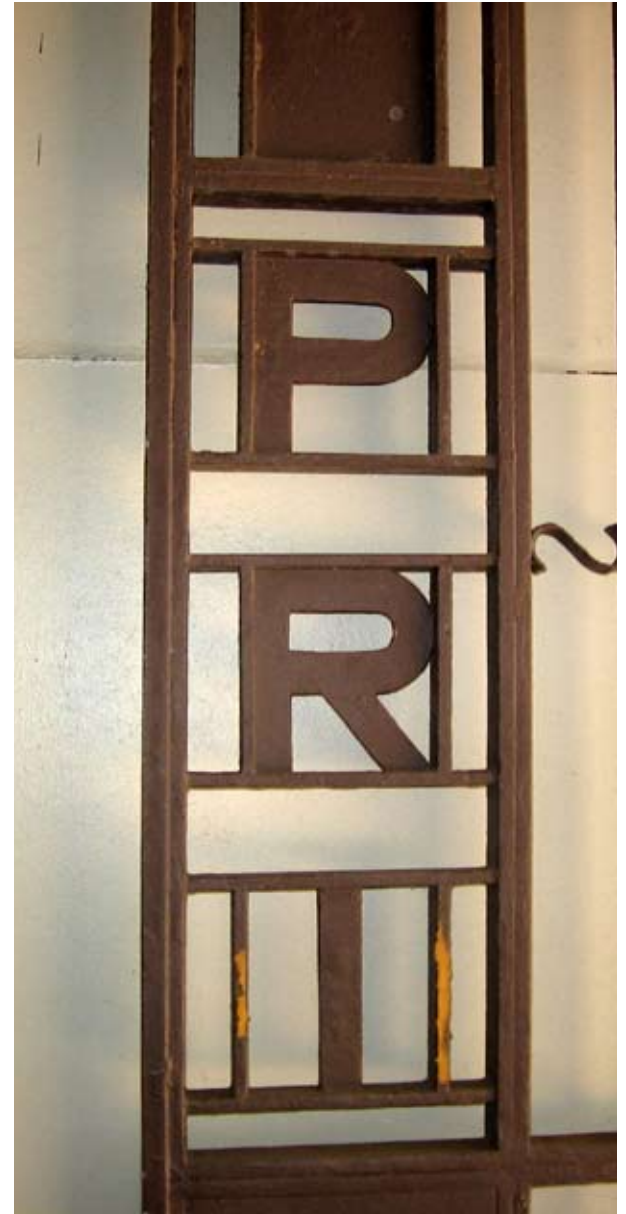
5.19 KRAUSS HALL COMPLEX

HISTORIC CONTEXT

The Krauss Hall Complex was originally named the Pineapple Research Institute (PRI) when it was first built on the University of Hawai'i campus in 1931. The complex has also previously been known as the Experiment Station of the Association of Hawai'i Pineapple Canners, according to a 1933 campus newspaper, *Ka Leo o Hawai'i*. The PRI was located on the only privately owned portion of the campus. It was acquired by the University in 1968 for \$1.6 million (Evinger 1968: B-8). The complex was renamed for Frederick Krauss, professor of agriculture in 1971 (Kobayashi 1983: 143).

In 1931, the original property included Krauss Annex 2 and the Entomology Virus House and a series of glass houses (Map Showing Portion of Kapa'akea Belonging to Pineapple Research Institute T.H. [map] 1941). Krauss Annex 2 is the oldest surviving wood structure on campus and historically housed entomology and nematology labs and offices as the first Pineapple Research Institute building. In 1948 a "one story, square shaped building with an enclosed court" and another small building behind it were added, called Krauss Hall and Krauss Annex 22 (*The Honolulu Advertiser* 1948: 10). The site also includes noncontributory buildings: two temporary classroom buildings, across a road and one north of Krauss Annex 2 and another sandwiched between Krauss Annex 2 and the Entomology Virus House; and one 1996 air conditioning equipment building. Three walls contribute to the property: two lava rock walls enclose the two courtyards of Krauss Annex 2, while another encloses the courtyard of Krauss Hall, replacing a wing that was demolished. Several buildings, including the glass houses were demolished for the construction of Sakamaki Hall in 1977 (Kobayashi 1983: 163).

Fig 5.137: PRI - Pineapple Research Institute
Metal Work Detail, 2007



The Pineapple Research Institute made a significant contribution to the broad pattern of Hawai'i history related to a major industry of the Islands. Perhaps no agricultural product is more associated with Hawai'i than pineapple. The former home of the Pineapple Research Institute of Hawai'i, therefore, has special significance in the history of the state. Between 1912 and 1986, PRI research formed the basis for a cash crop that at its greatest production brought millions of dollars into the state and supported thousands of workers. The year 1955 marked a watershed year for pineapple production. Never again would the industry reach the 76,700 acres planted that year. The Pineapple Research Institute also patented numerous advances in pineapple planting and harvesting including the Stubble Plow, Patent Number 2689512 (Skromme 1954: n.p.).

The efforts of the Pineapple Research Institute, by making pineapple growing more efficient, helped extend the Plantation Era in Hawai'i. Without the advances in yield and equipment for harvesting and planting, the highly labor intensive industry would have ended earlier than it did. The pineapple industry continued on O'ahu until 2007 when Del Monte ceased its operations. The pineapple industry still exists on the island of Maui.

The research of the Institute also had unintended consequences. The development of DBCP by the Pineapple Research Institute in the 1940s and the use by the pineapple industry resulted in contaminated water, especially on the Leilehua plateau where most of the pineapple planting took place. Four water wells found to be contaminated were shut down (Christensen 1985: A-7). A \$1 billion suit was filled on behalf of Mililani residents in 1983 (Hastings 1983: A-7).



Fig 5.138: Krauss Hall Prior to Demolition of the Wing Fronting Dole Street (foreground), Circa 1960

Originally the buildings of the Pineapple Research Institute were devoted to all aspects of pineapple, including nematology, entomology, meteorology, and soil science. Today, Krauss Hall houses the offices of Outreach College, Summer Sessions and International Programs. Krauss Annex 2 contains the John Young Museum and classrooms. The Entomology Virus House contains the University of Hawai'i High Energy Physics Group's Anechoic chamber, an electromagnetic isolation chamber. Krauss Annex 22 has the Office of the Ombudsman. Krauss Annex 1 and Krauss Annex 19 are portable classrooms, the latter containing the Environmental Center.

5.19 KRAUSS HALL COMPLEX

NARRATIVE DESCRIPTION

Narrative Description of the Setting and Landscape

The Krauss Hall Complex faces the north-south pedestrian spine of campus. The south end of Krauss Hall is separated from Dole Street by an eye-level lava rock wall. Krauss Hall is linked together by a series of enclosed courtyards. The overall size of the facility is approximately 150 feet by 400 feet with three distinct courtyards linking the building components.

The south courtyard is bound by Krauss Hall on three sides, and the fourth edge along Dole Street is created by the lava rock wall. The courtyard is a tranquil open air garden space with an approximately 70 feet by 50 feet naturally landscaped pond occupying the central space. The northeast and northwest corners of the pond are planted with bamboo and dense ti, traveler's tree, and Joannis

palm, making those corners impenetrable and creating a barrier between the courtyard walkway and the interior courtyard space in these areas. This also creates variety in terms of visual experience and gives the pedestrian walking the perimeter varying views of the interior garden space.

There is a walkway through an open air transitional space which leads to the middle portion of the structure. The middle portion of the facility is organized around a second open air courtyard. Three of the courtyard walls are formed by buildings and the fourth is formed by a lava rock wall. The courtyard space is a grass lawn lined with low shrubs and Cuban royal palm trees along the rock wall.

The third (North) courtyard is entered from the west side through an open hallway separated from the courtyard by eight simple wood columns. This



Fig 5.139: Krauss Hall Koi Pond, 2007

Fig 5.140: Krauss Hall Courtyard Garden and Koi Pond, 2007



courtyard seems the most private in the sequence of spaces and is separated from the walkway with an iron gate. The east side of the space is defined by a rock wall with water flowing over the surface into a rectangular concrete pond. The water is channeled along the south side of the courtyard into another rectilinear pond bordered with large pebbles south of the channel. The interior space is a grass lawn, with an organic pattern of stones breaching the space between the lawn and the covered loggia walkway. On the North side of the pool is one of the two original ipe (*Tabebuia impetiginosa*) trees planted by PRI researcher, Dr. Walters Cartes. The other was planted at his home in Mānoa.

spaces between portions of the building while providing a central organizational element for each section of the facility. The use of water, stone and a variety of plantings creates an interesting yet natural aesthetic. The courtyards introduce natural daylighting into the walkway spaces as well into the classrooms and offices. While the primary circulation is along the perimeter of the courtyards, benches offer places for the pedestrian to pause. The appropriate proportioning of the space at a human scale encourages the user to comfortably occupy or traverse the space without a sense of being overwhelmed by the surrounding structure or openings.

The courtyards are all proportional in scale to the single story building. They create transitional

5.19 KRAUSS HALL COMPLEX

NARRATIVE DESCRIPTION OF BUILDINGS

Narrative Description of Krauss Hall

Krauss Hall is a one-story, reinforced concrete with brick infill structure built in a modified Hawaiian Style. The building is located off of Dole Street, which cuts horizontally through the center of the University campus. The building initially was a donut-shaped plan, but is now U-shaped in plan, with a tall lava rock wall bordering the south edge of the inner courtyard garden. The three, one-story rectangular wings have a single pitch hip roof made of corrugated roofing.

The building has two main entrances off of the north façade. Both entrances are through covered walkways bordered by wrought iron gates with the letters "PRI" (Pineapple Research Institute) made of wrought iron in a transom above the entry gates. The walkway leading to the westernmost entrance on this façade is covered as well. Additional features

of the north façade are painted brick infill wall base with double-hung wood window sashes above. Half of the center portion of the north façade between the two main entrances is blocked off by a wood fence concealing outdoor storage space.

The east façade of the building is composed of a painted brick wall base with double-hung wood windows running the length of the façade above the brick base.

The south façades of the east and west wings face south towards Dole Street and are comprised of a brick wall base and windows above. A single-story tall lava rock wall runs along the south edge of the building, protecting the inner courtyard from the street. Originally a fourth wing filled in between these two elements.

The west façade of the building is also composed of a painted brick wall base with double-hung wood windows running the length of the façade above the brick base. A low set of stairs leads up to the south west edge of the building off of the Legacy Walk, where a small wood gate leads to the inner courtyard and water garden.

The three inner facades of the building are composed of painted brick infill with single doors, which lead to interior office space, equally placed along all three facades. All three facades are sheltered by a wide covered walkway wrapping around all sides of the courtyard and supported by thin round steel columns which are painted red.



Fig 5.141: Krauss Hall Corridors, 2007



Fig 5.142: Krauss Hall Annex, 2007

Narrative Description of the Krauss Annexes

Another contributory building within the Krauss Hall complex is Krauss Annex 2, a one-story, wood frame structure located just north of Krauss Hall. The most notable feature of the building is the double-pitched roof. It is designed with a simple Plantation Style aesthetic. Double hung wood windows, two panel doors and covered walkways add to the overall simple proportions of the building.

Non-contributory buildings within the Krauss Hall complex are Krauss Annex 22, a one-story, reinforced concrete with brick infill structure with a hip roof and similar architectural style of Krauss Hall without any of its sensitive proportions.

A second non-contributory building on the Krauss Hall complex is the Entomology Virus House, a one-story concrete structure with a shed and gable roof with a north-south ridgeline. A concrete trench encircles the base of the building. A sliding door acts as the main entry on the east façade.

5.19 KRAUSS HALL COMPLEX

STATEMENT OF SIGNIFICANCE



Fig 5.143: Krauss Hall Complex, 2007

Krauss Hall, originally named The Pineapple Research Institute (PRI), was designed in 1948 by R. E. (Rich) Windisch. Windisch was a local architect who participated in the building boom that followed the war that saw houses and businesses expand into the formerly agricultural lands of East Honolulu (*Honolulu Star-Bulletin* 1955: 15). He is not noted for any other buildings.

Krauss Hall originally held agricultural and entomological laboratories. Today, it holds the offices of Outreach College and Summer Sessions. In 1971, Krauss Hall was named after Frederick George Krauss, who was an agricultural researcher, a professor of agriculture at the University in 1911 and the director of Agricultural Extension Service when he joined the Hawai'i Experiment Station in 1906. Krauss received the first University honorary doctorate in 1923 based on his influence and devotion to agriculture in Hawai'i (Kobayashi 1983: 146).

Criterion A: Significance for Events

The Pineapple Research Institute made a significant contribution to the broad pattern of Hawai'i history related to a major industry of the islands. The former home of the Pineapple Research Institute of Hawai'i, therefore, has special significance in the history of the state of Hawai'i. The buildings of the Pineapple Research Institute all conducted research to encourage the growth of pineapples while preventing disease and pests. Krauss Annex 2 was added to Krauss Hall, the second PRI building on the University campus, when it was completed in 1948. Krauss Annex 2 historically housed entomology and nematology labs and offices of the PRI. Today, it contains the John Young Museum and classrooms.

Criterion C: Significance for Landscape Design

The water garden of Krauss Hall was designed by Richard Tongg and Lorraine Kuck in 1948. Tongg also designed the Traditional Asian Gardens at Honolulu International Airport. *Landscapeonline.com* called the garden “excellent examples of early to mid Twentieth-Century garden design” (Landscape Communications, Inc 2007: n.p.). Tongg and Kuck also co-wrote *The Modern Tropical Garden: Its Design, Plant Materials and Horticulture*; and *Hawaiian Flowers* (Landscape Communications, Inc 2007: n.p.). The garden and the pond were restored in 1996 by Betsy Sakata, a waterlily expert (Ruby 1998: n.p.). Betsy Sakata also designed the water feature in the courtyard accompanying the John Young Museum of Art, opened in 1999 (University of Hawai‘i at Mānoa 2008b: n.p.).

The Krauss Hall Annex building was designed in the Plantation Style as it is evident with the wood materials used, the use of lanai and the double-pitched roof that covers the entire building. Harry Sims Bent’s design was recognized in *The Architecture of Honolulu* as a “good example of the Hawaiian roof in a restful setting on the University of Hawaii campus” (Fairfax 1971: 30).

Narrative Statement of Integrity

The location and setting of Krauss Hall, Annex and courtyards have been modified but a feeling and a sense of the events that have occurred there can be interpreted by a knowledgeable observer. In 1982 the south wing of Krauss Hall was demolished for a drainage project and replaced by lava rock wall, which continues to enclose the exceptional courtyard water garden.



Fig 5.144: Krauss Hall Courtyard Garden and Koi Pond, 2007

The demolition of this wing did not negatively impact the courtyard garden. The form volumes and spatial qualities of both the first and second research stations (except as noted) are intact, with the exception of the makai wing. The central organizing element of the plan, the series of courtyard spaces linking the buildings has a variety of tropical plantings with only minimal changes from the original designs. A variety of changes have been made to the interior spaces including rearrangement of the office partitions and changing of finishes. The Krauss Hall Annex now serves as the John Young Museum. These changes do not detract from the overall understated aesthetic of the building and the variety of spaces and textures present in the carefully controlled forms.

5.20 EAST-WEST BUILDING COMPLEX



EAST-WEST BUILDING COMPLEX

- 5.20.1 BANYAN GROVE (1962)
- 5.20.2 KENNEDY THEATRE GROVE (1962)
- 5.20.3 JAPANESE GARDEN (1963)
- 5.20.4 JEFFERSON HALL (1961)
- 5.20.5 JOHN F. KENNEDY THEATRE (1962)
- 5.20.6 ABRAHAM LINCOLN HALL (1962)
- 5.20.7 HALE MĀNOA (1962)
- 5.20.8 HALE KUAHINE (1962)
- 5.20.9 JOHN A. BURNS HALL (1962)



The first five buildings built for the East-West Center were Hale Kuahine, Thomas Jefferson Hall, Hale Mānoa, Abraham Lincoln Hall and John Fitzgerald Kennedy Theatre and cost \$8.1 million (Kobayashi 1983: 126). These buildings were quickly constructed between the years of 1961 and 1962 at the far edge of the campus and Mānoa Stream. This land had previously been used to raise the farm animals of the College of Tropical Agriculture and was used for faculty housing. The East-West Center is listed on the Hawai'i State Register of Historic Places.

Post World War II, housing was in short supply for all of Honolulu and was particularly difficult to obtain for the University staff as the average salary was around \$4,000. Old Army structures and prefabricated cottages initially used by the Olokele Plantation of Kaua'i for its field hands were provided for new faculty members in an area called "Chicken Corners." Additional cottages were assembled at the current site of the East-West Center. The close proximity to the College farm was a benefit as they were allowed to purchase eggs and milk from it (Kamins 1998: 53). The new buildings of the East-West Center continued the function of housing in addition to a variety of other uses including administrative offices, food services, laboratory/classrooms and a theatre (Kamins 1998: 79).

5.20 EAST-WEST BUILDING COMPLEX

NARRATIVE DESCRIPTION OF THE COMPLEX

The idea of the Center to promote an Asia-US focused “Oriental Institute” was conceived by Professor Gregg M. Sinclair years before it came to complete fruition. In 1936, Sinclair convinced the UH Regents and administration “to establish within the University a center for Asian philosophy and literature that would commingle scholarship from both sides of the Pacific Ocean” (Kamins 1998: 39-40). Dean William H. George supported this vision saying, “It is confidently expected that the Institute will be a potent force for international understanding and peace in the Pacific” (Kamins 1998: 40).

In 1938, the Oriental Institute was started and C.W. Dickey, the leading architect of that time in the territory, was asked to draw plans for a building (Kamins 1998: 150). However in 1941, despite significant funding, the plans for the institute were terminated due to the United States involvement in the war in the Pacific. The concept was later revived

as the East-West Center when Hawai‘i became a state in 1959 (Kamins 1998: 40). It began with a speech by Lyndon B. Johnson, Senate majority leader, discussing the need to foster relations amongst nations. “Johnson asked, perhaps rhetorically, why there should not be established in Hawai‘i an international institute where intellectuals of East and West could meet to exchange ideas” (Kamins 1998: 77). At the urging of John Stalker, professor of history, and Professor Norman Meller, who chaired the Faculty Senate, President Snyder responded with a proposal to Congress for such an institute. The rapid response was made possible because art professor Murray Turnbull, then acting dean of the College of Arts and Sciences, had submitted a proposal to Meller only two months earlier for the “establishment of an International College of Cultural Affairs” to serve students and faculty from around the world. Turnbull, along with more than 60 UH faculty members worked on the new proposal detailing the programs and organization of the proposed center. As a result, an amendment was made to the Mutual Security Act of 1960 authorizing the establishment of the Center for Cultural and Technical Interchange between East and West in Hawai‘i (Kamins 1998: 77). The purpose of the Center was “to promote better relations between the peoples of Asia, the Pacific, and the United States, by promoting the interchange of ideas, and offering various educational and research programs for its participants” (Kobayashi 1983: 126). President Eisenhower then signed an appropriation act that included approximately \$10 million. This funding was to finance the Center’s first year of operation and the construction of new buildings. Hawai‘i’s legislature also provided financial assistance, \$800,000 for the planning efforts (Kamins 1998: 77).



Fig 5.145: Japanese Gardens, 2007

Narrative Description of the Setting and Landscape

The East-West Center has three distinct landscape areas that define the setting and landscape, the Kennedy Theatre Banyan Groves, the Thai Sala and Banyan Grove, and the Japanese Garden. Each of these is described separately in following sections. The groves are part of the overall East-West Center design strategy. The groves create a forested setting for these primary East-West Center buildings. The Kennedy Theatre grove visually references the Banyan Grove area surrounding the Thai Pavilion, and connects the green spaces of McCarthy Mall. The groves flanking the Kennedy Theatre create a spatial pause along East-West Road.



Fig 5.146: Koi Pond at the Japanese Gardens, 2007

Fig 5.147: Tea House at Japanese Gardens, 2007

5.20 EAST-WEST BUILDING COMPLEX

5.20.1 THAI SALA AND BANYAN GROVE

Narrative Description of the Setting and Landscape

The Thai Sala and Banyan Grove are on knoll at the east terminus of McCarthy Mall. The edges of the designed landscape are formed by the façades of Hale Kuahine, Lincoln Hall, the green space that leads to the Japanese Garden along the side of Jefferson Hall and East-West Road. The grove canopy is square in form and is approximately 16,000 square feet. The grove is formed by nine Chinese banyan trees planted 40 feet apart on a four part square grid. The Thai Sala, or pavilion is anchored in the middle of the south-east square of the grid. The Banyan Grove and Sala sit upon a single knoll, sloping down to the street level on the western edge, and sloping down to Jefferson Hall on the south side. The focal point of the garden space, is the Royal Thai Sala. The north and east edges are defined by dormitories. The banyan trunks on the north and south edges of the grove align with the articulation of the central volumes of the west façade of Hale Kuahine. The spatial volume of the landscape takes on the character of an outdoor room defined by the façades of buildings and a ceiling of Chinese banyan (*Ficus microcarpa*) trees. The overall feeling of the space is private, somewhat formal and intimate. The formality of the space is reinforced by the rigor created by the gilded pavilion on the hilltop. The Thai Pavilion acts as a centering element, although the structure is open air, allowing visual connections to the entire site. The primary connection to the space is with McCarthy Mall, the pedestrian backbone of the campus. There is a glimpse of the Japanese Garden space behind Jefferson Hall from this vantage point visually linking these green spaces. Pedestrian circulation borders the space on all sides, with people passing

by the space, rather than traversing through it. The primary route is on the west edge for pedestrians while vehicle traffic follows this same path along East-West Road. A staircase on the walkway by the Thai Pavilion provides passage down the slope toward Jefferson Hall and the Japanese Garden. The Grove trees are Chinese banyans (*Ficus microcarpa*), planted next to a group of Singapore Plumerias dedicated by Ladybird Johnson, the wife of President Lyndon Johnson, in the 1963 (Gillmar 2008b: n.p.). Lawn forms the ground cover except for Laua'e Fern and Spider Lily planting around the Royal Sala Thai after it was re-built in 2007.

The groves form an important part of the overall East-West Center design strategy. The Kennedy Theatre Grove visually references the Banyan Grove area surrounding the Thai Pavilion, connecting the green spaces. The groves flanking the Kennedy Theatre create a spatial pause along East-West Road. The

Fig 5.148: Thai Pavilion, 2007





Groves create a forested setting for these primary East-West Center buildings.

Narrative Statement of Significance

The primary point of focus in the space, the Royal Sala Thai, is unique to the University of Hawai'i campus, State of Hawai'i, and nation, considering the structure is "one of only four such pavilions outside of Thailand to bear the king's own royal seal..." (Morrison 2008: n.p.). The original structure was dedicated on June 6, 1967 as a gift from His Majesty, King Bhumibol Adulyadej of Thailand.

According to the sign on the site, the sala is named "Pratinang Patiharn Tasani" or "Throne of the Miracle Vision", designed by Thai National Artist/

Architect Dr. Pinyo Suwankiri. The traditional sala was typically sited in a temple courtyard or near a roadside as a place for people to encounter other travelers, find respite, and exchange knowledge about the places of their journey (Gillmar 2008b: n.p.). For this reason, the East-West Center Royal Sala Thai was intentionally located with a privileged view of McCarthy Mall and along East-West Road (Gillmar 2008b: n.p.). The Banyan Grove where the sala is situated is significant for its clean, simple design that bridges Asian traditions of groves and banyans with the modern lives of the adjacent I.M. Pei International Style buildings. One of the Monkey Pod trees in makai space near Jefferson Hall honors Dr. Alexander Spoehr, first chancellor of the East-West Center.

Narrative Statement of Integrity

The Banyan Grove tree planting is intact to its original design. Some ground corner plants Laua'e Fern and Spider Lilies were added in 2007 when the Royal Sala Thai was rebuilt. The Sala was rebuilt in the same location and for the same use. It was not a reconstruction of the original.

Fig 5.149: Banyan Grove, with Thai Pavilion in background, 2007

5.20 EAST-WEST BUILDING COMPLEX

5.20.2 KENNEDY THEATRE GROVE

The pair of Banyan Groves flanking Kennedy Theatre are significant under Criterion C for the important role the landscape design plays in establishing the character at the heart of the East-West Center and anchoring a key building, the Kennedy Theatre. The Theater is a work by internationally renowned architect I.M. Pei. The design of the Groves was done by a respected Hawaiian landscape architect, George Walters, FASLA (Gillmar 2008c: n.p.).

Narrative Description of Setting and Landscape

These two groves of large Chinese Banyan trees along East-West Road adjacent to the Kennedy Theatre “book-end” the structure and are between 20,000 and 30,000 square foot each. The south-side of the site forms a green space between the Kennedy Theatre and Correa Road. The green space on the north side spans between Kennedy Theatre and McCarthy Mall, also serving as an extension



Fig 5.150: Banyan Grove, Kennedy Theatre in background, 2007

of visual field. The canopy predominates on both sides. The dimensions of the overall site, including the building are rectangular and approximately 460 feet by 220 feet, with the long dimension along the East-West Road. The grove spaces are generally rectangle in layout and slope slightly down away from Kennedy Theatre, which is at the center of the top of a knoll. Through orderly tree layout and closely related to a symmetrical building, the groves subtly introduce a Japanese sensibility via their different numbers of trees. Their odd numbers, (five trees on the north and seven trees on the south) and the irregular outline produces a “missing tree” in the each grid of each grove.

The spatial volume of the groves is created by the tree canopies, providing a roof over the lawn space. The proximity of the groves to the East-West Road and Correa Road creates a public feeling in the space. The over-arching, spreading tree canopies give closure to the space, extending the entry plaza area of the Kennedy Theatre building as the ground plane transitions from concrete to lawn. The Groves themselves are permeable with clear views in all directions except for the large trunks and roots spreading across the ground.

The Groves are part of the overall East-West Center design strategy. The Kennedy Theatre Grove visually references the Banyan Grove area surrounding the Thai Pavilion, connecting the green spaces. The groves flanking the Kennedy Theatre create a spatial pause along East-West Road. The groves create a forested setting for these primary East-West Center buildings.

Movement through the space is primarily along the

sidewalks bordering the roads. The shady groves encourage pedestrians to continue across the lawn to McCarthy Mall, cutting a pedestrian-made earth path through the North Grove. The South Grove has a substantial sculptural piece visible from East-West Road. This sculpture, dating from October 1986, is the Hawaiian Peace Memorial commemorating the “Japanese immigrants who came to Hawai‘i – following the arrival of the first laborers from Japan on June 20, 1868...” (sculpture plaque). The major landscape elements of the Groves are the Chinese Banyan (*Ficus microcarpa*) trees. The predominance of the Banyan trees offers a strong green hue to the space, creating varying values as light and shadow mix with the branches and tree canopies. The tree trunks are all located on a forty foot grid that lines up with the Theater’s structural bays

Narrative Statement of Significance:

The two Groves and the open space they command are important for the distinguished setting they provide for the Kennedy Theatre building they flank, the building being a work by internationally renowned architect I.M. Pei. A respected Hawaiian landscape architect, George Walters, FASLA, was the designer.

Criterion C: Significance for Landscape Design

The pair of Groves is designed in a deceptively simple style with tropical plant material organized with a Japanese sensitivity appropriate to the Hawaiian climate as well as the East-West Center.



Fig 5.151: Hawaiian Memorial, 2007

Narrative Statement of Integrity

The Kennedy Theatre Groves planting is intact. The peace monument located on the “missing tree” point of the grid of the South Grove was added in 1986. It does not seriously disrupt the grove and could be removed without damage to the trees.

5.20 EAST-WEST BUILDING COMPLEX

5.20.3 JAPANESE GARDEN

The East-West Center Japanese Garden is significant under Criterion B, persons, for the involvement of the Japanese royal family and its funding from Japan. The Garden is significant under Criterion C, landscape architectural design, as a good example of the traditional high art of garden design in Japan, adapted to tropical and subtropical plant materials by a noted Japanese landscape architect, Kenzo Ogata.

Narrative Description of Setting and Landscape

The Japanese Garden is part of the East-West Center, and is located behind Jefferson Hall, with the east border defined by the parallel bank of Mānoa Stream. The site is a trapezoidal shape with the approximate dimensions: 260 feet by 190 feet by 70 feet by 286 feet. The topography of the garden varies from nearly level along Jefferson Hall and under the Tea House at the north end to

steep banks along Mānoa Stream. The entrance to the garden from the high ground on the north side is marked by the Jakuan “Cottage of Tranquility” Tea House. A winding flight of traditional Japanese garden-style stepping stones descends the bank below the teahouse with a series of small waterfalls that flow to a pond separated from the banks of Mānoa Stream by a low berm. The west side of the pond has two gently sloping hills. All of these landforms are symbolic of a greater landscape, the garden serving as a model of progression through time and space.

