



## ***Content and Format Guidelines: Archaeological Inventory Survey Reports***

### **Preface**

This document was prepared by the Hawai'i State Historic Preservation Division (SHPD) for use by individuals, consulting firms and research teams who conduct archaeological field investigations within the State of Hawai'i and the United States Territorial Islands that were historically within the territory of Hawai'i (e.g., Midway, Johnston and Palmyra Atolls). The purpose of the guidelines is to aid archaeological report preparation and review by ensuring that all important information is included in reports, and that the information is organized in a manner that allows full and effective use by the SHPD as a regulatory agency and as the party responsible for maintaining the State Inventory of Historic Places (SIHP).

Some of the recommended content found here is derived from Hawaii Administrative Rule (HAR) Title 13 Subtitle 13 Chapter 276. This content is cited as to source and is *required* for all reports produced in connection with a State or County-issued permit. Some of the recommended content is derived from the Secretary of the Interior's Standards for Identification, Evaluation or Archaeological Documentation. This content is cited as to source and is *required* for all reports produced in connection with Federal undertakings or Federally-permitted projects. Many projects in Hawaii are permitted or funded through both Federal and State or County agencies. Reports produced in connection with these projects are required to include content pursuant to HAR 13-13-276 and The Secretary of the Interior's Standards. Most of the HAR requirements are based on The Secretary of the Interior Standards; the joint use of these sources is therefore relatively seamless.

Archaeologists conducting research projects in Hawaii are urged to incorporate the applicable guidelines regarding spatial data and metadata, and SIHP site number requests, to ensure that information is made available for long range planning, land use decisions, and emergency protection measures. Survey and inventory reports funded by Certified Local Governments must use The Secretary of Interior's Standards, and we urge the use of these guidelines when designing scopes of work, grant budgets and timelines, and in awarding grants to individuals or firms. In cases where archaeological and architectural surveys are conducted simultaneously, please refer to the guidelines for architectural surveys as well, to ensure that all information is consistent for the applicable resources.

Copies of these guidelines are available from our website ([dlnr.hawaii.gov/shpd/](http://dlnr.hawaii.gov/shpd/)). If you have questions or wish to comment, please contact:

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## Acronyms

AIS	archaeological inventory survey
APE	area of potential effects
CFR	Code of Federal Regulations
GIS	geographic information system
HAR	Hawaii Administrative Rules
HRS	Hawaii Revised Statutes
HRHP	Hawaii Register of Historic Places
NPS	National Park Service, Department of the Interior
NRHP	National Register of Historic Places
SIHP	State Inventory of Historic Places
SHPD	State Historic Preservation Division
TMK	Tax Map Key (property identification system in Hawaii)

## Acknowledgement

*This program receives Federal financial assistance for identification and protection of historic properties. Under Title VI of the Civil Rights Act of 1964, Section 504 of the Rehabilitation Act of 1973, and the Age Discrimination Act of 1975, as amended, the U.S. Department of the Interior prohibits discrimination on the basis of race, color, national origin, or disability or age in its federally assisted programs. If you believe you have been discriminated against in any program, activity, or facility as described above, or if you desire further information, please write to:*

*Office of Equal Opportunity  
National Park Service, 1849 C Street NW,  
Washington, DC 20240*

*The activity that is the subject of this (type of publication) has been financed (in part/entirely) with Federal Funds from the National Park Service, U.S. Department of the Interior, and administered by the Hawaii Department of Land and Natural Resources (DLNR). However, the contents and opinions do not necessarily reflect the views or policies of the Department of the Interior or the DLNR.*



## 1. Submittal Form / Cover Letter

### **Submittal Form and Fee Payment**

Inventory survey reports submitted to the SHPD for review and comment in connection with State or County permitted actions (Chapter 6E compliance) are subject to a submittal fee schedule, pursuant to HRS Chapter 6E-3 and HAR §13-275 and 284. The fee must be paid at the time of submission; fee payment triggers the beginning of the review period timeframe, assuming that the submittal is otherwise complete. All submittal fee payments are processed at the main SHPD office in Kapolei; neighbor island offices do not accept or process these payments. Report submittal forms are available from the SHPD website (<http://dlnr.hawaii.gov/shpd/forms>). The filing fee schedule is also posted on the SHPD website at <http://dlnr.hawaii.gov/shpd/archaeology/filing-fee-schedule/>. Filing fees do not apply to reports prepared for Federal undertakings or for research projects, unless there are also Chapter 6E permits involved. The submittal form is designed to provide sufficient information for an initial entry into the SHPD Reports Database. After the report is reviewed and accepted as final, the database entry is updated, the final report is uploaded to DocuShare, and hard copies are shelved at the SHPD Kapolei library and the applicable island SHPD library. Draft reports are stored in a holding area for one year; if no revised final is submitted after that time, the draft will be scanned into DocuShare, accessioned and shelved so that the information is available to researchers.

Information required for the Chapter 6E compliance submittal form includes the agency or consulting firm requesting the review, a contact person's name, address and other contact information, the title, authors and date of the report, number of pages, acres surveyed, and SIHP sites identified and described. If the submittal is a revised report, indicate the correspondence Log and Document numbers and date of the review letter. The submittal fee schedule, based on the type of report/plan submitted, is provided on the form. An example of a Chapter 6E report submittal form is found in Appendix A.

### **Cover Letter**

Reports completed for federal undertakings should be submitted by the lead federal agency or its designated representative. No submittal fees are charged, however important information about the undertaking should be provided with the report. The following information should be included in the cover letter:

- A. The name of the undertaking, location including TMK parcel(s) with island code, and any identifying number assigned to the project by the lead federal agency;
- B. The lead agency name and applicable branch office, contact person(s) who can answer questions, and their contact information (phone and email);
- C. Brief description of the undertaking, including type and extent of proposed land disturbance, acreage of the area of potential effects (APE) and whether or not the entire APE had been surveyed and is addressed in the attached report;
- D. Applicable laws and regulations that apply and what action by SHPD is being requested, i.e., request for concurrence with National Register eligibility (36CFR800.4) and/or request for concurrence with a determination of effect (36CFR800.5);
- E. Any conditions that might affect or assist in the review of the report and in the responding correspondence; for example, consultation with NHO may be documented in a separate report.

