



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

STATE HISTORIC PRESERVATION DIVISION
33 SOUTH KING STREET, 6TH FLOOR
HONOLULU, HAWAII 96813

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DIVISION
LAND MANAGEMENT
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WATER AND LAND DEVELOPMENT

November 30, 1995

Ms. Virginia Goldstein, Director
Planning Department/County of Hawaii
25 Aupuni Street
Hilo, Hawaii 96720

LOG NO: 16048 ✓
DOC NO: 9511RC55

Dear Ms. Goldstein:

356 *812*
SUBJECT: County of Hawaii SMA 95-3 & Change of Zone 95-12 --Oceanside 1250
Hokukano & Others, North Kona & South Kona, Hawaii

In late September 1995, our office received copies of County Planning Commission documents approving these applications. We were concerned about these approvals, because our office was not asked to comment on these applications. Our major concern is that historic preservation review of this project is still ongoing and continued approval of development actions prior to conclusion of review could have adverse impacts on extremely important historic sites in this project area. We need to better coordinate our planning efforts on this project.

When these letters arrived, we were within our 30 day review of the 3rd draft of the archaeological inventory survey report of this overall project. The prior drafts of the report had many flaws. We had not yet concluded all sites were found, which sites were significant, and most important which sites merited preservation or data recovery. We have since completed our review (attached). The report will need revision yet again, to be an acceptable scientific inventory of what was found -- and to enable the public to clearly see what was found. However, we were able to agree that all sites had been found (with one condition), and to agree on site function. We are still working out significance evaluations, which we believe can be easily done, but which will result in a substantial change in the evaluations. More important, we are still working out mitigation agreements, and we do not yet agree with the proposals for preservation and data recovery.

This project area contains extremely important historic sites. It is the last large area in Central Kona where much of the prehistoric settlement ruins are still intact. (There has been some destruction, but much remains.) It, thus, contains large landscapes of historic sites vital for interpretive preservation planning for the local public and visitors and vital for long-term scientific research. For interpretive concerns, this area has coastal housing ruins (with burials and heiau of

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different types) which are excellent examples of many housing types. The landowner (Oceanside 1250) is amenable to preserving important parts of this housing landscape along the shore (Hokukano's housing, Pu'u 'Ohau and its burials, and Nawaa Bay's housing in the Keekee area). But, the form of the historic preserves along the shore has not been discussed or been worked out, and is somewhat complicated by shoreline recreation use plans. Upon review of this draft of the report, it has been clear that we need to discuss these shoreline preserves more with the landowner. We have also asked if a strip of landscape can be preserved from the shore up through the agricultural fields, since the report clearly indicates that excellent examples of the Kona Field Systems (with kuaiwi walls) extend down very close to the shore and these areas contain excellent examples of house sites and religious structures within the fields. No such slice of the Kona Fields landscape has yet been preserved at these elevations, and it may be one of our last chances to do so. We suggested it might be considered to extend this slice up from Nawaa Bay, so interpretation of the shore and uplands could be linked. We believe the potential of this area for public interpretation is of great value. We are awaiting a meeting with Oceanside 1250 to discuss these possibilities. One of our concerns, however, is that if the County has approved sweeping landuse commitments for areas in the uplands (e.g., for housing or golf courses or farming), the possibility of such historic preserves may be difficult to negotiate at this time. Another concern is that with approval of permits by the County before the historic preservation concerns are worked out, confusion results because multiple land use plans exist (e.g., recreation, historic preservation, etc. along the shore).

Second, long-term research concerns in this area are extremely important. With the settlement landscape intact, this may be the last place in Central Kona where archaeologists can have an excellent opportunity to answer broad and important questions on Hawaiian history for Kona, Hawaii Island, and all the islands. Population growth in fertile areas can be studied by looking at house sites here; it cannot in most other areas of Kona or Hawaii, where only a few house sites have survived in coastal areas. Similarly, the development of complex social ranking can be studied here by looking at house sites of all social ranks. The growth of the field systems over time, and their intensification in relation to population and social ranking changes can also be looked at here. These are major questions for understanding prehistory, ones that have yet to be adequately answered. And honestly, a typical historic preservation review procedure of one data recovery field session (although it would be quite large and expensive for this area) would not be adequate to address the research questions in this area -- because the area is so large and has so many sites. A multi-year project would be needed. If, however, we can work with the landowner to preserve sizable slices of the landscape, such long-term work can be feasible, and at the same time the cost and scope of the immediate data recovery work might be considerably reduced.

Again, we do hope to meet with the landowner, Oceanside 1250, in the near future on these matters. Hopefully, we can finalize the mitigation plans to the satisfaction of all parties. We are fortunate that Oceanside 1250 has had a very positive attitude toward historic preservation and Hawaiian history. We understand that review of the archaeological inventory survey report has been a long and frustrating slow process for all involved, but we are very close to getting an acceptable report completed. We do want to better coordinate the historic preservation

concerns in with your permitting process. We would like to make several suggestions to help reach this goal. When we meet with Oceanside 1250, could one of your staff also attend, so the details and status of the mitigation planning is available to your department, and so County concerns can be discussed? Also, if future permit applications are submitted, can you be sure that they are sent to us? At least, we can advise your office on the status of the historic preservation review and of any potential problems. And hopefully, by that time all mitigation concerns will be worked out, so we can actually give a finalized status to your department.

Aloha,

A handwritten signature in black ink, appearing to read 'Don Hibbard', with a long horizontal flourish extending to the right.