There are varying interpretations of the symbolism of the garden. According to the signage overlooking the garden from the lanai of Jefferson Hall, the garden represents three stages of life: turmoil of youth, steady adulthood, and finally the majestic tranquility of old age. An article in the campus newspaper, the “Ka Leo o Hawai‘i” from 1963,



Fig 5.152: Japanese Garden Pond, 2007
Fig 5.153: Japanese Garden Waterfall, 2007



mentions that the “three waterfalls also symbolize the progress from mountains to city life” (Dreger 1963: n.p.). Other text states that the “stream is patterned after the Chinese character ‘kokoro’ (heart, spirit)” (Kobayashi 1983: 128). According to a Star Bulletin interview with the designer, “The garden, Ogata says, is to provide a miniature landscape in which water runs from the highlands (at left) down across lowlands into the sea” (*Honolulu Star Bulletin* 1963: 29). The edges of the space are clearly defined by the tree-covered bank on the north, and the east façade of Jefferson Hall. The overall feeling of the place is one of privacy, and the scale of Jefferson Hall and the height of the trees along Mānoa Stream create a sense of enclosure or separation from the urban and academic setting.

There are sculptural elements in the garden. The teahouse at the north entrance to the garden is a pausing point, to the east side of the walking path, inviting the visitor to explore the secluded building. The traditional teahouse structure and its garden setting create the tranquility conducive to a tea ceremony. The visitor to the garden is provided a transition to the serenity of the Japanese Garden at this teahouse. A nine-tiered concrete miniature pagoda on the tree-covered bank nearby symbolizes “the temple in the mountains” (Dreger 1963: n.p.).

The landscape materials are natural in appearance. The stone stepped pathway is irregular both in the overall twisting path as well as the unique shape of each stone tread. The waterfall and stream introduce the action of falling water both through sight and sound. The Koi introduce an element of movement, life, color and discovery into the water feature. The granite basin was originally a gift to the Friendship Garden in Kokokahi, O’ahu, from



Fig 5.154: Japanese Gardens, Tea House in background, 2007

Doshisha University in Kyoto, Japan in 1935. The Community Trust, via Robert Midkiff gave it to the East-West Center at the time the Japanese Garden was built. The unpretentious concrete lantern and pagoda sculptural pieces are permanent, designed to weather the outdoors for an extended period of time, as is the granite basin near the teahouse and garden entrance.

Plant materials lining the north end stone path are Pittosporum, Gardenia, Azalea, and Mondo ground cover. The palette of shrub and ground cover plantings along the stream from the waterfall to the ground level include Crepe Jasmine, Yedo Hawthorn, Mistletoe Fig, Pittosporum, Azalea, Juniper, Ixora, Iris and Mondo. The trees comprising the overhead canopy, and particularly enhance the view of the

5.20 EAST-WEST BUILDING COMPLEX

5.20.3 JAPANESE GARDEN

garden from the Jefferson Hall second story lanai include: the Coral Shower Tree, Formosa Koa, Strawberry Guava, Monkey Pod, Golden Striped Bamboo (*Bambusa aureus*), Yellow Strawberry Guava, and the highly poisonous Be-Still Trees (Hirano 1963: n.p.). The Willow originally planted by the pond was replaced with a Weeping Bottle Brush (*callistemon*). Lawn grass covers the low hills on the Mānoa Stream side of the pond. The garden has been very well-maintained throughout its existence.

Narrative Statement of Significance

The East-West Center Japanese Garden is a good example of this high art form developed over more than a millennium in Japan and translated into tropical and sub-tropical plants as-needed in Hawai'i. The garden design was a collaborative work between nine landscape architects from six



Fig 5.155: Japanese Garden Koi Pond, 2007

different countries (Dreger 1963: n.p.). Some of the locales represented by the design team include Hawai'i, the US mainland, Australia, New Zealand, Thailand, and the Philippines (*Honolulu Star Bulletin* 1963: 9). The team was led by Kenzo Ogata, a noted Japanese landscape architect (Dreger 1963). The effort was funded through the contributions "of Japanese businessmen and industrialists who raised \$77,000" (Dreger 1963:m n.p.).

In addition to the landscape space design, the Japanese teahouse structure at the entrance to the garden is a noteworthy design and contribution. The placard on a rock sign in front of the teahouse reads:

"The chashitsu Jakuan and the tea garden Seien were presented to the University of Hawai'i by Dr. Shshitsu Sen the XVth generation grand tea master of Urasenke Konnighian on the 4th of August, 1972, through the efforts of Dr. John Young and Mr. James K. Fujikawa." The plantings themselves are living evidence of cultural exchange. The pink shower tree, also known as the Pink Cassia, was planted by Prince Akihito and Princess Michiko of Japan during a visit on 16 May 1964. The Japanese Black Pine was planted by Princess Sayako more recently, on 14 September 1999. The willow tree cutting in the garden came from a plant in the Imperial Palace Grounds in Tokyo and was made by the Showa Emperor (Kobayashi 1983: 128). This willow has not survived.

Criterion B: Significance for Persons

The Japanese Garden is significant in connection with a Shower Tree in the garden planted by Princess Michiko of Japan in 1964 as well as its funding by Japanese businessmen and industrialists.



Fig 5.156: Japanese Gardens Tea House, 2007

Criterion C: Significance for Landscape Design Narrative Statement of Integrity

The Japanese Garden is a good example of the internationally renowned Japanese tradition in garden design translated where needed into Hawaiian tropical and subtropical plant material. The design team was led by a noted Japanese landscape architect, Kenzo Ogata.

While there have been small changes to the plant materials in the garden, the essential character of the garden is intact to the original design. The characteristic elements are the pathway through the garden, the rock outcroppings, the waterfall, and the ponds. Each of these elements is manipulated to form a distinctive composition that focuses on the three scales of composition, immediate middle ground and borrowed view. The feeling and association of this garden as a Japanese space for mediation and contemplation is easily possible for all observers.

5.20 EAST-WEST BUILDING COMPLEX

5.20.4 JEFFERSON HALL

Jefferson Hall is significant under Criterion C for its architectural design in the International Style of the Modern Movement, by the design architect, I. M. Pei, and by its muralists, Jean Charlot, Affandi and David Barker (Kobayashi 1983: 126). It is also significant as one of a collection of buildings that first made up the East-West Center.

Narrative Description of the Building

Jefferson Hall is a three-story, post and beam reinforced concrete structure built in the International Style of the Modern Movement. The building is part of the East-West Center and is located between East-West Road and Mānoa Stream. Jefferson Hall is rectangular in volume but consists of a combination of indoor and outdoor spaces that makes the building read as two distinct volumes. The first and second floors are composed of a recessed rectangular volume with a larger rectangular volume extending



Fig 5.157: Jefferson Hall as seen from East-West Road, 2007

out overhead. The building has four main entries of which the two most prominent are located on the long elevation of the building facing west and determine the interior circulation. The entries open into a foyer that separates the central conference room from vertical circulation corridors at either end of the building.

The west façade features the two-story wood double door entrances into the building and they are located near the edges of this recessed volume. These entries are accessed by short staircases and lead to the second floor as the first floor is mostly underground from this elevation. Surrounding the entries are tall vertical wood framed windows. Prior to the entries is a covered plaza composed of a series of arched double columns supporting two exposed pre-stressed reinforced concrete I-shaped girders. This colonnade creates five structural bays. The girders in turn support a framework of similar exposed I-beams. Above the I-beams is a small covered lanai that wraps the building and features a decorative concrete railing. The lanai serves the second floor of the building, which is composed of a ribbon of wood frame and glass sliding doors. A simple concrete parapet wraps the building above the lanai.

The north façade is composed of two rectangular volumes surrounded by the open plazas on both the east and west sides. The entryway volume protrudes from the main volume to allow for another double-height double door entry accessed by a stairway. The main volume is fairly narrow in width and does not have any openings.

The east façade is similar to the west façade with the exception of the grade change revealing the lower



Fig 5.158: Jefferson Hall, Hale Mānoa in background, 2007

level floor. This floor is visible from the Japanese Garden that borders Mānoa Stream and its façade is composed of seven bays of one-story concrete archways approximately thirty-feet wide. Beyond the arches, recessed sliding wood frame and glass doors originally provided access to this floor but are no longer operable.

The south façade mirrors the north façade.

The interior of the building is composed of a central double-height conference room on the ground floor and small meeting rooms on the third floor. The first floor has meeting areas overlooking the Japanese Garden and various work rooms. The narrow footprint of the building and the façade treatment of ribbon windows provide significant daylighting

into the spaces and provides a strong connection between interior and exterior.

In 1985, the building underwent a major renovation that included adding central air conditioning, converting a food service area into the main conference room on the second floor and adding new tile and carpet floors throughout.

5.20 EAST-WEST BUILDING COMPLEX

5.20.4 JEFFERSON HALL

Narrative Statement of Significance

Jefferson Hall, which houses the Hawai'i Imin International Conference Center, was constructed in 1963 (Kobayashi 1983: 112). It was designed by renowned architect I. M. Pei and local architects Young and Henderson (Salmon 1999: 50) and named after the third President of the United States, Thomas Jefferson (University of Hawai'i at Mānoa 2008: n.p.). The building's original use was for the East-West Center administrative offices and food services (Kamins 1998: 79). Currently, the building offers facilities for conferences, seminars, luncheons, receptions and workshops (East-West Center n.d.: n.p).

Criterion C: Significance for Architectural Design

The building is designed in the International

Style of the Modern Movement. The design was undertaken by internationally known architect I. M. Pei in collaboration with local architects Young and Henderson (Salmon 1999: 50). The building is one of a several buildings that first made up the East-West Center and its style and design complements Kennedy Theatre, which is across the street (Kobayashi 1983: 126). "The building exemplifies balance and regularity of form, as well as the use of steel, concrete and glass materials" (Salmon 1999: 50). The signature feature of the building is its structural system. It consists of exposed pre-stressed reinforced concrete I-shaped beams and girders and is the identifying characteristic of the building. Within the building at the stairwells are several significant murals by Jean Charlot of Hawai'i and Mexico, Affandi of Indonesia and fiberglass and resin murals by David Barker of New Zealand (Kobayashi 1983: 126). Charlot's mural is of hands surrounding flames. It is a symbol of



Fig 5.159: Chinese Lion Statue, 2007
Fig 5.160: Jefferson Hall with
Kennedy Theatre in background, 2007





Fig 5.161: Jefferson Hall, as seen from the Japanese Gardens, 2007

human endeavor and creativity. Affandi's fresco shows three wise Asians – Ghandi, a Buddhist monk and the Indonesian legendary figure Semar – in the palm of God's hand. This image symbolizes the wisdom of the orient (Planetware n.d.: n.p.).

Narrative Statement of Integrity

The setting of Jefferson Hall is intact to the original design with the organizing element of the strong form aligned with the main circulation corridor of that portion of the campus. The building relates to the localized site of adjacent banyan trees and the reflective grove at Kennedy Theatre. The pre-stressed concrete structural system is clearly evident on the exterior and easily interpretable by a knowledgeable observer. The massing arrangement of lights and shadows as the organizing parti of the complex is also easily interpretable in the building.

5.20 EAST-WEST BUILDING COMPLEX

5.20.5 JOHN F. KENNEDY THEATRE

John F. Kennedy Theatre is significant under Criterion B, person, as it was where Bette Midler, a now famous actress and singer, performed as a University student (Kamins 1998: 226). The theatre is significant under Criterion C for its architectural design in the International Style of the Modern Movement, by the design architect, I. M. Pei (Kobayashi 1983: 126). It is also significant as one of a collection of buildings that first made up the East-West Center.

Narrative Description of the Building

Kennedy Theatre is a combination of a two and three-story exposed reinforced concrete structure built in the International Style of the Modern Movement. The building is located on the eastern end of upper campus and is bordered by a portion of McCarthy Mall. Kennedy Theatre is composed of several volumes including one square two-story

volume and one rectangular two-story volume that form its T-shaped plan. A third rectangular one-story volume protrudes from the top of the building that allows for the required height of the stage within. The main entrance to the theatre is located on the east façade facing the entry to Jefferson Hall across East-West Road.

The main entry is within the square two-story volume that features a post and beam reinforced concrete structural system. The entrance is at grade and is composed of five sets of wood double doors, which are recessed under a large open-air lanai that serves the second floor. The lanai is supported by a total of four two-story concrete columns, one in each corner, and has a concrete railing that balances the heaviness of the structure with its lightweight design. It has a concrete railing and slender concrete vertical supports forming rectangular openings. The doors serving the



Fig 5.162: Kennedy Theatre, at night, 2007

lanai are identical to the first floor entry doors in material and location. The exposed concrete walls of this façade feature a relief pattern of vertical lines spaced approximately three feet apart. The lanai is protected by an expansive concrete roof featuring exposed concrete T-beams. The ends of the beams are wrapped by a concrete fascia with regularly spaced reveals making it read as a series of square panels. The roof is supported by exposed pre-stressed reinforced concrete I-shaped girders.

The south façade features both the square and rectangular volumes. This side of the square volume has more of the concrete two-story columns extending to the girders creating five bays. All of the bays are filled except for the one supporting the lanai, which highlights the entry to the building.

Within the second bay adjacent to the open lanai is a double-height cylindrical volume expressing the function of an interior staircase. The other bays are filled with exposed concrete panels with a reveal pattern similar to the east façade. The second volume of this façade is located on the west side of the building and is placed perpendicular to the first volume. This volume is composed of exposed reinforced concrete and has no openings except for a single, double door entry. The volume reads as a box and has a simple reveal pattern consisting of a horizontal line offset from the top and bottom of the building by a few feet and equally spaced vertical lines wrap the volume. A third smaller rectangular volume is located above this volume, which makes the building three stories tall in the center of the building. The north façade mirrors the south façade but also includes an accessible concrete ramp leading to a second double door entry.



Fig 5.163: Banyan Grove at Kennedy Theatre, 2007

The west façade continues the aesthetic of the simple concrete box as this side features the long façade of the rectangular volume. A service entrance is located to the north side of this façade, which includes an accessible ramp. This entry and small landscaped area covers the north half of this façade and is protected at the ends by two projecting L-shaped concrete walls. A series of narrow vertical windows runs the length of this segment at the first floor.

Kennedy Theatre, originally known as the theatre auditorium, was constructed in 1962 (Kobayashi 1983: 112). A few days before its opening night in November 1963, President Kennedy was assassinated and the building was named in his honor (Kamins 1998: 225). Kennedy Theatre was

5.20 EAST-WEST BUILDING COMPLEX

5.20.5 JOHN F. KENNEDY THEATRE

designed by renowned architect I. M. Pei along with local architects McAuliffe, Young and Associates (Kobayashi 1983: 126). It was to be used by the East-West Center for international conferences and by the University's Drama Department for theatre performances. However, it was mostly used by the Drama Department as they operated the building and had planned an ambitious schedule that conflicted with East-West Center assemblies. Eventually, the East-West Center gave the structure to the University in return for a transfer of land that Burns Hall, an East-West Center building, occupied (Kamins 1998: 223). The University is known for its long tradition of producing both Western drama and Asian plays, which are accommodated for in the theatre's design.

Criterion B: Significance for Person

Kennedy Theatre is significant under Criterion B, Persons, based on it being the location that a famous actress and singer studied and performed.

Bette Midler, a University student at the time, was cast in the performance *Of Thee I Sing*, in 1964. She appeared in several roles in that play during the first two seasons at Kennedy Theatre before going on to gain national prominence in her profession (Kamins 1998: 226).

Criterion C: Significance for Architectural Design

The building is designed in the International Style of the Modern Movement. The design was undertaken by internationally known architect I. M. Pei in collaboration with local architects McAuliffe, Young and Associates. The building is one of a several buildings that first made up the East-West Center and its style and design complements Jefferson Hall, which is across the street. Similarly to Jefferson Hall, the structural system is a distinctive identifying characteristic of the building. It consists of exposed pre-stressed reinforced concrete I-shaped members



Fig 5.164: Kennedy Theatre Interior, 2007

Fig 5.165: Kennedy Theatre northern façade, 2007



Fig 5.166: Kennedy Theatre, 2007



that support an expansive lanai and cantilevered roof. Within the building, the design of the 638-800 seat theatre was made adaptable to allow both Western drama and Asian plays to be performed. The University has a long tradition of producing both types of theatre and providing these facilities continued the tradition of producing international theatrical productions (Kobayashi 1983: 131). Three wagon stages are motorized so they can roll along tracks on casters to be removed from the basic stage (Kobayashi 1983: 126). Other features are four side stages and a smaller laboratory theatre for experimental work (Kobayashi 1983: 131).

Narrative Statement of Integrity

The setting of Kennedy Theatre is intact to the

original design with the organizing element of the strong form perpendicular to the main circulation corridor of that portion of the campus. The building relates to the localized site of adjacent Banyan trees and the reflective grove at Jefferson Hall. The pre-stressed concrete structural system is clearly evident on the exterior and reflects the clear span space required on the interior for performances. It is interpretable by an informed observer. The massing arrangement of lights and shadows as the organizing parti of the complex is also easily interpretable in this building. The second floor lanai element is a clear adaptation of the building form to the localized climatic environment.

5.20 EAST-WEST BUILDING COMPLEX

5.20.6 HALE MĀNOA

Hale Mānoa is significant under Criterion C for its architectural design in the International Style of the Modern Movement, by the design architect, I. M. Pei (Kobayashi 1983: 126). It is also significant as one of a collection of buildings that first made up the East-West Center.

Narrative Description of the Building

Hale Mānoa is a 13-story, reinforced concrete structure built in the International Style of the Modern Movement. The building is part of the East-West Center and is located on land owned by the University of Hawai'i. The building is located on the eastern end of upper campus and is bordered by East-West Road to the west and Mānoa Stream to the east. Hale Mānoa is rectangular in volume and in plan, with the shortest façades fronting East-West Road and Mānoa Stream. The main entry of the building is an opening that connects through the

building from the south façade to the north façade. It is centered on these façades and provides a lobby for the vertical circulation.

The expansive north and south façades mirror each other and are composed of 15 structural bays featuring concrete columns. The entry breezeway lies within the central bay and is open to the elements with the exception of a glass transom above the open entryway. Similar to this entry are two open-air passageways through the building, one at each of the end bays. Within the other bays are recessed wood-framed glass vertical windows, of which some are operable. In contrast to the vertical concrete columns, the floors of the building create horizontal bands. Some of the bands are open air lanai floors that are on both the north and south façades to allow for natural ventilation. They feature large, square, punched concrete railings with ten inch by ten inch openings. The other floors are composed



Fig 5.167: Hale Mānoa, 2007

of two sets of pod modules with recessed sliding aluminum windows. These windows fill the entire volume between the pod structure and the wind scoops that are located below each window. At the roof, a large horizontal concrete parapet tops the façade. The variation of the floors between solid and void provides relief within the massive structure as well as provides additional articulation to the façade for aesthetic interest.

The east and west façades are also identical to each other. These 50 to 60 foot wide façades are composed of reinforced concrete panels and are devoid of windows. At the first floor, a one-story tall, open arch is centered highlighting the passageway beyond.

The interior of Hale Mānoa is organized by the alternating lanai and dormitory floors. Floors 3, 6, 9 and 12 are lanai floors with elevator access. These lanai floors hold lounge rooms, kitchen and laundry rooms. The other floors have no direct access to elevators; elevators must be accessed by stairs which lead from these dorm floors to the closest lanai floor elevator. The interior has undergone major renovations. Two new communal kitchens were added to each lanai floor in 2005, and a new lobby was added to the ground floor in 2004. Metal pipe railings were added to each large, square, concrete railing opening on the lanai floors for code compliance. The East-West Center is installing metal soffits for new fire sprinklers on all dormitory floors.



Fig 5.168 Hale Mānoa Northern Façade, 2007

5.20 EAST-WEST BUILDING COMPLEX

5.20.6 HALE MĀNOA

Narrative Statement of Significance

Hale Mānoa was constructed in 1962 and was designed by renowned architect I. M. Pei (Kobayashi 1983: 126). Its original function was a dormitory for East-West Center grantees, and today it remains as a residence hall primarily serving the Center's long term degree-seeking students (East-West Center 2008: n.p.).

Criterion C: Significance for Architectural Design

Hale Mānoa is designed in the International Style of the Modern Movement and is one of several buildings that first made up the East-West Center. Its style and design complements the other East-West Center buildings through its use of steel, concrete and glass materials signifying a collection of buildings. The design of this building along with

the other initial East-West Center buildings were undertaken by internationally known architect I.M. Pei (Kobayashi 1983: 126). The building most notably expresses the duality between solid and void and the lightness of the structure. The two narrow façades of the building are solid vertical planes with the exception of a small open archway at the first floor. The long façades represent the void by featuring the slender concrete structure and openings in a repetitive pattern. The voids or openings are glazed on the floors with dormitory units and left open on the communal living floors. These floors offer shared kitchen and laundry facilities and lounge areas. The dormitories are arranged into living units that each consist of two-double and five single rooms. Each living unit has shared bathroom facilities.



Fig 5.169: Hale Mānoa, 2007



Narrative Statement of Integrity

The integrity of the building is similar to the other East-West Center structures with the structural system expressed on the exterior, the forms dependent on a mixture of lights and voids, and the function expressed by the patterns and mixtures of fenestration. All are easily interpreted and intact.



Fig 5.170 Hale Mānoa northern façade, 2007

5.20 EAST-WEST BUILDING COMPLEX

5.20.7 LINCOLN HALL

Lincoln Hall is significant under Criterion C for its architectural design in the International Style of the Modern Movement, by the design architect, I. M. Pei (Kobayashi 1983: 126). It is also significant as one of a collection of buildings that first made up the East-West Center.

Narrative Description of the Building

Abraham Lincoln Hall is a four-and-a-half-story reinforced concrete and concrete block structure built in the International Style of the Modern Movement. The building is part of the East-West Center and is located on land owned by the University of Hawai'i. The Hall is located on the east end of upper campus and is bordered by East-West Road to the west. Lincoln Hall is rectangular in volume and in plan with its main entry on the short façade facing west. Interior circulation is organized by a covered courtyard.



Fig 5.171: Lincoln Hall, as seen from East-West Road, 2007

Stairs lead up through planters to the main entrance plaza on the west façade. At the ground floor, the entry is divided into three open bays with recessed full-height sliding glass doors leading into a foyer. The central bay has a short set of stairs denoting this set of doors as the main entrance. Above the entry bays, the façade consists of three sets of pod modules with recessed sliding aluminum windows at each floor. These windows fill the entire volume between the pod structure and the wind scoops that are located below each window. A large horizontal concrete parapet conceals the low-sloped roof. The east façade mirrors the west façade with the exception of the ground floor, which continues with the pod modules.

The north and south façades are identical. They consist of ten ten-foot bays flanked by solid concrete block walls. The bays feature series of pods at each level matching the north and south bays in appearance. The flanking walls feature patterned concrete block that is filled breezeblock. A single glass door entry with transom is located in between the patterned concrete walls and the bays. Above the door at each level is a pair of glass jalousie windows that provide daylight into the vertical circulation corridor.

Within the building, the most significant interior feature is an interior sky-lit, rectangular-shaped courtyard that is reached through the foyer. The center of the courtyard features a landscaped garden. Surrounding the courtyard at each floor are covered walkways with metal railings that face towards the courtyard. The building is naturally ventilated and the interior finish materials are Terracotta floors and Koa veneer wood paneling.

Narrative Statement of Significance

Lincoln Hall was constructed in 1962 and was designed by renowned architect I. M. Pei (Kobayashi 1983: 126). Named after President Abraham Lincoln, the Hall was originally used as a residence hall for visiting scholars and trainees of the East-West Center (Kamins 1998: 79). Later on, the function of the building changed to house the East-West Center program office, East-West Center Press offices and a library. However, today it serves, once again, as a dormitory for students and visiting East-West Center participants (Kobayashi 1983: 126).

Criterion C: Significance for Architectural Design

Lincoln Hall is designed in the International Style of the Modern Movement and is one of several buildings that first made up the East-West Center. Its style and design complements the other East-West Center buildings through its use of steel, concrete and glass materials signifying a collection of buildings. The design of this building along with the other initial East-West Center buildings was undertaken by internationally known architect I. M. Pei (Kobayashi 1983: 126). This building highlights the play between solid and void that is characteristic of many of the East-West Center buildings. Solid breezeblock is used at the corners of the building with glazed façades in between. The lightness of the concrete structure is expressed in these glazed areas. Within the building, a central courtyard exists to organize the circulation of the building and to bring natural daylight and ventilation into the building.



Fig 5.172: Lincoln Hall, 2007

Narrative Statement of Integrity

The landscape design of the interior courtyard was changed in recent renovation by Umemoto Cassandro Design Corporation. The rest of the integrity is similar to the East-West Center as a whole.

5.20 EAST-WEST BUILDING COMPLEX

5.20.8 HALE KUAHINE

Hale Kuahine is significant under Criterion C for its architectural design in the International Style of the Modern Movement, by the design architect, I. M. Pei (Kobayashi 1983: 126). It is also significant as one of a collection of buildings that first made up the East-West Center.

Narrative Description of the Building

Hale Kuahine is a four-story reinforced concrete, concrete block and breeze block structure built in the International Style of the Modern Movement. The building is part of the East-West Center and is located on University of Hawai'i property. The building is located on the east end of upper campus, between East-West Road and Mānoa Stream. Hale Kuahine is composed of eight alternating rectangular volumes that create a rectangular pinwheel in plan with a cross-shaped inner courtyard. The circulation of the building is organized by the main

entry that is located on the south façade. Within the building, circulation borders the courtyard and vertical circulation occurs at the corners.

All of the façades are nearly identical and each is composed of three rectangular volumes that clearly express the function of the interior spaces. On the south façade, the main entry to the building is hidden from view from East-West Road as it is tucked behind one of these three volumes. The single glass door entry is located within the long central volume to the western side and is recessed compared to the above floors. Directly to the east of the entry is a series of aluminum-framed fixed windows with wood louvers below for natural ventilation. This band runs the length of this central volume. The three upper levels of this volume consist of two parts. The west side is a recessed solid reinforced concrete wall with a vertical window at the far left edge at the second and third floors. This is where



Fig 5.173: Hale Kuahine, 2007

Fig 5.174: Hale Kuahine Courtyard, 2007



the bathrooms and showers are located within. An exterior staircase with concrete railing runs parallel to the building from the third floor to the fourth floor. The majority of the central volume features three horizontal bands of ten reinforced concrete pod modules each representing a dorm room. These modules have recessed sliding aluminum windows that fill the entire volume between the pod structure and the wind scoops that are located below each window. Flanking the central volume are two similar smaller rectangular volumes that are composed of a combination of patterned and open breeze block that allow natural ventilation to the stairwells within. The west volume protrudes out from the central volume creating the pinwheel shape in the plan. The east volume is narrower and is flush with the central volume until it turns the corner and

protrudes out compared to the central volume on that façade. A large horizontal concrete parapet connects all of the volumes while concealing the low-sloped roof. The west façade is identical with the exception of the first floor. The site slopes up to the north, preventing openings at this level. Therefore, the first floor consists of recessed concrete block. The north façade is the same as the west façade with one addition. At the left volume, a one-story concrete block rectangular volume has been added as a storage area. The east façade is similar to the south façade with some differences at the first floor. This façade features a lanai with a breeze-block railing and sliding glass doors. The lanai connects to an interior communal area.

5.20 EAST-WEST BUILDING COMPLEX

5.20.8 HALE KUAHINE

The most significant interior feature of this dormitory is an interior cross-shaped courtyard. The concrete courtyard has a central landscaped area as well as perimeter landscaping. Overlooking the courtyard are dorm rooms that have small protected lanais with concrete railings and sliding glass doors. At the first floor below the rooms are communal areas that link the courtyard to the interior hallways. The walls that separate the courtyard and the perimeter hallways are composed of open breezeblock that allows natural daylight and ventilation to pass through the spaces.

Narrative Statement of Significance

Hale Kuahine was constructed in 1962 and was designed by renowned architect I. M. Pei and the East-West Associates, of which Pei was a member. The East-West Associates was a joint venture of architects McAuliffe, Young, & Associates, I. M. Pei and Associates and Young and Henderson. The

name of the building refers to “sister of a male,” which is the definition of “Kuahine” (Kobayashi 1983: 127). The dormitory was originally designed as an all female dormitory and was the sister to the all male dormitory, Hale Mānoa. Hale Kuahine was built as a residence hall for the East-West Center participants and remains so today (Kobayashi 1983: 127).

Criterion C: Significance for Architectural Design

Hale Kuahine is designed in the International Style of the Modern Movement and is one of several buildings that first made up the East-West Center. Its style and design complements the other East-West Center buildings through its use of steel, concrete and glass materials signifying a collection of buildings. Since its construction, two other dormitories of similar design were completed in close proximity. The design of this building along



Fig 5.175: Hale Kuahine, 2007



Fig 5.176: Hale Kuahine Southern Façade, 2007



Fig 5.177: Hale Kuahine Northern Façade, 2007

with the other initial East-West Center buildings were undertaken by internationally known architect I. M. Pei (Kobayashi 1983: 126). The building features a courtyard that permits natural daylighting and ventilation into the dorms from both the exterior and interior of the building. The building makes use of breezeblock to further enhance the passive ventilation strategy. Another design element that is characteristic of Hawai'i is the use of protected lanai that overlook the interior courtyard. The courtyard itself is a partially landscaped space that is an extension of the interior gathering spaces used by the student residents. Overall, the courtyard provides a strong relationship between the interior and exterior that takes advantage of Hawai'i's pleasant climate.