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Reports completed in connection with a Certified Local Government grant or contract, or other National Park Service Historic Preservation Fund grant should be submitted with a cover letter that contains the following information:

- A. The survey or project name, location including TMK parcels(s) with island code;
- B. The title and type of grant, source of funding, tracking number(s) and deliverable schedule with the attached report identified as a specific deliverable;
- C. Dates of any fieldwork and/or archival work presented in the report;
- D. Conditions of the grant or contract scope of work that apply specifically to the attached report;
- E. A clear statement regarding what action by SHPD is being requested; for example, review of the report and comments are requested, or report being submitted for information and filing in the SHPD library database.
- F. Contact person familiar with the survey (preferably the principal investigator) who can answer questions, and their contact information (phone and email).

Reports prepared as part of or as the result of research projects should be submitted with a cover letter that contains the information listed above. We understand that TMK information is often not used in research contexts; however our inventory and library databases are most frequently searched by TMK. This field is very important for management purposes and for insuring that historic properties identified during research fieldwork are integrated into the review and compliance process.

## 2. Report Cover and Title Page

All reports submitted to SHPD, regardless of their regulatory context should provide the information listed below on the title page. Chapter 6E compliance reports should include the following information on the report cover as well as the title page:

- A. Report title, which should include the type of investigation (inventory survey, reconnaissance survey), project name, location (ahupua'a, modern district, island), and Tax Map Key parcel(s) with island code, written (x) x-x-xxx:xxx;
- B. All authors and editors; name and address of the consulting firm if applicable;
- C. If the report was prepared on behalf of a private entity or public agency, include the name and mailing address of that entity or agency, along with applicable contract or permit number;
- D. Year and month of report printing; if this is a revised report, the printing date should reflect the year and month of the most recent revision;
- E. Notation as to whether the document is a draft or final report.

Reports completed for projects funded by the NPS Historic Preservation Fund or other Department of the Interior grant sources must include an acknowledgment of federal assistance that shall be placed in its entirety on the title page or on the page immediately following the title page. The full text of the acknowledgement as found on page 3 of this document must be used.



### 3. Management Summary / Abstract

This section is appropriate for all Chapter 6E and Section 106 compliance reports as well as reports generated through NPS Historic Preservation Fund grants. It should be a succinct summary of the scope and findings of the survey, as well as recommendations for significance and any further work. The following information should be included:

- A. Specify the type of survey and acreage of area surveyed; if different levels of survey were used, indicate the acreage of each level; for example 7 acres of a 10-acre survey area may have been subjected to intensive pedestrian transects only and 3 acres may have been subjected to pedestrian transects and systematic subsurface shovel testing;
- B. Describe the regulatory context and reason for the survey, to include reference to pertinent laws and regulations, SHPD correspondence relating to the need for a survey and/or scope of work; if this is an addendum or update survey indicate such and provide reference to the preceding document(s);
- C. Provide a description of the proposed project or undertaking if the survey is in a compliance context; include location and description of APE; if the survey area and APE are not the same, indicate such and explain;
- D. Provide the name of the principal investigator, dates of the investigation (archival research, field work and laboratory work), the number of persons involved in the fieldwork and total labor hours;
- E. Summarize the findings, to include number of newly identified and previously identified archaeological sites found and their SIHP site numbers; number of subsurface tests conducted; if testing was conducted within site areas, indicate number of features and sites included in testing; indicate number of sites found via surface survey and number found via subsurface survey/testing;
- F. Provide a summary of recommended significance evaluations and indicate standards/criteria used (HAR §13-275, §13-284, HRHP or NRHP); and a summary of treatment recommendations.

### 4. Table of Contents

The table of contents for all reports and plans should provide the following information if the text exceeds ten pages:

- List the major sections with subheadings and appendices (pages numbered);
- Provide a list of figures and their page numbers;
- Provide a list of tables and their page numbers.

Chapter 6E compliance reports and plans should follow the organizational structure indicated in the HARs as applicable. Archaeological inventory survey reports, for example, are required to include a minimum of nine sections, each with multiple subsections (HAR §13-276):

- (1) Introduction, provides identification of the survey area, owners, permit(s), jurisdiction
- (2) Description of the environment, discussion of previous disturbances;
- (3) Background research – historic background information and archaeological background information;
- (4) Methods used during the field survey;

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- (5) Survey findings with descriptions of each site;
- (6) Description of recovered materials, if applicable;
- (7) Summary of findings;
- (8) Information on the consultation process, if needed;
- (9) Discussion of final disposition of collections;
- (10) Significance assessments and recommendations;

Reports prepared in advance of or as part of a federal undertaking must minimally include sections reflecting the required documentation points pursuant to the Secretary of the Interior's standards for reporting identification results. These are:

- (1) Objectives;
- (2) Area researched and surveyed;
- (3) Research design or statement of objectives;
- (4) Methods used;
- (5) Results;
- (6) Evaluation of identified properties.

The accuracy of the table of contents is checked by SHPD staff as part of their review process for Chapter 6E and Section 106 reports. Please ensure that it is accurate prior to submitting drafts to SHPD.