DON HIBBARD, Administrator
State Historic Preservation Division

RC:amk

Attachment (copy of 9509rc12)



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

STATE HISTORIC PRESERVATION DIVISION
33 SOUTH KING STREET, 6TH FLOOR
HONOLULU, HAWAII 96813

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WATER AND LAND DEVELOPMENT

November 9, 1995

Dr. Hallett Hammatt
Cultural Surveys Hawaii
733 North Kalaheo Ave.
Kailua, Hawaii 96734

LOG NO: 15885 ✓
DOC NO: 9509RC12 ✓

Dear Dr. Hammatt:

**SUBJECT: Review of Draft 3 of Archaeological Inventory Survey Report --
Villages of Hokukano
Hokukano & others, North Kona, Hawaii**

Thank you for your submittal of this revised draft -- Volume 1 submitted August 23, 1995 and Volumes 2 & 3 on September 13, 1995. Revisions were made in response to our letter of December 15, 1994, and based on further discussions made during a fieldcheck conducted on May 18-19, 1995, by Ross Cordy, Pat McCoy and Marc Smith of our staff. We have been waiting for 2 weeks for a map showing coastal preservation areas, so we can finish our review of mitigation proposals. We have not received it, so we will conclude our review with available information at this point.

This draft is vastly improved from the previous draft. Our concerns about the abstract and project area description have now been met. The background section is now quite good, and the predicted site patterns are clear for the different time periods.

Survey Coverage

The archaeological methods section has now been suitably revised. Based on our fieldcheck and the revised report, we believe that it is now clear that Cultural Surveys adequately surveyed the project areas that it looked at. The PHRI survey area of Hokukano Flats was not re surveyed. Portions of this PHRI area were fieldchecked by your firm and our staff on May 19, and very few sites were present. However, the fieldcheck did suggest that the site locations may not be accurate and that some additional small sites might be present near the boundary line with the State's Hokukano parcel. To handle this problem, we recommend that early in the mitigation phase of work, survey be done just inland of the State's Hokukano parcel to better locate known sites and to identify/inventory any small sites that might have been missed. With this

understanding, we can agree at this point that a total of 408 historic sites have been identified in the project area.

Site Inventory

The prior draft report needed considerable improvement in the site inventory parts of the report. Much has been corrected. Given the massive amount of data in the report and our limited review time, we are assuming that the editorial problems (site numbers in tables matching texts, specific site description concerns) have been taken care of. Our focus in this review has been on the summaries of sites by functional types. The scientific justifications for interpreting sites into these types needed improvement, so the reader could clearly see the basis for your interpretations. Although these interpretations are greatly improved, the interpretations for some of the site types (housing, burial, animal pens and religious sites) still are not clear in the draft, nor are they yet solidly supported by scientific evidence. This problem is primarily a failure to clearly present your scientific evidence.

In this case, as planning needs to move forward, we can work around this problem. Based on our field inspections (in which we carefully evaluated the housing and religious sites) and based on what is in the revised report, we believe your interpretations of burials/possible burials, animal pens and religious sites are acceptable -- with the understanding that these report sections need yet one more revision to acceptably present your interpretations (see attachment for details). As for your interpretation of permanent vs. temporary habitation sites, we still cannot tell from the report how your firm distinguished these types of habitation sites. The report does not explain the steps you used. Also, the variables (criteria) that were used to distinguish these types of habitations still need clarification (see attachment). Looking at your interpretation of these sites, it still appears to us that many sites which other firms would interpret as permanent habitations are being labeled as temporary habitations by your firm. We do not have great confidence in your classification. However, we believe that this problem must be largely deferred to the archaeological data recovery and preservation (interpretation) phases of the historic preservation process. We believe that the scope must address the more standard interpretations of permanent housing (which will identify far more sites as permanent houses than you have) and your firm's interpretations. Thus, with the understanding that revision will be done to better clarify the housing, burial, animal pens, and religious sites interpretations to acceptable inventory report levels, we provisionally accept the site descriptions and their functional interpretations and can proceed with our review.

Significance Evaluations

Simplified, the basic prehistoric/early historic site pattern that the survey found is as follows: A large percentage of the permanent habitations were focused near the shore, with two impressive coastal concentrations (Hokukano and the other around Nawawa Bay to the south). These are

two of the rare, still intact coastal settlement areas remaining in the once highly populated area between Honaunau to Kailua. The Hokukano habitations include some impressive structures and are generally not within walled house yards. The Nawawa habitations are in many cases within walled house yards. Large heiau are near these habitations, with one extremely large heiau (almost definitely a luakini or major national heiau) being above Nawawa and with several much smaller but quite distinctive heiau along the coast in Hokukano. Agricultural fields (all remnants of the Kona Field System) extend from near the shore to the upper limits of the project. Intensively used fields with long coastal heading walls and small cross-terraces or walls (the classic Kona formal walled field type) come down quite low in these areas, and are suggestive of considerable production. The best preserved examples lie inland of Nawawa Bay. Scattered permanent habitations are found among the upland fields, as well as temporary habitations and animal pens. Some long lava tubes extending down through these fields were used as temporary habitations and as periodic refuges with blocked entries. Burials were found in some of these caves (one containing over 45 individuals). It is expected that many small high platforms or terraces near coastal housing and on the slopes of Puu Ohau may contain burials. Test excavations in 13 possible burial features found 7 to contain remains, so many of the 80 possible burial features may not prove to contain burials. Of these possible features, the platform cases are more likely to contain remains. In the 1800s, the raising of livestock greatly expanded causing the Kuakini wall to be built, population dropped with fewer people living in house sites on the shore (and eventually most people moved up along the upper highway), and the main trail location was moved to the inland side of the reduced coastal housing areas, and then was abandoned.

