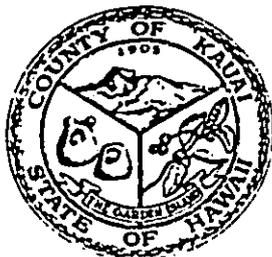


JOANN A. YUKIMURA
MAYOR

RECEIVED

'94 MAR -8 12:42



COUNTY ENGINEER
TELEPHONE 241-6600

EDMOND P.K. RENAUD
DEP. COUNTY ENGINEER
TELEPHONE 241-6600

OFFICE OF ENVIRONMENTAL QUALITY CONTROL
AN EQUAL OPPORTUNITY EMPLOYER
COUNTY OF KAUAI
DEPARTMENT OF PUBLIC WORKS
3021 UMI STREET
LIHUE, KAUAI, HAWAII 96766
March 4, 1994

Mr. Brian J. J. Choy, Director
Office of Environmental Quality Control
220 S. King Street, 4th Floor
Honolulu, HI 96813

Dear Mr. Choy:

RE: Negative Declaration for Halehaka Landfill Closure,
TMK 3-3-03: Por. 1, Lihue, Kauai, Hawaii

The Department of Public Works, County of Kauai has reviewed the comments received during the 30-day public comment period which began on December 23, 1993. The agency has determined that this project will not have significant environmental effect and has issued a negative declaration. Please publish this notice in the March 23, 1994 OEQC Bulletin.

We have enclosed a completed OEQC Bulletin Publication Form and four copies of the final EA.

Please contact our Solid Waste Coordinator, Dale Burton, at 241-6860 if you have any questions.

Sincerely,

ED RENAUD
Deputy County Engineer

DRB/db
Enclosures

c:\wpwin\cont\bc03044a.1tr

DOCUMENT CAPTURED AS RECEIVED

1994-03-23 - KA-PEA-Halehaka Landfill
Closure

MAR 23 1994

Environmental Assessment

**Halehaka Landfill
Closure/Post-Closure Plan**



County of Kauai

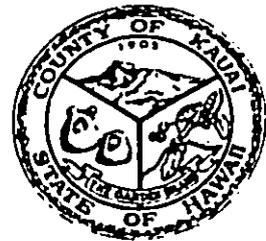
February 1994

**R.W. BECK
AND ASSOCIATES**

 A Recycled Paper Product

Environmental Assessment

**Halehaka Landfill
Closure/Post-Closure Plan**



County of Kauai

February 1994

**R.W. BECK
AND ASSOCIATES**

**HALEHAKA LANDFILL CLOSURE
ENVIRONMENTAL ASSESSMENT**

Table of Contents

Section	Description	Page
A.	CLOSURE	1
B.	CONSULTATION PROCESS	1
C.	GENERAL PROJECT DESCRIPTION	1
	1. Technical	2
	2. Socioeconomic	3
D.	ENVIRONMENTAL CHARACTERISTICS	4
	1. Affected Environment	4
	2. Flora	4
	3. Fauna	5
	4. Historical/Archeological and Cultural Sites	6
	5. Adjacent Natural Resources/Sensitive Habitats	6
E.	IDENTIFICATION AND SUMMARY OF MAJOR IMPACTS AND ALTERNATIVES CONSIDERED	7
	1. Major Impacts	7
	2. Alternatives	8
	3. Proposed Mitigation Measures	8
F.	DETERMINATION FINDINGS AND REASONS SUPPORTING DETERMINATION ..	9

APPENDIX - SUPPORTING DOCUMENTATION

HALEHAKA LANDFILL CLOSURE ENVIRONMENTAL ASSESSMENT

A. CLOSURE

The closure of the Halehaka Landfill on the island of Kauai is being proposed by the Department of Public Works of the County of Kauai.

B. CONSULTATION PROCESS

Several agencies and private groups and individuals were consulted as part of the early consultation process prescribed in 11-200-9 of the Office of Environmental Quality Control (OEQC) guidelines. These agencies include:

- State of Hawaii Department of Health - Solid Waste Branch
- State of Hawaii Department of Health - Clean Air Branch
- State of Hawaii Department of Health - Clean Water Branch
- State of Hawaii Department of Land and Natural Resources - Fish and Wildlife Branch
- State of Hawaii Department of Land and Natural Resources - State Historic Preservation Division
- State of Hawaii Department of Budget and Finance
- State of Hawaii Office of Environmental Quality Control
- State Office of Planning
- County of Kauai Planning Department
- County of Kauai Department of Public Works
- County of Kauai Building Department
- County of Kauai Office of the Mayor
- County of Kauai Fire Department
- Grove Farm Company, Incorporated
- U.S. Army Corps of Engineers

C. GENERAL PROJECT DESCRIPTION

The Halehaka Landfill is located on approximately 20 acres of land, 1.5 miles southwest of Lihue, on the island of Kauai. The landfill, which is unlined, began accepting mixed municipal waste from the Lihue area in 1973 and was closed to the public in June 1991. During this time period, virtually all wastes produced in the area were disposed of at the Halehaka Landfill. The exact nature of the waste contained in the landfill is unknown, but it likely consists of predominantly mixed residential and commercial waste. Some industrial waste from sugar production is also likely. Due to past regulatory practices and public awareness levels, the landfill could contain household hazardous wastes, small quantity generator wastes, and some hazardous materials.