Narrative Statement of Integrity

Hale Kuahine is intact to its original design, materials, workmanship, and setting. The association and feeling can be easily interpreted due to the minimal changes to the historic context.

5.20 EAST-WEST BUILDING COMPLEX

5.20.9 JOHN A. BURNS HALL

John A. Burns Hall is significant under Criterion C for its architectural design in the International Style of the Modern Movement, by the design architect, John Hara (Kobayashi 1983: 126). It is also significant as one of a collection of buildings that make up the East-West Center.

Narrative Description of the Building

John A. Burns Hall is a four-story reinforced concrete structure built in the International Style of the Modern Movement. The building is part of the East-West Center and is located on the eastern end of campus, on the corner of Dole Street and East-West Road. The building is composed of two long rectangular volumes that are placed adjacent to one another but are offset so they form a connection at their ends. This layout creates a jogged rectangular plan with the longest façade facing East-West Road. This west-facing façade features the main entrance

to the building. Within the building, the circulation is organized by a central vertical core and racetrack corridors. Additional fire exit stairs exist in the northeast and southwest corners of the building.

The main entry is centered on the northern volume of the west façade. The south volume is set back the entire width of the north volume creating a jog in the floor plan. The entry is significantly recessed, approximately 100-feet, within the building creating a large protected gathering space. Leading up to the entrance are low, plaza-like steps that extend the length of the opening as well as an accessible ramp. The entry consists of three pairs of wood-framed glass doors facing west as well as two pairs of matching doors facing north. Surrounding the entry alcove, the first-floor façade is recessed allowing for a walkway within a concrete column arcade that wraps the perimeter of most of the building. On the west façade, this arcade consists



Fig 5.178: Burns Hall, 2007

Fig 5.179: Burns Hall as seen from East-West Road, 2007



of seven bays in the north volume and five bays in the south volume. The upper floors consist of a repeating pattern of windows alternating with a horizontal concrete band. The window pattern consists of three recessed windows per bay, each delineated by the concrete structure surrounding them. A slender concrete horizontal element divides each of the window arrangements into a narrow horizontal window at the bottom with a combination of a fixed and operable window above. Above the fourth floor band of windows is a concrete parapet that matches the horizontal bands below. The southern volume repeats this aesthetic but with only two windows per bay.

The north façade matches the west façade's design aesthetic but on a much narrower façade. Both the

east and west rectangular volumes are three bays wide with a combination of two and three windows per bay. This façade also has a set of double doors within the west volume. The east façade mirrors the west façade with the exception of the first floor. Instead of a recessed walkway, the window pattern above repeats itself on this level as well. The south façade mirrors the north façade. Interior finish materials appear to be original and are made of koa veneer wood paneling.

5.20 EAST-WEST BUILDING COMPLEX

5.20.9 JOHN A. BURNS HALL

Narrative Statement of Significance

Burns Hall was added to the East-West Center collection of buildings in 1977. The design architect John Hara created a building that integrated design elements of the other East-West Center buildings to continue the architectural consistency and cohesion of the East-West Center campus (Kamins 1998: 77). The building was designed to operate as the Administrative headquarters for the East-West Center, a function it continues to serve today (Kamins 1998: 79). The name of the Hall is in honor of John A. Burns, the second State governor. The Governor was significant to the development of both the East-West Center and the University. He played a key role in locating the East-West Center in Honolulu and was a strong advocate and supporter of advancing the University into a major institution of higher learning and research (Kobayashi 1983: 126).



Fig 5.180: Burns Hall western façade, 2007

Criterion C: Significance for Architectural Design

Burns Hall is designed in the Modern Style and is one of the buildings that make up the East-West Center. Its style and design complements the other East-West Center buildings through its use of concrete and glass materials signifying a collection of buildings. For instance, the windows were designed to directly match the visual appearance of those of Lincoln Hall (Kobayashi 1983: 126). The façades consist of thick concrete bands that wrap the building alternating with glazed openings supported by the slender concrete structure. Like the other East-West Center buildings, this building exhibits a balance of solid and void and lightness of structure.

Narrative Statement of Integrity

Burns Hall is the final piece in the composition for the East-West Center, although it is substantially later than the other buildings. Compositionally it is similar to the other Pei buildings as a combination of solids and voids. It contributes to the overall scale and harmony of the campus buildings and although not “exceptional” in terms of National Register significance should be considered an integral part of the East-West Center campus.



Fig 5.181: View of Diamond Head from Hale Mānoa, 2007

NARRATIVE STATEMENT OF COMPLEX INTEGRITY

The integrity of the setting of the East-West Center is remarkably intact. The location of the buildings and gardens at the edge of the campus allows them to feel detached yet be part of the campus at the same time. The individual landscape areas have been modified by slight changes in materials but the essential feelings of the historic elements can be understood. Banyan Grove is intact to the original design. Additional elements have been added to the Grove since its original planting but those elements that are non contributory are reversible.

The buildings designed by I.M. Pei are intact on the exterior and modified on the interior. The essential

organizing elements of the plan and the open and closed voids of light and shadow clearly remain for all the buildings. The essential design elements can be easily understood and the ingenuity of the structural systems particularly for Jefferson Hall and Kennedy Theatre are easily interpretable.

CHAPTER 6

CONFLICTS WITH THE LRDP

6.1 INTRODUCTION

This section addresses the conflicts evident between the Long Range Development Plan (LRDP) and the Campus Heritage Report (CHR).

The purpose of this section is to state the problem and identify the conflicts occurring between the LRDP and CHR. There are a number of development and improvement plans proposed in the LRDP that would either disrupt or completely remove historically significant buildings and/or landscapes. A conflict is something, through its implementation, that negatively impacts the integrity of a historical feature. Measures to preserve the historic heritage of the University of Hawai'i at Mānoa campus should be incorporated into the planning for the campus. This report is the first step in that process.

The University of Hawai'i at Mānoa campus is a unique campus with historic buildings and landscapes as well as a broad botanic collection.

The botanic collection of the Mānoa campus consists of exceptional and memorial trees along with numerous plantings by noted tropical botanist Joseph Rock. In an effort to preserve these historically significant features of the Mānoa campus the CHR has established a record of these elements identified in previous chapters. This section clarifies areas of immediate concern and provides specific considerations that should be incorporated into the planning for the campus.

LRDP History

The Long Range Development Plan is a comprehensive plan intended to provide an organizing vision for the campus and to guide subsequent development. The importance of a plan began in 1917 as stated in the President's Report that, "In order to properly develop these plantings we have prepared a permanent plan for placing the



6 CONFLICTS WITH THE LRDP

6.1 INTRODUCTION

buildings and drives so that no valuable plants need to be planted in situations which will later be needed for other purposes (Chock 1963: 92). In 1987 the UH Mānoa Campus LRDP was commissioned to address and correct the deficiencies that were apparent after decades of unplanned growth. Prior to this the campus had been developing without the benefit of a specific development plan. In 1966 a plan was created by John Carl Warnecke and Associates and approved in concept by the University's Board of Regents but was not completed and formally adopted (LRDP Committee 2007: 1).

The 1987 LRDP proposed a setting much like a successful small town. The intention was to increase landscaped areas and remove vehicle traffic to the periphery of campus. In place of roads and parking were a series of gateways, malls, paths, and plazas as the main organizing theme for the campus. An additional 3,000 parking spaces and approximately

three million square feet of new construction were included in this plan. Buildings were to adhere to new design criteria establishing height, bulk, density, and character. The plan anticipated that regular intervals of updating would be needed to adequately respond to the variety of future changes. Five to six year intervals were established to accommodate changes in academic priorities, Capital Improvement Program (CIP) priorities, enrollment, environmental issues, funding, changes in the campus caused by the construction of new buildings, and other factors influencing the campus' development (LRDP Committee 2007: 1-2).

In 1994 the first revision to the original 1987 campus plan was completed. The 1994 Update provided refinement to the original plan and helped ensure functional and aesthetically appropriate buildings on campus. The following building projects were completed or started since the adoption of the 1994



Fig 6.1: Hawai'i Hall, 2008

campus plan and the completion of the 2007 update (LRDP Committee 2007: 2-3):

- Agricultural Science Facilities, Phase III
- Hamilton Library, Phase III
- Hawai'i Hall Renovations
- Dole Street Parking Structure
- Hamilton Library Renovations to Phases I and II
- Webster Hall Renovations
- Spalding Hall Renovations
- Dean Hall Renovations
- Gartley Hall Renovations
- HIG Buildings Renovations
- Crawford Hall Renovations
- Center for Hawaiian Studies
- Holmes Hall Renovation
- Frear Hall
- Environmental Protection Facility
- Biogenesis Research Laboratory
- Center for Student Services
- George Hall Renovation
- Pacific Ocean Science And Technology Building
- Paradise Palms Café
- Softball Stadium
- Tennis Court Renovation
- Stan Sheriff Center
- Parking Structure 11A
- Architecture Building
- Makai Substation
- Wist Hall Annex Renovation
- Frear Hall – Replacement dormitory

In 2007 an update to the 1994 LRDP was finally completed. For 13 years there was no updating at the intervals established in the 1987 UHM LRDP. The 2007 LRDP continued the planning principles

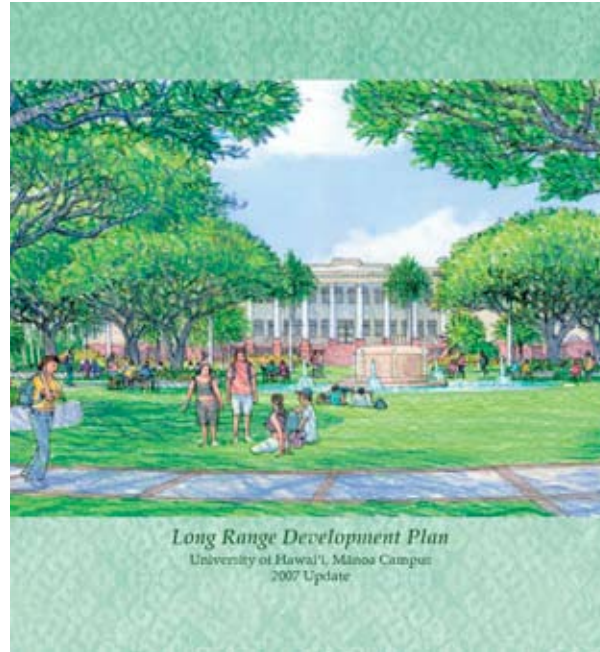


Fig 6.2: UHM LRDP Cover Image, 2007

established in the 1987 UHM LRDP and added two additional planning considerations. First, the 2007 Update created two categories of projects: those anticipated for development in the next 5-10 years; and projects anticipated for development beyond the 5-10 year period. Second, the Update incorporated four new 'Major Themes' based on consultation with administrators, faculty members, community representatives, and students. These themes were: Globally connected Hawaiian place of learning, leadership, and service; Livable urban campus; Outdoor spaces for living and learning; and UHM – Leader in environmental sustainability (LRDP Committee 2007: 5-6).

6.2 LRDP GOALS AND OBJECTIVES

6.2.1 LRDP MAJOR THEMES

The following goals and objectives of the 2007 LRDP are contrasted to the CHR to identify parallels and variants. Buildings and Landscapes are addressed separately within both plans although the connection between the building and landscape is a critical planning consideration and must be designed wholistically.

6.2.1. LRDP MAJOR THEMES

Globally Connected Hawaiian Place of Learning, Leadership, and Service

This theme recognizes both the heritage of the Hawaiian culture and international cultures interconnecting at the Mānoa campus. The wide variety of plant species, designed landscapes and historic buildings all reflect the campuses wide variety of cultural influences. This theme focuses on strengthening the Hawaiian host culture along with maintaining and expanding the international influences on campus.

To strengthen the Hawaiian culture the plan proposes reconnecting the campus with the Ahupuaʻa land unit. The Ahupuaʻa land unit is the Hawaiian geographic boundary, which designates an area of land extending from the mountains (mauka) to the reef of the ocean (Makai) usually bounded by ridges on either side. The Mānoa campus, which covers 304 acres, is a significant part of the Ahupuaʻa of Waikīkī. Due to this significance the campus has a major responsibility to preserve and enhance the natural systems of the Ahupuaʻa (LRDP Committee 2007: 7-8).

To preserve the natural systems of the Ahupuaʻa and simultaneously become a major urban center, the Mānoa campus is envisioned to be a major

ecological contributor. This vision includes using permeable surfaces to allow ground water to continue its natural flow, well-landscaped areas, and green roofs. The Mānoa campus is envisioned to become a leader of sustainable practices (LRDP Committee 2007: 8-9).

The Hawaiian sense of place is not just the physical attributes of the geography and landscape it is the actions and programs, as well. Oceanography, earth sciences, and astronomy are some of the programs that give the Mānoa campus its deeper meaning of place. The Mānoa campus must continue to evoke experiences, memories, and images sufficient to impart a special meaning to its residents and neighbors (LRDP Committee 2007: 9-10).

Livable Urban Campus

The primary goal of this theme is to create a livable campus, which is a departure from the 1994 LRDP. The Mānoa campus previously was viewed as a commuter campus. Due to student, parent, and faculty demand the LRDP is taking the initiative to increase campus residences. To do this the LRDP suggests more housing for students and faculty both on and adjacent to campus. In addition to more housing, the LRDP envisions creating an improved quality of life for faculty, students, researchers, staff, and visitors.

This lifestyle revolves around the idea of a “24 hour live, learn, work and play” environment. This includes venues for cultural, social and artistic interaction, dining in multiple locations, places for fitness and wellness, and other day-to-day living activities available on or within walking distance of the campus. The theme envisions the campus as a mini-city.



Fig 6.3: Krauss Hall Pond Garden, 2008

Outdoor Spaces for Living and Learning

The theme is exactly as the title implies, creating outdoor spaces for living and learning. The goal is to develop the unused transition spaces between buildings to encourage functional use. Functional use could be shaded walkways, gathering spaces, or visual/environmental characteristics. This theme is primarily addressed in the LRDP through a system of gateways, malls, paths, plazas, and courtyards. The vision is to create more usable space during the day and night that promotes a safe life-filled campus. Buildings that allow for shaded walks such as the Art Building strengthen this idea (LRDP Committee 2007: 7-8).

UHM – Leader in Environmental Sustainability

It is envisioned that the campus will take major strides to become a leader in local and global environmental sustainability. The campus should reflect the research being done by students and faculty, and therefore become a laboratory itself to model and lead in sustainability practices. Aspects of sustainability will be based on the Leader in Energy and Environmental Design (LEED) assessment system. The LRDP's goal is to address water use, manage storm water run-off, and reduce energy use. Permeable surfaces should cover 60 percent of the campus and the tree canopy 30 percent. With the implementation of renewable energies the future goal of the buildings is to be "zero-carbon" buildings (LRDP Committee 2007: 6, 13-14).

6.2 LRDP GOALS AND OBJECTIVES

6.2.2 CAMPUS BUILDING BLOCKS

The following building blocks are the systems and methods that the LRDP uses to implement the major themes envisioned for the campus. The building blocks are mostly prototypical, recommending various ways of appropriately developing a theme. The combined use of the building blocks across the whole of the campus is intended to implement the campus vision.

Arrival Areas

Arrival areas create a space where people can transition into the campus environment. The LRDP concept for the Mānoa campus is to give priority to pedestrian circulation. This means providing arrival areas that allow people to transition to foot traffic from alternate means of transportation such as vehicular, moped, bicycle, and mass transit. To effectively transition people, arrival areas need to be strategically located around campus to provide access to buildings within an acceptable walking distance. The integration of parking structures into peripheral buildings is encouraged. The priority to pedestrians includes removing vehicular traffic from the interior of the campus. The removal of roads increases pedestrian activities and the need for arrival areas (LRDP Committee 2007: 15).

Gateways

This building block is the first means for improving the sense of place on arrival at the campus. The existing campus has indistinguishable access points and boundaries. To clarify the access points and boundaries of the Mānoa campus the LRDP envisions two types of gateways: pedestrian and vehicular. Vehicular gateways are envisioned for primary roadways into the campus. They are to

be manned and controlled but portray a welcoming sense rather than security oriented gateways. Pedestrian gateways are to be meeting and gathering areas with benches, shade trees, and proper night lighting. Buildings that are part of gateways become part of the gateway expression (LRDP Committee 2007: 16).

Malls and Paths

Malls and paths address the deficient system of walkways around campus. They are to allow for day and night travel for pedestrians, including persons with disabilities. Malls and pathways are to have their own characteristics. Each must be adequately lighted including security call stations. Hedges along paths are to be minimized for security and maintenance. Proper landscaping and shaded places for walking, sitting, and gathering are to be incorporated into the malls and paths. Appropriate signage must be provided and surfaces should be permeable where possible (LRDP Committee 2007: 17).

All malls and paths need to be accessible for persons with disabilities. This means providing the proper ramping and space at entrances and walkways. Entrances to buildings need to comply with this objective.

Plazas and Courtyards

Plazas are intended to revitalize the community life on campus. Instead of paths leading from building to building they should lead to large open gathering places. The plazas should be furnished with seating, lighting and tables as appropriate. Plazas should provide for planned emergency access. Plazas

need to be able to accommodate gatherings such as craft fairs, concerts, public meetings, and daily gatherings. Varney plaza and the Quadrangle are suggested as prime candidates for development (LRDP Committee 2007: 18)

Buildings

Buildings are to contribute to the campus as a unified whole. Any new buildings or additions to existing facilities are based on internal or external needs. Although all the buildings do not stylistically match, dialogue between buildings should be created. All structures new and existing must meet a Silver certification in LEED. Buildings are to be models of sustainable design (LRDP Committee 2007: 19).

Landscape

The landscaping is to function as the unifying element all the aspects of the campus together: buildings, paths, and parking. The principal goal of the Landscape Plan is to provide guidelines for the knitting together of the campus into a unified whole, which enhances the various sub-areas of the campus.

The primary difference between the 2007 LRDP and CHR is their differing purpose and methods of



Fig 6.4: Quadrangle Landscape, 2008

6.2 LRDP GOALS AND OBJECTIVES

6.2.3 LRDP AND UHM CAMPUS HERITAGE REPORT COMPARISON

conveying that purpose. While both the LRDP and CHR acknowledge the landscape as an important and unique characteristic of the Mānoa campus, the LRDP proposes a plan for future campus development while the CHR documents the historic buildings and landscapes so they may be preserved. The LRDP further suggests altering the present state of the campus while the CHR suggests guidelines for preserving the historic integrity of Mānoa Campus through proper maintenance.

The LRDP and CHR share, to an extent, parallel views regarding the importance of maintaining and strengthening the campus' historic integrity. The major theme of the LRDP, 'Globally Connected Hawaiian Place of Learning, Leadership, and Service,' emphasizes the importance of the campus' historic integrity, and thus is the only theme that aligns with the CHR. Part of the vision for this theme highlights the important places of international

connection on campus, such as the as the East-West Center, Thai Pavilion, Japanese Garden, and presence of over 600 species of plants.

Beyond this theme and the general policy regarding the preservation of the tree canopy and diversity of plant species, the majority of the LRDP does not address the historic features of the campus in specific detail. The LRDP does not specifically convey the significance of historic features, such as the materiality of historic buildings, the species, color, scale, form, or texture of exceptional vegetation, and the slope, shape, and elevation of the topography. Furthermore, the plan does not identify nor document in detail the significance of existing historic features, the relationship of those features to the overall organization of the campus, and how accessibility, environmental concerns and proposed developments will alter the historic integrity of the site.

Although the LRDP and CHR both suggest general guidelines for improvement, the LRDP is not specific to the protection of heritage buildings and landscapes through proper preservation and maintenance, as presented in the CHR. As such, the LRDP proposes development guidelines that conflict substantially with the historically recognized features of the campus. Parallels between the LRDP and CHR occur only where historic aspects of the campus are specifically identified and documented.



Fig 6.5: Bachman Hall Courtyard, 2008



Fig 6.6: LRDP Campus Map, 2007

6.2 LRDP GOALS AND OBJECTIVES

6.2.4 LRDP AND UHM CAMPUS HERITAGE REPORT CONFLICTS

Three of the four LRDP major themes implicate potentially devastating concepts to the heritage of the campus. The theme 'Livable Urban Campus' proposes significant structural growth that without proper measures would eliminate historic buildings from campus. To create a campus with more density and simultaneously increase the landscaping means buildings have to provide more square footage per foundational footprint. The only way to do this would be to replace existing buildings with larger ones or expand on existing buildings. There are no guidelines in the LRDP for additions to historic buildings in order to maintain the integrity. Some historic buildings could lose their integrity by simply disrupting the setting around the building. Increasing campus density would inevitably place new buildings in close proximity with historic buildings or substantially increase density, which changes the setting.

The theme 'Outdoor Spaces for Living and Learning' affects historic buildings and landscapes. The intention is to create an extension of the classroom into the environment. While this is a laudable theme, historic elements could be destroyed if not identified and protected. Unfortunately without identifying these elements and following appropriate guidelines to preserve their qualities, the campus historic features might be lost. Therefore, developing outdoor spaces for living and learning that are part of a building or set into an existing landscape has a high potential of altering a historic context. This theme requires careful implementation to protect the historic character of campus.

The theme 'UHM – Leader in Environmental Sustainability' affects the historical aspect of the campus just like the other themes; but specifically, it has a potentially damaging effect on historic buildings. The implementation of sustainable



Fig 6.7: Krauss Hall Complex, 2008

practices and materials to a historic building could mean significant renovations, especially to achieve Silver LEED certification. The LRDP proposes the use of renewable energy sources such as wind turbines and photovoltaic cells. The plan even suggested the use of green roofs on several historic buildings. All of these propositions, though well intentioned, have serious concerns for the historic buildings on campus. Proper guidelines need to be followed to insure that the historic campus features are preserved throughout the development of the campus. The reuse of an existing building is a highly sustainable practice and the appropriate use of historic structures can significantly support this overall theme. Respect for the historic buildings and landscapes must be integrated with the sustainability goals.

The campus building blocks described in the LRDP are the methods for implementing the campus themes. In many areas the detail was not significant to fully evaluate the impacts. Although not identified as replaced, buildings were “missing” in the plan. This indicates that planning has not proceeded to the point of “no return” and the heritage component should be an essential part of the long range planning. None of these concepts are necessarily a departure from the views of the CHR, but they do represent opportunities for negatively impacting historic features. The information presented by the CHR should be incorporated into the LRDP and all future planning decisions.



Fig 6.8 Banyan Grove, 2008

6.3 PROJECTS IN CONFLICT AND RECOMMENDATIONS

MAP 6A: CAMPUS AERIAL IMAGE



MAP 6B: CAMPUS BUILDING CONFLICT DIAGRAM



6.3 PROJECTS IN CONFLICT AND RECOMMENDATIONS

6.3.1 COLLEGE OF EDUCATION COMPLEX



Determination of Significance:

Criterion A: Significance for Events

Comprised the original Teachers College, or University Lab School (ULS), which helped shape early childhood education in Hawai'i.

Determination of Integrity:

- Location: Intact
- Design: Most historic forms intact.
- Setting: Different setting because of new buildings.
- Materials: Intact, some modifications.
- Workmanship: Intact
- Feeling: Intact
- Association: Intact



LRDP Design Criteria

The LRDP proposes to completely replace the University High School (UHS) buildings 1 & 2 with new instruction buildings and a two level parking structure. There are several design criteria, which state that the new buildings will be organized around quadrangles and courts. The entire educational complex consisting of approximately 15 acres will be connected by a system of pedestrian streets. Parking facilities will be removed from the center of the site and accommodated by a new parking structure at the northwest end of the complex. New buildings are not intended to exceed three stories in height.

Conflicts

The intended vision of the LRDP would eliminate these two historic buildings, thus impacting all of their historic significance and integrity and neighboring historic buildings. The scale of the new buildings does not respect the existing width dimensions of the historic buildings or plan proportions. Consequently the feeling of the historic context of the neighboring historic buildings will be substantially impacted. Recognition of the scale of the historic structures would enhance the design of the new structures to provide for an integrated whole.

6.3 PROJECTS IN CONFLICT AND RECOMMENDATIONS

6.3.2 ENGINEERING COMPLEX



Determination of Significance

Criterion A: Significance for Events

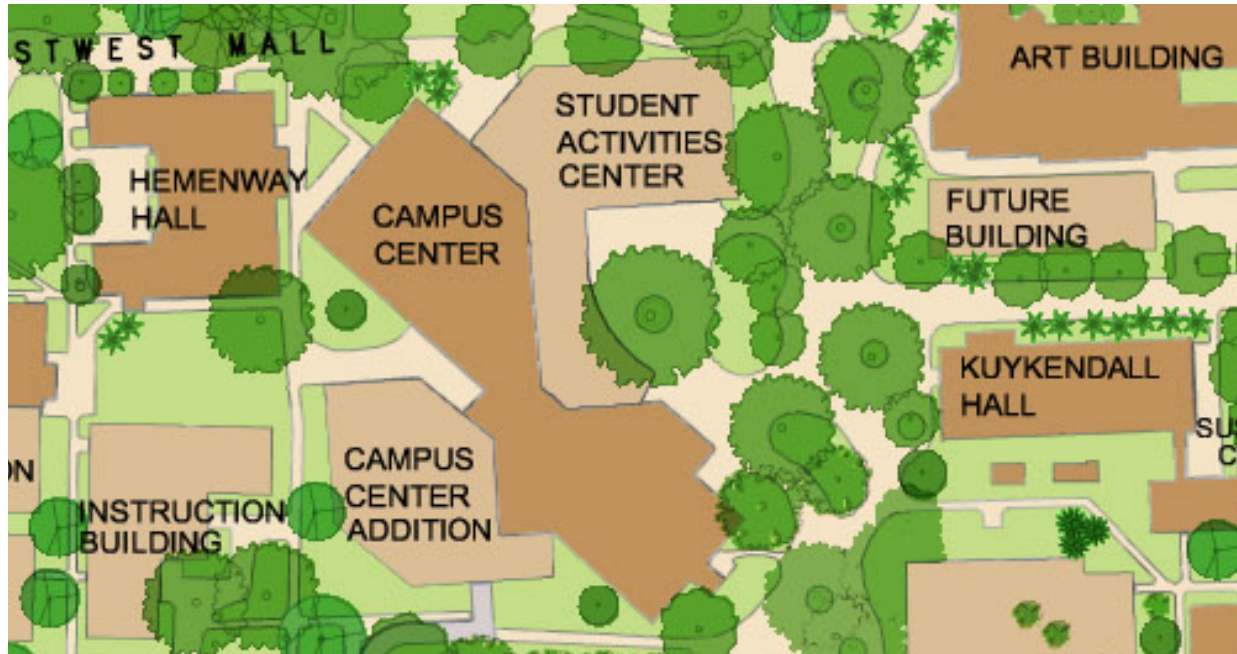
The Engineering Quad contains some of the oldest buildings of the University that reinforce the permanence of the school. The buildings were used during World War I. Material testing in several buildings was noteworthy.

Criterion C: Significance for Architectural Design

Designed by architect, Dr. Arthur Keller, a university professor, the Engineering Quad is a collection of buildings in the Neo-Classical Style.

Determination of Integrity

- Location: Intact
- Design: Minor change due to window air conditioners.
- Setting: Minor change due to demolition of a Laboratory building.
- Materials: Intact
- Workmanship: Intact
- Feeling: Intact
- Association: Intact



LRDP Design Criteria

The LRDP proposes to completely replace all of the Engineering Quad buildings with an expansion of the Campus Center. The expansion is to include a large urban-style paved plaza. Landscaping features are not to obstruct pedestrian movement. Vehicular access from Correa road is to be restricted to service and maintenance vehicles. Hard surfaces should have a permeable pavement of brick or tile pavers. A variety of seating configurations under medium-size canopy trees are to be provided. The plaza should have night lighting, trash/recycling receptacles, and directional signage.

Conflicts

The intended vision of the LRDP would completely eliminate the Engineering Quad, thus impacting all of its historic significance and integrity. The new uses and proportions reinforce the large intrusive quality of the campus center without respecting the scale and landscape of the existing historic structures. These structures are noted as one of the 11 most endangered sites by Honolulu magazine (November 2008) and appropriately reflect the change of the campus overtime.