With this background, significance evaluations of the sites in the project area can be addressed. We agree with the report's assigning of criteria B, D and E to the historic sites in the project area. We disagree with the criterion C evaluations (excellent example of site types) in three cases. Three large prehistoric/early historic remnants of the Kona field system are relatively unaltered (sites 16,363; 16,369 and 16,370). We believe these are excellent examples of site types, so we believe that criterion C applies to these sites and page 9 should be changed to indicate this.

We also disagree with the use of criterion A (associations with broad patterns of history). We agree that the project area contains sites reflecting the transformation of a subsistence-based system to a market-based system in the 1800s (with ranching important)(pp. 290-291). However, an important point in the report is that the project area contains many sites which represent prehistoric settlement in Central Kona without massive early historic modifications. To this we would add (1) the project area is relatively unaltered by modern development, so most of the settlement ruins are present (except where chain dragging for ranching and higher elevation intensive cultivation occurred) and (2) the project area was part of the highly populated, agriculturally productive Central Kona region (Kailua to Honaunau). Essentially, it is the only area that we know of between Honaunau and Kailua where this settlement pattern has substantial portions remaining from the coast to upper elevations. It retains nearly all of the coastal housing and lower upland housing -- the only place in Central Kona perhaps with this situation. Thus, a vast number of major prehistoric developments in Kona are reflected in the sites with the project area -- (1) population growth, (2) local organization, (3) development of complex ranking (higher

social strata), and (4) the start and growth of the intensive field systems. It may be one of the few -- if the only -- Central Kona areas where the development of complex ranking and population growth can still be studied based on permanent habitation remains. We think that these prehistoric/early historic developments are major patterns in prehistory with which the sites of this project area are associated. They are more important than the 1800s changes, because the 1800s changes can be studied with written records, while the prehistoric/early historic changes can only be studied through the archaeological remains present within the project area's sites.

Given this point, we think you need to reconsider your evaluation of criterion A. For example, your report lists some agricultural system sites reflecting late 1800s intensive use as being significant under criterion A, but it does not so list the large agricultural system sites belonging to prehistoric/early historic times -- yet clearly they have great value for reflecting broad developments of history. Also, collectively all the prehistoric/early historic permanent house sites and religious sites, and even temporary house sites and animal pens, have value under criterion A, as a unit -- given the importance of this area. We recommend that you:

- (1) rewrite pages 290-292 which discusses sites which are significant under criterion A, and (a) describe the prehistoric/early historic developments which the project area's sites reflect and simply note that collectively all the sites of this period have significance under this criterion, and (b) then present the later 1800s sites which contribute to the study of the change to market economies.
- (2) Change Table 1 by marking A only on the (1)(b) sites. Drop A from the prehistoric/early historic sites in the table and instead put an asterisk on the table's title, with the asterisk note saying all prehistoric/early historic sites still containing information on this period are collectively significant for criterion A (and refer the reader to pages 290-292 for more information).

In sum, we both agree that all 408 sites found are significant; however, we have recommended some changes in the details of the evaluations. Please let us know in writing if these changes are acceptable. If so, send replacement pages for 290-292 and Table 1. If not, please contact us so a consultation meeting can be held to resolve the disagreement.

Treatment (Mitigation) of the Significant Sites

The next step to be considered is how to treat (mitigate) the 408 significant sites. You note that two wall remnants need no further work, having been adequately recorded in the survey (pp. 303). We agree. Thus, 406 sites need treatment or mitigation.

We agree that some sites merit preservation and others could undergo archaeological data recovery (salvage). We do not yet completely agree with the treatments that you propose.

1. Sites to Preserve

a. We do agree with your proposal to preserve sensitive sites of traditional cultural significance to Hawaiians -- all burials/possible burials and all religious sites. As you know, your client will have to take the proposal for preserving all burials/possible burials to our Hawai'i Island Burial Council for a vote. Please make it clear that 80 possible burials are identified and that your testing showed perhaps 50% may not prove to be burials. They or your client may wish more testing to identify exactly which are burials.

b. We also agree with your proposal to preserve the Kuakini Wall and the 1800s period coastal cart road (site 10290), but we are not sure what you are proposing when you say only portions will be preserved based on condition and location. Typically, the commitment is to preserve the entire site, with the understanding that reasonable approvals for breaches by access roads can be made. Please clarify what you mean or intend.

c. As for the rest of your preservation recommendations, we believe that they must be presented in relation to the two main criterion A themes relevant to this project area -- prehistoric/early historic settlement and 1800s changes. Also, two reasons for preservation must be discussed -- interpretation and protection for long-range research.

(1) We recommend that you revise your mitigation discussion to address these points. For example, for changes in the 1800s, which sites are you recommending be preserved for interpretation -- the Cart road, Kuakini Wall, portions of the railroad bed, the ahupua'a boundary walls (why all)? What about the coastal "store" and the houses in Nawawa and Hokukano? For prehistoric/early historic patterns, the report's mitigation section currently fails to note any preservation of coastal permanent houses, or of temporary habitations, animal pens, agricultural fields or single-structure permanent habitations inland of the Conservation zone. Clearly, these sites are all relevant to the major theme of prehistoric settlement and associated developments.