Q.1

As part of the original landfill permit, the State Department of Health (DOH), as the permitting agency, obligated the County of Kauai to close the landfill in "an approved, environmentally sound manner." Meetings with the DOH to determine closure criteria indicated that the Environmental Protection Agency (EPA) solid waste regulations would provide the standard for the closure of the Halehaka Landfill. The EPA, under Subtitle D of the Resource Conservation and Recovery Act (RCRA) has established criteria for controlling the management of nonhazardous solid waste. The "Criteria for Classification of Solid Waste Disposal Facilities and Practices" which is set forth in 40 CFR part 258, and details closure requirements for landfills, was revised on October 9, 1991. Since the Halehaka Landfill stopped receiving waste prior to October 9, 1991, and since the Hawaii State Solid Waste Regulations do not state otherwise, the landfill does not fall under these revised Subtitle D closure requirements. Therefore, closure requirements applicable to the Halehaka Landfill call for two feet of compacted soil cover, adequately sloped to allow surface water to run off the waste area, with a final layer of tillable soil, to be seeded for erosion control.

The landfill property and all property immediately surrounding the landfill is owned by Grove Farm Company, Incorporated (Grove Farm). Grove Farm is planning to develop the existing sugar cane fields adjacent to the north and east sides of the landfill property into a golf course with adjacent single family housing, as part of their Lihue/Puhi Project.

Due to the imminent proximity of residents and recreational users, the closure proposed for the Halehaka Landfill is substantially more stringent than what the applicable EPA regulations require. These more stringent measures, adopted by the County of Kauai, will ensure the health and safety of the nearby residents/users, improve the aesthetics of the site, and address the long-term environmental issues associated with closed landfills.

1. Technical

The closure of a landfill typically consists of grading the landfill to prescribed slopes (generally, between 5 percent and 33 percent) which are steep enough to shed surface water away from the landfill but shallow enough to remain stable and discourage surface erosion. An impermeable layer of material is placed on top of the graded landfill to minimize the production of leachate, which is created when water is allowed to filter through the refuse and become contaminated. A layer of drain material is placed above the impermeable layer to provide a flow path away from the landfill. A layer of topsoil is placed over the drain material and seeded to provide a vegetated cover which will discourage erosion and give the landfill a more natural appearance.

Since landfill gas is produced as a by-product of waste decomposition, a landfill gas control system will be provided to ensure the safety of adjacent property users. The gas control system consists of header pipe, which is ringed around the top of the landfill; gas extraction wells and lateral pipes connected to a motor blower, which induces a vacuum on the pipe system drawing the gas to a designated point; and a flare, having a stack approximately 25- to 30- feet high, to destroy the gas and its accompanying odors through combustion. As an additional gas control measure, a minimum 200-foot setback for all residences has been established around the perimeter of the landfill.

The existing slopes on the west and south sides of the landfill are unstable and too steep to construct a final cover system. Therefore, to execute a proper closure, it will be necessary to cut these steep slopes back to a more stable configuration. (It should be noted that work on these slopes will be kept to the minimum amount necessary to achieve stable slopes.) The excess waste material produced when these slopes are cut back must be distributed elsewhere on the site. The property owner has limited the ultimate height of the landfill to elevation 246 (above M.S.L.), which eliminates the possibility of mounding the waste on top of the landfill. The southeast face of the landfill is the only location without a major constraint; however, the amount of waste to be distributed will exceed the existing waste footprint by approximately two acres. To protect the groundwater in this area, a soil liner will be constructed for the refuse, with a leachate collection system. The system will also control surface water discharge during the construction phase of the closure.

Surface water will be controlled with a system of ditches and infiltration basins. Surface water from the west and south sides of the site will eventually drain to the Puuli Stream, as does the existing landfill. Surface water from the north and east sides of the site will be channeled to infiltration basins, outside and downstream of the limits of waste, where it will infiltrate to the groundwater.