6.3 PROJECTS IN CONFLICT AND RECOMMENDATIONS

6.3.3 HENKE HALL



Determination of Significance

Criterion A: Significance for Events

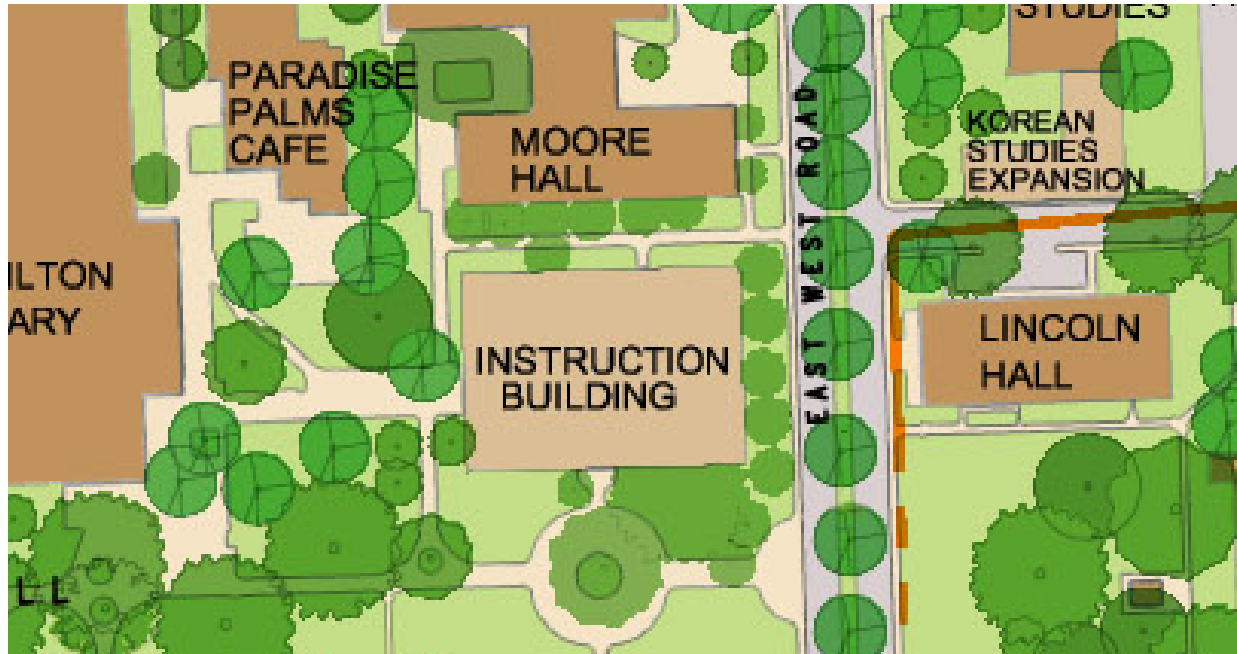
The site is the location of various research events that led to the development of agricultural sciences and the commercial agricultural economy in Hawai'i.

Criterion C: Significance for Architectural Design

Henke Hall is the only example of commercial work by its design architect Theodore A. Vierra, who later became the in-house Architect for Hawai'i Sugar Planters Association.

Determination of Integrity

- Location: Intact
- Design: Intact but impacted by additions and mechanical equipment.
- Setting: Impacted by the much larger and adjacent Moore Hall and development.
- Materials: Impacted by various changes.
- Workmanship: Obscured by additions.
- Feeling: Changed due to development of agricultural fields.
- Association: Original context hard to interpret.



LRDP Design Criteria

A new building is to be located on the site of the existing Henke Hall. It is to be designed as a distinctive structure defining the mauka boundary of the East-West Gateway. The building's height should not exceed seven floors. The building should line up and create connections with Hamilton Library and Moore Hall.

Conflicts

The intended vision of the LRDP would eliminate Henke Hall, thus impacting all of its historic significance and integrity. No recognition of the existing contribution of the low-rise scale of the historic structure has been recognized. The new building does not evoke any significance as the founding location of agricultural sciences. Significant landscape resources would also be removed by the new building. Affected vegetation includes two Gold trees (ID#251), the David Quinn Memorial and a "tree of note" at the eastern end of McCarthy Mall.

6.3 PROJECTS IN CONFLICT AND RECOMMENDATIONS

6.3.4 BILGER HALL



Determination of Significance

Criterion A: Significance for Events

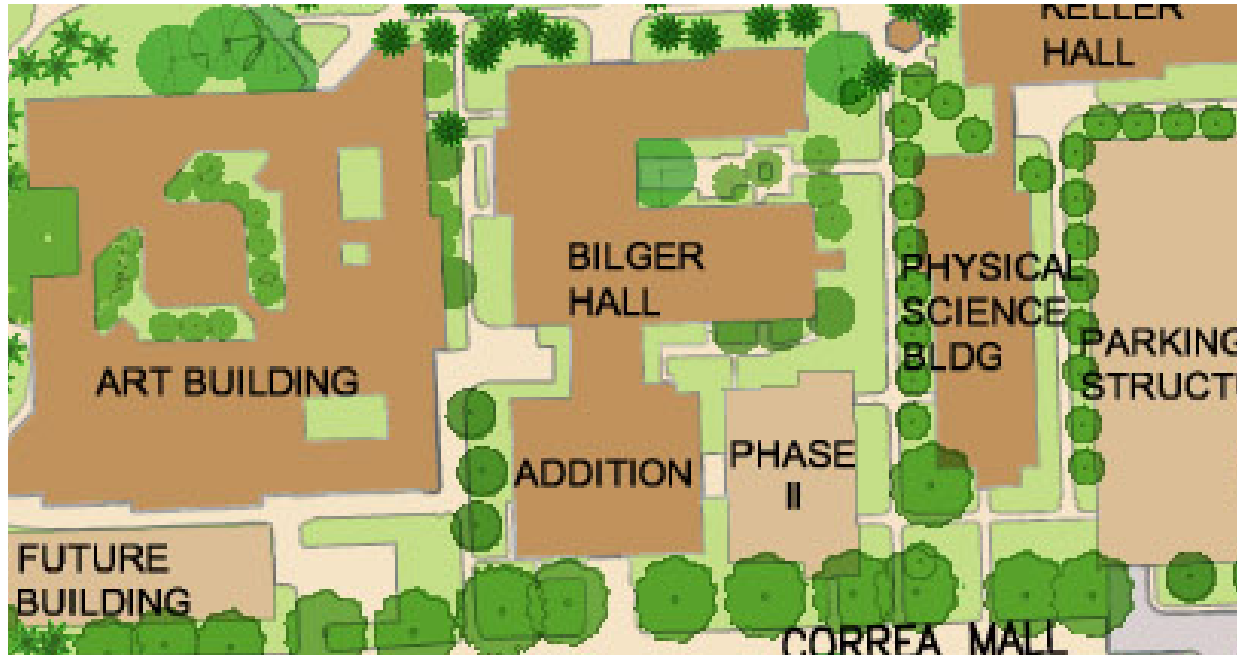
Bilger Hall is the site of pioneering research and development of marine natural products and chemistry.

Criterion C: Significance for Architectural Design

Bilger Hall is designed in the International Style as adapted to the Hawaiian climate by its design architect, Mark Potter. Juliette May Fraser also designed two frescoes with the building.

Determination of Integrity

- Location: Intact
- Design: Minor changes due to additions.
- Setting: Intact
- Materials: Intact
- Workmanship: Intact
- Feeling: Intact
- Association: Intact



LRDP Design Criteria

The proposed Information Technology Services (I.T.S) addition to Bilger Hall replaces two temporary portable buildings and parking lot, between Bilger Hall and the Physical Science Building. The design is proposed to provide approximately 70,000 square feet divided into data/telecommunications infrastructure and office space with a footprint of 10,300 square feet. The addition is to be seven stories in height with a basement. The addition is to maintain the setback currently kept between the Physical Science Building and Bilger Hall. Canopy trees are to be the dominating feature along the Makai side of the building.

Conflicts

Increasing the density in the surrounding area of a historic building impacts the feeling and association of its integrity. Although one addition is a seemingly mild change to the setting of a historic building, future additions can begin to add up to a significant change in the setting. The addition impacts the appearance of Bilger Hall and when the later Phase II is implemented a significant scale change to the area will be realized. Landscaping should reinforce existing themes in the area.

6.3 PROJECTS IN CONFLICT AND RECOMMENDATIONS

6.3.5 KENNEDY THEATRE



Determination of Significance

Criterion B: Significance for Person

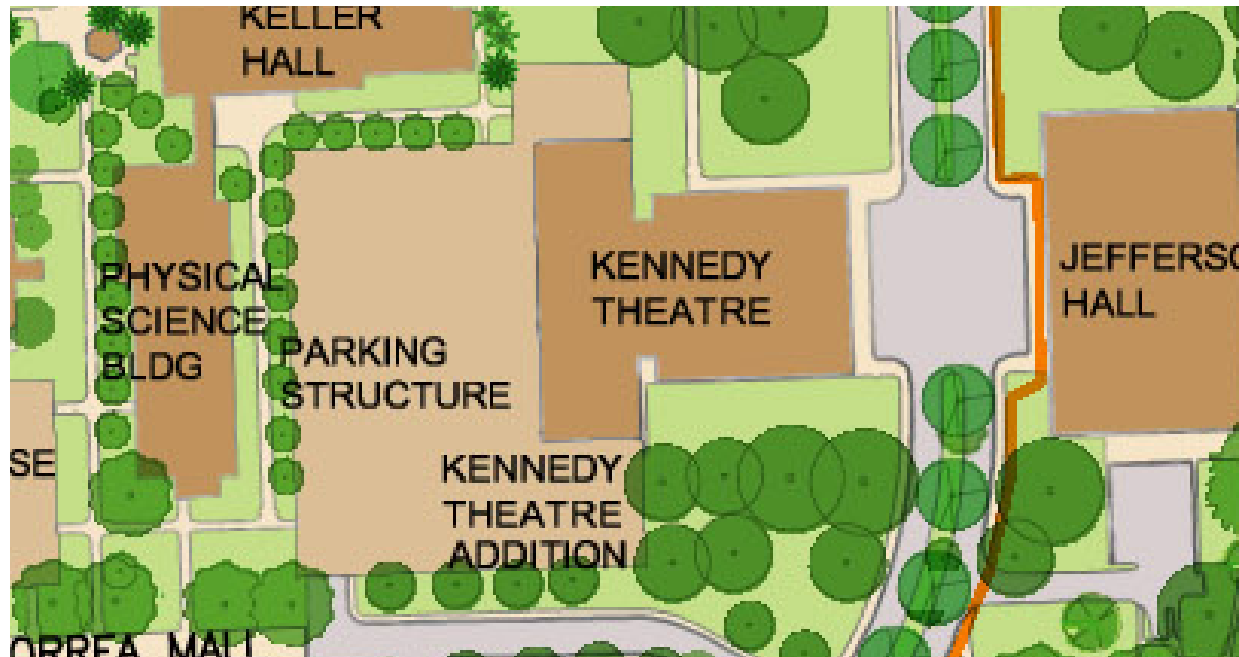
Kennedy Theatre is the location where famous actress and singer Bette Midler studied and performed.

Criterion C: Significance for Architectural Design

Kennedy Theatre is designed in the International Style of the Modern Movement by internationally known architect I. M. Pei in collaboration with local architects McAuliffe, Young and Associates.

Determination of Integrity

- Location: Intact
- Design: Intact
- Setting: Intact
- Materials: Intact
- Workmanship: Intact
- Feeling: Intact
- Association: Intact



LRDP Design Criteria

A substantial addition to Kennedy Theatre would include additional studio, rehearsal, classroom, shops, performance, and theatre spaces. The proposed addition will be three stories and five stories. The design is to relate to the architecture of the theatre with every attempt to minimize the impact of the addition on the building. A grand entry stair is to be introduced on the Mauka side giving importance to McCarthy Mall. Careful consideration should be taken to preserve the existing banyan trees. A new six-story 480 car parking structure is proposed to replace the existing parking lot at the back of the theatre. The addition should be designed to be split-level to take advantage of the 10-foot difference in slope across the site. Open areas are to be landscaped with trees.

Conflicts

The proposed addition and parking structure to Kennedy Theatre is a large increase in building density to the setting and will change the overall scale of the building. The addition is directly connected to the theatre, which significantly changes the design integrity and massing of the building. The new additional steps, and parking structure have the potential to make the Kennedy Theatre appear as a complex apart from the East-West Center instead of a balancing anchor to Jefferson Hall. The surrounding historic buildings and landscapes settings are altered by the additions unless carefully sited and detailed. Surrounding historic structures would be impacted by the change in setting. Construction will affect the outstanding grove of Banyan trees.

6.3 PROJECTS IN CONFLICT AND RECOMMENDATIONS

6.3.6 MUSIC COMPLEX



Determination of Significance

Criterion A: Significance for Events

The Music Building Complex is the site of the pioneering music course “Pacific and Asian Music in Education” and of the first Hawaiian Chorus.

Criterion C: Significance for Architectural Design

The Music Building Complex is designed in the International Style and implements an innovative structural system. The Auditorium features a Baroque pipe organ by Schlicker and a mural by Edward Brownlee. The design architect is Haydn H. Phillip, AIA and acoustical consultant Iwao Miyake, a University physics professor.

Determination of Integrity

- Location: Intact
- Design: Intact
- Setting: Altered due to demolition of the original band building & additions.
- Materials: Intact
- Workmanship: Intact
- Feeling: Intact
- Association: Intact



LRDP Design Criteria

A new building is to be located to the north of the Music Complex replacing the Music Building, Music Practice Building, Choral Rehearsal Building, and Mae Zenke Orvis Auditorium. There is no specific design criterion for the new building other than the general guidelines for the campus development. The proposed replacement in the LRDP plan view does not appear to be of similar proportions to the existing music buildings. The replacement building is “U” shaped in plan and opens to the existing open-air amphitheatre making it more rectangular. The height of the new building cannot be interpreted from the LRDP map but could be assumed to be one to three stories based on existing height of the surrounding buildings.

Conflicts

The intended vision of the LRDP would eliminate four of the historic buildings on the north end of the Music Complex, thus impacting a majority of its historic significance and integrity. The replacement building does not maintain the scale of the existing building. The replacement building is one single structure as opposed to four individual structures creating a different feeling for the area. The replacement building does not maintain the frame of two separate courtyards but instead combines the remaining courtyard (amphitheatre) with a new courtyard resulting in one large space. The replacement building appears to change the excellent human scale of the existing facility.

6.3 PROJECTS IN CONFLICT AND RECOMMENDATIONS

6.3.7 GARTLEY HALL



Determination of Significance

Criterion A: Significance for Events

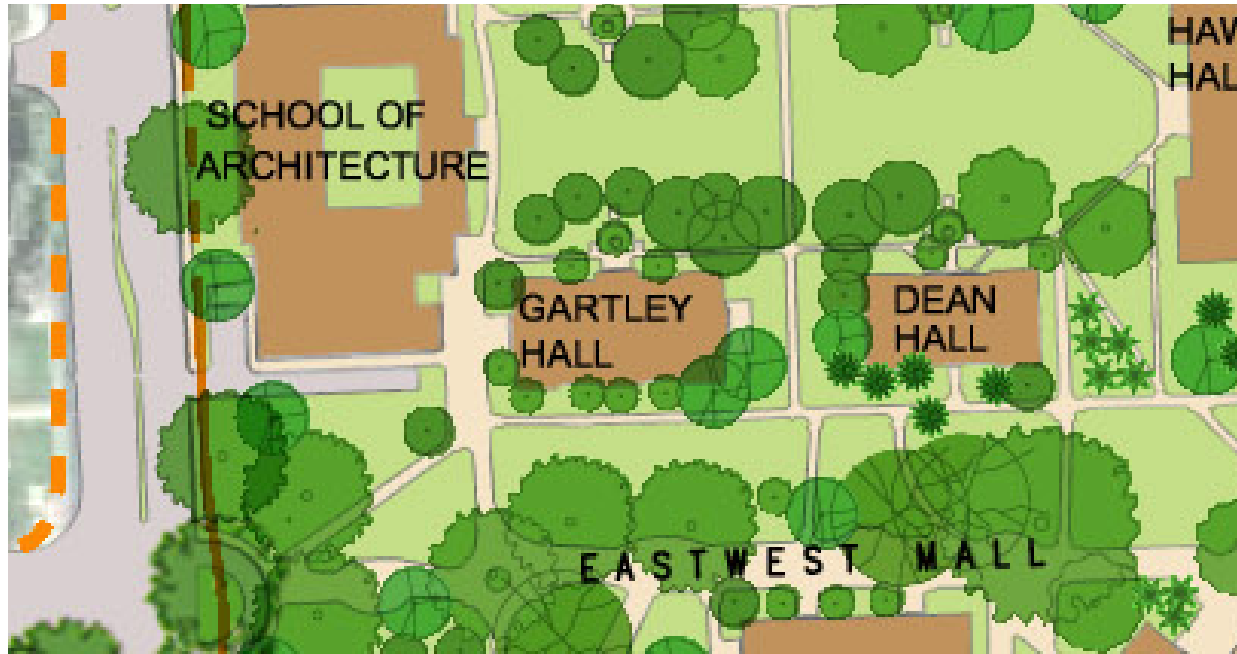
The funds appropriated for the Gartley Hall and construction were a milestone in the history of local support for the college.

Criterion C: Significance for Architectural Design

Gartley Hall was designed in the Neo-Classical Style, by its design architect, J.H. Craig. It is also significant as one of a collection of buildings that compose the University Quadrangle a significant historic space on campus

Determination of Integrity

- Location: Intact
- Design: Intact with the exception of added stairs and ramps for egress.
- Setting: Intact
- Materials: Intact
- Workmanship: Intact
- Feeling: Intact
- Association: Intact



LRDP Design Criteria

A green roof is to be installed on the roof of Gartley Hall. There is no specific design criterion for the green roof other than the general guidelines for sustainability briefly discussed in the LRDP. Presumably the green roof would have to be an extensive system with a soil depth consisting of no more than six inches. Access to the roof would only be for maintenance.

Conflicts

The weight of a green roof installed on Gartley Hall is a potential conflict. The existing building is not designed for a roof dead load weight of much more than it already supports. Structural damage from increased weight could diminish the historic integrity of materials and workmanship. Likewise, potential water damage could further impact building integrity by damaging the finish materials. A green roof does not relate to the existing feeling and association with the building or setting. A green roof significantly impacts the historic integrity of Gartley Hall. A green roof would impact the integrity of the Quad Buildings Complex and buildings, if visible from any taller buildings. Construction may affect the Herbert B. Weaver memorial (*Pink tacoma*, ID# 329) and row of Kukui Trees.

6.3 PROJECTS IN CONFLICT AND RECOMMENDATIONS

6.3.8 DEAN HALL



Determination of Significance

Criterion C: Significance for Architectural Design

Dean Hall was designed in the Neo-Classical Style, by its design architect, John Mason Young. It is also significant as one of a collection of buildings that compose the University Quadrangle.

Determination of Integrity

- Location: Intact
- Design: Intact with the exception of added stairs and ramps for egress.
- Setting: Intact
- Materials: Intact
- Workmanship: Intact
- Feeling: Intact
- Association: Intact



LRDP Design Criteria

A green roof is to be installed on the roof of Dean Hall. There is no specific design criterion for the green roof other than the general guidelines for sustainability briefly discussed in the LRDP. Presumably the green roof would have to be an extensive system with a soil depth consisting of no more than six inches. Access to the roof would only be for maintenance.

Conflicts

The weight of a green roof installed on Dean Hall is a potential conflict. The existing building is not designed for a roof dead load weight of much more than it already supports. Structural damage from increased weight could diminish the historic integrity of materials and workmanship. Likewise, potential water damage could further impact building integrity by damaging the finish materials. A green roof does not relate to the existing feeling and association with the building or setting. A green roof significantly impacts the historic integrity of Dean Hall. A green roof would impact the integrity of the Quad Buildings Complex and buildings, if visible from any taller buildings. Construction may affect the Herbert B. Weaver memorial (*Pink tacoma*, ID# 329) and row of Kukui Trees.

6.3 PROJECTS IN CONFLICT AND RECOMMENDATIONS

6.3.9 SINCLAIR LIBRARY



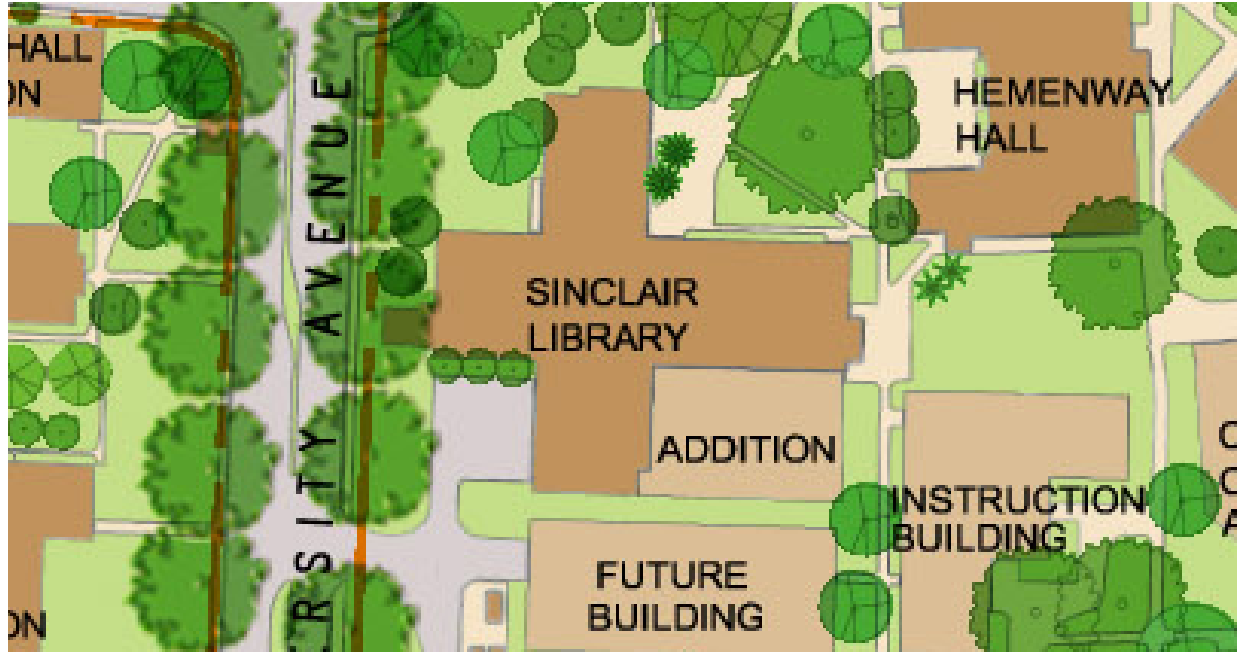
Determination of Significance

Criterion C: Significance for Architectural Design

The Sinclair Library is an adaptation of the International Style using local materials and design techniques to take advantage of natural ventilation and day lighting in the building. Designed by architect, Lemmon, Freeth & Haines (currently “Architects Hawaii”) the building was originally one of the largest library structures in the United States to function without air conditioning.

Determination of Integrity

- Location: Intact
- Design: Minor Changes to Interior layout.
- Setting: Intact
- Materials: Intact
- Workmanship: Intact
- Feeling: Intact
- Association: Intact



LRDP Design Criteria

An addition is to be added to the southeast corner of the Sinclair Library. There is no specific design criterion for the new building other than the general guidelines for the campus development. The proposed addition would fill in one of the corners of the distinctive cross shaped plan of the Library.

Conflicts

The proposed addition would significantly impact the Library's integrity of design workmanship, feeling, and association. The addition connects directly to the Sinclair Library covering a façade designed to provide open ventilation to the interior. This addition would remove one of the campus memorial trees located next to the building impacting the campus' Historic Botanic Collection and the setting of the surrounding buildings. The addition would block or remove a significant part of the original passive cooling design. The original workmanship and materials would be compromised by the addition. Affected vegetation includes the 50th Anniversary Sun Sapote tree (ID#105). Construction may affect the row of memorial monkey pod trees along Dole Street.

6.3 PROJECTS IN CONFLICT AND RECOMMENDATIONS

6.3.10 BACHMAN HALL LAWN



Determination of Significance

Criterion A: Significance for Events

Bachman Hall Lawn is the site of several important sit-ins at the University President's Office.

Criterion C: Significance for Architectural Design

Bachman Hall is designed by architect, Vladimir Ossipoff with Associated Architects in an adapted Hawaiian Modern Style. The building also contains artwork by muralist Jean Charlot.

Determination of Integrity

- Location: Intact
- Design: Minor changes to interior layout.
- Setting: Intact
- Materials: Minor changes to interior finishes.
- Workmanship: Intact
- Feeling: Intact
- Association: Intact



LRDP Design Criteria

An addition is to be added to the northeast corner of Bachman Hall. There is no specific design criterion for the new building other than the general guidelines for the campus development. The proposed addition would frame a courtyard by the “L” shaped plan attached to Bachman Hall. The height, materials, and design are not defined by the LRDP.

Conflicts

The proposed addition would impact Bachman Hall’s integrity of design, feeling, and association. The original workmanship and materials could be compromised by the addition unless specific design direction is given. The proposed addition nearly doubles the building density and footprint on the site impacting the historic building and landscape features. A memorial tree located at the northeast corner of Bachman Hall could be damaged or removed by construction. Affected vegetation includes the Alice Ball memorial tree (*Chaulmoogra*, ID#85), Daniel L Marsh memorial tree (Autograph tree, ID#58), Extension Director’s Gold Tree (ID#251), and the Harry David Gideonse memorial tree (*Pongra* ID#464).

6.3 PROJECTS IN CONFLICT AND RECOMMENDATIONS

6.3.11 FUTURE BUILDING AT SINCLAIR PARKING LOT



Determination of Significance

Criterion A: Significance for Events

Bachman Hall is the site of several important sit-ins at the University Presidents Office.

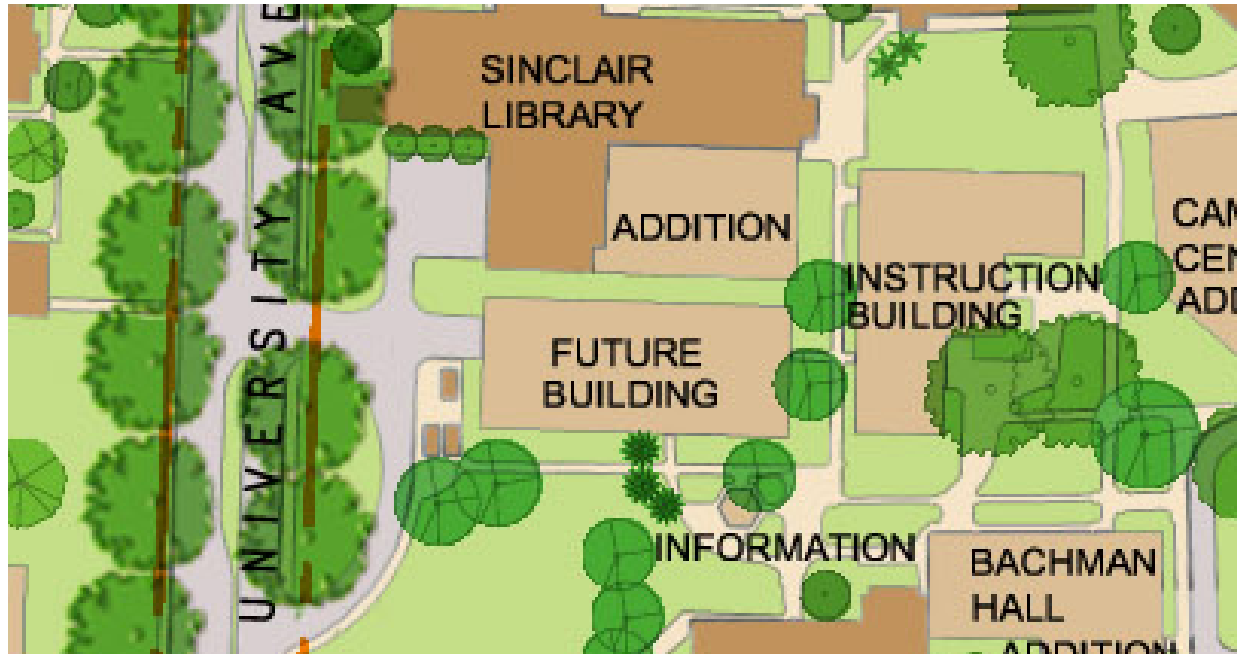
Criterion C: Significance for Architectural Design

The Sinclair Library is an adaptation of the International Style by use of local materials and design techniques to take advantage of natural ventilation and light in the building. Designed by architect, Lemmon, Freeth & Haines (currently "Architects Hawai'i") the building was originally one of the largest library structures in the United States to function without air conditioning.

Bachman Hall is designed by architect, Vladimir Ossipoff with Associated Architects in an adapted Hawaiian Modern Style. The building also contains artwork by muralist Jean Charlot.

Determination of Integrity

The integrity of both buildings is in good condition. Most importantly, the setting of the two buildings and the space between them is intact. The current temporary structures are removable.



LRDP Design Criteria

A New parking garage is proposed between Sinclair Library and Bachman Hall replacing the existing on grade parking lot. There is no specific design criterion for the new parking garage other than the general guidelines for the campus development. The parking would presumably be a structure with several levels limited to the height of Sinclair Library.

Conflicts

The new parking structure would significantly impact the integrity of setting, feeling, and association of Sinclair Library and Bachman Hall. The increased building density and heavy persona of a parking structure will impact the historic attributes currently intact between the Sinclair Library and Bachman Hall. Several exceptional and memorial trees near the new parking structure would be impacted. , such as the Cannonball tree (ID#82), both exceptional and memorial for Thornton Wilder. Views from Sinclair Library of the mountains and ocean would be impacted. The first impression of the campus would be a parking garage rather than open space, a significant statement of misplaced values.

6.3 PROJECTS IN CONFLICT AND RECOMMENDATIONS

6.3.12 ANDREWS OUTDOOR THEATRE



Determination of Significance

Criterion C: Significance for Architectural Design

The Andrews Outdoor Theatre was jointly designed by Ralph Fishbourne and Professor Arthur R. Keller in 1935. Funding for the project was part of Franklin D. Roosevelt's "New Deal" depression project funds.