(2) We also recommend that the revisions should take into consideration the need to preserve large land areas intact to ensure that long-term research on these major prehistoric research problems can occur in the future, as well as to promote interpretations of sites in a landscape setting. Data recovery in one field session cannot adequately approach the goal of retrieving the details of the broad developments of prehistory from this project area. If representative sections of the settlement pattern are preserved (rather than preservation of scattered sites), this goal could be attained. Thus, we believe that this section needs to discuss your client's intent to preserve large sections of the shoreline areas (Hokukano house areas, the graves around Pu'u Ohau, and Nawawa's houses) -- noting the bounds of this area (showing which sites are included) and general plans for preservation and other activities within these areas. These lands (preserves) would seem to preserve the permanent housing along the shore and associated religious structures and many burials. Also, we believe that this section needs to consider the possible preservation of a coastal to inland slice of sites -- to preserve a section of the field system with its formal walled fields for which Kona is so famous and with its associated sites (permanent and temporary habitations, animal pens, etc.). No such slice of makai-mauka fields at this elevation has yet been set aside in Kona; it would have great interpretive and research benefits. We would recommend that this field system be a slice of the 16,363 site (Ke'eke'e) or of 16,369 ('Ilikahi and Kanakau), because your report states these are the best remains found. Either would also have the benefit of being associated with the housing cluster of Nawawa, so the

agricultural fields directly associated with the houses could be preserved for long-term research. We are unaware of the details of your client's development plans. A series of recent permits have been given by the County, and we sincerely hope the opportunity of preserving such a slice of field system sites and adequately addressing the preservation problem is not lost. The field system slice could be green belt recreation area for your client. Last, with the preservation of the settlement in slices of land (preserves), we believe that the preservation of many single sites (which are not burials and heiau) outside of these preserves could be vastly reduced. Excavation needs within the preserves could also be reduced, as sites would be set aside for long-term research and can be studied later. Thus, data recovery costs could be reduced.

2. Data Recovery

Our recommendation is that sites outside the land sections to be preserved (coastal Hokukano to Nawawa and hopefully a slice inland through the field systems) and outside the isolated unique sites that will be preserved should be clearly listed in the mitigation section as slated for data recovery. This data recovery must top quality research, focusing on the questions of prehistoric population growth, local social organization, the presence of higher social ranks (high chiefs) and agricultural developments. There will be only one opportunity to study the remains in these sites relevant to the research questions which this area has great potential to answer. The focus of the work might be more on dating and excavations to flesh-out the chronological frameworks for these changes, leaving more detailed study to the future and for the sites being preserved for long-term research. The detailed scope will be worked out later.

Given these points, we believe the treatment (mitigation) of the 406 significant sites needs to be better clarified. We recommend a meeting on this matter to (1) clarify the coastal areas to be preserved and (2) discuss the possibility of an inland field system strip. Once these points are covered in the meeting, pages 301-303 could be revised.

If you have any questions, please feel free to contact Ross Cordy, our Branch Chief for Archaeology (587-0012).

Aloha,



DON HIBBARD, Administrator
State Historic Preservation Division

RC:amk

Attachment

NEEDED CHANGES TO 3RD VERSION OF HOKUKANO SURVEY

CULTURAL SURVEYS HAWAII

Minor editorial points seen during review

1. p. 30, para. 2, line 3. Where does the Kamakau quote end?
2. p. 31, last paragraph, 2nd sentence. This sentence does not make a lot of sense. It could be re-written.
3. p. 33, top para., last line -- typo Kaukini is incorrect. Try Kuakini.
4. p. 42, Figure 7. This is a good figure, but the caption shows that the three ahupua'a are coded for each house lot, yet they are not coded in the figure. It would appear that each award numbers should have a [2], [3] or [4] after the number.

Burials (pp. 150-164)

Again, we are prepared to agree that you have reasonably identified these sites or features as burials or possible burials -- after seeing some of these sites in the field and the vastly improved discussion in the text. However, this section of the report still needs to better clarify each trait, and justify them. Thus, alterations are needed to this section to more concisely and scientifically support the claims.

1. Size, p. 157. It is said that size is a main criterion for identifying a burial feature -- size being area. However, no area is given for burials based on evidence from other archaeological projects. Your possible burials range from small to 150 m², a close match with house sites. Clearly, it is not size you were using -- unless it was habitation size. Or if you were using size, no justification is given for what a burial's size might be.
2. Height, p. 157. We suspect that this was the key variable. If so, you need to cite evidence from other archaeological projects which establishes burial platforms as being of a certain height and relatively higher than many house sites.
3. Context or Location, p. 157. This is clearly a trait which helps reinforce a burial interpretation -- although by itself it cannot define a burial. The text is fine. However, the table labels this trait under the column "Associations". This column should be titled Location to be consistent with the text.
4. Similarity to Other Sites which tested positive for burials, p. 159. This would seem to be a very important criterion. You use it only for confirmed burials within your project area, and you could expand it to other projects. Regardless, it is not stated what the confirmed burial looked like, and it must be. Also, there is no column in the table for this criterion.

5. Page 159, Other possible traits are noted. If you used them, they should be discussed and included in the table.

Religious Structures

Again, we are prepared to agree that you have reasonably identified these sites or features as religious structures -- after seeing many of these sites in the field. However, this section of the report is still too long and wandering, fails to justify each criterion as religious, and fails to clearly summarize the presence/absence of the criteria for each site. Alterations are needed to this section to more concisely and scientifically support the claims.

1. First, the key points that we requested were (a) present archaeological traits (criteria) which you used to identify religious sites and present justifications for why these are considered religious criteria, (b) identify the sites which you feel match those criteria and you interpret as religious, (c) present in text and/or table each site and itemize the evidence for each criteria being met (such as upright stones = religious; the table shows under the column upright stones, 12 upright stones), and (d) differentiate between larger and lesser heiau (luakini vs. others).