Following the construction of the closure improvements, a post-closure care period begins. This care period can range from 20 to 30 years, depending on the physical processes of the landfill. Post-closure tasks include: periodic repair to the cover system, ground and surface water sampling and testing; landfill gas control system adjustment and gas production monitoring; leachate and gas condensate collection and disposal; and miscellaneous maintenance and troubleshooting. A complete description of all post-closure monitoring programs, schedules, and monitoring site locations is included in Section IX of the Closure/Post-Closure Plan. Specific post-closure care manuals will be developed and then evaluated and modified periodically to reflect increased knowledge of the site after collection, review, and analysis of data.

Q. 2

2. Socioeconomic

The construction cost of this project is estimated at approximately \$7,000,000. The State of Hawaii has contributed funds in the amount of \$550,000 toward the construction cost. The construction period will be approximately 10 months, and will most likely utilize local labor and materials.

The estimated annual cost for the post-closure care period is approximately \$118,000. The County will utilize existing staff for the more routine maintenance tasks, and will either train a staff member or subcontract with an outside firm for the more specialized duties. Analysis of groundwater samples will be performed by an independent testing laboratory.

D. ENVIRONMENTAL CHARACTERISTICS

1. Affected Environment

The Halehaka Landfill is bordered by sugar cane fields to the north and northeast, a small cemetery to the east, the existing Halehaka Road to the south, and the Puali Stream to the west. About 65 percent of the landfill waste volume was placed in an historic north trending steep-sided tributary valley, which had an original base elevation of approximately 160 feet mean sea level. Prior to filling this area, a 14-foot trench was excavated and a 48-inch-diameter perforated drain pipe was placed at the trench bottom. At the completion of filling, this area was the deepest part of the landfill, at approximately 60 feet deep. Trench-fill methods were used along the west side of the landfill. This method involves excavating a grid pattern of trenches approximately 8-10 feet deep, backfilling the trenches with waste, and utilizing the excavated soil for daily cover. Additionally, 10 to 15 feet of waste was added above the original elevation of the trench. This area comprises approximately 25 percent of the landfill waste volume. The final 10 percent of fill volume is located on approximately three acres immediately below and northwest of the main fill volume, separated by a ridge of natural saprolite soil. This area, which was the last active waste fill area, was filled by pushing waste off the edge of the main landfill above. The depth of fill in this area is approximately 35 feet, but this includes a generous amount of soil.

2. Flora

After the fill portion of the landfill site stopped receiving waste, a veneer of soil material was placed over the site and allowed to vegetate itself, presumably with nearby, encroaching plant species. As part of Grove Farm's Lihue/Puhi Project, which the Halehaka Landfill abuts, a field survey of the property immediately west of the landfill, along the opposite bank of the Puali stream, was performed by Char & Associates in November, 1992 and April 3, 1993, and incorporated into "Supporting Documentation for a Use Permit, Class IV Zoning Permit, and a Special Permit Application for the Puakea Golf Course Relocation" dated May 1993. The field survey indicated the following:

"Existing vegetation on the plateau consists of actively cultivated sugar cane (*Saccharum officinarum*) approximately four to five feet tall at the time of the November survey. Few other species were noted in the cane fields themselves, although weedy species, including puahilahila (*Mimosa pudica* var. *unijuga*), narrow-leaved plantain (*Plantago lanceolata*), and honohono (*Commelina diffusa*) were observed in drainage ditches and along field boundaries.

The gulch is vegetated by a mixed forest of introduced trees and shrubs. Although the floor of the gulch did not suffer much damage from Hurricane Iniki most of the trees on the upper slopes sustained severe damage, and some were snapped in half. Among the species observed in the gulch were Eucalyptus, Java plum (*Syzygium cumini*), mango (*Mangifera indica*), hau (*Aleurites moluccana*), and bamboo (*Bambusa*

vulgaris). Scattered patches of ferns, Hilo grass (*Paspalum conjugatum*), and the indigenous lau'e (*Phymatosorus scolopendria*) were also noted.

Vegetation on the subject property is composed almost exclusively of introduced species. The few native species present on the property are indigenous, that is, native to the Hawaiian Islands and elsewhere throughout the Pacific. No listed or candidate threatened or endangered species were observed, and none were considered rare or vulnerable. Completion of the proposed action is not expected to have any significant effect on botanical resources in the area...."

Inspection of the broad, flat portion of the landfill surface in June 1993 indicated some landfill gas-stressed grasses, with a scattering of hau. The thin layer of nutrient-poor soil which covers the fill area, combined with constant exposure to the sun, inhibits the establishment of many of the plants referenced above. The west and south slopes of the landfill property, which were not disturbed by the landfilling process, are immediately downstream of the gulch area described above and thus are very similar in description.

As part of the final landfill cover, a 2-foot soil planting layer will be distributed over the fill area. Shallow root plants and grasses will be established to integrate the landfill with both the undeveloped area and the adjacent golf course.