Determination of Integrity

- Location: Intact
- Design: Minor intrusions by ticket booths and maintenance facilities.
- Setting: Intact
- Materials: Intact
- Workmanship: Intact
- Feeling: Intact
- Association: Intact



LRDP Design Criteria

Amenities are to be located at Andrews Outdoor Theatre. There is no specific design criterion for the amenities other than the general guidelines for the campus development.

Conflicts

Depending on the type of amenities proposed for the amphitheatre all of the historic integrities could be potentially impacted.

6.3 PROJECTS IN CONFLICT AND RECOMMENDATIONS

6.3.13 BUILDING 37



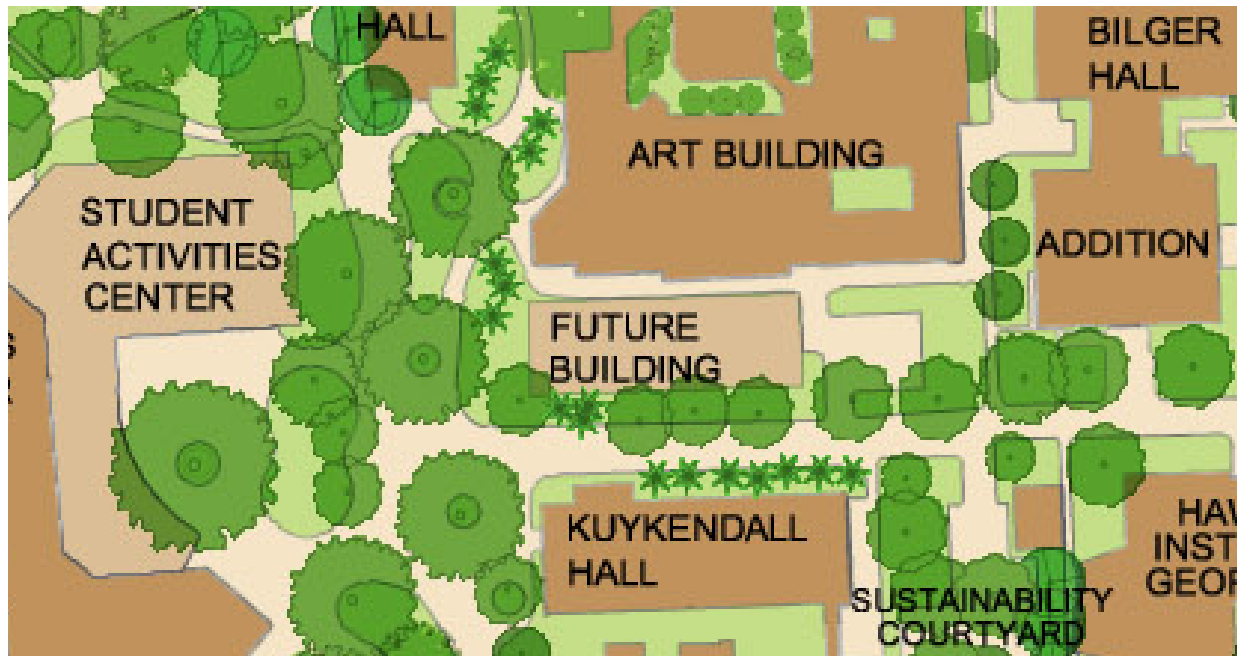
Determination of Significance

Criterion A: Significance for Events

Significant research that helped establish Hawai'i's agriculture industry was completed within this structure.

Determination of Integrity

- Location: Intact
- Design: Form intact but plan changed.
- Setting: Impacted by the larger and adjacent Art building and development.
- Materials: Interior finishes replaced.
- Workmanship: Obscured by additions.
- Feeling: Minor change due to development.
- Association: Original context hard to interpret.



LRDP Design Criteria

A new building is to be located on the site of existing Building 37. There is no specific design criterion for the new building other than the general guidelines for the campus development. The proposed new building appears to be of similar proportions to Building 37 except for a longer east-west length. The new building is oriented on the same east-west axis as Building 37. The height of the new building cannot be interpreted from the LRDP map but could be assumed to be two or three stories based on the scale of the building footprint.

Conflicts

The intended vision of the LRDP would eliminate building 37, thus impacting all of its historic significance and integrity. The new building could slightly increase the building mass of the setting and most likely eliminate the scale of the historic architectural form associated with the site.

6.3 PROJECTS IN CONFLICT AND RECOMMENDATIONS

6.3.14 UNIVERSITY HEALTH SERVICES



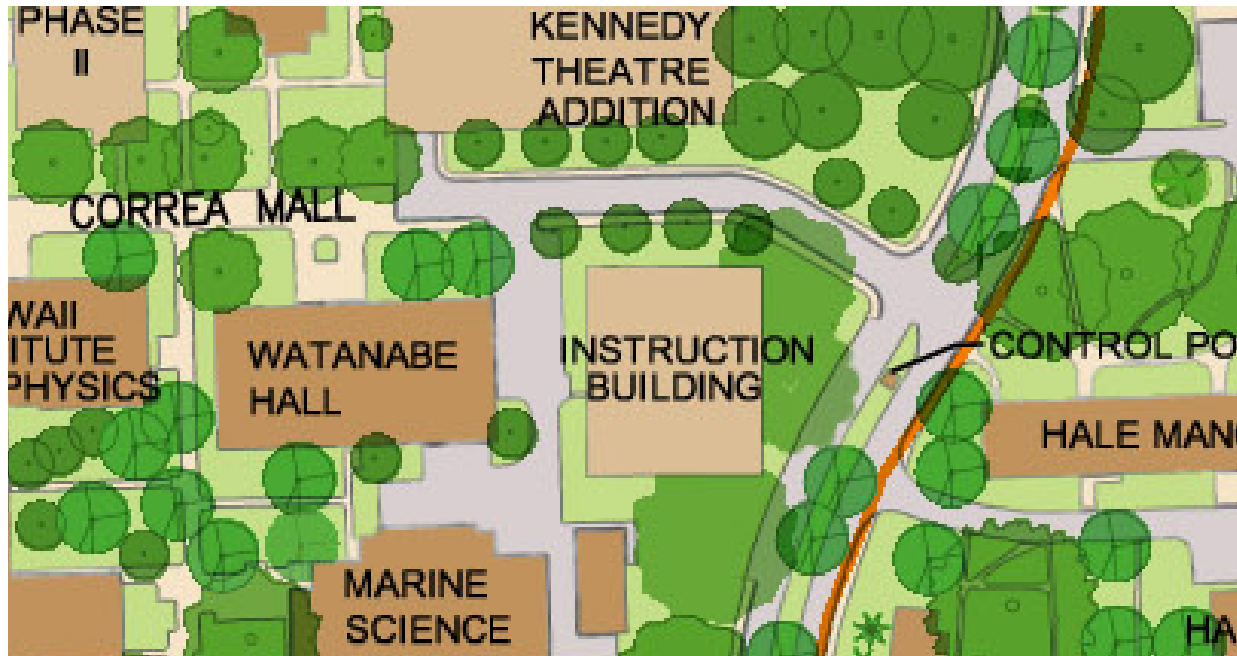
Determination of Significance

Criterion C: Significance for Architectural Design

The University Health Services building was the 24-hour infirmary care space on campus in an adapted Hawaiian Modern Style, by its design architect, Herbert Matsumura.

Determination of Integrity

- Location: Intact
- Design: Changes to interior.
- Setting: Intact
- Materials: Interior finishes replaced.
- Workmanship: Intact
- Feeling: Intact
- Association: Intact



LRDP Design Criteria

A new building is to replace the existing University Health Services building. There is no specific design criterion for the new building other than the general guidelines for the campus development. The proposed new building appears to be of similar proportions to the Health Services building except it does not include a courtyard entrance. The LRDP does not specify materials, construction, or height of the new building.

Conflicts

The intended vision of the LRDP would eliminate the University Health Services building, thus impacting all of its historic significance and integrity. The new building would slightly increase the building mass of the setting. Construction and the establishment of the new building would impact the historic landscape surrounding the Health Services building. Construction may impact a “tree of note” Banyan (ID#435).

6.3 PROJECTS IN CONFLICT AND RECOMMENDATIONS

6.3.15 KRAUSS HALL COMPLEX



Determination of Significance

Criterion A: Significance for Events

Krauss Hall is the second University site for the Pineapple Research Institute.

Criterion C: Significance for Architectural Design

The water garden is by local prominent landscape architect Richard Tongg and designer Lorraine Kuck. The design of the structures reflect the simple Plantation Style aesthetic notable in Hawai'i.

Determination of Integrity

- Location: Intact
- Design: Several wings removed and changes to interior layout.
- Setting: Modified
- Materials: Interior finishes replaced.
- Workmanship: Changed
- Feeling: Intact
- Association: Intact



LRDP Design Criteria

A Conference Center is to replace the Krauss Hall Complex. There is no specific design criterion for the new building other than the general guidelines for the campus development. The proposed Conference Center would completely remove all of the original buildings but keep the water garden intact.

Conflicts

The intended vision of the LRDP would eliminate the Krauss Hall Complex, thus impacting all of its historic significance and integrity. Krauss Hall consists of several buildings with courtyards and green space evenly spread throughout the site. The proposed Conference Center replaces all of these buildings and green spaces with a solid mass that is not proportional to the original buildings and context. The height of the proposed Conference Center cannot be determined from the LRDP but in an effort to increase campus density would probably be a multi-story complex. This impacts the integrity of the setting and association with the site as the Kraus Hall complex is a series of one story buildings.

6.4 LANDSCAPE PROJECTS IN CONFLICT AND RECOMMENDATIONS

MAP 6A: CAMPUS AERIAL IMAGE



MAP 6C: CAMPUS LANDSCAPE CONFLICT DIAGRAM



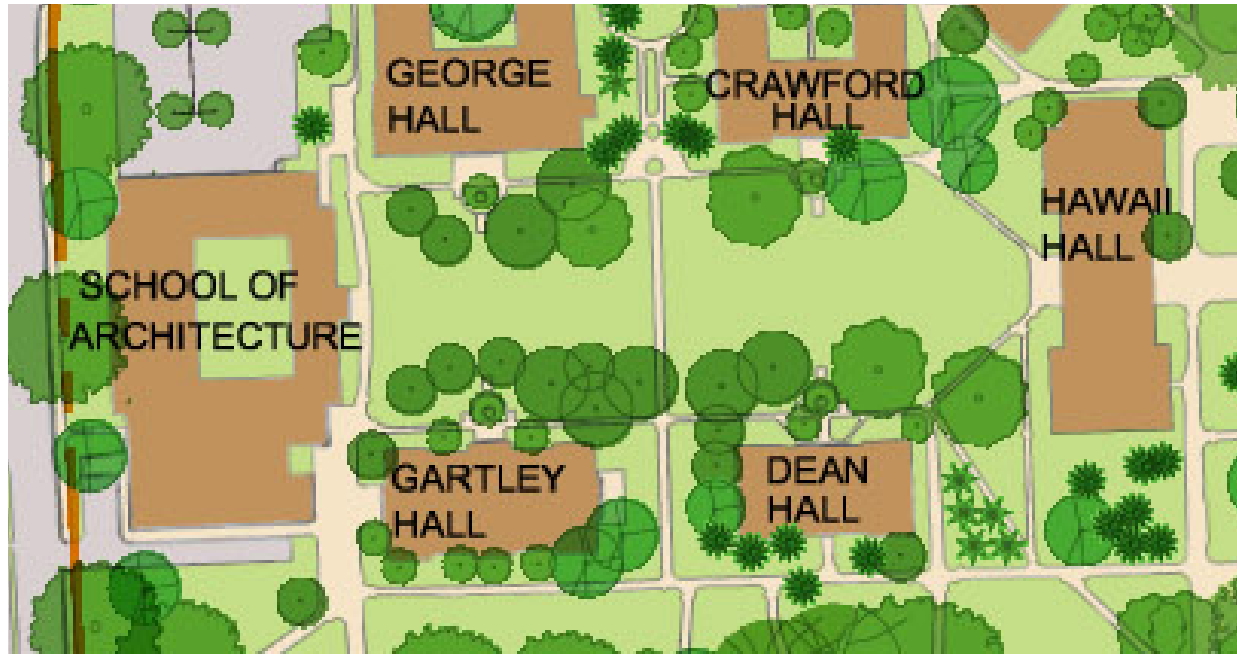
6.4 LANDSCAPE PROJECTS IN CONFLICT AND RECOMMENDATIONS

6.4.1 THE QUADRANGLE



LRDP Design Criteria

The LRDP proposal replaces existing pedestrian walkways and removes major diagonal walkways cutting across the lawn. A new north-south walkway will connect existing Campus Road and Business Administration transects the Quad between Gartley and Dean Hall at the south and George and Crawford Hall at the north. Landscaped gathering areas will be added between and near the entrance of each building. New landscape and outdoor furniture occur throughout the Quad.



Conflicts

Proposed walkways, gathering areas, and site furniture may alter the spatial organization and land patterns of the Quad through altering the size, configuration, proportion, and function of the Quad. Proposed north-south walkways alter the spatial division of Quad as the introduced north-south alignment of semicircular gathering areas weakens the strong east-west axis presently forming the Quad. The removal of diagonal walkways, creation of walkways, replacement of existing walkways, and addition of gathering areas will alter the circulation system of the Quad. A more comprehensive circulation study could speculate if students may continue to walk across the lawn and create worn paths where existing walkways are removed.

Furthermore the LRDP does not identify the potential affects of the addition and removal of paved areas on existing sloping topography of the Quad, which may affect site drainage. Changes in walkways widths, relationship of walkway edge to vegetation, or material need to be identified to determine affect on historic integrity. New vegetation could alter the dominance of existing kukui trees throughout the Quad. Proposed north-south walkway will require the removal of the Herbert B. Weaver memorial tree (*Tabebuia Heterophylla*, ID # 329). The affects of accessibility, health and safety, or environmental considerations of proposed walkways, gathering areas, and site furnishings need to be identified.

6.4 LANDSCAPE PROJECTS IN CONFLICT AND RECOMMENDATIONS

6.4.2 SINCLAIR GROVE



LRDP Design Criteria

LRDP proposal suggests the removal of the existing Campus Road and replaces it with a new, semicircular entry procession and east-west walkway. New vegetation occurs throughout the new construction.



Conflicts

The addition of a new walkway alters the spatial organization and land patterns through affecting the size and proportion of Sinclair Grove. The proposed walkway completely ignores the existing edge of Campus Road and thus alters the relationship of Sinclair Road to the primary circulation route. A widened walkway through Sinclair Grove will affect circulation experience through the existing botanical collection. Furthermore, the LRDP does not identify the affect of proposed walkways on existing topography. Possible re-grading of existing topography to accommodate new pavements may negatively impact the root system, current drainage, and thus damage the grove. Also, the LRDP does not identify how new walkways will affect the current

seating areas located within the grove. The LRDP proposes the addition of new vegetation that could compete with current botanic variety. Proposed east-west walkway will permanently harm the existing vegetation including exceptional and memorial trees (Indian Rubber Tree, ID# 591; Jack-in-a-Box Tree, ID# 21; Banuyo, ID# 411).

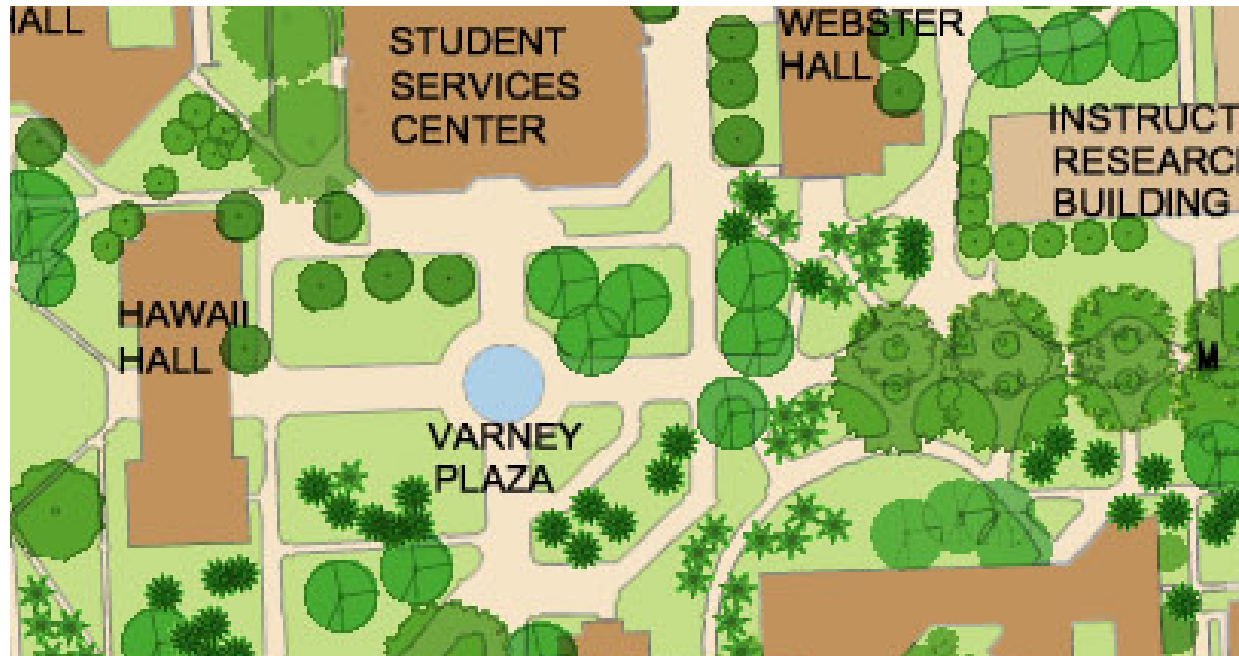
6.4 LANDSCAPE PROJECTS IN CONFLICT AND RECOMMENDATIONS

6.4.3 VARNEY CIRCLE



LRDP Design Criteria

The LRDP proposal realigns Varney Circle and the fountain with the entrance of the Student Services building. The existing parking around the fountain will be replaced with new paving, and landscaping. The LRDP also suggests replacing vegetation around the base of the fountain with a larger reflecting pool equipped with additional geyser fountains.



Conflicts

The realignment of Varney Circle will affect the size, configuration, and proportion of the circle in relationship to McCarthy Mall and change its contextual alignment with historic Miller Hall, thus altering the spatial organization and land pattern of the site. Relocation of the fountain will damage the integrity of the features' location. The LRDP does not identify the shape, edge, or water level, movement, and reflective quality. The removal of the plants may restore the fountain to its original condition. The addition of the larger reflecting pool and geyser fountains will alter the subtle presence of the existing fountain and substantially impact the historic design integrity.

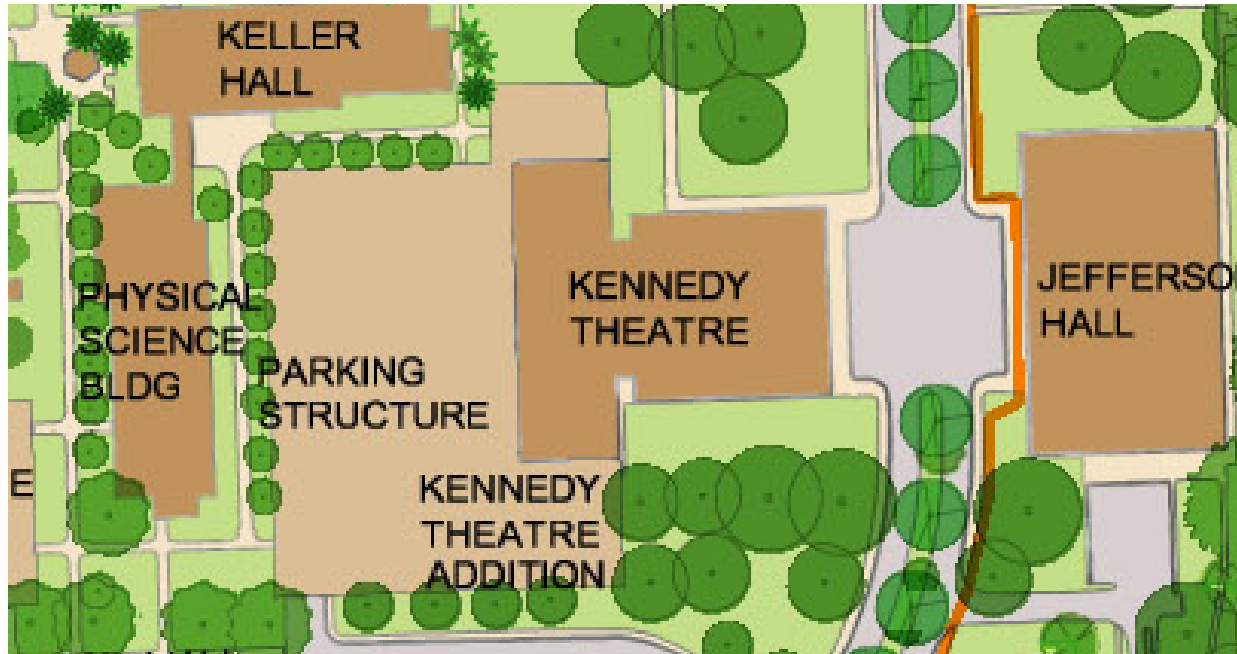
6.4 LANDSCAPE PROJECTS IN CONFLICT AND RECOMMENDATIONS

6.4.4 BANYAN GROVE



LRDP Design Criteria

The LRDP proposal for the East-West Road Gateway suggests a pathway to be cut through the Banyan Grove



Conflicts

The addition of a walkway will alter the size, configuration, and proportion of the grove. The spatial organization of the trees follows the structural grid of Kennedy Theatre; cutting through the grove will dilute this spatial orientation. The addition of a walkway will change the function of the grove into a formal passageway rather than a destination for contemplation.

Currently, an unpaved trail transects the grove, which enhances the “rural sense of place” to the grove’s natural esthetic, expressed as naturally exposed roots. The addition of a formal walkway will disrupt this circulation experience. Furthermore, a new walkway will encourage heavier circulation through

the grove, which may encourage degradation and damage of the grove. The addition of a walkway may also damage existing root systems.

6.4 LANDSCAPE PROJECTS IN CONFLICT AND RECOMMENDATIONS

6.4.5 MCCARTHY MALL



LRDP Design Criteria

The LRDP proposal calls for the refurbishment of McCarthy Mall. Suggested improvements include a 20-foot minimum width (where possible), the removal of coconut trees, addition of new planters, seating areas, and pavers, a completely new subslab, and the overall raising of the entire mall to improve drainage. New vegetation will be added to the mall while several coconut trees and other trees will be relocated.



Conflicts

The widening of the mall and addition of planters and seating areas will greatly impact the size, configuration, proportion, and function of the Mall. The excessive addition of planter and seating walls changes the historic function of the mall from a shaded passageway into more of a plaza, which will destroy the spatial organization and patterning of the space as a green passageway. New seating and planter features will also alter the direct circulation throughout the site. Widening the mall to twenty feet minimum will dissolve the sense of linear movement through the site, currently emphasized by the present pavement. Raising the walkway will destroy the shape, contour, slope, and elevation of the existing topography and thus alter

the relationship of the current walkway to the rest of the site. The LRDP does not explain how raising the mall will improve drainage. The LRDP also does not identify the cover type, genus, species, caliper, size, color, scale, form, or texture of new vegetation to be planted. New construction to raise and widen the mall, pour new slabs, and add new planters could damage existing vegetation, particularly the root system of the existing monkeypod trees. Other trees that may be endangered by new construction include the exceptional and Rufus C. Harris Memorial tree (Hutu ID# 84), the Martin Luther King Jr. memorial tree (Pink Trumpet Tree ID# 255) and the Dianne Goldenberg tree (Hong Kong Orchard, ID# 347).

CHAPTER 7

PRESERVATION GUIDELINES

INTRODUCTION

Preservation plays an important role in retaining the campus continuum, through preserving the features of significant events, associations, and persons important to the University's history. These add integrity to the University and richness to campus life. Heritage buildings and landscapes should be retained and maintained for future generations. The subsequent guidelines are general to historic buildings and landscapes and supplement the inventory gathered throughout this Campus Heritage Report. These together have provided a tool in developing the framework for the general guidelines to encourage the preservation of the Mānoa campus heritage buildings and landscapes.

Guidelines provide a framework from which maintenance operations can monitor damage and minimize disturbances that may compromise the integrity of the Mānoa campus' heritage buildings and landscapes. The following guidelines were written using the US Secretary of the Interior's Standards for Rehabilitation, Preservation Briefs, and the Guidelines for Preserving Cultural Landscapes established by the Heritage Preservation Services of the US Department of the Interior National Park Service (NPS). These provide national standardized guidelines to help preserve, rehabilitate, restore, and reconstruct historic buildings and landscapes and their features to its fullest extent possible.

The following is taken from the National Park Service web site developed to promulgate the Secretary of the Interior Standards. Initially these guidelines were developed as part of the approach to guide projects desirous of federal grants or tax incentives, these standards are now used universally to define appropriate preservation work to historic buildings and landscapes in the US. This web site is http://www.nps.gov/history/hps/tps/standards_guidelines.htm. The Secretary of the Interior's Standards consist of four approaches for treatment

of historic buildings and landscapes. These sections consist of: preservation, rehabilitation, restoration, and reconstruction.

"The Standards are a series of concepts about maintaining, repairing and replacing historic materials, as well as designing new additions or making alterations. They cannot, in and of themselves, be used to make decisions about which features of a historic property should be preserved and which might be changed. But once an appropriate treatment is selected, the Standards provide philosophical consistency to the work.

There are Standards for four distinct, but interrelated, approaches to the treatment of historic properties- preservation, rehabilitation, restoration, and reconstruction.

Preservation focuses on the maintenance and repair of existing historic materials and retention of a property's form as it has evolved over time. (Protection and Stabilization have now been consolidated under this treatment.)

Rehabilitation acknowledges the need to alter or add to a historic property to meet continuing or changing uses while retaining the property's historic character.

Restoration depicts a property at a particular period of time in its history, while removing evidence of other periods.

Reconstruction re-creates vanished or non-surviving portions of a property for interpretive purposes." (NPS 2008: n.p.)

Rehabilitation is the most likely alternative for the continued use of the buildings on the University of Hawai'i Mānoa Campus. The NPS has identified

7 PRESERVATION GUIDELINES

INTRODUCTION

ten standards for rehabilitation. The National Park Service defines Rehabilitation as “the process of returning a property to a state of utility, through repair or alteration, which makes possible an efficient contemporary use while preserving those portions and features of the property which are significant to its historic, architectural, and cultural values” (NPS 1995: n.p.). The Standards (Department of Interior regulations, 36 CFR 67) pertain to historic buildings of all materials, construction types, sizes, and occupancy and encompass the exterior and the interior, related landscape features and the building’s site and environment as well as attached, adjacent, or related new construction. The Standards are to be applied to specific rehabilitation projects in a reasonable manner, taking into consideration economic and technical feasibility.

The Secretary of the Interior’s Standards for Rehabilitation are as follows:

1. A property shall be used for its historic purpose or be placed in a new use that requires minimal change to the defining characteristics of the building and its site and environment.
2. The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided.
3. Each property shall be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or architectural elements from other buildings, shall not be undertaken.
4. Most properties change over time; those changes that have acquired historic significance in their own right shall be retained and preserved.
5. Distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize a property shall be preserved.
6. Deteriorated historic features shall be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature shall match the old in design, color, texture, and other visual qualities and, where possible, materials. Replacement of missing features shall be substantiated by documentary, physical, or pictorial evidence.
7. Chemical or physical treatments, such as sandblasting, that cause damage to historic materials shall not be used. The surface cleaning of structures, if appropriate, shall be undertaken using the gentlest means possible.
8. Significant archeological resources affected by a project shall be protected and preserved. If such resources must be disturbed, mitigation measures shall be undertaken.
9. New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with

Fig 7.1: Castle Memorial Building, 2008



the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.

10. New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired” (NPS 1995: np).

There is additional on line educational materials produced by the National Park Service that can be found on their web site. “For over 30 years, Technical Preservation Services has helped home owners, preservation professionals, organizations, and government agencies by publishing printed

pamphlets and books - easy-to-read guidance on preserving, rehabilitating and restoring historic buildings. These web features build on that tradition” (NPS 1995:n.p.) This web site http://www.nps.gov/history/hps/tps/online_ed.htm.

Current Maintenance Procedures

The maintenance operations of all heritage buildings and landscapes fall under the jurisdiction of the Buildings and Grounds Management (BGM) of UHM Facilities Management. The BGM is divided into two sub-groups: janitorial and landscaping services.