2. Archaeological traits (criteria) which you used to identify religious sites and presentation of justifications for why these are considered religious criteria.

a. Your complete list of traits is not clear. You list on page 166 that size (area and ht), uprights, depressions, paving, water-rounded stones are criteria. It is not clear if you are also including prominent locale and associated habitation structures. Later you discuss massiveness (p. 167). Even later you note historical references (p. 165) in which some structures were identified by informants as heiau. Clearly this is a key criterion; it should be in your list. Also, on page 168, you note coral as not being a major indicator. We wonder if you want to reconsider this point, because large amounts of branch coral have been definitively documented in the archaeological literature (citing historical references and substantiated archaeological cases) as being a religious offering that sometimes is present archaeologically. Our point is that you must clearly present a list of relevant traits on page 166, para. 1.

b. Your following paragraphs must then concisely discuss each trait and the supportive evidence (historical, oral historical, archaeological) substantiating this claim. Much of the logic is muddled, and substantiating evidence is not clear.

(1) p. 166, para. 2. Size. Actually, you are muddling three criteria together here under size: area, height, and massiveness. You discuss area, but you do not show what area enables you to identify a site or structure as religious. All of the structures which you identify as religious are not comparatively large in relation to habitation sites, in contrast to your claim. 7 of your religious sites are between 41-103 sq. m. (your table shows 7, not 8 as your text claims), and many of the permanent habitation sites fall into this size range. Thus, area is clearly not a variable in identifying these 7 structures. In 7 cases, area is striking. To quantify this criteria, you should reference the vast archaeological literature that structures over 200 m² nearly always have been interpreted as religious structures. 7 of your religious sites are larger (based on your table, not 6 as your text claims). Rewrite this paragraph to justify your criteria, and then say simply: 7

are about the same size as permanent habitations; 7 are much larger. Also, when speaking of heiau, small usually refers to less than 200 sq. m., moderate refers to those in the 200-400 or so range, and large heiau are much larger (cf. Kirch 1985). We would recommend you use those terms, because structures 42-100 meters squared are not moderate-sized structures in the universe of religious structures.

(2) Height of the structure is another criterion, perhaps. What is the evidence that height and a specific height is reflective of religious use? Where are your references or evidence.

(3) Massiveness (volume?) certainly might be another trait. But, again, you must define massiveness and must include evidence supporting a specific measurement of massiveness is a religious criterion.

(4) You need an ethnographic reference (oral history based, 1800s-early 1900s informant based, journal record, etc.) to support your claim that upright stones possibly represented deities. We agree that this is a criterion, and we know of such references. You need to include some; otherwise, it is supposition.

(5) p. 167, para. 2. Similarly, you need references for what image depressions looked like and what their dimensions were. We are not sure what image depressions looked like and what their dimensions were, so it is vital to include references. If you do not have references and you are only proposing that holes of a certain size and depth might be image holes, then this must be stated as a clear proposal (with the justification why you think a hole would be a certain size). This cannot be a definitive criterion, but if it appears with other clear religious traits in the analysis of your sites, then at the end of your discussion you can note that the argument for these holes being religious is increased -- which would be an important contribution of your study.

(6) p. 168, Water-rounded stones. A similar problem arises. Unless you have specific evidence that such stones reflect religious use, you are only proposing an archaeological trait that might reflect religion. Thus, you must better clarify your proposition. First, water-rounded stones are not all that uncommon in sites (for example, konane stones). You need to clarify what you mean -- large stones (specify size) and many of them? You must provide arguments as to why the presence of such stones would reflect religious use. Also, you must provide evidence for concluding that such stones in certain cases might have been uprights (e.g., solitary stone that tends to be long and thinner). [And then, you probably should be discussing these cases under your upright criterion discussion.] Again, at the end of the discussion on religious sites, you need to note whether this trait occurred with other traits that are religious traits, thereby increasing the likelihood that this trait might be a religious trait.

(7) p. 168. If you consider prominent locales to be a trait related to religious use, you must clearly state this and provide cited evidence.

(8) p. 168. We disagree that associated habitations have any relevance as a religious traits. Habitations are associated with agricultural sites, burial sites, and almost every other kind of site. Either drop this point, or present supportive (cited) evidence.

(9) p. 168. We strongly recommend that you include the presence of numerous pieces of branch coral as a key archaeological trait of religious use. List it and cite the references.

(10) p. 170. We strongly recommend that you include oral information on religious use as a trait for religious use. This must be oral evidence. Interpretations by archaeologists, such as Reinecke, are not oral evidence.

(11). p. 170. You might wish to record historical records as a trait. Presumably these are grounded in oral testimony, however.

(12) p. 167. Paving. We are completely unsure what you are discussing here. You note pavings and multi-levels (tiers). We know of no studies which claim pavings are evidence of religious uses; indeed the vast majority of houses had pavings. Some have argued that smaller heiau in some areas had multiple-tiers. You could use "multiple tiers" as a criterion and cite those references.

2. You do indicate on page 164 which sites you feel are religious. Thus, this point is met.

3. Present in table and/or text each site and itemize the evidence for each criteria being met (such as upright stones as a column under criteria; then for site "X" under that column an entry might be "12 upright stones"). This enables the reader to quickly see all the sites you are claiming to be religious and to see the evidence on which you are basing your claim. We recommended that this could most simply be done using a table, with minimal accompanying text. Currently, the table does not clearly present the evidence for each site. The table column headings do not match the criteria being used to determine site function. Again, we specifically stated that these tables should list the information under each criterion which you considered important, so the reader could evaluate your functional interpretation. Please revise the table. We believe you need to add criterion. If it must be a fold-out, that is fine.