3. Fauna

There are two distinct areas on the landfill property: the portion of the site which was filled with waste; and the steep, vegetated slopes adjacent to or east of the Puali Stream. Of these two areas, only the area near the stream provides a significant habitat for wildlife. The fill area is relatively barren and exposed, and does not appear to present an inviting habitat to birds or mammals, as numerous site visits have not produced sightings of either in this area. Occasional sightings of birds in flight overhead and in the trees along the west and south edges of the property have been noted, but the sightings were too obscured by vegetation to determine species.

An avifaunal and feral mammal survey for the property immediately adjacent to the project site, on the opposite side of the Puali Stream bank, was performed in December 1992 by Dr. Phillip L. Bruner as part of the Grove Farm document referenced above. This survey, found in Appendix C of that document, is included in this assessment. Basically, Dr. Bruner's one-day survey of the area resulted in sightings of the Koloa or Hawaiian Duck (*Anas wyvilliana*) and the Black-crowned Night Heron (*Nycticorax nycticorax*) along the Puali Stream. He also hypothesized that several other types of indigenous and exotic birds were known to exist in similar habitats on Kauai, and so may also occur on or fly over the Grove Farm project site. The birds which were not observed but were consistent with the habitat include: American Coot (*Fulica americana alai*); Newell's Shearwater (*Puffinus newelli*); Pacific Golden Plover (*Pluvialis fulva*); Ruddy Turnstone (*Arenaria interpres*); Barn Owl (*Tyto alba*); Cattle Egret (*Bubulcus ibis*); Hwamei (*Garrulax canorus*) and Red-crested Cardinal (*Paroaria coronata*).

The feral mammal survey for Grove Farm did not indicate the presence of any mammals on the site at that time, but it was presumed that rats, mice, and cats were likely to occur on the property. The stream valley was also noted to be somewhat consistent with the feeding grounds of the endangered Hawaiian Hoary Bat, although none were observed.

4. Historical/Archeological and Cultural Sites

There are no historical/archeological or cultural sites on the landfill. An historic cemetery containing approximately 35 headstones of Japanese and Hawaiian ancestry is located adjacent to the east edge of the site. As part of Grove Farm's Lihue/Puhi Project, a document by Paul H. Rosendahl, Ph.D., Inc. (PHRI) entitled "Archeological Preservation Plan Site 503 - Halehaka Cemetery" dated October 1991 was compiled. This document assessed the site as "significant for information content, cultural value, and as a representative example of a site type." PHRI excavated backhoe pits, in conjunction with research and personal interviews, to determine the extent of the cemetery. When the actual extent of the cemetery was established, PHRI proposed buffer zones, of varying width, on all sides and proposed a final cemetery boundary which incorporated these buffer zones. The edge of the landfill closure improvements will be immediately adjacent to this boundary. This document was reviewed by Mr. Don Hibbard of the State Historic Preservation Division (SHPD) of the Department of Land and Natural Resources (DNLR), the jurisdictional agency for the cemetery. His review suggested the use of a temporary fence during construction of any adjacent improvements. In response to this suggestion, Grove Farm has erected a temporary fence around the cemetery. R. W. Beck and Associates also notified Mr. Hibbard of the project and its proximity to the cemetery as part of the early consultation process for this Environmental Assessment. His letter of response, dated 9/13/93, is included at the end of this document, along with a copy of the approved protection plan. Mr. Hibbard's response reaffirms the SHPD requirement that the temporary fence installed by Grove Farm remain in place throughout the grading process. At a minimum, the contractor will be required to comply with this requirement during construction of the landfill closure improvements.

5. Adjacent Natural Resources/Sensitive Habitats

The Puali Stream is located adjacent to the west boundary of the landfill site. The stream bed adjacent to the site is quite broad, and relatively flat on the bottom with a flow depth, on average, of 1 foot. The existing landfill boundary stops short of the stream, and the closure improvements will not encroach upon the stream.

As part of the early consultation process for this environmental assessment, R. W. Beck and Associates contacted the Corps of Engineers to discuss whether or not the Corps had jurisdiction in this project. A conversation with Mr. Warren Kanai of the Operations Division of the Corps determined that, since the closure would not impinge upon the stream, the Corps would not have a regulatory role in the project. Copies of the relevant communications with the Corps are attached at the end of this document.

Substandard landfilling practices may have caused some waste to be pushed over the west edge of the landfill, toward the stream area. Any errant waste in or near the stream bed will either be recovered and incorporated into the waste regrade portion of the closure construction, or will be hauled to the local (operating) landfill. The construction specifications for the landfill closure will require the contractor to protect the stream from any impacts due to his operations.

The closure of the landfill and the adjacent housing and recreational development will likely result in improved water quality of the stream, as the cessation of cane irrigation combined with the capping of the landfill may reduce the volume of any water running through the waste and ultimately draining to the stream.