7 PRESERVATION GUIDELINES

INTRODUCTION

Building Maintenance

The issues involved with the maintenance of buildings at the Mānoa campus are complex one. In 2006 a special Ad Hoc committee generated a Report that itemized many of the issues involved with maintenance. “The operations as well as the repairs and maintenance of the UH Mānoa campus are the responsibility of the existing Office of Facilities and Grounds. Their responsibilities are complex and extensive as is customary for an enterprise of the size and breadth of the Mānoa campus. This requires a wide range of expertise combined with effective coordination and a clear understanding of the mission and business of the University. The quality and speed with which operational, and repair and maintenance services are delivered has a direct impact on the activities of faculty and students for whom the Office of Facilities and Grounds exists. The quality of the campus environment also directly impacts the morale, effectiveness and esprit de corps of the University at all levels” (Yeh 2006: 2).

This Ad Hoc Report discussed several specific challenges with regard to the facility management. This Campus Heritage Report should assist with several of those challenges. One challenge was “to improve management and operations by clearly understand the adequacy, management, and distribution of resources; the physical resources, the financial resources, and the human resources” (Yeh 2006: 3). This Campus Heritage Report identifies those heritage resources that have importance to the history and design of the campus so that they may have the important consideration in the planning process.

Another challenge was to “institutionalize an investment in the growth of Facilities and Grounds’ staff through training, seminars, professional involvement, career ladders, and other means that unlock human potential. The recognition and development of the staff must be given a high priority and must be supported with financial resources as well as a philosophy that supports employee development” (Yeh 2006: 3). This training should include appropriate techniques for the maintenance of the historic structures and landscaping.

The challenge of energy efficiency is also an important one. As discussed earlier, the reuse of existing buildings is an extremely sustainable alternative as historic structures embody tremendous energy in their existing materials. However, they also require prudent decision-making. An important consideration in the reuse of a building is to find an appropriate use rather than shoving a large foot into a small shoe. With the use of technology and distance learning the campus requirements will change. It is important to build for the future educational setting.

Another important point was also made by the Ad Hoc Report: “It is often argued that that a lack of funding is the overriding cause of the repair and maintenance problems at UH Mānoa. The APPA report strongly disagreed with this opinion. ... In general, there is a need to marshal the organization’s resources, focus their attention, and empower and energize the workforce. The right direction ensures the future success, growth, and the viability of the organization” (Yeh 2006: 4). This direction should include proper consideration of the elements that define the history of the campus.



Fig 7.2: Bachman Hall and Terrace, 2008

“The design and planning function of a campus ought to be aimed at ensuring that every facility modification decision adds value to the campus, aesthetically and functionally. Design and planning should be continuous activities as the changing of facilities needs for programs are constant. The campus designers and planners need to communicate with and respond to the needs and wishes of the campus community and facility users that they are supposed to serve” (Yeh 2006:4). The Long Range Development Plan did not take in to consideration either heritage structures or landscapes but looked at adding increased density because of space needs without clearly evaluating the tremendous potential of the heritage resources already in place.

While the long range planning must have a clear vision of the future and not use outmoded technologies of learning, it is also important that there be a connection to the past that helps to define our future. “New capital projects, besides accommodating the immediate needs of individual programs, provide building blocks for the future campus. Every decision on where and how to build produces implications for the future of the university beyond the adding of another building to campus inventory” (Yeh 2006: 6). Planning and maintenance decisions cannot be based purely on current needs or projected desires but also reflect a holistic view of who we are as a campus and people; that vision clearly has values that are evidenced by the associations with people and place that are

7 PRESERVATION GUIDELINES

INTRODUCTION

embodied in the heritage buildings and landscapes of the Campus.

Landscape

The UHM Landscape Service “provides for the maintenance, care, and upkeep of lawns, trees, shrubs and hedges, courtyards, walkways and roadways situated on the main upper campus” (UHM facilities homepage). Maintenance also “repairs and maintains the sprinkler system, provides refuse and bulk rubbish collection and disposal, bulk recycling, maintains a small nursery, and provides plants for special events.” Four separate entities currently maintain the overall campus landscape: athletic facilities, student housing services, a private landscape company, and UHM facilities. The Japanese Garden is maintained by a private landscape company, and the Kanewai Lo’i, is maintained by the School of Hawaiian Knowledge.

Advising the BGM Landscape Services in proper landscape procedures is the Landscape Committee, composed of an interdisciplinary group of various concentrations including landscape architecture, botany, tropical plant and soils science, art, zoology, English, and facilities. The landscape committee has four main task forces: the landscape policies and plans subcommittee, tree risk assessment and management subcommittee, project review and coordination subcommittee, and communications subcommittee. Though these task forces the committee advocates the pursuit for an attractive, appropriate, educational, and historically rich campus. Through recommendations and advice, evaluations of existing conditions and proposed developments, and the creation of projects to

improve landscape quality, the Committee is a crucial component to the university facilities landscaping services.

Together the Landscape Committee and UHM Facilities maintain the landscapes of Mānoa Campus. However, current procedures suffer from many disadvantages. While maintenance operations occur on a daily schedule, insufficient funding allows for only the most basic landscaping services. Landscaping suffers from the lack of equipment, planting supplies, and landscaping materials. Not enough funds are allocated to hire workers with licenses, certificates, or sufficient training in landscape maintenance. The majority of workers are only entry-level positions whose job descriptions are oversimplified, requiring no landscape experience or ability to read or write. Many maintenance workers are eager to have additional training. There exists insufficient documentation of landscape procedures. With only one arborist, no current protocol exists for protecting trees during construction. These are only a few of the many issues currently affecting maintenance procedures.

Other obstructions of preferred maintenance operations include the current hierarchical organization of landscape services. As part of buildings and grounds management, much of the allocated funding goes to the building before landscaping. Under such a structure, landscape is seen more as a janitorial service, keeping the campus clean. Furthermore, the discontinuity of landscape services throughout the university, between housing and athletics, and the Lyon arboretum prevents the potential for all entities to share a wider net of resources and expertise.

Preservation Guidelines

The historic buildings on campus are important to defining the unique character of the campus and represent significant events, associations, and persons important to the University's history. They add richness and a sense of time to the campus life. These buildings should be kept and maintained for future generations.

The following material guidelines were written using the Secretary of Interior Standards for Rehabilitation and the Preservation Briefs articles. These articles are standard guidelines to help preserve, maintain, and repair historic buildings and their materials to its fullest extent possible.

The Secretary of the Interior's Standards consist of four approaches for treatment of historical buildings and materials. These sections consist of: preservation, rehabilitation, restoration, and reconstruction. The standards are written guidelines to help assist in ways to preserve and maintain a historic building. They can be found on the following website: <http://www.nps.gov/hps/tps/tax/rhb/stand.htm>

For this report, the Rehabilitation section was used and carefully analyzed. Within the Rehabilitation section, there are 16 subject-sections that suggest ways in order to rehabilitate a building without damaging it. These sections are: Masonry, Wood, Metals, Roofs, Windows, Entrances/Porches, Structural Systems, Spaces/Features/Finishes, Mechanical Systems, Site, Setting, Energy, New Additions, Accessibility, and Health/Safety.

Preservation Briefs were written by the National Park Service, to help preserve, rehabilitate and restore historic buildings. These briefs consist of a total of 47 sections. Each section consists of different elements and properties that can be found in a historic building. This resource is mainly a guideline that gives recommendations from repairing to maintaining a historic building without altering or destroying the integrity of the historic structure. Along with recommended guidelines, a section may contain a list of 'suggested readings' to give additional information on a particular subject.

The 47 Preservation Briefs can be found on the following website: <http://www.nps.gov/hps/TPS/briefs/presbhom.htm>. They are frequently added to as a resource.

The use of the Secretary of the Interior's Standards for Rehabilitation, along with the Preservation Briefs has been a large tool in developing the following rehabilitation guidelines. These guidelines should be followed when rehabilitating a historic building in order to assure the best possible way to maintain these significant campus buildings. These are the standards that will be used by the State Historic Preservation Division in their review of any work on structures more than 50 years old.

7 PRESERVATION GUIDELINES

7.1 PRESERVATION GUIDELINES FOR HISTORIC MASONRY

7.1.1 Preservation and Maintenance of Historic Masonry

Masonry is the most common material in historic buildings on the campus. Although masonry is considered to be a strong building material, it can also be damaged by improper treatments. Types of historic masonry existing on University of Hawaii at Manoa Campus are cast stone, stucco, and concrete. Since proper treatment and maintenance vary depending on the masonry type, each building material should be accurately identified prior to any treatment or maintenance.

Locations

Reinforced concrete: Hawaii Hall, JFL Theatre, Sinclair Library, and others

Plaster: Hawaii Hall, Gartley Hall, Dean Hall, Miller Hall, and others

Brick: Sinclair Library, Krauss Hall, Bachman Hall, Henke Hall, and others

Cast Stone: Hemenway Hall and Bilger Hall

Stucco: Wist Hall, Building 37, and Henke Hall

Concerns

To preserve the character of the historic building, it is important to understand what the character-defining elements are in the building as they should be protected. Masonry is typically a character element. For example, removing original paint can easily damage the masonry of the building. Some cleaning methods or chemicals and repairing processes can damage historic masonry. It is important to understand both the characteristics of the material and effects of the treatment before execution.



Fig 7.3: Exposed Masonry Columns Outside of the Administration Services Building, 2008

Fig 7.4: Deteriorated Paint Finish on Concrete Trellis at Bachman Hall, 2008

Recommendations

Masonry can be damaged by exposure to standing water. Proper drainage must be provided so that water does not stand on flat, horizontal, or curved decorative surfaces.

Cleaning must be done only when absolutely necessary with the gentlest method possible. Cleaning methods must be tested for immediate and long-term effect before applying to a larger surface. Improper cleaning can leave damage to masonry such as loss of detail, erosion, metal stains, change in color, water penetration, and forming efflorescence (crystallization of salt on the surface) (Mack 1975: 1).

Water cleaning is typically considered to be the gentlest method yet there are risks of damage from water. Some masonry may absorb water and cause water damage. It can also form efflorescence from the soluble salts contained in the material of the masonry. Chemical cleaning might involve additional problems such as dissolving masonry such as marble and limestone and also causing change in color. Mechanical Cleaning such as grit blasters, grinders, and sanding discs, might cause loss of details and increase the rate of erosion. Due to its complexity, cleaning projects should involve several kinds of experts: conservators, geologists, chemists, and preservation architects (Mack 1975: 2-3).

Masonry must be repaired when the evidence of deterioration can be observed. Possible evidence of deterioration: disintegrating mortar, cracks in mortar joints, damp walls, or damaged plasterwork. Area of repairing or replacement must be kept as small



Fig 7.5 Damaged Masonry Ledge at Hawaiian Institute of Geographics, 2008

as possible. Complete replacement must be done only when absolutely necessary. When repairing of Masonry requires duplication of materials, new material must match the historic material in strength, composition, color, texture, and method of assembly (type and width of mortar). Repairing can also be done with compatible substitute materials (Weeks & Grimmer 1992: Masonry, n.p.)

** For treatment for cast stone and stucco, please refer to the sections the Maintenance, Repair and Replacement of Historic Cast Stone and the Preservation and Repair of Historic Stucco.*

7 PRESERVATION GUIDELINES

7.1 PRESERVATION GUIDELINES FOR HISTORIC MASONRY

7.1.2 Repointing Mortar Joints in Historic Masonry

A proper repointing process can improve the appearance and physical integrity of historic masonry. Yet, one must take great care since improper repointing can cause visual and physical damage to the building. Repointing is defined as “the process of removing deteriorated mortar from the joints of a masonry wall and replacing it with new mortar” (Mack & Speweik 1998: 1).

Concerns

Repointing is usually an expensive, lengthy process. Adequate time must be spent to research the original mortar and test the effect of the new mortar on the historic masonry. To avoid damage to the historic masonry and to the building, new mortar should never be stronger than the original. Strong

or hard mortar can not accommodate the stress due to expansion, contraction, moisture migration, or settlement. This may weaken the masonry. The new mortar must match the original in color, texture, tooling, and type of sand. The new mortar must also be softer and have greater vapor permeability than the original mortar.

Recommendations

One should follow these steps to minimize the risk of serious damage:

1. Understanding the problems: Possible signs of deterioration are disintegrating mortar, cracks in mortar joints, loose brick or stones, damp walls, or damaged plaster walls. Since it tends to be a challenge to find out the root cause of deterioration, use of consultants is recommended.
2. Finding an appropriate mortar: Unweathered portion of the historic mortar must be examined to match historic mortar.
3. Budgeting and scheduling: Since repointing requires handwork and time, point repointing only for necessary areas is recommended. Repointing must be done when the wall temperature is below 95 degrees F to avoid excessive evaporation (Mack & Speweik 1998: 7).
4. Contractor selection: When contractor selection has to be done through the bidding process, it is important to require at least five years of experience



Fig 7.6: Mismatched Color and Mortar Size at the Administrative Services Building, 2008

in specifications. The contract should contain unit pricing along with a base bid for the project.

5. Execution of work: The Contractor must prepare test panels including all types of masonry, joint style, and mortar colors and place it at several locations. Old mortar should be removed at least to the depth of 2 to 2.5 times the width of the joint (Mack & Speweik 1998: 9).

** For repointing in cast stone, please refer to the section on The Maintenance, Repair and Replacement of Historic Cast Stone below.*

7.1.3 Applying Waterproof Coating on Historic Masonry

Application of non-historical treatment such as water repellent must be considered only after the complete failure of historic features. Waterproofing is not a “solve-all” for proper treatment.

Concerns

Waterproofing is usually unnecessary since the most historic buildings have survived without it for a long time (Weeks & Grimmer 1992: Masonry, n.p.). Typical causes of the water penetration problems are deteriorated gutters and downspouts, deteriorated mortar, capillary moisture from the ground, and condensation. Waterproof coatings do not solve these problems (Mack 1975: 4). Waterproof coatings can sometimes be a cause of deterioration. Since masonry varies greatly in material composition and characteristics, one must

understand the effect and consequences of each treatment on different masonry materials.

Recommendations

One may follow following steps to minimize the risk of serious damage:

1. Understanding the construction of the building.
2. Choosing the types of cleaning: One must choose the gentlest method possible for the type of dirt and desired result. One must understand that some chemicals are hazardous to plants, animal life, and also to people.
3. Testing cleaning methods: Each cleaning methods should be tested before application to the entire building. The test patch should be at least a square yard in size. Test all the masonry types to be cleaned on the building. When cleaning a building with high significance, the test patch should be exposed for a full year to understand the long-term effect (Mack 1975: 3).
4. Execution of the cleaning method and applying waterproofing if necessary.

7 PRESERVATION GUIDELINES

7.1 PRESERVATION GUIDELINES FOR HISTORIC MASONRY

7.1.4 The Maintenance, Repair and Replacement of Historic Cast Stone

Cast stone has been widely used as an economical substitute for more expensive natural stone since the early 20th century. Today it has gained its own historical value and should be carefully protected as well as other historic materials (Pieper, n.d.: n.p.). Preservation Briefs defines cast stone as “just one name given to various concrete mixtures that employed molded shapes, decorative aggregates, and masonry pigments to simulate natural stone” (Pieper, n.d.: n.p.).

Locations

Decorative pilasters at Hemenway Hall; main entryway at Bilger Hall and others.

Concerns

Even though high quality cast stone is as durable and long-lasting as natural stone, it is also subject to deterioration. Deterioration can be found in the aggregate, in the cementing matrix, in the iron or steel reinforcement, or in the cramps and anchors used in its installation. Deterioration may also cause separation of the facing and core layers (Pieper: 5). Frequent exposure to water runoff may cause erosion of the matrix surface. More rough texture and change in color are common result of the erosion (Pieper, n.d.: n.p.).

Recommendations

1. Cleaning: Cast stone with marble or limestone aggregates may be cleaned with the alkaline pre-wash/acid afterwash chemical cleaning systems. If no marble

Fig 7.7: Cast in Place Stone Pilasters at Hemenway Hall, 2008



or limestones are used, acidic cleaners may be used. Do not use ordinary sand blasting or wet grit blasting. Refer to Cleaning Section in Preservation Briefs 42.

2. **Repointing:** For cast stone from late 19th and 20th century, Type N mortar (one part cement and one part lime to six parts of sand) is appropriate for repointing (Pieper, n.d.: n.p.). New mortar should match the original in character, color of sand, and color of the cement matrix. Since joints may be very narrow and dense, unnecessary repointing may damage the cast stone. Use of grinders is not recommended unless carefully done by skilled personnel.
3. **Re-securing Separated Surface Facing:** Injection of grouts may be used to re-secure the separated facing. Re-attachment tends to be time consuming and should be done by conservator rather than a mason.
4. **Repairing Reinforcement Spalls and Mechanical Damage:** Small damage can be repaired by mortar that visually matches the original material. If a large area of the surface is affected by deterioration, consult a preservation architect or consultant.
5. **Surface Refinishing:** Surface refinishing for cast stone is not recommended since tooling or grinding of the surface may not restore the original appearance.



Fig 7.8: Cast Stone Detail at Hemenway Hall, 2008

6. **Replacement of Historic Cast Stone Installation:** When a cast stone unit is frequently exposed to weather or water and shows signs of severe failure or reinforcement deterioration, it may require replacement of the unit. Replicating the unit may be done by a cast stone manufacturer who is specialized in ornamental and custom work (Pieper, n.d.: n.p.).

7 PRESERVATION GUIDELINES

7.1 PRESERVATION GUIDELINES FOR HISTORIC MASONRY

7.1.5 The Preservation and Repair of Historic Stucco

Often stucco tends to be unnoticed or removed due to misunderstanding of its historical value. However, stucco often plays a very important role in preservation of the historical character of the building. Preservation Briefs defines stucco as “a type of exterior plaster applied as a two-or-three part coating directly onto masonry, or applied over wood or metal lath to a log or wood frame structure” (Grimmer 1990: 1).

Location

Exterior finish at Wist Hall and Building 37; Henke Hall, and others.



Fig 7.9: Wist Hall Stucco Facade, 2008

Concerns

Despite its simple appearance, stucco is a complex material. Historic stucco is not a long-lasting building material unless careful maintenance is performed regularly (Grimmer 1990: 7). Preservation or repair project must include experts. Stucco is usually composed of Portland cement and lime or gypsum if the building is relatively newer. Composition of stucco varies from place to place. The appearance of most stucco is determined by the color of sand or additives in the final coat (Grimmer 1990:4).

Recommendations

One may follow the following steps for repairing deteriorated stucco:

1. **Regular Maintenance:** Stucco should be whitewashed every year to protect it from cracking and water penetration. The paraffin coating, other type of wax, or other stucco-like coatings such as oil mastic coatings can be applied as water repellent after testing (Grimmer 1990: 7).
2. **Assessing Damage:** Water infiltration is a major cause of stucco deterioration. Water infiltration problems of the building must be resolved prior to repairing stucco. Previous repair done inexpertly can also be a cause of deterioration. When rigid cement-based stucco was used for repairing instead of flexible lime-base stucco, the external vibration often causes cracks. Stucco walls should be carefully assessed to determine the extent of damage and amount of areas to be replaced (Grimmer 1990: 7).

3. Identifying the Stucco Type: Historic stucco must be analyzed to find out the original ingredients to duplicate replacement stucco that is similar in strength, composition, color, and texture as close as possible. However, when authenticity or period restoration is not required, new mortar does not have to duplicate the original ingredients. Small test patches should be made before application to larger areas (Grimmer 1990: 8).
4. Planning Repair: The repair process should be done professionally. Small hairline cracks should be repaired by a thin slurry coat of finish material. Patching may work on heavily textured or painted stucco yet is not recommended for smooth-finished stucco. It is recommended to repair in a well-defined or contained area if possible (Grimmer 1990: 9).
5. Finishing Stucco Surface: Before patching or repairing, historic stucco surfaces should be analyzed to determine whether the surface color is in sand, cement, or pigment. Surface color and finish should be carefully applied to match the historic stucco. When the original pigments are not available, hand-mix colors to make samples matching the color and texture as close as possible (Grimmer 1990: 11).
6. Cleaning: Smooth unpainted stucco and heavily-textured painted stucco maybe cleaned using a low-pressure water wash. Even though cleaning methods can be applied to other types of stucco, it



Fig 7.10: Stucco Wall at Wist Hall, 2008

may be difficult to remove dirt.

7. Replacing Stucco Wall: When 40-50% of the stucco is deteriorated, total replacement is recommended. Since the new stucco does not need to be compatible with the historic stucco, new mix should be chosen based on durability, color, texture, and finish (Grimmer 1990: 13).

7 PRESERVATION GUIDELINES

7.1 PRESERVATION GUIDELINES FOR HISTORIC MASONRY

7.1.6 Removing Graffiti from Historic Masonry

The best way to eliminate and avoid recurrence of graffiti is to remove it as soon as possible. However, improper removal of graffiti often damages historic masonry or pigment stains the surface permanently.

Concerns

Proper treatment requires understanding of three components: types of masonry material, types of materials used to make the graffiti, and types of cleaning methods. (Weaver 1995: 1) Materials used to create graffiti varies greatly from various types of spray paints, brush-applied paints, permanent markers, water-soluble markers, ballpoint pens, chalk, color pencils, pastels, crayons, liquid shoe polish, to lipstick (Weaver 1995:2). Some materials may be cleaned easier than others so it is important to understand the characteristics of each material. Difficulty of graffiti removal also depends on the type of masonry, its fragility, porosity, and permeability. These characteristics should be identified prior to cleaning (Weaver 1995: 2).

Different types of solvents and paint strippers are capable of removing paints; however these products may discolor or stain the masonry. To understand the reaction to cleaning agents, masonry materials are categorized into acid sensitive, non-acid sensitive, or alkali sensitive. Acid sensitive masonry materials may be destroyed by acid. Sensitive masonry material may be severely stained by alkalis or water (Weaver 1995:3).

Recommendations

One may follow following steps to successfully remove graffiti from historic masonry:

1. Identify the material used to make the graffiti.
2. Identify the masonry material type and sensitivity to cleaning agents.
3. Identify possible cleaning methods: Refer to Suggestion for Removing Graffiti from Historic Masonry chart on page 13 in Preservation Briefs 38.
4. Test the selected cleaning method(s): Test should be done on a mock-up or area that is not highly visible.
5. Conduct cleaning method: Most of the chemicals used for removing graffiti are dangerous to people and may contaminate the environment. It is important to identify hazardous chemicals to the workers and review Material Safety Data Sheets from the product manufacturers. Arrange appropriate chemical disposal plan prior to cleaning (Weaver 1995:7-8).
6. Care and prevention: Use of physical barriers around the masonry features and the application of barrier coatings that helps removal of graffiti are recommended (Weaver 1995: 7).

Recommended Readings

The Secretary of the Interior's Standards for Rehabilitation: Building Exterior Masonry

Preservation Briefs 1: The Cleaning and Waterproof Coating of Masonry Buildings

Preservation Briefs 2: Repointing Mortar Joints in Historical Masonry Buildings

Preservation Briefs 22: The Preservation and Repair of Historic Stucco

Preservation Briefs 38: Removing Graffiti from Historic Masonry

Preservation Briefs 42: The Maintenance, Repair and Replacement of Historic Cast Stone



Fig 7.11: Graffiti at Sinclair Library, 2008



Fig 7.12: Graffiti at a Parking Structure, 2008

7 PRESERVATION GUIDELINES

7.2 PRESERVATION GUIDELINES FOR HISTORIC WOOD

7.2.1 The Preservation and Maintenance of Historic Wood

Wood is one of the most common building materials today as well as in the history. Since wood can easily be shaped, it has been used both structurally and decoratively.

Locations

Wist Hall, Castle Memorial Hall, University High School 1 & 2, Music Building, Krauss Annex 2, and others.

Concerns

Wood is a building material that has a potential to become more beautiful when properly maintained. Its appearance often changes dramatically over time and often plays a very important role in defining the historic character of the building. However, wood materials are highly prone to deterioration due to ultraviolet light, moisture, and, especially, to termites in Hawaii. Wood features should carefully be maintained to preserve the historic building (Weeks & Grimmer 1992: Wood, n.p.).

Recommendations

Provide proper drainage around and on wood features. Apply chemical preservatives to expose or unpainted wood features. Coatings such as paint should be retained to protect the wood from moisture and ultraviolet light. Paint removal should be considered only when there is paint surface deterioration. Paint should be removed only to the next sound layer by the gentlest method possible. Repainting should be done with an appropriate

Fig 7.13: Water damage to Plywood panels at Keller Hall, 2008

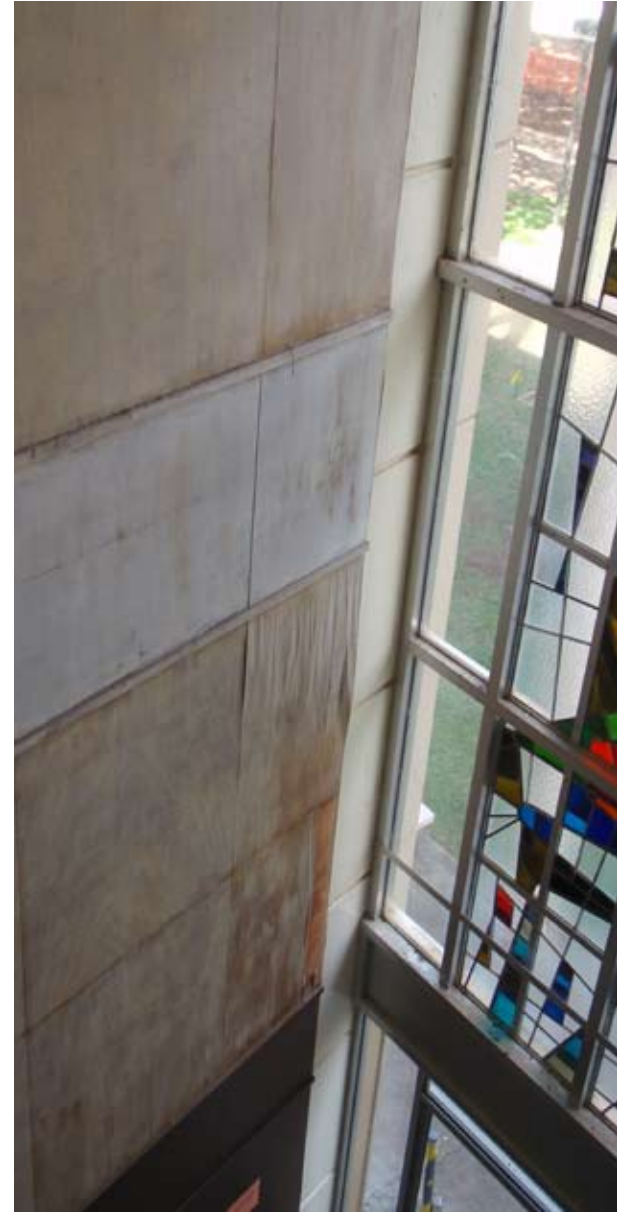




Fig 7.14: Wooden Bench with no Protective Coating at Watanabe Hall, 2008

color for the historic building (Weeks & Grimmer 1992: Wood, n.p.).

Wood features should be repaired by patching, piecing-in, consolidating, or reinforcing. When a feature is extremely deteriorated, it may be replaced by the same material or with a compatible substitute material. The area of replacement should be kept as small as possible. When an entire wood feature needs to be replaced, it should be recreated based on physical evidence or designed to match the historic building in size, scale, material, and color (Weeks & Grimmer 1992: Wood, n.p.).



Fig 7.15: Deteriorated Exterior Wooden Wall, 2008

7 PRESERVATION GUIDELINES

7.2 PRESERVATION GUIDELINES FOR HISTORIC WOOD

7.2.2 The Exterior Paint Problems on Historic Woodwork

Exterior wood features are painted to minimize moisture penetration which causes wood deterioration. Even though paint usually provides temporary protection for only five to eight years, its importance should never be underestimated in preservation of exterior wood elements (Weeks & Look 1982: 1).

Concerns

Failure in maintaining paint layers as protection can cause deterioration in exterior wooden features as well as exposed structural members. Evidence of paint deterioration includes chalking, blistering, peeling, or cracking (Weeks & Look 1982: 3). Removing “multiple layers of hardened, brittle paint from complex, ornamental, and possibly fragile

exterior wood surface” tends to be extremely difficult and must be done with a great caution. In addition, historic buildings built before 1950 are painted with layers of toxic lead-base paint. Removal process must be done under the strict control of the environment. Treatment for paint problems in historic buildings tends to be more complex than it is for recent buildings due to its level of details and multiplicity of the paint layers (Weeks & Look 1982: 1).

Recommendations

It is important to identify the condition and type of the paint to determine the most appropriate paint treatment. Condition of the paint varies greatly in different parts of a historic building and each problem should be recorded carefully (Weeks & Look 1982: 3).

When the condition of the paint only shows minor blemishes or dirt collection, paint removal is not required. When the top layer of the paint shows evidence of failure, limited paint removal is required. When substantial or multiple layer of the paint shows evidence of failure, total paint removal may be considered (Weeks & Look 1982: 3).

Complete paint removal, with any method, on historic wooden elements must be avoided as much as possible. When it’s absolutely necessary, the paint should be removed only to the next sound layer with the gentlest method possible. Paint removal is usually a costly, time consuming, and hazardous process. Hiring qualified professionals may be an economical option (Weeks & Look 1982: 2-3). Types of paint removal treatment must be chosen considering the long-term protection of the



Fig 7.16: Deteriorated Exterior Wall at University High School, 2008



Fig 7.17: Wooden Louver Windows at University High School, 2008

historic building, the condition of the paint layers, and the safety of the individuals who performing the treatments. Appropriate removing method may be chosen or combined from abrasive, thermal, and chemical methods (Weeks & Look 1982: 7).