4. On distinguishing between functional types of heiau -- minimally large (probably luakini) vs. others. Your discussion on pages 169-181 is far too long and rambling. The types of heiau you are trying to identify is not clear, much less which sites fit the types. We would suggest that this section be considerably shortened. You mention ko'a (fishing heiau), hale o Lono, and luakini. If you identified hale o Lono, you might be the first archaeologists to have done so (without oral historical information). To our knowledge there are no clear archaeological traits to differentiate a myriad of types of lesser heiau (hale o Lono, occupational shrines, family shrines, etc.). Only ko'a and men's houses have archaeological criteria to date to our knowledge, with the larger luakini identifiable on size. There is a vast middle ground of moderate-size heiau of unknown function. We suggest that you might simply sort out ko'a, luakini, and lesser-sized heiau -- describing the archaeological traits for each and then showing a table with the sites for your area. You can include your comments on Ukanipo being the large heiau.

Animal Pens

Again, we are prepared to agree that you have reasonably identified these sites or features as animal pens -- based on discussions and site visits. However, the report needs some minor alterations to clearly show your justifications for these claims.

1. p. 186, last para.. It needs to be stated who was (were) the informant(s) who supplied this information.

2. Again, the table column headings do not match the criteria being used to determine site function. Again, we specifically stated that these tables should list the information under each criterion which you considered important, so the reader could evaluate your functional interpretation. Please revise the table. If it must be a fold-out, that is fine.

a. As an example, lack of entrance is listed as a trait on page 185, but it is not shown in the table as a separate trait. It must be shown as a column, with the information entered stating something like "no entrance", "entrance". This criterion seems to be blended into a vague "Internal Features". It must be separated out.

b. Similarly, pig doors is another criterion, and it too is blended into "Internal Features". It must be a separate column, with the data indicated as yes/no.

c. High walls should be another column title, not "Wall height". The data should be entered "Yes (0.7 m internal)", etc. If some are "No", mark them no. The text on page 186 clarifies what is considered high, with justification.

d. Internal walls better built is a criterion in the text. It does not show in the table.

e. Historic fencing material is mixed in with "Internal Features" and needs to be separated into a separate column.

f. The same is true for being built on an outcrop.

g. Local informants is another criterion. It should be a column, with the data entered for each site.

h. Some of the information in the table is irrelevant to the criterion used to determine function. Site area and functional associations are not variables, but they could be left in. Entries under Internal Features that seem not relevant are: "constructed entrance", "Incorporates a lava bubble", "Utilizes sink".

i. It appears that another critical variable is mentioned on page 188, para. 1 -- the lack of any visible midden or artifacts. If this is the case, this should go in the table.

Permanent Habitations/Temporary Habitations (pp. 110-150)

Over half of your sites are habitation sites (p. 110). Quite frankly, we still think your interpretations would not be replicated by any other firm or by any of the other models of permanent vs. temporary habitations currently in the literature.

1. One problem is your definition of structures in a habitation site. All other researchers look at architectural structures that would have held dwelling houses or related buildings (e.g., shrines). Open-air work areas, burials, agricultural features, and animal pens are not considered structures when looking at how many structures are in a habitation site. Solitary features such as petroglyphs, pits, salt pans, etc. are also not typically considered structures within a habitation site. You seem to be counting these other items, and as a result your study is not comparable to other studies. This is very confusing. Ideally, you need to pull out all this extraneous information.

1. Some errors in fact exist, or could be implied, in your introduction section.

a. p. 111, last para.. The historic references note that ruler, high chiefs, lesser chiefs and wealthy commoners had multiple-structure house sites, while single-structure house sites were used by the remainder of the commoners. What percentage of the commoner's had single-structure house sites is not yet clear in the analysis of the historic record. Your text implies that commoners solely had single-structure house sites, which is not true. Thus, we recommend the sentence read "... were occupied by the ali'i or wealthy commoners, and the single-house residences were occupied by other commoners."

b. p. 112, sentence two. Actually Handy and Pukui were ethnographers in their study; something very different from an ethnohistorian. If one reads them closely, they note that a newly married couple had only a sleeping house built for them (Handy & Pukui 1958:112). Thus, although they emphasize the multi-structure household in their book, they also note single-structure households -- like Malo. Your text needs to be changed. We recommend: "Ethnographers E.S. Craighill Handy and Mary Kawena Pukui also noted the presence of single-structure households and multi-structure households, although they emphasized the multi-structure pattern (Handy & Pukui 1958:7, 112).

c. p. 112, last sentence of first paragraph. Actually, multi-house households for commoners and chiefs have been substantiated in the archaeological record since the 1970s. It is not a supposition that seems to be supported; it has been proven (cf. Cordy 1981 or his similar thesis 1978; Kirch & Weissler for Kawela). This sentence needs reworking. We recommend "In the archaeological record, it has been shown that multi-structure households were a common pattern among commoners, as well as the standard with chiefs (cf. Cordy 1981; Kirch & Weissler). Cultural Surveys Hawaii work in inland settlements in Waiohinu, Ka'u, and Honokohau, North Kona, suggest that 46% and 53% of the households (house sites) were multi-structure house sites."

d. p. 113, para.. 1. The last three sentences are in error in a minor yet critical way. In a relative sense, the primary habitation structures of a permanent habitation site (e.g., sleeping house) are usually larger than temporary habitation structures. Certainly smaller structures found in a permanent housing site (cook-houses, storage sheds, etc.) could fall into a temporary habitation range. We believe that the primary habitation structures are the key for distinguishing permanent vs. temporary and needs more emphasis. We would recommend that the sentences read "In a relative sense, the primary permanent habitation structures (e.g., sleeping houses) are usually larger than temporary habitation structures. Smaller structures found within multi-structure permanent habitation sites (e.g., cookhouses, storage sheds) can be the same size as temporary houses, but the key distinction in area is the primary permanent habitation structures."