## 5. Introduction & Project Area Description

Much of the information provided in this section is summarized in the Management Summary section; it should be expanded here, with appropriate maps as specified in HARs or in the Secretary of the Interior's standards. The following components should be included:

- A. Explain why the study was conducted or why a plan was prepared, citing the relevant Federal, State or County laws or permitting process. If the report of plan was recommended by SHPD through the review process, this needs to be discussed and relevant correspondence should be cited;
- B. Provide information on the proposed undertaking or project, including a discussion of the nature and extent of anticipated disturbance.
- C. A location map showing the entire area surveyed; for Chapter 6E survey reports, this must be a section of the relevant 1:24,000 USGS quadrangle map [HAR §13-276-5(a)]. The map should identify the quadrangle, indicate a scale and north arrow and provide a key to identify boundaries or areas placed on the map. Please do not use quad map sections that are zoomed in larger than 1:12,000 scale.
- D. Chapter 6E compliance survey reports must include locational information consisting of the island, district (modern), ahupua'a, and tax map key (TMK) location [see HARs as cited in (C) above]. It is preferred that a copy of the relevant tax map plat showing the project area be included in the report, along with the topographic location map.
- E. Provide accurate dimensions and acreage of the area surveyed and state clearly whether this correlates or not with the APE of the associated undertaking or project. This is required for Chapter 6E survey reports [HAR §13-276-5(a)].
- F. Identify the property owner(s). This is required for Chapter 6E survey reports.



## 6. Scope of Work

This discussion can be included as a subsection of the introduction, or as a separate section, depending upon the nature of the study or plan. Inventory survey reports prepared for Chapter 6E compliance must include the following information in a discussion of the scope of work as defined under HAR §13-276-4:

- A. The entire surface shall be visually inspected; this should be confirmed in the report. If a deviation from a 100% surface survey is necessary, the scope of work shall be approved by SHPD prior to implementation. Documentation of such approval should be included in the report.
- B. The survey shall include an evaluation of the presence or absence of subsurface historic properties for areas with no visible historic properties. Normally, this is conducted in consultation with SHPD prior to initiation of field work. If no subsurface testing of non-site areas was conducted, it should be supported with documentation that subsurface historic properties are not anticipated.
- C. When identified historic properties have several possible alternative functions based on surface examination, test excavations shall be conducted to provide additional information regarding function. The results of all subsurface testing and analysis of recovered portable materials shall be included in the survey report.
- D. If a sampling strategy is used for the pedestrian survey, it must be approved by SHPD prior to implementation. The report must document the sampling approach and prior SHPD approval of the survey plan.

The scope of work for Chapter 6E compliance surveys must also address all required elements pursuant to HAR §13-276, including the following:

- a prediction of the kinds and distribution of expected historic properties, based on a synthesis of background information;
- interpretation of age and function of identified historic properties;
- recommended significance assessment of all identified historic properties; and
- recommendations regarding the appropriate treatment of identified historic properties.

The scope of work for surveys conducted pursuant to Federal guidelines is based on the type of survey (reconnaissance or intensive). Both reconnaissance and intensive survey reports should document the following: 1) the kinds of properties looked for; 2) the boundaries of the survey area; 3) methods used and extent of survey coverage.

Reconnaissance scopes of work prepared pursuant to the Secretary of the Interior's Standards include the following:

- The kinds of historic properties present in the surveyed area;
- Specific properties that were identified and categories of information collected; and
- Identification of areas that did not contain historic properties.

Intensive survey reports include the following in addition to the three items listed above:

- A record of the precise location of all identified historic properties;
- Information on the appearance, significance, integrity and boundaries of each historic property sufficient to permit an evaluation of its significance.



## 7. Environmental Setting

A description of the physical environment is required for all Chapter 6E compliance reports and is necessary for completing a research design for all other types of reports. The following information is required to be presented, pursuant to HAR §13-276-5 (a) (3):

1. Topography, including general elevations, distance inland and general terrain patterns;
2. Vegetation;
3. Geology and Soils;
4. Climate, including rainfall; and
5. Hydrology.

The discussion of certain items listed above (vegetation, rainfall, and hydrology) should be provided for the present environment and for any former periods that might be important to the interpretation of identified cultural resources. For example, existing vegetation in many areas of Hawai'i consists of introduced plants that were not present prior to western contact. A general reconstruction of the former (pre-contact) vegetation is therefore important in order to identify the types of sites and general level of expected land use within a project area. Likewise, the presence and economic importance of surface streams and rivers has changed dramatically in many areas; a consideration of hydrology must take such change into account when developing a research design or predicting expected findings. Information regarding former vegetation patterns, the extent of agricultural lands and the traditional uses of water resources is available from early to middle nineteenth century land records (boundary testimonies, Land Commission testimonies), the journals of visitors, traditional chants, and many additional sources that should be consulted during the collection and integration of background information.

Environmental information relating to the geology and soils should include a discussion of any culturally important resources or resource areas that are known to be present, or could potentially be present within the project area. Examples of important traditional materials relating to geology and soils include adze-quality basalt, volcanic glass, scoria, cinder, coral, salt, alae, and various types of wood or fibrous plants that require certain soils or topographic zones. The soil discussion should be consistent with the USDA soil classification system and survey maps of the islands provided by the Soil Conservation Service and the University of Hawaii Agricultural Experiment Station.

The environmental setting should include a description of the current land use within the project area, and the current condition(s) represented. If portions of the project area are disturbed by plowing, grubbing, grading or other mechanical means, these areas should be depicted on a map of the project area. This information is required for Chapter 6E compliance reports. HAR §13-276-5(e) states that, "The report shall document, describe, and graphically display any previous land disturbances (e.g., bulldozing, grubbing by machine, or sugarcane cultivation) if identified during the survey."

An examination of the natural features within a project area should also consider any natural landforms or areas that could potentially hold traditional cultural significance for Native Hawaiians or other ethnic groups. A consideration of place names, geological uniqueness, and geographic context should be included in this discussion, in addition to consultation and background research regarding the potential for culturally significant natural features.



## 8. Historic Background

The background research sections of a survey report have a dual purpose, as described in the Secretary of the Interior's Standards and in the relevant HAR. The background discussions 1) provide a context for understanding and evaluating the significance of identified historic properties; and 2) provide information used to predict the kinds and distribution of historic properties that might be present within a given project area. Survey reports prepared for Chapter 6E compliance must include three specific sets of historic information:

- A. Findings on patterns of land use and site patterns for the project area and the relevant ahupua'a or other relevant research area, for three temporal periods: pre-contact and early post-contact, 1848-1851, and post 1851;
- B. Provide a summary of the documents and materials reviewed during the research; and
- C. Indicate whether any Land Commission awards were granted within or near the project area, and if so, specify the LCA number, the use of each apana awarded, and locate the awards on a map whenever possible [HAR §13-276-5 (b) (1)].