Surface and groundwater monitoring data characterize offsite migration of pollutants as a combination of rather low contamination coupled with high dilution. There is no evidence at this time that groundwater in the area is being contaminated by the landfill leachate. Without a low permeability cover on the landfill, the concentration of pollutants migrating offsite would likely increase. Section III of the closure/post-closure plan contains detailed information on the hydrogeological and geotechnical investigations conducted to determine appropriate closure measures, designed to protect adjacent resources. Q.?

E. IDENTIFICATION AND SUMMARY OF MAJOR IMPACTS AND ALTERNATIVES CONSIDERED

1. Major Impacts

The major permanent impacts presented by the closure of a landfill are overwhelmingly positive:

- Capping the landfill with a low-permeability layer inhibits the amount of water contacting the waste, thus reducing the volume of leachate produced and introduced to the Puali Stream.
- Installation of an active landfill gas control system will ensure the safety of the nearby residents and recreational users and provide odor control.
- Regrading the waste on the west and south sides will remedy existing slope instabilities.
- Establishment of a vegetative layer on the surface of the landfill will improve the aesthetic appearance of the landfill and assist in providing permanent erosion control.

The closure of the landfill could result in the following negative impact, if left unmitigated:

- During very wet weather, when the topsoil and drainage layers have become saturated from previous storms, the presence of the impermeable layer over the landfill will produce a rate of stormwater runoff above that of the existing landfill. In general, increased rates of runoff are undesirable since they may negatively impact the downstream receiving waters through erosion, and, in extreme cases, cause flooding downstream.
- Additionally, negative impacts of a temporary nature, such as odor release, windblown litter, and the potential for contaminated surface water, may be experienced during construction of the landfill improvements, since a significant amount of waste will be exposed during regrading of the landfill slopes.

2. Alternatives

Due to the unique nature of this project, better alternatives do not exist. Unlike many projects requiring an Environmental Assessment, the final closure of a landfill is not optional. As stated in the general description above, the closure of the Halehaka Landfill is dictated by state and federal requirements. To comply with these requirements, the landfill must be closed.

3. Proposed Mitigation Measures

The only permanent negative impact which requires mitigation involves the increased rate of surface water runoff which may be generated during very wet weather due to the installation of a low-permeability barrier above the waste. Since the project area is relatively small, a portion of the increase in runoff rate will be mitigated on-site through the use of either detention or infiltration basins, located away from and downstream of the waste. However, there are some areas where the confines of the site do not allow for the installation of these storm system facilities. As compensation for the increased runoff rate from these areas, arrangements will be made, with the cooperation of Grove Farm, for the surface water management system of the adjacent portion of the Lihue/Puhi project to infiltrate additional runoff, above and beyond the requirements of that project.

The negative impacts associated with regrading waste during construction will be addressed by the contractor. During construction, the contractor will be directed to provide for the control of blown litter, and for surface water runoff and leachate management. Litter control measures will include temporary litter fencing, daily recapture of errant waste, and the use of soil or tarp covers when areas are not actively under construction. The contractor will be required to construct temporary containment berms to ensure that contaminated surface water from graded landfill areas is contained within the landfill. The leachate collection system for the south placement area of the landfill will be designed to contain surface water runoff within the perimeter of the landfill. It

is likely that the excavation and placement of the landfill waste will result in the release of odors from the landfill. Although these odors will be somewhat mitigated by the use of temporary soil and tarp covers, effective odor control will not be achieved until the final cover system is completed.

F. DETERMINATION FINDINGS AND REASONS SUPPORTING DETERMINATION

After review of the existing environmental characteristics of the project area and the potential environmental impacts of closing the Halehaka Landfill, it has been determined that an Environmental Impact Statement is not required. Following are the principal reasons supporting the determination that no Environmental Impact Statement is required:

An early consultation process was conducted as part of the environmental assessment, in accordance with OEQC guidelines 11-200-9, to gather input from agencies and individuals with expertise in and jurisdiction over solid waste, clean air, clean water, fish and wildlife, historic preservation, budget and finance, planning, public works, building, fire control, and government. Input and oversight from a variety of resources like these has ensured that the closure plan presented is environmentally sensible.

The background flora and fauna resource information provided in the environmental assessment is sufficient to evaluate the environmental sensitivity of the closure plan. Closure of the landfill would not threaten any sensitive species or habitat. It would result in greatly improved vegetative cover and reduced potential for landfill gas-stress on the flora. The risk of wildlife loss due to contamination of surface water by uncontrolled landfill leachate would be reduced by landfill closure.