Even when the color of the paint is fading, neither repainting nor paint removal is necessary unless the wooden feature shows evidence of deterioration. After the accumulated paint layers over its history reaches the thickness of 1/16 inches (16-30 layers), one or more additional layers of paint may cause extensive cracking and peeling of the oldest layers next to the wood. Necessity of repainting should be considered with a great caution (Weeks & Look 1982: 3).

If the exterior wood has been painted many times with oil paint, the new layer should also be oil paint. Latex paint over layers of oils paint has greater risk of failing since latex paint has greater shrinkage when dries. If use of latex paint is necessary, oil primer should be applied on existing oil paint to avoid failures (Weeks & Look 1982: 11).

Recommended Readings

The Secretary of Interior's Standards for Rehabilitation: Building Exterior Wood

Preservation Briefs 10: Exterior Paint Problems on Historic Woodwork

7 PRESERVATION GUIDELINES

7.3 PRESERVATION GUIDELINES FOR HISTORIC METALS

7.3.1 The Preservation and Maintenance of Building Exterior Architectural Metals

Architectural metal features include porches, steps, cornices, siding, roofs, roof cresting, rolled doors, window sash, entablatures, and hardware. Common types of architectural metal used in historic buildings are lead, tin, zinc, copper, bronze, brass, iron, and steel.

Location

Decorative screen in lanai at George Hall; wrought iron grill above entryway at Dean Hall; wrought iron gates at Krauss Hall; metal frame windows at Hemenway Hall and Bilger Hall; rain gutters and downspouts in various buildings.

Concerns

Architectural metal is a strong building material, yet it requires maintenance and careful preservation since it is prone to corrosion. Causes of corrosion should be identified and repaired as well as repairing the corrosion itself. Leaking roofs, broken gutters, and poorly maintained mechanical systems are common causes of corrosion. Placing incompatible metals that are far apart on the galvanic scale directly next to each other can also cause corrosion (Weeks & Grimmer 1992: Metal, n.p.).

Recommendations

Proper drainage should be provided to avoid water standing on surfaces. Type of metal and the characteristics should be understood prior to cleaning. The gentlest cleaning methods should be considered and tested before applying to the entire



Fig 7.18: Deformed Metal Drainpipe at Hemenway, 2008



Fig 7.19: Corroded Metal Doors at Hawai'i Institute of Geographics, 2008

surface. Blasting methods should never be used on soft metal such as lead, tin, copper, terneplate, and zinc. Grit blasting method may be considered for cast iron, wrought iron, and steel only after handscraping and wire brushing have proven to be ineffective. Apply appropriate paint or protective coating to minimize corrosion (Weeks & Grimmer 1992: Metal, n.p.).

Metal features may be repaired by patching, splicing, or reinforcing. Extremely deteriorated parts of metal features may be replaced with the same or a compatible substitute material. The area of replacement should be kept as small as possible. When an entire metal feature needs to be replaced, it should be recreated based on physical evidence or designed to match the historic building in size, scale, material, and color (Weeks & Grimmer 1992: Metal, n.p.).

Recommended Readings

The Secretary of Interior's Standards for Rehabilitation: Building Exterior Architectural Metals



Fig 7.20: Steel Columns at Krauss Hall



Fig 7.21: Wrought Iron Grill Detail at Dean Hall, 2008

7 PRESERVATION GUIDELINES

7.4 PRESERVATION GUIDELINES FOR HISTORIC ROOFS

7.4.1 The Preservation and Maintenance of Historic Roofs

Throughout the history, various materials and techniques are used to create building roofs. Historic roofs vary greatly in shape, materials, size, color, and patterning. Common historic roofing materials include wood shingles, clay tile, sheet metal, and slate (Weeks & Grimmer 1992: Roofs, n.p.).

Concerns

Preservation of historic roofing features is important both aesthetically and functionally. Keeping the roofs weathertight is a key in the long term preservation of historic buildings (NPS: Roofs). Roofs generally protect the historic building from the sun, rain, and other natural forces. Poor roofing features increase the rate of material deterioration of the building and

roofing problems should be repaired as soon as the failure is evident (Sweetser 1978: 1).

Recommendations

When roof failure is detected, it is important to contact professionals such as an architect, a roofing contractor, or a craftsman who are familiar with similar types of projects (Sweetser 1978: 3).

Problems in roofing can be due to various causes. Although slate can be expected to last longer than wood shingles, the majority of the roofing materials will deteriorate or become weakened after years of exposure to the sun, air pollutants, and rainwater. (Sweetser 1978: 3-4) Gutters and downspouts should be cleaned regularly to avoid water damage. Low slope roofs with parapets sometimes have inadequate slope for sufficient runoff and cause



Fig 7.22: Double Pitch Roof with Wooden Shingles at Krauss Hall, 2008



Fig 7.23: Dormer and Chimney on Roof of Krauss Hall, 2008

water to form pools on the roof. Failure of flashings can also cause major deterioration of roofing system (Sweetser 1978: 4). Roof sheathing should also be checked for moisture penetration and insect infestation. Leaking roof should be protected with plywood and building paper until repaired (Weeks & Grimmer 1992: Roofs, n.p.).

Both existing and potential problems of the roof system should be researched and identified to determine proper treatment for the roof. The cost of repeating repair can sometimes be more expensive than the cost of a new roof (Sweetser 1978: 5).

Reinforce historic roof when necessary and replace extensively deteriorated parts of the feature with

same or a compatible substitute material. Replacing of roofing material must involve professionals to determine the replacing material and extent of replacement (Sweetser 1978: 6). When an entire roof feature needs to be replaced, it should be recreated based on physical evidence or designed to match the historic building in size, scale, material, and color (Weeks & Grimmer 1992: Roofs, n.p.). Roofs, including the replaced ones, should be inspected twice a year along for leaks and damage (Sweetser 1978: 8).

7 PRESERVATION GUIDELINES

7.4 PRESERVATION GUIDELINES FOR HISTORIC ROOFS

7.4.2 The Preservation and Maintenance of Historic Clay Tile Roofs

Clay tiles are generally highly decorative and distinctive so that it often becomes an important character-defining feature of a historic building. Clay tile is a very durable roofing material that can last over a several hundred years when it's properly maintained. As for different roofing material, regular inspection and early detection of problems are the key in long-term preservation (Grimmer & Williams 1992: 1-2).

Locations

Wist Hall



Fig 7.24: Clay Tile Roof Detail at Wist Hall, 2008

Concerns

Common problems are the breakdown of the fastening system (i.e. iron nails), deterioration of metal flashing, deterioration of gutters, and the failure of the support system. Once gutters or downspouts fail, rainwater can seep under roofing tiles and cause deterioration of sheathing, fastening system, and even the structural members. Whether hand-made or machine-made, quality of clay tile varies from one to another. Efflorescence of soluble salts on the tile surface indicates poor quality porous tiles which often lack water-proofing ability. Clay tile can also easily be damaged by roofers walking carelessly. Broken tiles no longer function as water-proofing surface (Grimmer & Williams 1992: 11).

Recommendations

Historic clay tile roof must be regularly inspected for missing or broken tiles and leaks. Identifying the source of leaks usually requires thorough investigation in the attic and on the roof. When leaks are detected, the problem area should be covered by plywood sheets, roll roofing, or other water-proofing materials for protection (Grimmer & Williams 1992: 12).

When clay roof tiles are extremely fragile and cannot be walked on, removal of several rows of roof tiles may be necessary to create a path to the repair location. Slate rippers must be always used when removing historic clay tiles (Grimmer & Williams 1992: 12). Since clay tiles often last longer than the fastening system, it may be necessary to remove all clay tiles and re-lay them after installing the new fastening system. Tiles may be numbered and diagramed so that they are placed in the original



Fig 7.25: Clay Tile Roof Detail
at Wist Hall, 2008

location to preserve the original pattern and color of the roof (Grimmer & Williams 1992:13).

Since it tends to be extremely difficult to remove a broken tile without breaking the neighboring tiles, a professional roofer must be involved in clay tile replacement projects. When replacing a tile that is hard to obtain the matching replacement, original tiles from less important locations can be used. Although replacement tiles may seem to match color when installed, the difference in color and texture gets more obvious over time. When more than 30 percent of the roofing tiles are lost, broken, or damaged, the entire clay roof may be replaced. Concrete tile should not be used as a substitute material (Grimmer & Williams 1992: 12-15).

Recommended Readings

The Secretary of Interior's Standards for Rehabilitation: Building Exterior Roofs

Preservation Briefs 4: Roofing for Historic Buildings

Preservation Briefs 30: The preservation and Repair of Historic Clay Tile Roofs

7 PRESERVATION GUIDELINES

7.5 PRESERVATION GUIDELINES FOR HISTORIC WINDOWS

Windows are often one of the most important character-defining elements in historic buildings. Since windows are part of both interior and exterior of a building, they greatly influence the appearance and the function of the building. Historic windows sometimes require extensive maintenance since they are directly exposed to the weather, yet in many cases they are repairable and may be modified to fit modern needs.

7.5.1 The Repair of Historic Wooden Windows

Historic wooden windows often require much more maintenance than modern window units, yet they have a special appearance that is necessary in the preservation of historic buildings.



Fig 7.26: Window frames at Jefferson Hall, 2008

Locations

University High School 2, Krauss Hall and Annex 2, Jefferson Hall, Bachman Hall, and others.

Concerns

Even though historic wooden windows can easily be deteriorated without proper maintenance, deteriorated wood may be repaired by simple, yet time consuming, restoration work. Also, since it is relatively easy to replicate wooden window details, it is possible to keep the appearance and function of the window units for a long period of time. Major causes of wooden window deterioration are poor design, moisture, vandalism, insect attack, and lack of maintenance.

Recommendations

To carefully evaluate the physical condition of each window unit, a window schedule that lists all the window parts and location may be created. Window schedules may include visual record of the unit, condition of the paint, condition of the frame and sill, condition of the sash, glazing problems, hardware, and the overall condition of the window. All window units must carefully be inspected for water penetration problems. Paint blistering, cracking, flaking, and peeling usually occur where water penetrates (Myers 1981: 2-3).

Routine maintenance of wooden windows are usually labor intensive and relatively simple, it may be done without professional help. The routine maintenance process includes limited interior and

exterior paint removal, repair of sash, repairs to the frame, weather stripping and reinstallation of the sash, and repainting (Myers 1981: 3).

Even when wooden windows show some degree of deterioration, it's often repairable. Partially decayed wood can be repaired through drying the wood, treating decayed areas with fungicide, waterproofing with linseed oil, filling cracks and holes with putty, and then painting (Myers 1981: 5).

When wooden frames or sashes are too deteriorated to be repaired, deteriorated parts can be replaced with matching pieces or splicing new wood parts to existing members. This process is more expensive than previous processes and requires the help of carpenters or woodworking mills (Myers 1981: 6).

To increase the energy efficiency, installation of weather-stripping or re-caulking may be done (Weeks & Grimmer 1992: Windows, n.p.). Weather-stripping materials varies from felt, rolled vinyl strips, metal, to plastic spring strips. It is important to remember that some weather-strip holds undesirable moisture to further damage the wood (Myers 1981: 6-7).

When the condition of the historical window requires replacement, a replacement window should be carefully chosen considering the contribution of the window to the building such as “the pattern of the openings and their size, proportions of the frame and sash, configuration of window panes, muntin profiles, type of wood, paint color, characteristics of glass, and associated details” (Myers 1981: 7). Compatible substitute materials may be used to



Fig 7.27: Cracked window detail at Krauss Hall Annex, 2008

replace the original wood material when the detail design can be matched and the maintenance of original material or duplicating the window with the original material is not economically feasible (Weeks & Grimmer 1992: Windows, n.p.).

An important consideration in window repair is using linseed oil putty (not synthetic putty) as the material to re-glaze wood windows. While putty glazing is labor intensive the final product is superior.

7 PRESERVATION GUIDELINES

7.5 PRESERVATION GUIDELINES FOR HISTORIC WINDOWS

7.5.2 The Repair of Historic Steel Windows

Due to its tendency to be corroded and the low energy efficiency, historic steel windows have been removed and replaced with new units in many cases creating significant damage to the appearance of historic buildings. It is important to remember that historic steel windows can be cleaned, repaired, and weatherized to improve the appearance, functionality, and energy efficiency to fit the modern needs.

Locations

Hemenway Hall, Bilger Hall, University Health Center, and others.

Concerns

It is usually a more economical option to preserve

and retrofit historic steel windows rather than replacing with new or replicated units. In addition, replacing new units often differ in design from the original units and negatively impact the appearance of the historic building.

Recommendations

Character-defining windows of the historic buildings must be preserved even if the use of the building has been modified. A window schedule may be created to record the condition of each window unit. The window schedule may include visual record of the window unit (drawings or photographs), “degree of corrosion, condition of paint, deterioration of the sash, bent sections, condition of the glass and glazing compound, presence and condition of hardware, screws, bolts, and hinges, and condition of the masonry or concrete surrounds” (Park, n.d.: 3). Presence and degree of corrosion (rusting in



Fig 7.28: Window Modification for Air Conditioning, 2008

case of steel) is the controlling factor in window repair. Degree of corrosion depends on the how deep the corrosion exists in a steel section (Park, n.d.: 3).

Since moisture is the major cause of corrosion, windows should be made weather tight as much as possible before conducting any rehabilitation work. Since historical steel windows often are covered with toxic lead paint, it is important to understand the health and safety risks while planning the rehabilitation work.

Surface dirt and grease must be removed with the use of a vacuum or a brush and a wiping cloth with mineral spirits or denatured alcohol to access the degree of corrosion. When no major corrosion is detected following steps may be followed as regular maintenance :

- Remove rust and excessive paint
- Priming of exposed metal
- Replacement of damaged glass
- Replacement of missing screws or fasteners
- Cleaning and lubricating the hinges
- Retaining steel sections with two coats of finish paint compatible with the primer
- Caulking the masonry

When extensive corrosion or misaligned window section are detected, repair work is required. Extensive corrosion may be removed by sandblasting and misaligned window section may be repaired in place. Extreme care must be taken to protect the glass and surrounding masonry from damages. In case of severe corrosion damage or misalignment, it may be necessary to remove the



Fig 7.29: Metal Windows at Gartley Hall, 2008

window unit and repair it in a workshop. Repair work in workshops may sometimes be more costly than replacing, yet repairing must be done to preserve significant window units in historical buildings (Park, n.d.: 5-6).

It is possible to increase the energy efficiency of steel windows by simple additions such as weather stripping and caulking. Also, installation of thermal glass, applying fixed layers of glazing over the historic windows, or adding operable storm windows may be done to increase the efficiency of the windows (Park, n.d.: 10-11).

7 PRESERVATION GUIDELINES

7.5 PRESERVATION GUIDELINES FOR HISTORIC WINDOWS

7.5.3 The Preservation and Repair of Historic Stained and Leaded Glass

Although glass is a very durable material that can last over centuries, it is also one of the most fragile building materials. Extreme care should be taken for any minor work and all the restoration work should be done by professionals. Preservation Briefs defines stained glass as “colored, painted, or enameled glass, or glass tinted with true glass stains”. Leaded glass is defined as “...all glass assemblies held in place by lead, copper, or zinc cames” (Vogel & Achilles 1993: 1).

Locations

Keller Hall and University Health Service Building and other locations.



Fig 7.30: Stained Glass Mural Entryway at Keller Hall, 2008

Concerns

Deterioration of stained and leaded glass units can occur in three different elements: glass, the paints on glass, and the supporting structure. Since glass is generally prone to natural deterioration, the most common cause of breakage is physical impact or internal stress due to improper supports. Paint on glass often fades or flakes off in particles due to the poor quality of the paint mixture or being fired at too low temperature after painting. Structure for stained and leaded glass can consist of various materials. Deterioration of the structure often causes cracks or breakage of glass (Vogel & Achilles 1993: 7-8).

Minor cracks, sagging, and oxidation of glazing are part of the historic character therefore these require no treatment. Extensive cracks, major bulges of more than 1½ inches, and other signs of deterioration must be repaired properly. Glass should always be protected during restoration or when other work is undertaken on the building (Vogel & Achilles 1993: 9).

Recommendations

1. Soft water, or deionized water for significant windows, should be sufficient to remove dirt, soot, and grime on glass. If not, deionized detergent should be used as the next step. For painted glass, stability of the paint should be examined to avoid damages. Acidic, caustic, or abrasive cleaners should never be used.
2. For the best restoration result, it is important to research and record the

historic glass including an accurate date, maker, and style prior to any treatment. These can be researched through the building context, inscriptions and signatures on the glazing, style and imagery of the window, framing materials, shape and material of reinforcement bars, and construction method and color glass itself.

3. Repair and restoration project must be documented before, during and after the project work. Significant windows should be documented in writing as well as photographs. Windows must be photographed with color and black and white films under reflected as well as transmitted light (Vogel & Achilles 1993: 7).
4. Maintain the frame by painting and caulking regularly. It is important to keep the windows waterproofed.
5. Broken glass can be repaired in pieces by “drop-in” method or replaced when absolutely necessary. Replaced original glass should always be kept as a record. Cracks on glass should be repaired by copper foil, epoxy techniques, or silicone edge-gluing.
6. Glass panes that are bulging more than 1½ inches indicate failure in structural support. These windows should be placed flat for a few weeks before repairing to reduce stress. (Vogel & Achilles 1993: 9-12)



Fig 7.31: Stained Glass Detail at Keller Hall, 2008

Recommended Readings

The Secretary of Interior's Standards for Rehabilitation: Building Exterior Windows

Preservation Briefs 9: The Repair of Historic Wooden Windows

Preservation Briefs 13: The Repair and Thermal Upgrading of Historic Steel Windows

Preservation Briefs 33: The Preservation and Repair of Historic Stained and Leaded Glass

7 PRESERVATION GUIDELINES

7.6 OTHER PRESERVATION GUIDELINES

7.6.1 The Preservation of Historic Signs

Unlike “uniform plastic box signs” of today, historic signs are generally attractive for its details, the use of color, and unique design that are particular to its owner, time, and locations.

Locations

Bachman Hall, Bilger Hall, Keller Hall, Krauss Hall and Annex 2, and others.

Concerns

Even though historic signs could be a part of character-defining elements in a historic building, it may cause problems or may be modified since the use may change over time and historic sign becomes inappropriate to the building. Even after the sign becomes old or significant enough to be

preserved as a historic element, architectural style of the sign may not match the style of the historic building. It often rises as a question to whether it will be appropriate to preserve or remove the sign from the historic building (Auer 1991:1).

Recommendations

Historic signs should be retained when they are:

- Associated with historic figures, events, or places.
- Significant as reflecting the history of the building or the development of the historic district. A sign may be the only indicator of a building’s historic use.
- Characteristic of a specific historic period
- Integral to the building’s design or physical fabric.
- Local landmarks, that is, signs recognized



Fig 7.32: Keller Hall Signage, 2008

as popular focal point in a community.

- Elements important in defining the character of a district.

Regular maintenance is required for long-term preservation of historic signs. Signs should be checked for its support system, drainage system, and accumulation or damages by insects or birds. When any major problem is detected, it is recommended to contact qualified professionals. The goal of the repair is to restore the historic appearance of the sign. Signs must not be over restored (Auer 1991:8-9).

Historic signs may be reused even after the building use has changed. Historic signs may be kept unmodified as a historic symbol of the building when the new use is obviously different from the existing. Historic signs may be preserved by relocating it to the interior of the building. Historic signs may be modified to match the new use or owner when only minor changes to the sign are necessary (Auer 1991:9).

When placement of new signs is necessary, it should be designed as a part of the historic building respecting the size, scale, and design. Placement of the new sign should not negatively impact the significant feature of the building. New signs must be made of compatible materials with the historic building and it must be attached with extreme care so that historic fabric is not damaged (Auer 1991: 11).



Fig 7.33: Signage at Hemenway Hal, 2008



Fig 7.34: Bachman Hall Signage, 2008

7 PRESERVATION GUIDELINES

7.6 OTHER PRESERVATION GUIDELINES

7.6.2 The Use of Substitute Materials on Historic Building Exteriors

An increasing number of preservation projects are adapting the use of substitute materials on historic building exteriors. Despite the convenience and cost-effectiveness, an inappropriate use of substitute materials can greatly damage historic buildings both visually and physically.

Concerns

The use of substitute materials should be avoided as much as possible since more problems may be created and may cause the destruction of historic resources. Even if the substitute material seems to fit with the historic material well when installed, it often starts to age differently after continuous exposure to the ultraviolet light, moisture, and changing temperature. However, the careful use of substitute materials can reduce the cost, time, and effort required in preservation projects. Each case should be analyzed and planned with a great caution with the help of qualified professionals (Park 1972: 1).

Recommendations

Before considering the use of substitute materials, all the other preservation options should be considered. Repairs are always preferable to replacement. The use of substitute materials should be determined upon considering the “the unavailability of historic materials, unavailability of skilled craftsmen, inherent flaws in the original material, and code-required changes” (Park 1972: 2). Initial cost and long-term maintenance cost may also be a determining factor.

To assure the quality of the finished project, it is necessary to fully understand the properties of both historic and substitute materials. Some substitute materials may cause future deterioration of the historic material due to their difference in vapor permeability. The use of newly discovered building materials is not recommended since the properties are often not fully discovered. Substitute materials must match the appearance of the historic material, match the physical properties, and meet performance expectations (Park 1972: 6).

Possible substitute options include: cast aluminum for cast-iron; cast stone for stone or terra cotta; precast concrete for stone or terra cotta; and epoxies for terra cotta, ornamental metal, or wooden ornaments. All of the substitute options have advantages and disadvantages (Park 1972: 10-13).

7.6.3 Dangers of Abrasive Cleaning to Historic Buildings

Abrasive cleaning is one of the quickest ways to remove dirt accumulation, stains, and deteriorated building fabric or finishes yet may cause substantial damage to historic buildings. Abrasive cleaning methods are defined as “all techniques that physically abrade the building surface to remove soils, discolorations or coatings” (Grimmer 1979: 1). Abrasive tools include wire brushes, rotary wheels, power sanding disks, belt sanders, and high-pressured water.

Concerns

Because of its aggressiveness, abrasive cleaning must be avoided as much as possible and less

harsh cleaning methods should be considered. It is important to analyze the cleaning needs and desired result before applying abrasive cleaning methods. It is unnecessary for a historic building to appear as a new building to successfully complete a rehabilitation project. A thin layer of soil may not be desirable but is often not harmful. When the building has harmful layer such as stains, graffiti, or pollutants, cleaning of as small area as possible is desired. Repainting may be suggested instead of cleaning.

Before removing paint or coating from historic buildings, it is necessary to understand when and why the building was painted. The building may have been painted soon after the construction or painted later to solve maintenance issues. Abrasive cleaning may cause increased rate of erosion, enlarged cracks, loss of details, damaged nearby wood, glass, and other elements, and health risks to operators and nearby residents.

Recommendations

Appropriate application of abrasive cleaning depends on various factors such as the type and condition of the material, the size and sharpness of the grit, the pressure, the skill and care level of the operator, and the constancy of the pressure on all surfaces during the process (Grimmer 1979: 3).

For historic buildings, conscientious dry or wet abrasive cleaning using a 00 or 0 (very fine) mesh grit from 1/4 inch opening with the pressure of 20 to 100psi at a range of 3 to 12 inches is generally recommended (Grimmer 1979: 4). However, appropriate cleaning method and intensity varies from a project to the other. Abrasive cleaning tests



Fig 7.35: Water Damage on Exterior Walls, 2008

must be conducted each time under the supervision of experts and test patches should be weathered for one year to understand the long-term effects.

Recommended Readings

Preservation Briefs 6: Dangers of Abrasive Cleaning to Historic Buildings

Preservation Briefs 16: The Use of Substitute Materials on Historic Building Exteriors

Preservation Briefs 25: The Preservation of Historic Signs

7 PRESERVATION GUIDELINES

7.7 GUIDELINES FOR APPROPRIATE TREATMENT

7.7 Choosing Appropriate Treatments to Maintain Character

The buildings on campus have evolved over time in response to the changing needs of the different departments. Renovating or adding an addition to a historic building or context can greatly change the historic appearance; and it should be executed so that the integrity of the structure is not negatively impacted.

Considerations

The character of a historic building is very important; building an extension to or renovating a historic building could alter the character if done inappropriately. Before changing a historic building, one must acknowledge the elements that define the historic character. Thorough research on the building should be done to further understand the importance of the building. Such things as its construction, functionality, furnishings, as well as the knowledge about the builder, its owners, the later occupants, and the history of the building are all important. They all play factors to define character to the building. Many of these issues have been identified as part of this Report.

The National Park Service Preservation Briefs define a three-step process to identify the character of a building. These steps should be followed before any work occurs on a historic building. The steps suggested include:

Step 1:

Identify the building's overall visual aspects, by examining the exterior from afar to understand its distinctive features, and the building site, or

landscape. The NPS web site continues with a further clarification of this step:

“This first step involves looking at the building from a distance. Identifying the overall visual character of a building is nothing more than looking at its distinguishing physical aspects without focusing on its details. Such a general approach to looking at the building and site will provide a better understanding of its overall character without having to resort to an infinitely long checklist of its possible features and details. The major contributors to a building's overall visual character are shape, roof and roof features, openings for windows and doorways, the various projections and recesses on the building, such as porches that extend outward, or arcades that appear as voids, the exterior materials with their color or patterning, the trim and secondary features, such as decorative scrollwork and, finally, the building's site, that is, its immediate yard” NPS 2008: n.p.).

Step 2:

Identify the visual aspects of the exterior at close range by moving up very close to see its materials, craftsmanship and surface finishes.

“The second step involves looking at the building at close range. This is where you will be able to see and appreciate the qualities and workmanship of exterior surfaces – that is the building's specific materials and its craft details. ...What distinguishes the close-up visual character is often the result of materials that differ sharply in their color and texture. They often convey that sense of craftsmanship and age that distinguishes historic buildings from other buildings. It is important to understand that many of these materials can be easily damaged or obscured



Fig 7.36: Krauss Hall, 2008

by work that affects their surface. There is an almost infinite variety of surface materials, textures and finishes that are part of a historic building's character which are fragile and easily lost" (NPS 2008: n.p.).

*Step 3:
Identify the interior visual aspects – spaces, features and finishes – by going into and through the building.*

"The third step involves looking at the interior. This needs to be done slowly in order to correctly identify its distinctive visual character. These are the visual aspects to be considered: individual spaces and spaces that are related to each other, interior features that are part of the building, distinctive

surface materials and finishes, and any exposed structural elements.

First, remember that the shape of a space may be an essential part of its character. In office buildings, this is generally the vestibules, lobbies or corridors. If the shape or plan is altered, the interior character is changed. With some buildings, the relationship between spaces creates a visual linkage, such as in a hotel – from the lobby, to the grand staircase, to the ballroom. Closing off the openings between those spaces would change the character dramatically. Distinctive surface materials and finishes may be an aspect of the visual character, such as wooden parquet floors, pressed metal ceilings, wallpaper, or grained doors (NPS 2008: n.p.).

7 PRESERVATION GUIDELINES

7.7 GUIDELINES FOR APPROPRIATE TREATMENT

Fig 7.37: Addition at Hamilton Library, 2007



Finally, so-called secondary spaces are not usually perceived as important to the visual character of the building. This is quite often where change can take place within a rehabilitation or addition project.

Another issue to take into consideration while renovating or adding to a building is deciding where the addition should be placed on the site. It is suggested that the addition should be placed at the most inconspicuous side of the building where it would not overpower the character of the historic form (Weeks 1986: 5). This suggestion should be taken into consideration when adding additional floors to a building. It is recommended that the floors be set back from the existing wall plane to make the height extension less conspicuous (Weeks 1986: 5). Placing an addition in an area where it is very

noticeable impacts the building's historic character and historic context. The connection must also be detailed in a sensitive way.

It is also important to avoid any significant change to an important building elevation. The integrity of the design elements of the elevation should be preserved.

Recommendations

If it is determined that renovation or an addition is needed, using the three-step process guide to the determination of the historic character is important. Treatment of materials as further defined in this study is critical to the rehabilitation work.



Fig 7.38: Modified Windows to Accommodate Air Conditioning, 2008

An addition to the building should also be constructed at the area where the least amount of historic materials and features would be affected or lost, and the least change to historic context would occur. This area should be situated where it would not interrupt the character of primary interior spaces. The massing and scale of a historic building should be carefully respected.

It should be understandable as to what part of the building is historic and what part of the building is the addition. This can be accomplished by using similar but slightly different materials, colors, etc. If adding additional levels to a building, the floors should be set back from the wall plane, where it is least possible to view from street level.

Recommended Readings

NPS On-line education website: http://www.nps.gov/history/hps/tps/online_ed.htm

Secretary of Interior Rehabilitation: New Additions

Preservation Briefs 14: New Exterior Additions to Historic Buildings: Preservation Concerns

Preservation Briefs 17: Architectural Character: Identifying the Visual Aspects of Historic Buildings as an Aid to Preserving Their Character.