Discussions of land use and site patterns should be focused on the project area and ahupua'a in which the project area is located. If a different land area is selected, it should be in consultation with SHPD. It is not uncommon to find generic discussions of pre-contact land use patterns that apply to multiple districts or islands in this background discussion. This is acceptable as an introductory discussion to the background research, but it is not a substitute for the information described in item A. Boilerplate discussions of Hawaiian prehistory do not meet the requirements of HAR for Chapter 6E reports, particularly when the discussion does not include recent findings and is not tied to ahupua'a of focus. It is acceptable to provide additional time periods in the discussion of land use, particularly when 20<sup>th</sup> century archaeological resources are expected to occur within a project area. In these cases, the post 1851 period may be subdivided into additional units such as 1851-1900, 1900-1950 and post 1950.

Item B is often not included in the historic background discussion, the assumption being that materials reviewed are found in the List of References. It is important to search for primary sources of information when conducting background research and to state in this discussion which primary sources were used. It is not acceptable to only use other archaeological reports when compiling this information. There are many sources of information that should be routinely included in historic land use research efforts. Examples include:

- University of Hawai'i system, including Hamilton Library at Mānoa and neighbor island campus collections such as Hilo;
- Hawai'i State Archives (<http://ags.hawaii.gov/archives>);
- Mission Houses Museum Library, digital collections and manuscripts ([www.missionhouses.org](http://www.missionhouses.org));
- Hawai'i Public Library system;
- Archives and Library of the Bishop Museum ([www.bishopmuseum.org/research](http://www.bishopmuseum.org/research));
- Historic photographs at the Hawai'i State Archives, Archives and Library of the Bishop Museum;

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- Historic maps at the Land Survey Office of the Department of Land and Natural Resources (<http://ags.hawaii.gov>);
- Libraries and archives of private corporations or resource management firms;
- Māhele and Land Grant records available from a variety of sources
- Office of Hawaiian Affairs Papakilo and Kipuka databases ([www.papakilodatabase.com/main/main/php](http://www.papakilodatabase.com/main/main/php)), ([www.kipukadatabase.com](http://www.kipukadatabase.com))
- Neighbor island museums such as the Kauai Museum in Lihue, Lyman Museum in Hilo, Parker Ranch in Waimea and others;
- Military museums and archives;
- Hawaiian language newspapers and early issues of mainstream newspapers;
- Specialty museums such as those serving the interests of railroads, plantations, and others.

Item C information pertaining to Land Commission claims and awards can be obtained from the online Waihona 'Aina ([www.waihona.com](http://www.waihona.com)), which maintains four databases: Māhele, Boundary Commission, Royal Patent and Land Grants (1846-1922+). A description of each database is found on the homepage of this website; important information regarding a specific project area or ahupua'a can be found in any of these databases, and it is recommended that these databases be used as resources for discussions of the environment, land use patterns and pre-contact/early historic settlement, in addition to a recitation of LCA for the study area. The records include information on claimant names, relatives, neighbors, place names and descriptions, house locations, trails, trees, plants, birds, roads, fishponds, burials, landscape features, local and regional chiefs, and other information. When this information is available in Native or Foreign testimony, Royal Patent narrative or maps, boundary descriptions or Land Grant records, it should be included as appropriate in the various sections of the background discussion.

It is not uncommon to find numerous LCA as well as claims that were not awarded within larger project areas or study areas. When this occurs pertinent information for each award should be tabulated in the report (award number, apana, awardee name, location, size, and designated use). As noted above, the locations of the LCA should be shown on a map, especially if they are inside the project area. Kuleana with documented uses that would have left archaeological traces (house sites, lo'i, fishponds) should receive special attention during archaeological pedestrian survey and subsurface testing because there is a higher likelihood of finding resources at these locations. Kuleana locations frequently exhibit perimeter walls in areas that were not mass grubbed or cultivated. These features could potentially be misinterpreted as ranch walls if the research on LCA and unawarded claims is incomplete.

When a project area is expected to include 20<sup>th</sup> century uses, it is highly recommended that consultation occur with local community members and any families connected to the area, as indicated in land records. Persons living adjacent to a project area often have first-hand information regarding the age and function of archaeological resources and land uses that are not clearly indicated in the archaeological record; this can eliminate guessing and misinterpretation when archaeological data is scant. It is also important to consult historic maps that could potentially depict prior land uses such as residences, barns, roads, walls, ditches and so forth. Even USGS topographic maps dating to the 1960s or 1970s provide information not found on the current topographic maps.



## 9. Previous Archaeology

This section of the report should include a records search for known historic properties within and near the project area and a summary of previous field work conducted within the project area and the ahupua'a or other agreed-upon study area. This generally requires more research than simply checking the shelves of the SHPD library. Many of the historic properties recorded during the initial statewide survey are not tied to a report, and may not be mentioned in previous studies. The locational information for these sites is located in the SHPD GIS and on blue line USGS topographic maps compiled in 1980. The researcher should contact SHPD staff regarding the GIS, paper maps and site database; access to the information will be made available, or staff will run searches in order to verify whether SIHP sites have been recorded in the project area. Please note that sites such as inadvertent burial discoveries and other types of post-review discoveries will not always have records available in the SHPD library; these will be available via the GIS, site database and consultation with staff.

When conducting SHPD library research, it is important to check the report database for the respective island; this information is also available in spreadsheet format at the respective libraries, and a spreadsheet will be sent to a researcher via email on request. The researcher should also check with the appropriate lead archaeologist to confirm whether the report database is current. There could be reports that are relevant to the study area under active review or waiting to be accessioned and shelved in the library.