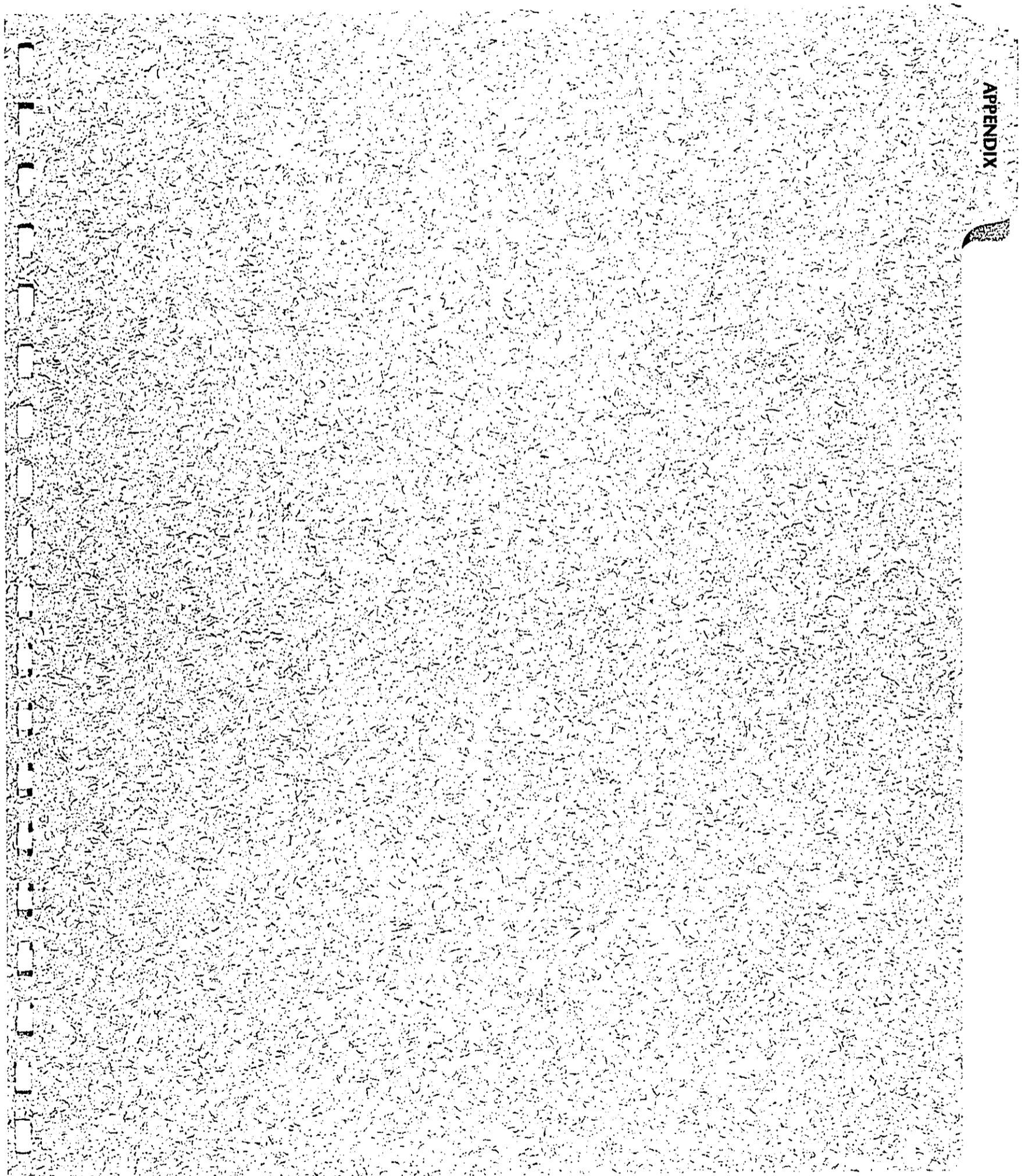
The interim and final archeological protection measures developed for the environmental assessment appear adequate to protect the historic cemetery adjacent to the landfill. Closure of the landfill should also provide a more aesthetically pleasing environment for the cemetery.

The environmental assessment addresses the risks posed by increased surface water runoff after landfill closure and adequate mitigation measures are planned.

Environmental protection measures outlined in the environmental assessment should be adequate to control litter and to manage surface water and leachate during construction. Unavoidable odor impacts will occur during closure, but available odor minimization measures will be used. Puali stream, adjacent to the landfill, should be improved by landfill closure due to removal of errant waste and decreased risk of landfill leachate entering the stream.

Overall, closure of the landfill will result in greatly improved environmental conditions, including reduced risk of surface water contamination, improved landfill gas safety, improved slope stability, and greater erosion control. The environmental assessment conducted has not indicated environmental risk that would warrant preparation of an Environmental Impact Statement.