2. Criterion

a. p. 111, Layout (single-structure vs. multi-structure). You need to cite evidence that temporary habitations are usually single-structure sites. Easy sources to use would be Makaha and Lapakahi. Kona also has many cases. We are not certain that this is true, so you do need to substantiate this claim.

b. p. 112, Amount of Labor (what others have called Substantiveness of Architecture). This is generally okay. But you need to describe variables, so they can be measured -- for

example bi-faced walls (permanent) vs. uni-faced (temporary), and well-paved need description. [Here we would suggest rectangular shaped with well built faces vs. less regular shapes with less vertical faces as a trait you might consider.] Minimal construction (temporary) needs definition vs. some variable for permanent houses.

c. pp. 112-113. Floor size. We would suggest that you discuss somewhat this variable. For example, Cordy found in north Kona that the primary permanent habitation structures ranged ca. 20-70 m² and temporary structures were less than 20 m². Clark has suggested areas for temporary habitations of and for permanent habitations, but his ranges overlap considerably. Cordy has noted that areas can vary from region to region. Somewhere you should have plotted out your areas, shown bimodality, and then described the ranges for temporary vs. primary permanent structures.

d. Internal Features, p. 113. You need to cite studies which have documented that permanent habitations have solitary hearths, entryways, and split-levels, while temporary habitations do not. We are aware that temporary habitations can often have multiple hearths (frequently at different stratigraphic levels), but we have not seen studies that say permanent sites have single hearths. Many temporary habitations have single hearths. You need to present some supportive information.

3. p. 114. Before you enter into discussing each housing type, you need to tell the reader (in easy-to-read language) how you actually distinguished permanent vs. temporary housing. Did you first split sites into single-structure vs. multi-structure, with the latter considered to be permanent. Did you then look at substantiveness of architecture (your amount of labor investment) to split the single-structure sites into permanent vs. temporary? In some ways, this looks like this is how you proceeded. This needs to be very clear. Otherwise the scientific methods used to produce your classification cannot be evaluated or replicated.

4. Temporary Habitations, p. 115. . Like in the other cases, the table's traits do not match the text's. Your traits are single vs. multi-structures, area (no specific measure given yet), substantiveness of architecture, and internal features. Only Internal Features and area are in the table. Amount of Labor (Substantiveness) seems to be Architecture Elements, and if so, should be relabeled. And under that column, what do the variables Modification, paved, remnant, tiered, etc. mean (see point 2.b. above). Cultural remains, other, geological location and geogra-location are not variables -- should they be in the table?

a. Overall Layout, p. 119. Relabel this Single-Structure vs. Multi-Structure as this is the criterion being evaluated. Be sure to drop out all structures that are not habitation structures or architectural structures that had a related function (shrine, roofed work areas, etc.) Sentence one shows that 94 sites consisted of but one structure and 25 had multiple structures. Assuming this is correct (with the term structure referring to roofed), then you need to clearly state the number of structures per site within the 25 sites. For example, 20 of the sites had 2 structures, 5 had 3 structures.

b. Formal Architectural Type, p. 119. This is not one of the listed criteria to differentiate permanent from temporary habitations. If it is relevant, and we believe it is (because caves and rockshelters are nearly always temporary habitations, when not within a permanent habitation sites as associated feature to the primary dwellings), then it should be discussed as a criterion in prior pages -- with supportive evidence.

c. Size, p. 120-121. The problem here is that you apparently have not used size as a distinguishing criterion, rather you have differentiated temporary habitations based on single-structure and amount of labor (if we are correct in guessing how you have done this). Thus, you are reporting on size of the sites which you have grouped on other criteria. You need to better present your data, other than a mean and range. To be honest, the fact that 30% of your structures are greater than 30 m², and an unknown number between 20-30 m², still does not match prior analyses of permanent vs. temporary, except some studies by your firm. Thus, your study stands out as one with different findings. This makes us wonder if your findings are correct. Our fieldchecks focused on looking at the very large structures which you had identified as temporary habitation sites. The ones we saw seemed reasonable. We had expected you to discuss these apparent deviation cases. This discussion has not been made. But, upon seeing your text, it is clear that you still have a large number of structures which you call temporary, which other researchers might call permanent based on the data presented. This point really bears discussion, but it will probably have to be deferred to the mitigation phase of this project.

d. p. 122, para. 1 -- Midden. You stated earlier you were not going to use this variable. If you do, you have to quantify and present the data showing that temporary habitations had smaller quantities or no midden and artifacts vs. what you are calling permanent.

5. Permanent Habitations

a. The elements (criteria) used to identify this type of site are listed on p. 125 para. 1. Some of these were not listed previously as criteria -- such as formal architectural type. If they are used, they need to be discussed previously, stating how permanent vs. temporary is different (with supportive evidence). Others are termed differently than in prior discussions -- e.g., architectural elements (amount of labor), and should be consistent. These also need to match the table column heads.

b. Layout, p. 125. Again, this criterion really should be labeled single vs. multi-structure sites. The first sentence says how many single structure sites there are (63) and how many multi-structure (59). Thus, the remainder of the discussion should focus on the multi-structure cases. You say 2-18 structures are present within multi-structure sites, but are you only including structures which were likely roofed -- primary dwellings, small structures (cookhouses, storehouses), shrines? Or are you counting animal pens, burials, etc. Again, the latter approach is unique and not comparable to other studies. What is the situation for multi-structure sites, how many had 2 structures, 3 structures, etc.?

c. Formal Architectural Type, p. 137. This is not one of your criterion presented originally. You need to describe earlier how this helps you determine permanent vs. temporary. Internal feature criteria are mixed in here, and the evidence is not presented, other than said it is present.

d. Size, p. 138. This discussion is meaningless. Again, the key structures used by others to identify permanent habitation sites are the primary dwellings (similar in size to solitary structure permanent habitation sites). As you noted early in your text, these structures are relatively larger than temporary habitations. We know that smaller structures were present in permanent habitation sites which overlapped with temporary habitations, and we know that occasionally there were larger structures (e.g., men's houses). To lump all these types of permanent habitation structures together has little usefulness. If you presented a graphic plot of all the structures and identified the size ranges of small, medium = primary dwellings, and larger-probably men's houses, then that would be extremely useful. You could then compare the primary dwelling sizes to temporary habitation sizes. Or you could analyze the larger structures. As it is, this discussion has little value. You cannot talk about predominant size ranges (for that ignores variation).

e. Temporal Affiliations, p. 140-143. This discussion should go under a dating section in this report. It is not directly relevant here to identifying permanent habitations.