Discussions of previous archaeology in Chapter 6E reports are required to contain the following information if prior studies have occurred within the agreed upon study area:

- A. The areal extent of the prior survey coverage indicated on a map;
- B. A synthesis and analysis of information on the project area and its related lands' chronology, function and land use patterns, reconciling, as needed, the historical and archaeological information; and
- C. Predictions as to types of sites expected to be encountered during field survey.

The above information is included as components 1 and 3 of a research design as defined by the Secretary of the Interior's Standards for Identification. The term "research design" is not used in the HAR for inventory survey reports, however information required to be present in a report fulfills the federal specifications. This is further discussed below.

Many of the consulting firms maintain a GIS with previously surveyed areas, making it relatively simple to produce a map of a given study area. When GIS or other data is used to compile these maps, study areas may be depicted that are not discussed in the report. If shown on a map, the previous study area should be included in the synthesis of information and all references for the depicted prior study areas must be included in the report's list of references.

Item B above stipulates a synthesis and analysis of information regarding chronology, function and land use patterns. This requirement entails more than summarizing the findings of each previous study. If there is no research design section in the report, the synthesis and analysis must occur in the previous studies discussion, or in the discussion of expected findings.



## 10. Research Design

Survey activities of any type are expected to have a statement of objectives or research design prepared before work is performed, pursuant to the Secretary of the Interior's Standards for Identification. The three elements of a research design as defined by the SOI Standards are: objectives, methods and expected findings. For a more detailed discussion of these elements, see Section 2.2 of *Guidelines and Procedures for Archaeological Survey in Hawaii*. The research design is an explicit statement of the theoretical and methodological approaches to be followed in any archaeological field study or research project. Reports prepared for Federal undertakings are required to include a research design section. As noted above, HAR do not require a specific section identified as a research design; however all the components of this section are required to be present in the background discussions. It is acceptable to group the three components in a research design section for Chapter 6E reports, so long as all information required in HAR §13-276 is present.

In the context of the Chapter 6E historic preservation review process, inventory surveys are intended to provide enough information to evaluate the significance of archaeological resources and in many instances are used to determine that no additional documentation is needed to adequately mitigate the effects of the loss or disturbance of the resources. This level of documentation needs to satisfy the requirements of the SOI Standards for Archaeological Documentation in order to be accepted by SHPD and integrated into the statewide inventory. The specifications for research designs in this context requires the same three components as a research design for identification, but it should be more oriented to specific types of archaeological resources, and should include an evaluation of the findings in terms of predictions or hypotheses made, and in terms of how the findings have modified or improved current research models, historic contexts, or planning tools. This additional research step is comparable to §13-276-5(f) for Chapter 6E reports, which specifies a summary of findings that includes the above information. The summary of findings section is further discussed below.

In order to link a research design to an actual field survey, there needs to be a consideration of the theoretical basis from which the proposed research questions and predictions are springing. There is no explicit requirement for this type of information in 13-276-5, or in the SOI for identification; however, a statement of research paradigm(s) is critical to the evaluation of significance. If a study proposes to collect as many dating samples as possible from certain feature types during an inventory survey, there must be a summary of the important research questions that will be addressed with the data, beyond the generic desire to determine the age of the feature. Asking and answering the questions of age and function are not adequate research paradigms for the proper evaluation of archaeological resources. These are starting points from which a research design should be developed. It would be more productive to develop mechanisms to assess the integrity of identified resources during an initial survey and then select the resources that have integrity to address more complex research questions. This process is supported under both the federal and state review processes. Unfortunately, the inventory survey is often conducted with the goal of "mitigating" as many sites as possible in one swoop and is substituted for more intensive research-driven field work. Because of this situation, researches should be more aware of the need to present research questions recognized as important for the region in which the project is located, and strive to formulate new ideas and questions. Repetition of non-focused and boiler-plate overviews do not meet the definition of a research design.



## 11. Methods

Survey reports completed for Section 106 and Chapter 6E projects must include a section on the methods used during the field work. Both types of reports may include the methods discussion within the research design; Chapter 6E compliance reports can include the methods as a separate section. The following information is required to be present, pursuant to the SIO Standards and HAR §13-276-5(c):

- (1) Names and qualifications of the principal investigator(s);
- (2) Number of field personnel, the dates when the survey was performed and the duration of time spent conducting survey fieldwork;
- (3) Extent of survey coverage;
- (4) A discussion of any factors that limited the survey effort;
- (5) Techniques used to identify archaeological resources;
- (6) Extent of recording conducted, techniques and rationale;
- (7) Method(s) used to plot site locations; and
- (8) Methods used to determine what constitutes a site and its boundaries.
- (9) When consultation occurs in connection with the survey, the methods used to identify and contact knowledgeable persons, and the methods used to interview and record or document the consultation process must be included.

When discussing and describing the extent of survey coverage (Item 3), please note that Chapter 6E surveys must include visual inspection of the entire surface of the project area (§13-276-4). If the coverage is less than 100%, the report must include a discussion of the rationale used in sampling (if such occurred), and information on when the sampling design was presented to SHPD and approved. The sampling design is often presented in a formal inventory survey plan which is approved prior to implementation. Some projects consist of complete pedestrian survey with a sampling design for subsurface testing. In these cases, the sampling design for testing should be approved prior to implementation and must also be presented in the methods section.

In many cases, a 100% pedestrian survey may be completed; however actual surface visibility may be 50% or less. This is considered a factor that limits the survey effort and it must be accurately reported in the methods section, along with a discussion of measures taken to control for poor visibility. The most common means of controlling for poor visibility is to decrease the distance between members of the survey team. If there are variable visibility conditions within a large survey area, the acreage and location of these areas should be described in the report and plotted on a project area map.