DOCUMENT CAPTURED AS RECEIVED



APPENDIX

APPENDIX

SUPPORTING DOCUMENTATION

R.W. BECK
AND ASSOCIATES

JOHN WAINEE
GOVERNOR OF HAWAII



COPY

WILLIAM W. PATY, CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES

DEPUTY
JACK P. KEPPELER &
DONAL L. HANAKI

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
STATE HISTORIC PRESERVATION DIVISION
33 SOUTH KING STREET, 6TH FLOOR
HONOLULU, HAWAII 96813

AQUACULTURE DEVELOPMENT PROGRAM
AQUATIC RESOURCES CONSERVATION AND ENVIRONMENTAL AFFAIRS
CONSERVATION AND RESOURCES ENFORCEMENT
CONVEYANCES
FORESTRY AND WILDLIFE HISTORIC PRESERVATION DIVISION
LAND MANAGEMENT
STATE PARKS
WATER AND LAND DEVELOPMENT

March 2, 1992

Paul H. Rosendahl, Ph.D.
PHRI
305 Mohouli Street
Hilo, Hawaii 96720

LOG NO: 476B
DOC NO: 1807W

Dear Dr. Rosendahl:

SUBJECT: Historic Preservation Review -- (Final Report --- Archaeological Preservation Plan - Site 503 - Halehaka Cemetery Grove Farm Lihue/Puhi Project Area, Kalima, Walker and Rosendahl, October 1991, PHRI Report 966-012992)
Niumalu, Lihue, Kauai

Thank you for submitting the above revised report, covering the preservation of site 503 Halehaka Cemetery. We have reviewed the report and find it to be an acceptable preservation plan. Future development activities near this site should initiate the interim protective measures. The State Historic Preservation Division and the County of Kauai Planning Department should ensure that this plan has been successfully executed at the conclusion of the development project. Please inform both agencies when this is to occur.

Two other points of information. The boundaries as you presented do not include the headstones of two/three markers which exist across from this cemetery. The other grave site is the sailor headstone, which is nearby. It was stated in a letter to us that these headstone locations are not in the project area. It would be beneficial for the landowner to have them marked on a map and a preservation plan executed for these burial sites. Please update us on the status of this request.

If you have any questions, please call Nancy McMahon at 587-0006.

Sincerely,

DON HIBBARD, Administrator
State Historic Preservation Division

cc: Greg Kamm, Grove Farm Properties, Inc.
Peter Nakamura, County of Kauai

NM:sty

Report 966-012992

**Archaeological Preservation Plan
Site 503 - Halehaka Cemetery
Grove Farm Lihue/Puhi Project Area
Land of Niimalu, Lihue District
Island of Kauai**

PHRI

Paul H. Rosendahl, Ph.D., Inc.

Archaeological • Historical • Cultural Resource Management Studies & Services

305 Mohouli Street • Hilo, Hawaii 96720 • (808) 969-1763 • FAX (808) 961-6998
P.O. Box 23305 • G.M.F., Guam 96911 • (671) 472-3117 • FAX (671) 472-3131

COPY

Report 966-012992

**Archaeological Preservation Plan
Site 503 - Halehaka Cemetery
Grove Farm Lihue/Puhi Project Area
Land of Niunalu, Lihue District
Island of Kauai**

by

Lehua Kalima, B.A.
Historical Researcher

Alan T. Walker, B.A.
Hawaii Projects Manager

and

Paul H. Rosendahl, Ph.D.
Principal Archaeologist

Prepared for

Grove Farm Properties, Inc.
P.O. Box 2069, Puhi Rural Ranch
Lihue, Hawaii 96766

October 1991

PHRI

Paul H. Rosendahl, Ph.D., Inc.

Archaeological • Historical • Cultural Resource Management Studies & Services

305 Mohouli Street • Hilo, Hawaii 96720 • (808) 969-1763 • FAX (808) 961-6998
P.O. Box 23305 • G.M.F., Guam 96911 • (671) 472-3117 • FAX (671) 472-3131

CONTENTS

	Page
INTRODUCTION	1
Program Background	1
PRESERVATION PLAN	2
Rationale	2
Identification of Properties and Objectives of Preservation	2
Buffer Zone Requirements	4
Preservation Tasks	4
Exhibition Requirements	4
Requirements for Archaeological Research to Improve Interpretation	4
REFERENCES CITED	6
ADDENDUM	ADD-1

ILLUSTRATIONS

Figure	
1	Location of Site 503 3
2	Map Showing Cemetery Boundaries and Backhoe Trenches 5
A-1	Locations of Plots within Halehaka Cemetery ADD-2
A-2	Headstones within Halehaka Cemetery ADD-3
A-3	Headstones within Halehaka Cemetery ADD-4
A-4	Headstone within Halehaka Cemetery ADD-5
A-5	Suggested Sign Text and Design ADD-6
A-6	Copy of DOH Letter ADD-7