7 PRESERVATION GUIDELINES

7.8 GUIDELINES FOR INTERIOR REHABILITATION

As the buildings on campus age and grow older, the buildings must respond to change and evolving needs. Many of the buildings have, and will continue to go through renovations that involve exterior, as well as interior renovations. Renovating a building can either support, or greatly damage the historic character of such a building. The work of interior rehabilitation can range from a total reconfiguration to preserving original elements and features of a building.

Considerations

On the other hand, if a project is ready to go under renovation for primarily interior renovations, it is strongly suggested that one should identify the interior elements and “historic character” (Jandl 1988, 1). For significant work, a Historic Structure Report should be written before any planning work occurs. The Preservation Briefs has a three-step process to assist in identifying a building’s character; which is discussed in Section 7.7. All work should follow the Secretary of the Interior’s Standards discussed in section 7.0.

The study of the sequence of spaces, features, and finishes should also be done. These features tell a lot about the history of the building. Sequence of spaces could also express how things functioned at a particular time period; therefore, these elements should be preserved. While studying the spaces, one should identify primary and secondary spaces. Primary spaces are usually the more public spaces and often relate to the exterior of the building. These spaces are often found as the most decoratively ornate areas and are often finished with more expensive materials. Secondary spaces have less of an importance for a building. These

spaces are usually the utility spaces which service the structure. Because they aren’t as important as the primary spaces, these spaces can accept more change than primary spaces.

A thorough understanding of building materials, construction, and most importantly, the basics of moisture and air movement is needed when dealing with moisture control. A diagnosis should be done in order to solve more complex moisture problems without damaging historic interior materials. Secondary moisture damage may be easier to fix. It is recommended that an elimination of one source at a time helps to track success of each treatment. Trying to eliminate more than one source could cause additional problems. Keeping a log of moisture damage helps to track problems easier.

Other elements that play an important role to the interior character of the building are items such as paint colors. It is strongly recommended that a professional be consulted when rehabilitation work is done on these kinds of elements to determine historic color layers (Chase 1992: 6). The colors of paint can reflect the cultural influences and individuals of a particular time. Careful choices should be made to retain or restore selected portions of decorative work, as well as match some of the earlier colors that retain a historic sense of time and place. It is recommended to use period type of paint color and paint placement. When choosing paint, the use of modern paint is recommended (Chase 1992: 8). Paints made today can recreate historic appearances, without the toxic chemicals, like lead, which were used in historic paints.

Recommendations

The original layout of a historic building holds a lot of history, significance, and character. It is recommended that the special character of original layouts are retained and preserved to the greatest extent (Jandl 1988: 5). Careful consideration when planning any kind of work should be done before pursuing actual work on a building. Original special layouts should be preserved to the greatest extent. Character is damaged when spaces are subdivided. Alterations such as making cuts in the floor and ceiling, as well as installing dropped ceilings below ornamental or high room ceilings should be avoided as much as possible. These actions could obscure and/or destroy the historic details. This could change the character, configuration, and space proportions of a historic building.

Changing the color or removing paint and plaster from historic finished surfaces could also affect a building dramatically. Repairing deteriorated plaster work is encouraged (Jandl 1988: 5). Keeping the original color scheme is highly recommended. Retaining stairs in the historic configuration and location is recommended. If needed, a second means of egress should be constructed in secondary spaces, where it will not affect the character of the building.

Preserving visible mechanical systems are important to defining the character of the building. The use of alternatives methods for thermal resistance should be done. Avoid furring out perimeter walls, for this could also change the appearance of the building.

Recommended Readings

Secretary of Interior Rehabilitation: Spaces, Features, and Finishes

Secretary of Interior Rehabilitation: Mechanical System – Repair, Alteration/Addition

Preservation Brief 18: Rehabilitating Interiors in Historic Buildings

Preservation Brief 28: Painting Historic Interiors

Preservation Brief 31: Mothballing Historic Buildings

Preservation Brief 39: Holding the Line: Controlling Unwanted Moisture in Historic Buildings



Fig 7.39: Breezeway at Krauss Hall, 2007

7 PRESERVATION GUIDELINES

7.9 GUIDELINES FOR ACCESSIBILITY

Most of the historic buildings on campus were not designed for people with disabilities; many of the buildings have already been retrofitted to accommodate people with such disabilities but in a way that is temporary in nature or destructive to the integrity of the building.

Considerations

A historic building should be made accessible while preserving the historic qualities and characteristics of a building. In order to retrofit a building with the appropriate elements for disabilities, the following three-step process discussed in the Preservation Briefs (Jester & Park: 1993, 2) should be followed:

Step 1: Identify the historical significance and character of the building (Jester & Park: 1993, 2). In order to help identify a buildings character, the three-step process

written in earlier sections should be used to assist in this task.

Step 2: Analyzing the existing topography on the site could help lessen the amount of work that will be needed to allow for the proper accessibility.

Recognizing primary and secondary spaces could help in this task, since secondary spaces are possible areas that can be altered, and are more likely to accept change and not impact the historical significance of the building (Jester & Park: 1993, 2).

Step 3: Evaluate the required work that is needed and set priorities of what needs to be done (Jester & Park: 1993, 2).



Fig 7.40: Temporary ADA ramp at George Hall, 2008

Retrofitting a building to have proper accessibility can become costly. Careful planning should be done in order to assure that all possible arrangements are investigated. Accessibility modifications should be visually compatible with the historic structure. Not only should it be pleasing to the eye, but also "reversible"; where the integrity of the building is not damaged by the accessible changes (Jester & Park 1993: 4). The accessible design should be distinguishable from the historic design of the property, but not impact the historic integrity.

Understanding programmatic access as an option if all other conditions are not possible. This would include an alternative method for providing such services for persons with disabilities.

Recommendations

Preserving the historic nature of a building while accommodating access for persons with disabilities is most desired. In order to accomplish these goals, it is strongly recommended to follow the "accessible" three-step process, above, to achieve the best design solution.

Accessibility codes should also be consulted before taking on this task of retrofitting a building to achieve the best design solution. The accessibility elements should not take away from the character of the building and should blend well within the site.

Programmatic access should only be considered if all other design ideas can not be met.



Fig 7.41: ADA Access at Bilger Hall, 2008

Recommended Readings

Secretary of Interior Rehabilitation: Accessibility

Preservation Brief 32: Making Historic Properties Accessible

7 PRESERVATION GUIDELINES

7.10 GUIDELINES FOR LIFE SAFETY

Life safety of others is always of paramount concern especially since the University is a public institution. Regulations such as building codes, as well as working habits, can become a large safety issue if not followed correctly and can affect the health and safety of people's lives.

Considerations

When undertaking rehabilitation work, all building codes and requirements should be reviewed before any work can get underway. Building codes change over time. If not followed closely, these codes can affect a building dramatically. Such things as adding proper stairways and/or elevators to meet certain safety codes can affect a historic building in many ways. Although these kinds of changes are required, this type of work should not affect the historic character and qualities of a building. The International Building Code provides for the ability

to negotiate with the building official to provide for life safety as well as preserve the historic integrity. Generally speaking the work on a historic building does not need to bring the building up to the current Building Code; the consideration is to improve the life safety in the building. Of utmost importance is to provide for appropriate egress without damaging the integrity of the interior spaces of the building.

Tests and routine maintenance for historic structures should be done to monitor and watch for warning signals of health and safety issues. Careful monitoring may help determine if the removal of any type of toxic material is needed. The State Health Department recommends removing surfaces which contain harmful chemicals (Park & Hicks 1995: 5). Materials like historic paint finishes may contain high levels of lead. If this is found, follow the three-step planning process as outlined previously.



Fig 7.42: Safety Railing Detail, 2008

Evaluating options to control lead hazards should be followed using the Secretary of the Interior's Standards for the Treatment of Historic Properties (Park & Hicks 1995: 7). While working on the job site, workers who are working in the historic building area should be properly trained and use proper protective gear. Work areas should be carefully monitored, as areas may generate lead dust. Using the 'dust wipe' method should be done after work is completed to make sure that a high level of lead dust doesn't remain in the affected area (Parks & Hicks 1995: 6). Other federal regulations, such as the Occupational Safety and Health Act should also be followed.

Other things that may affect the safety of people are retrofitting buildings for seismic protection. This would not necessarily affect the Mānoa campus significantly since O'ahu falls under a relatively low risk zone (Look & Wong 1997: 14).

Recommendations

Safety on campus is a very important issue that could affect all people who are in the area of work. Good work habits and proper maintenance while on the site is required to help protect the lives and safety of everyone.

While undergoing rehabilitation work, it is important all building code requirements are cleared before assessing any work. Proper evaluations for toxic chemicals and substances should be evaluated before any work is done.



Fig 7.43: Steel Fire-escape at Dean Hall, 2008

Recommended Readings

Secretary of Interior Rehabilitation: Structural System – Repair, Replace, Alteration/Addition

Secretary of Interior Rehabilitation: Health/Safety

Preservation Brief 37: Appropriate Methods for Reducing Lead-Paint Hazards in Historic Housing

Preservation Brief 41: The Seismic Retrofit of Historic Buildings: Keeping Preservation in the Forefront

7 PRESERVATION GUIDELINES

7.11 GUIDELINES FOR ENERGY EFFICIENCY

Conserving energy in historic buildings may help reduce cooling expenditures by using passive measures.

Considerations

Passive controls, such as vents, awnings, shutters, etc, can cut down on energy use. Preservation Retrofitting standards apply to current times; but are constantly changing with the rapid improvement of technology. The use of these types of measures should not impact the integrity of the structure. Ventilating and Cooling historic buildings are general additions that should be carefully considered. Maintenance of these systems are critical to its success. Consideration should be given to maintaining buildings that were designed to be passively ventilated such as Sinclair Library.

The six-step process should be followed when planning for efficient energy use:

- Step 1:* Determine the use of the building (Park 1991: 5). Determining the system type that will be used, this will be determined by the number of people and function type of the building. These elements will determine the level of comfort and services required.
- Step 2:* Assemble a Qualified Team (Park 1991: 5). A knowledgeable group of people are needed to balance the complex factors relating to each aspect of historical renovation of a building.
- Step 3:* Complete a Condition Assessment of the existing building systems (Park 1995: 5). This assessment will



Fig 7.44: Deteriorated AC Duct Work, 2008
Fig 7.45: Deteriorated AC Duct Work, 2008

evaluate all aspects pertaining to the building. It will weigh all the pros and cons of the new system that is chosen.

Step 4: Prioritize spaces, finishes, and features (Park 1995: 8). This will aid in determining where new mechanical systems can be located that don't affect the use and integrity of the building.

Step 5: Familiarize ones self with local building and fire codes (Park 1995: 8).

Step 6: Evaluate options for size and type of systems (Park 1995: 8). Writing out a pros and cons list for each option will help with the decision process.

Along with preserving mechanical systems, historic metal windows should be evaluated. Most historic windows are not energy efficient, but they can be made more efficient. For example, caulking around masonry openings and adding weather stripping to reduce air infiltration around windows is important (Smith 1978: 4). The installation of insulated glass in place of existing glass could be other way of making a building a little more energy efficient (Smith 1978: 6). Changing the glass changes the weight, so operable windows need special consideration.

Recommendations

Historic buildings can be energy friendly buildings if consideration is given to appropriate systems. Because they were built before the technology we have today, elements in these types of buildings need to be retrofitted, in order to function better.

Mechanical systems play a large role in the maintenance of a building. These systems can either hurt, or support a buildings function. Maintenance is key to a successful energy efficient building. Using the six-step process, as noted above, can help reduce and maintain the energy used in the building.

Existing historic systems should be preserved if found to have integrity. Some systems may be an important element to the buildings character. If this is the case, the system should be preserved as much as possible, and simple actions, such as caulking openings, or adding weather stripping to windows can all help in saving energy.

Energy efficiency is another important aspect to consider. As times change, the technology to keep a building energy efficient is constantly improving. Using the six-step process above will help assist in achieving the greatest efficiency for a historic building.

Recommended Readings

Secretary of Interior Rehabilitation: Energy

Preservation Briefs 3: Conserving Energy in Historic Buildings

Preservation Briefs 13: The Repair and Thermal Upgrading of Historic Steel Windows

Preservation Briefs 24: Heating, Ventilating, and Cooling Historic Buildings: Problems and Recommended Approaches

7 PRESERVATION GUIDELINES

7.12 GUIDELINES FOR LANDSCAPE PRESERVATION

The significant characteristics of a heritage landscape can be categorized into six groups of main concern. These include the spatial organization, circulation, topography, water features, structural elements, and vegetation, each with its own set of considerations to identify and document. The following text describes each concern and potential considerations.

CONCERNS

Spatial organization and land patterns

The relationship of significant landscape features the overall composition of a heritage landscape reflects a specific and unique spatial organization and land pattern. Size, configuration, and proportion define spatial patterns. Proper analysis will reveal the relationship of landscape features to the integrity of the site, temporal changes in organization and

patterns, and functions that originally influenced the historic organization of the space. Non-historic uses of heritage landscapes should also be identified as they may negatively affect the integrity of the site. Identifying and evaluating the degree of deterioration and damage to the character defining features and materials can help avoid the unnecessary replacement of damaged features and materials. Proper maintenance of the site involves the limit of non-historic uses or damaging levels of pedestrian access as a means to limit deterioration of the site.

Non-destructive maintenance procedures should be practiced to prevent potential damage. These include minimizing invasive growth of non-historic vegetation, preventing the addition of non-historic features, and replacing missing or destroyed features beyond repair with new elements that match historic characteristics. All repairs and replacements should not compromise the integrity of the historic



Fig 7.46: Banyan Grove at Kennedy Theatre, 2008

spatial organization of space (Additional guidance can be found at the NPS website: http://www.nps.gov/history/hps/hli/landscape_guidelines/preserve/spatial.htm).

Circulation

Human interaction with a historic landscape results in circulation patterns specific to the site. The circulation through a site greatly influences the quality of the landscape. Items to identify and document concerning the circulation of historic landscapes include pedestrian paths, walkways, vehicular roads, bike paths, and unpaved paths. Identification may reveal the alignment, surface, edge, width, grade, material, and infrastructure (drainage or structural system if any), the overall age of system, and evolution of circulation over time that has influenced circulation patterns. Identifying and evaluating the degree of dysfunctional circulation flows can help inform necessary steps to reverse degradation of a site.

The implementation of basic upkeep procedures such as raking and clearing out debris from drainage systems can form the first step in maintaining the circulation features and prevent dysfunction, and damage to circulation flows through the site. Areas of the site made vulnerable through improper or deteriorated circulation flows should be protected by restricting access or installing temporary protective textiles over the area until the area can be properly repaired. Surface treatment, materials, and edges of historic features should be repaired when damage is beyond basic maintenance, to prevent further deterioration. In-kind replacement of historic features should only occur when repair is insufficient. In the event of replacement, avoid



Fig 7.47: McCarthy Mall, 2008

installing new drainage systems when historic prototype functions properly and always match new material with the old composition, design, color, and texture (NPS 1995, n.p.).

Topography

Identifying the topography of a site includes documenting the historic shape, slope, elevation, aspect, contour, and evolution over time. Conducting a topographic survey and using archival resources such as historic plans and aerial photographs can help identify and document the historic topography and its relationship to natural systems. Studying changes beyond the site can inform the source of deterioration and damage to the site.

7 PRESERVATION GUIDELINES

7.12 GUIDELINES FOR LANDSCAPE PRESERVATION

Maintenance procedures should protect the topography by limiting erosion. Proper upkeep of drainage systems can prevent the destabilization of the topography. Restricting access when human interaction may compromise the site and installing temporary protective textiles over eroding slopes can help maintain the site until the topography is stabilized. Minimize replacement of historic soils and rocks that may alter historic quality of the topography, avoid filling portions of settling or eroded features with unmatched soil, and replace destroyed features with in kind topographic materials when damage is beyond repair. (NPS 1995: n.p.).

Water Features

Regarding water features, the shape, water level movement, sound, reflective qualities, structure, and mechanical systems of historic water features should be identified and retained. Proper maintenance involves the regular clearing of organic debris, to prevent damage to the mechanical system and deterioration of materials caused by rotting debris. Maintenance of mechanical, plumbing, electrical, and/or drainage systems holds top priority in preserving the characteristic qualities of the water feature. Damage to the structure, such as cracks should be immediately repaired to prevent enlargement of the crack and further deterioration of the site. Any non-historic or invasive vegetation should be removed, and the form, bottom, and edge of water features should be reinforced to stabilize the water fountain. In the even of damage beyond repair, match replacement with historic features to preserve significant characteristics (NPS 1995: n.p.).

Fig 7.48: Varney Circle Fountain, 2008



Structures, Furnishings and Objects

Relationships between historic structures, furnishings, or objects and the historic integrity of the site should be identified and documented. Archival photographs and original drawings can be used to determine the age of each element and retain historic characteristics. Deteriorating components should be reinforced according to the proper preservation standards of their respective material and structure, and access to these features should be restricted to stabilize and protect the feature. Employing non-destructive, non-abrasive maintenance procedures against rust and water intrusion can further contribute to the preservation of integrity. Replace materials and structural elements to match historic composition, design, color, and texture (NPS 1995: n.p.). Additional guidance can be found at the NPS website: http://www.nps.gov/history/hps/hli/landscape_guidelines/preserve/spatial.htm.

Vegetation

Vegetation identification includes documenting the broad cover types, genus, species, caliper, fruit, bloom, size, color, scale, form, texture, and age of historic vegetative features. Identification and condition work was accomplished as part of this Report. Further studies should be conducted to identify the proper season for maintenance of any vegetation. Practicing proper horticultural and agricultural maintenance techniques plays a primary role in ensuring the proper care of landscape materials. Maintenance, such as standardized pruning, deep root watering or fertilizing, aerating

soil, or grafting onto historic genetic stock is important. Proper techniques can rejuvenate vegetation and retain historic appearances.

Additional maintenance may require the removal of non-historic invasive plant materials. Installing protective structures around unstable vegetation can further protect below-ground root systems from soil compaction. Protect tree trunks and limbs from damage by equipment during maintenance or near by construction. Propagate replacement vegetation from historic plant when possible, otherwise replace damaged vegetation beyond repair with similar. (NPS 1995: n.p.).

Other Concerns

In addition to the six defining categories of historic landscape, preservation maintenance should also anticipate any special considerations that may affect the integrity of the site. These include any accessibility, health and safety hazards, or environmental concerns that may negatively affect the landscape. Solutions to accommodate modern concerns should not alter original character defining features. Solutions to mitigate potential conflicts can include alternatives, such as when widening a path for accessibility to use the same material and design pattern. Investigate systems, methods, devices, or technologies, such as energy efficient light fixtures or mechanical systems to ensure environmental protection and compliance with protection agencies. Reclaim natural resources and environmental integrity in a way that does not damage historical nature of site. NPS, 1995: n.p..

7 PRESERVATION GUIDELINES

7.12 GUIDELINES FOR LANDSCAPE PRESERVATION

Fig 7.49: Bachman Hall Courtyard, 2008



Recommendations

Proper maintenance forms the core of effective preservation of heritage landscapes. Improving the organization and coordination of UHM Facilities Management may provide the best assurance of proper preservation. Reform at the institutional level could create several benefits, mainly the creation of a unified unit that separates Grounds Landscaping Services from Janitorial and Buildings Services in the current Buildings and Grounds Management. The overall reorganization of UHM landscape maintenance would also combine the divided maintenance procedures between Central, Lower, and Housing, as the visual discontinuity between upper and lower campus reflects the current divide

between maintenance management. Furthermore, creating a unified landscaping unit may enable higher funding sources for landscaping services, which currently share funding with janitorial and building services. With more funding, equipment and irrigation systems may be upgraded and new materials and planting supplies purchased. Additional funding could also enable the creation of more qualified job positions. In addition to organizational hierarchy, landscape maintenance may also benefit from more qualified job positions. Upgrading job positions with requirements that mandate more experience, education, licensing, or certification could strengthen the landscaping work force. The addition of licensed arborists and more qualified workers could greatly improve the skill level of the overall work force. Further development of written policies, procedures, and protocol regarding maintenance and preservation procedures will better secure the protection of historic landscapes.

Every historic landscape could be maintained by a special crew, composed of experienced workers and an arborist, who can work with the Landscape Committee to ensure proper preservation of the heritage resources. Another recommendation may include connecting with other prominent University resources, such as Lyon Arboretum, which contains a strong collection of botanical specimens. Linking the botanical collection of Mānoa campus with the collection of Lyon Arboretum may introduce more expertise and labor support in the care and maintenance of the most significant plantings on campus.



Fig 7.50: Lyon Arboretum,2008

7 PRESERVATION GUIDELINES

7.13 CONCLUSION

Preservation of historic buildings can be very costly and hard work. It often involves a lot of time craftsmanship, and patience. However, historic buildings have character and quality in details that cannot be found in the buildings of today. Historic buildings symbolize the history and area place to remind people of their culture and traditions. Existence of historic buildings on the University of Hawai'i at Mānoa campus adds richness and dignity to the campus character. Each identified building holds a significant amount of history that makes up the great wealth of the campus.

This report is a reminder of how important the historic buildings and landscaping are on campus. Not only does this Report imply the great significance of each structure; but it also suggests ways of preserving these special historic buildings and landscapes for many more years to come. Following the suggestions in this Report will preserve such important buildings and establish the campus as an important contributor to the history of our state.





Fig 7.51: The Quadrangle with Hawai'i Hall in Background, 2008

CHAPTER 8

APPENDIX

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8 APPENDIX

8.3 FIGURES WITH SOURCES

All figures not listed were photographs of the Heritage Center.

CHAPTER 1

Fig 1.1: Hawai'i Hall, Hand Rendering – University of Hawai'i Archives

Fig 1.2: Founder's Gate, Hand Rendering – University of Hawai'i Archives

CHAPTER 2

Fig 2.2: Aerial Photo of UHM Campus, 1926 – University of Hawai'i Archives

Fig 2.3: View across Manoa Valley, Circa 1930– University of Hawai'i Archives

Fig 2.4: Aerial Photograph of the UHM Campus, Circa 1945 – University of Hawai'i Archives

CHAPTER 3

Fig 3.1: Hokulea Contemporary Polynesian Voyaging Canoe, Honolulu Harbor, 2007 –
• CC = citation and non-commercial use
• Flickr.com Profile Name: "Kanaka"
• Image Location: <http://www.flickr.com/photos/kanaka/1100688127/>

Fig 3.2: Manoa Falls, Honolulu, Hawaii, 2007
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Fig 3.3: Kukā'o Heiau, Manoa Valley, 2008
Heritage Center

Fig 3.4: Taro Lo'i Agriculture in Mānoa Valley
University of Hawai'i Archives

Fig 3.5: Manoa Chapel, Circa 1855
University of Hawai'i Archives

Fig 3.6: Aerial Photo of UH Campus, Circa 1920
University of Hawai'i Archives

Fig 3.8: UH Campus, Circa 1932
University of Hawai'i Archives

Fig 3.9: First UHM Faculty, Circa 1910
University of Hawai'i Archives

Fig 3.10: The Quad Buildings, Circa 1935
University of Hawai'i Archives

Fig 3.11: Mid Pacific Institute and the Quad Buildings Complex, Circa 1939
University of Hawai'i Archives

Fig 3.12: Makai view UHM Campus, Circa 1945
University of Hawai'i Archives

Fig 3.13: Pearl Harbor Bombings, 1941
• 'Public Domain' from the National Archives
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Fig 3.14: Newspaper Headlines December 7th, 1941
• 'Public Domain' from the National Archives
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Fig 3.15: Pearl Harbor Bombings, 1941
• 'Public Domain' from the National Archives
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Fig 3.16: Students on Hawai'i Hall lanai, 1945
University of Hawai'i Archives

Fig 3.17 and Fig 3.18: Hawai'i Statehood Ceremony at Iolani Palace, Honolulu, August 21, 1959'Public Domain" from the National Archives- Image use is 'unrestricted'

Fig 3.19: State Capital Building, Honolulu, 2007
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Fig 3.20: Bachman Hall Vietnam War Protests 1968 – University of Hawai'i Archives

Fig 3.21: Charles William Dickey, Circa 1900
University of Hawai'i Archives

Fig 3.22: Oriental Institute Design Proposal by C.W. Dickey, 1938
University of Hawai'i Archives

Fig 3.23: Thurston Chapel, by Vladimir Ossipoff, 2006
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Fig 3.24: Thurston Chapel Interior, by Vladimir Ossipoff, 2006
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Fig 3.26: Bank of China by I.M. Pei, Hong Kong. 2007
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- Fig 3.27: Arizona Memorial, Pearl Harbor. 2007
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 - Image Location: <http://www.flickr.com/photos/cutshall/1364469123/>

Fig 3.29: Pyramide du Louvre by I.M. Pei, Paris France. 2007

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- Flickr.com Profile Name: "Michael Davie"
- Image location: <http://www.flickr.com/photos/michaeldavie/2577415027/>

Fig 3.30 Hawai'i Theatre Interior 1922 at Hawai'i Theatre Center used with permissions

CHAPTER 4

(All Images by the Heritage Center)

CHAPTER 5

- Fig 5.8 Orvis Auditorium Hand Rendering, Circa 1960
University of Hawai'i Archives
- Fig 5.9 Music Complex Hand Rendering, Circa 1960
University of Hawai'i Archives
- Fig 5.10 Construction Site, Circa 1960
University of Hawai'i Archives
- Fig 5.34: Quad Building Complex, 1939
University of Hawai'i Archives
- Fig 5.35: Back of Manoa Valley, Quad Building Complex in foreground, 1932
University of Hawai'i Archives
- Fig 5.40: Hawai'i Hall, Circa 1925
University of Hawai'i Archives
- Fig 5.45: Gartley Hall Entry, Circa 1945
University of Hawai'i Archives
- Fig 5.50: George Hall. Circa 1950
University of Hawai'i Archives
- Fig 5.51: George Hall as 'the Library', Circa 1940
University of Hawai'i Archives
- Fig 5.52: George Hall Entry. Circa 1950
University of Hawai'i Archives
- Fig 5.55: Dean Hall, Circa 1950
University of Hawai'i Archives
- Fig 5.59: Crawford Hall, Circa 1950
University of Hawai'i Archives
- Fig 5.63: Students at the Fountain, Circa 1945
University of Hawai'i Archives
- Fig 5.68: Insurance Map for Engineering Quad, 1931

University of Hawai'i Archives

Fig 5.77: Hemenway Hall Entry, Circa 1945
University of Hawai'i Archives

Fig 5.78: Hemenway Hall Construction, 1938
University of Hawai'i Archives

Fig 5.79: Hemenway Hall with Diamond Head in the background, Circa 1945
University of Hawai'i Archives

Fig 5.84: Founder's Gate, Circa 1940
University of Hawai'i Archives

Fig 5.85: Founder's Gate, Hand Rendering
University of Hawai'i Archives

Fig 5.92: Open reading lanai with Diamondhead in Background, Circa 1965
University of Hawai'i Archives

Fig 5.93: Sinclair Library with Diamondhead in background, Circa 1965
University of Hawai'i Archives

Fig 5.95: Bachman Hall hand-rendering, Circa 1947
University of Hawai'i Archives

Fig 5.96: Bachman Hall, Circa 1955
University of Hawai'i Archives

Fig 5.97: Jean Charlot painting with mural Bachman Hall, 1949

Jean Charlot Collection with drawing for mural

Fig 5.98: Jean Charlot painting Bachman Hall, 1949

University of Hawai'i Archives

Fig 5.99: Andrews Amphitheater seating, Circa 1940
University of Hawai'i Archives

Fig 5.101: Andrews Amphitheater seating with Diamondhead in the background, Circa 1940
University of Hawai'i Archives

Fig 5.110: Andrew's Amphitheater Landscape, with Mānoa Valley in the background, Circa 1940
University of Hawai'i Archives

Fig 5.121: Building 37, Circa 1940
University of Hawai'i Archives

Fig 5.124: Bilger Hall, Circa 1960
University of Hawai'i Archives

Fig 5.138: Krauss Hall prior to demolition of the wing fronting Dole Street (foreground), Circa 1960
University of Hawai'i Archives

CHAPTER 6

(All Images by the Heritage Center)

CHAPTER 7

(All Images by the Heritage Center)

CHAPTER 8

(No Images)

CHAPTER 9

APPENDIX CD-ROM

1. Botanic Collection Maps:

- 2008 Botanic Inventory of Rock Plantings (1957)
- 2008 Botanic Condition Assessment of Rock Plantings (1957)
- 2008 Botanic Inventory
- 2008 Botanic Condition Assessment

2. Botanic Collection Plant Data Sheets:

- 2008 Rock Plantings (1957) Data
- 2008 Collection Data

3. Heritage Building Original Construction Documents:

- Bachman Hall
- Castle Memorial Building
- Engineering Quad
- Hale Mānoa
- Henke Hall
- Keller Hall
- Kennedy Theatre
- Krauss Hall Complex
- Miller Hall
- Music Building Complex
- Sinclair Library
- University High School 1
- University High School 2
- Wist Hall

4. University of Hawai'i at Mānoa Long Range Development Plan Document (03-03-2008)

5. University of Hawai'i at Mānoa Campus Heritage Report (12-29-2008)