The discussion of techniques used (Item 5) must include a summary of the pedestrian survey methods including the spacing between surveyors, orientation of sweeps, how sweep lines were marked or identified; machinery testing including type of machine used, dimensions of trenches, trench profiling procedures, shovel testing procedures, use of soil screening, material collection methods, and any remote sensing procedures. Further information on the methods used during recording of identified resources is also required. This includes methods used to produce scaled plan view maps, controlled excavation methods, soil screening and collection, photography (equipment used and how photos stored). It should be noted whether standardized forms were used during any of these procedures, and the number of personnel involved in each activity. Laboratory analysis methods should be included in

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this section if portable materials or samples were collected during the survey. Other methods used to organize, clean, document and prepare the materials for shipment to a laboratory or for curation should also be included. There should be an explicit discussion of how identified sites were marked in the field. What information was written on temporary site tags and where were tags placed?

When survey areas contain numerous features with the potential to contain subsurface deposits, there should be a discussion in the methods section which clarifies why certain features were selected for testing. Likewise, the methods used to select samples for dating or other types of analysis should be discussed and tied to the research design. Any pre-analysis screening, such as plant species identification, should also be discussed. As noted elsewhere, all reports received from specialized analysis of materials should be attached to the report in their original format. As noted in the Secretary of the Interior's Standards for Archaeological Documentation, "The choice of methods for recording data in the field should be based on the research design...Field records should be maintained in a manner that permits independent interpretation in so far as possible. Record keeping should be standardized in format and level of detail."

The methods section must include a discussion of how site and feature location data were collected. This includes a description of the equipment used (brand and model), any limitations inherent in the equipment such as distance error for GPS units, who or how many personnel were collecting data, how and where it was post-processed, including software, coordinate system used at the time of collection, data dictionaries or attribute tables used in the field, and how the data was prepared for transmittal to SHPD as part of the SIHP site number request process.

The final discussion required to be in the methods section includes the theoretical and practical issues on how a site is defined and how the boundaries are determined. This is an important issue that is also one of the most frequently overlooked. The practice of delineating site boundaries is directly tied to the perceived definition of a site. SHPD does not have regulatory control over this sometimes charged issue. The long-standing "lumper vs. splitter" dichotomy is very evident in the results of various reports. At this time, SHPD does not stipulate how a site should be defined, or provide a minimum distance threshold between identified features. SHPD does require that the definition of a site as used by the researcher be explicitly stated in the report, and that the process of site boundary delineation clearly follows that definition.

Directly related to the concept of a site are the formal and functional categories used to describe identified features within a site. SHPD has developed a formal typology in connection with the SIHP site database (Appendix C, Procedures and Guidelines for Archaeological Survey and Inventory in Hawai'i). Use of this typology in the report alleviates the need to provide detailed definitions of each formal type used; the typology would only need to be referenced in the methods section. If the SHPD typology is not used in the report, the author(s) must provide their working definitions of each formal type identified and described. Functional categories used to describe the activities assumed to have occurred at archeological sites must also be defined. This is critical when the results of surveys are compared to the findings of other studies, when regional syntheses are attempted, or when hypotheses are being tested.



## 12. Findings

This section of the report presents all information that was collected during the field survey and during laboratory analysis. Reports for reconnaissance level surveys are required to contain information on the kinds of historic properties that are present in the survey area; and descriptions of specific properties that were identified with consistent categories of information presented. This level of presentation is not acceptable for most Section 106 compliance reports and is not acceptable for Chapter 6E compliance reports.

Inventory or intensive survey reports must document the precise location of identified historic properties and provide information on the appearance, significance, integrity and boundaries of each historic property (Secretary of the Interior's Standards for Identification). If no historic properties were identified, their absence should be explicitly noted. If expectations or the research design predicted the presence of archaeological resources, there should be a discussion as to why the expectations were not met, especially if such resources were previously observed or recorded in the project area. If no findings are reported, Chapter 6E survey reports are referred to as assessments. This term can only be applied to the report after the intensive level field survey has been completed. SHPD does not have a predetermined assessment category of survey that connotes less than intensive survey.

Specific requirements for Chapter 6E inventory survey findings are found in HAR §13-276-5(d) and (e). Section 276-5(d) addresses the requirements for the description of each archaeological property found during the survey:

- (1) A state inventory (SIHP) number and any previous numbers must be included in the report. The SIHP number must be requested from SHPD prior to completion of this section. See *Procedures and Guidelines for Archaeological Survey and Inventory in Hawai'i*, Section 5 for instructions on obtaining SIHP numbers. It is important to include the temporary site number, particularly if these numbers are used on site tags that are left at the site location during the survey. It is also important that the information submitted with the site number request on Access database forms and geodatabase is consistent with the information presented in the report.
- (2) Reference to any previous studies that described the site and the information that was recorded at the time of prior survey(s). There should be a comparison between past and current site conditions and any changes that have occurred since the prior study.
- (3) The formal feature types represented at the site and frequencies for each type; all formal types used in this section should either follow SHPD guidelines or be defined in the methods section.
- (4) A verbal description of each site/property to include the following information:
  - A. The size (in square meters or hectares) and horizontal dimensions along north-south and east-west axes or the major and minor axes. If subsurface testing is conducted, include the vertical extent of the historic property to the extent that it is definable.
  - B. Surface architecture and features must be described as to shape, materials, methods of construction and dimensions.
    - i. Material descriptions should be of sufficient detail to provide meaningful comparisons within the survey area and with other study areas. For example, descriptions of building stones should consider likely source, extent of