Evaluation of Social Ranking Patterns in Permanent House Sites

Your cover letter states that this topic is covered in the habitation section. The only coverage we could find was on page 135, where it is argued site 16756 is likely a house of a High-status individual. To be honest, there is no scientific argument presented on this page as to why site

16756 is a high status structure. Again, to study social ranking differences among house sites, you have to compare all house sites in some manner -- studying traits that will likely reflect ranking. Our prior review letter itemized how this can be done by looking at labor expenditure differences among households. House counts by house site might be another approach. You also have to define your terms, like high status. Does it mean high chief or ruler, the common interpretation?

While we agree that site 16756 is likely that of a high chief and we can think of several lines of evidence to support it, you need to provide supportive evidence. Also, what about other house sites; you need to make comparisons to study ranking.

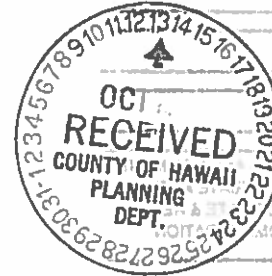
A solution to this might be to provide supportive evidence for site 16,756 being a high chief's dwelling site and to note that this is the only site of its type. Then you can avoid having to do a wider social ranking study, which to be honest seems to require much more work, and it appears that your staff needs to study up on how to do this, before attempting it.

DWYER IMANAKA SCHRAFF KUDO MEYER & FUJIMOTO

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October 11, 1995

Herman M. Aizawa, Ph.D.
Superintendent, Department of Education
State of Hawaii
P. O. Box 2360
Honolulu, Hawaii 96804

Re: **Change of Zone Application (REZ 95-12)**
1250 Oceanside - Villages at Hokukano
TMK: 7-9-12:11 & Pors. 2 & 4; and 8-1-4:Por. 3

Dear Mr. Aizawa:

We have received a copy of the attached letter addressed to Virginia Goldstein, Planning Director, dated September 18, 1995 from your department. The letter confirms that the developer, 1250 Oceanside, is to provide a fair-share contribution to the Department of Education for education facilities based on a State Land Use Commission condition. Our office represents 1250 Oceanside, the developer of the Villages at Hokukano project. We are not aware of any State Land Use Commission condition relating to the subject property. It is my understanding that the subject property has never been submitted to the State Land Use Commission for reclassification.

We would appreciate clarification of your letter and reference to the particular State Land Use Commission condition which is applicable to the subject property.

10/11/95

Herman M. Aizawa, Ph.D.
October 11, 1995
Page 2

Should you have any questions regarding the above, please do not hesitate to contact the undersigned.

Very truly yours,

DWYER IMANAKA SCHRAFF KUDO
MEYER & FUJIMOTO


Benjamin A. Kudo

BAK:eas

cc: Al Suga
Dick Frye
Virginia Goldstein

Benjamin J. Cayetano
GOVERNOR



STATE OF HAWAII
DEPARTMENT OF EDUCATION

P. O. BOX 2360
HONOLULU, HAWAII 96804

HERMAN M. AIZAWA, PH.D.
SUPERINTENDENT



- ROUTE SLIP - DATE
 - DIRECTOR
 - DEPUTY
 - PVT. SECRETARY
 - LONG RANGE DIVISION
 - PLANNER
 - SHORT RANGE DIVISION
 - PLANNER
 - DRAFTING SECTION
 - DRAFTSMAN
 - GENERAL ADMINISTRATION
 - SECRETARY TO COMMISSION
- September 18, 1995
- REVIEW AND COMMENT
 - APPROPRIATE ACTION
 - INVESTIGATE & REPORT
 - RECOMMENDATION

OFFICE OF THE SUPERINTENDENT

Ms. Virginia Goldstein
Planning Director
County of Hawaii
25 Aupuni Street, Room 109
Hilo, Hawaii 96720-4252

Dear Ms. Goldstein:

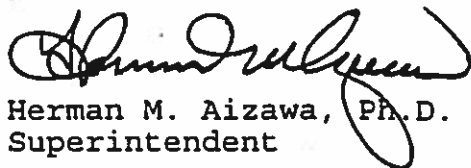
SUBJECT: Change of Zone Application (REZ 95-12)
Oceanside 1250
TMK: 7-9-12:11 & Pors. 2 & 4 and 8-1-4:Por. 3

This is to confirm that the developer has yet to provide a fair-share contribution to the Department of Education (DOE) for the subject proposed residential development based on the State Land Use Commission condition. The DOE will require the developer to provide a fair-share contribution of \$850 per lot or residential unit being developed in the subject subdivision.

For the proposed 810 units, the DOE will require that the developer contribute \$688,500 as a fair-share contribution for capital improvement projects for schools being impacted by this development.

Should there be any questions, please call the Facilities Branch at 733-4862.

Sincerely,


Herman M. Aizawa, Ph.D.
Superintendent

HMA:hy

cc: A. Suga, OBS
P. Bergin, HIDO

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