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- weathering, type of stone, and size grades using the Wentworth scale (i.e., pebble, cobble, and boulder).
  - ii. Dimensions for features with an interior area should include overall area and interior space measurements with a clear differentiation between the two values. Representative height measurements must be provided for surface features; this should be presented as a range and an estimated average height for features such as walls. Widths must be presented for features such as wall; this should also be expressed as minimum and maximum with an estimated average width when applicable.
  - iii. Identified subsurface features should be described in the same manner as surface features, with dimensions provided as applicable.
- C. The presence or absence of surface remains such as artifacts, midden or introduced debris must be noted.
- i. The description should include the location or distribution of such remains and their density on the surface in relation to any surface or subsurface features.
  - ii. Artifacts observed on the site surface should be described, photographed on site (if not collected) and dated to the extent possible. It should be clearly stated whether any surface materials were collected or moved (to a protected location on site) during the survey.
- D. If test trenching, coring or augering occurred, there must be a description of these findings, whether or not cultural deposits were encountered.
- i. Information presented must include standard U.S.D.A. soil descriptions and Munsell colors of soil strata, scaled profile drawings of natural and cultural strata, and descriptions of portable material observed in each layer (in addition to the natural soil inclusions).
  - ii. When controlled hand excavation units are excavated, the location of these units must be shown on a plan map and profiles of at least two contiguous side walls presented.
  - iii. Profile views of all identified subsurface features and cultural deposits must be presented (see item G comments below regarding excavations).
- E. Representative photographs of the site are required; it is recommended that these photos include representations of all feature types present. When there are six or fewer features within a site, it is recommended that photographs of all features be included. If vegetation allows, an overall site area photograph is also recommended.
- F. The major features of a site are required to be mapped in plan view to scale, with locations of surface remains, subsurface features, test units and other pertinent information depicted, such as site identification tag(s).
- i. The map must be presented with a scale and north arrow, and identified in the text as to whether it is hand drafted or auto drafted with schematic representation of stones. Auto drafted maps are usually identifiable as such based on appearance of the map; however it should be made clear whether or not characteristics such as the apparent uniformity of stones is actually reflected in the construction materials used.

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- G. The description of an archaeological resource is required to include a consideration of its integrity, as part of the evaluation process. In order to characterize integrity, the resource should be compared with similar sites or features within the same general age/function group. As assessment of integrity would ask whether the intended function of a feature can be determined based on its current appearance or condition, and whether or not there might be any information of value obtainable. Subsurface testing is sometimes needed in order to assess this level of integrity. If a feature is potentially of cultural value, consultation with SHPD, OHA and NHO or local descendants should occur prior to conducting any destructive activities such as excavation at the feature.
- H. The function or functions of a site are required to be presented for each identified archaeological resource. This process is subject to a high error rate if the site lacks integrity, if no portable remains are visible, or if no subsurface materials or deposits are located. Many surface architecture forms such as terraces, enclosures and c-shapes have multiple possible uses and could have been reused for purposes not intended by the original constructor.
- ii. All information regarding the function of a site or feature obtained during consultation must be presented in this discussion. If there is insufficient information to establish function, it is preferable to state such and to recommend additional field work in order to obtain a more accurate understanding of the site.
  - iii. If function can be inferred based on the location, association of the feature with surrounding features, and other factors such as size and construction technique, it must be stated that these factors were used in determining function.
  - iv. If a model is being used to infer function, this must be stated and the model must be thoroughly discussed in the methods or research design section of the report. The model should also be assessed for accuracy in the discussion of findings. For example, a small enclosure may exhibit traits of what would be considered permanent habitation based on a certain model, yet its size would place it in a temporary habitation category.
  - v. The utility of the model for correctly predicting temporary vs permanent habitation would need to be considered and alterations to the model suggested in the summary of findings section.
- I. An assessment of site age is required to be included in the site description.
- i. Inferring site age can be problematic and creates the potential for severe misrepresentation of the archaeological record. For example, the absence of historic era artifacts on the surface of a site is often used as the only variable to infer a Precontact age for a site. There are many cases where sites such as agricultural complexes were inferred to be Precontact and later found to date well into the 20<sup>th</sup> century, based on first-hand information from former residents. The formal characteristics of certain feature types do not provide reliable dating criteria. If these are used, there must be a very convincing argument in support of their validity.
  - ii. When absolute dates are used in the context of determining site age, extreme caution must be exercised to ensure that one or two dates is not equated with

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- an “absolute” site age. If wood charcoal is collected and dated, there must be sufficient controls in place to establish a clear contextual relationship between the dated sample and the event or feature being dated.
- iii. It is very important that collected wood samples are identified by species and short-lived specimens be selected for dating. All of the information on sample condition, collection techniques, context, and species must be presented in the report, either in the methods section or in the discussion of laboratory analysis.
  - iv. As noted elsewhere, the specialist reports regarding wood identification, dating and other information should be attached to the report so that the primary information is available for use by other researchers and so that the interpretations offered in the report can be independently verified.
- J. The final element required in the description and discussion of each historic property is a consideration of its significance.
- i. Pursuant to HAR, significance is defined for Chapter 6E reports in §13-275-6 for public agency (6E-8) projects, or §13-284-6 for 6E-42 projects requiring a state or county permit. Please refer to these rules and to *Procedures and Guidelines for Archaeological Survey and Inventory in Hawai'i*, Section 4.3 for a discussion on use of the HAR significance criteria. Four of these criteria correlate with the National Register criteria, making it possible to use federal guidelines for the evaluation process.
  - ii. Pertinent Federal standards for evaluation are found in the Secretary of the Interior's Standards for Evaluation which state that significance is based on established criteria, not on proposed uses of the site or area. It is not acceptable to elevate the significance of a resource because it can be avoided, or to degrade significance because it is in an area of proposed development.
  - iii. The SOI standards state that evaluation should be made using a historic context that identifies and defines the characteristics of representative properties that can be used in a comparative manner to establish significance.
  - iv. The discussion of significance in this section of the report should include a consideration of missing or incomplete information and propose ways to acquire the missing information.
  - v. Although it is not required in §13-276, it is permissible to evaluate sites as eligible for listing in the Hawaii and/or National Registers, in addition to the HAR significance criteria. National Register criteria must be used for federal projects; projects needing federal and state permits should use both HAR and NRHP.
  - vi. The discussion of site significance is also required to be included in the site description, even though it is not part of the factual findings of the survey.
  - vii. It should be noted that archaeological resources found and determined to be not significant and/or not eligible for listing in the Hawaii or National registers should be described and evaluated in the report, so that SHPD is provided an opportunity to review the information and concur with the evaluation. SIHP numbers should not be assigned to these locations; they can be referred to using temporary numbers. If SHPD determines that such a site is significant, a SIHP number will be obtained and inserted in the revised report.



The final component of the report findings section addresses current conditions of the survey area that have the potential to affect the condition and distribution of identified archaeological resources. HAR §13-276-5(e) states that, "the report shall document, describe, and graphically display any previous land disturbances (e.g., bulldozing, grubbing by machine, or sugarcane cultivation) identified during the survey. This information is sometimes presented in the background section of the report in conjunction with the description of the environment. It is common to find no graphic representation of disturbed areas in the report. This is a requirement and will be requested by SHPD if it is not present. In cases where an entire survey area is within an area of current or former sugarcane cultivation, a current satellite view or historic aerial photos showing the extent of cultivation is acceptable and recommended. If the project area has been partially impacted by bulldozed trails or similar alterations, the perimeters of these areas should be walked with a GPS so that they can be accurately located on a project area map.

### **13. Summary Discussion/Interpretation**

This section provides a summary of the findings and ties the survey findings with the research design and/or the discussion of expected findings. It should address both resource management concerns as well as research problems. Reports for Chapter 6E projects must include six elements that are enumerated in §13-276-5(f); and generally stated in the SOI for Archaeological Documentation:

- (1) The total number of sites and component features identified during the survey must be presented.
- (2) One or more maps showing the location of all identified sites and their boundaries must be included; one site location map must be a section of the relevant USGS topographic map at 1:24,000 scale. This requirement will be waived if an acceptable geodatabase is submitted at the time site numbers are requested, so long as it includes the survey area boundaries, all identified sites and features, and site boundaries, with associated data and metadata as described in *Procedures and Guidelines for Archaeological Survey and Inventory in Hawai'i*, Appendix D.
- (3) A table presenting the site SIHP numbers, formal type and function if determined; this table is frequently combined with the table required in the significance assessment section. Combining the tables is acceptable; however the information should be included in the significance assessment section and referenced in this section.
- (4) If multiple sites within a major functional type are found, summaries of each type shall occur. For large project areas, it is advisable to include maps showing the distribution of the represented site types, along with a consideration of possible environmental factors that could be affecting the distribution, such as soil types or lava flows, elevation gradients, rainfall differences, distance to the shoreline and so forth.
- (5) The section must contain a re-evaluation of models, hypotheses or stated ideas on the history of land use in the ahupua'a and parcel, and other research problems or topics identified in historic context studies, regional syntheses or published manuscripts. The research goals of the survey should also be evaluated in this discussion to determine whether they were appropriate for the project and whether they should be refined for future surveys. For example, was the approach adequate to identify areas with no built environment that have the potential to be culturally significance? Or was the approach sufficient to establish the likely presence or absence of subsurface cultural deposits or features within the survey area?



- (6) In cases where more than five sites are present within a major functional category, the map referred to in item 4 above is required, as well as a table itemizing the "relevant constituent structures" for each site and the key variables used to determine function.

If a considerable body of information was obtained about the survey area during consultation with knowledgeable individuals, a separate section on the consultation results should be included in the report. For example, if additional archaeological or cultural resources were identified through the consultation process, this information should be attributed to the appropriate source, unless the person consulted wishes to remain anonymous. Information that assists or guides the interpretation of specific sites must be included in the respective site descriptions.

The summary discussion or a subsection of the methods section should include information on the final disposition of any collected materials as well as the field records, maps and photographs generated during the survey. The curation/archival facility must be determined by SHPD if the materials originated from public lands and in consultation with SHPD if the materials originated from private land. Additional discussion of curation standards is found in *Procedures and Guidelines for Archaeological Survey and Inventory in Hawai'i*, Section 3.2.

## 14. Significance Assessments and Recommendations

The significance evaluations discussed for individual sites in the findings section must be summarized and tabulated in a separate section at the end of the report. Pursuant to HAR, these evaluations are considered recommendations until SHPD concurs formally in writing. Likewise the recommended mitigation measures are summarized and tabulated in this concluding section. The significance evaluations and recommended treatments (mitigation commitments) for Chapter 6E projects are required to be in one table, pursuant to HAR §13-276-8. The proposed treatment for each identified site is considered a recommendation until formal concurrence by SHPD is finalized. The recommendations section should also include proposed mitigation documents and the SIHP sites to be included in each document. These include a data recovery plan, preservation plan, burial treatment plan and archaeological monitoring plan. For large projects, it is not unusual to have all four of these plans recommended after the survey is completed and the report has been approved.

The discussion of significance evaluations and criteria used in a report should reflect the regulatory context(s) of the survey. If it is conducted for a private entity in response to a county permit application, the discussion of significance should be focused on significance criteria as listed in §13-284-6. If the survey is conducted for the state department of transportation and FHWA, pursuant to NHPA Section 106, the significance criteria should include National Register eligibility criteria as well as significance criteria listed in §13-275-6 which regulates state projects. This discussion should also consider the definitions of historic districts, historic landscapes and cultural landscapes and assess whether or not all or portions of the survey area are eligible for this designation. Pursuant to HAR, a group of sites can collectively be argued to be significant under any of the criteria. In many cases, additional criteria can be applied to a group of sites that reflect a meaningful unit within a historic context, as compared to the individual sites that make up the grouping.

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## 15. References

All sources of information used in the preparation of the report should be cited in text and listed in the references section. It is recommended that the American Antiquity format or a similar format be used to list references. Regardless of the format, all entries should be consistent and listed in alphabetical order. Reports that are missing cited references will be returned for revisions.

## 16. Appendices

SHPD has no regulatory guidance on appendix content. It is preferred that site description information be presented in the body of the report, with lengthy tables such as dimensions of individual features and lists of recovered remains placed in an appendix. Specialized reports on material analysis should be appended to the report; these should be kept intact and complete, so long as the reported findings apply to materials described in the report.