INTRODUCTION

PROGRAM BACKGROUND

Program Identification

Paul H. Rosendahl, Ph.D., Inc. (PHRI) has prepared this archaeological preservation plan at the request of Mr. Greg Kamm of Grove Farm Properties, Inc. This plan provides for long-term preservation of a historic site in the Grove Farm Lihue/Puhi Project site, situated in the Land of Niūmalu, Lihue District, Island of Kauai. The purpose of the plan is to satisfy preservation concerns detailed in the archaeological inventory report prepared for the site (Walker and Rosendahl 1988), and to satisfy review comments on the report made by the Hawaii County Planning Department (HCPD) and the State Department of Land and Natural Resources-State Historic Preservation Division (DLNR-SHPD).

Findings of the Previous PHRI Inventory Survey and Data Collection Work

An archaeological surface and subsurface inventory survey was conducted in the project area in 1988 and an interim report on this project has been published (Walker and Rosendahl 1988). The basic objective of the survey was to identify and evaluate sites of potential archaeological significance. The specific objectives of the survey were fourfold: (a) to identify (find and locate) all sites and site complexes in the project area, (b) to evaluate the general significance of all identified archaeological remains, (c) to determine the possible impacts of proposed development upon the identified remains, and (d) to define the general scope of any subsequent data collection and/or other mitigation work that might be necessary.

During the survey two sites were identified, Halehaka Cemetery ("Japanese Cemetery"; Site 503*) and a Historic Residence (Site 9390). This preservation plan concerns only Site 503, as a preservation plan for Site 9390 has already been prepared (Kalima and Walker 1991).

Significance Assessments

As a result of the inventory survey, Site 503 was assessed as significant for information content, cultural value, and as a representative example of a site type. Further data collection (detailed recording and additional historic documentary research) followed by preservation with some level of interpretive development was recommended for the site. It was further recommended that a local Japanese community organization be consulted regarding management and possible custodianship of the cemetery. Subject to review of the final report on the survey, Dr. Ross Cordy of the DLNR-SHPD concurred with the evaluations and recommendations for the site. A memo dated March 29, 1989, from Ralston H. Nagata, state parks administrator, to Roger Evans of the Office of Conservation and Environmental Affairs (OCEA) indicated that the State agreed with the significance assessments for the site, and a detailed preservation plan for the site was recommended.

Recommendation for Long-Term Site Preservation

The remainder of this document outlines for the State, County and landowners what PHRI considers an appropriate plan for long-term, intact preservation of Site 503. This plan has been based on the findings of data collection and data recovery work, as outlined above, and on input received from the DLNR-SHPD.

* State Inventory of Historic Places (SIHP) site designation system: three- or four-digit site numbers prefixed by 50-30-11 (50 = State of Hawaii, 30 = Island of Kauai, 11 = USGS 7.5' series quad map ["Lihue"]).

PRESERVATION PLAN

RATIONALE

Preservation is the act or process of utilizing procedures to maintain the existing form, integrity, and material of a building or structure, and the existing form and vegetative cover of a site (36 CFR Par 60.2[b]). Preservation of archaeological sites generally falls into two categories: (1) avoidance and protection (conservation), and (2) exhibition (DLNR 1987). In the case of the former, an archaeological property typically is preserved with no planned future action except limited archaeological examination and stabilization in order to prevent deterioration. In this context, "preservation" means continued physical survival for the purpose of preserving specific properties for future research programs and for resource "banking."

IDENTIFICATION OF PROPERTIES AND OBJECTIVES OF PRESERVATION

Site 503 is on a bluff adjacent to Halehaka Sanitary Landfill; the bluff overlooks Halehaka Gulch (Figure 1). The cemetery measures c. 75.0 m (E-W) by 20.0 m (N-S); it is in poor to fair condition and appears unaltered. There are approximately 35 headstones in the cemetery and inscribed on most if not all of the headstones are Japanese characters. Many of the headstones consist of weathered subangular basalt boulders which have been set upright with concrete. Headstones of this type appear to be among the older ones in the cemetery. Other headstones, of apparently more recent origin, consist of rectangular or square blocks of concrete or granite. The most recent date on any headstone is AD 1961. Judging by the offerings present, the cemetery is visited frequently. The cemetery is noted on a 1961 map depicting Kauai County cemeteries (map found at the Kauai County Planning Department). The cemetery is named "Halehaka Cemetery" and is listed as private. No other information is present.

The following is information on the cemetery provided by informants.

According to Ms. Susan Remoaldo, an assistant to Archaeologist Dr. William Kikuchi, the cemetery is included in an inventory of Kauai cemeteries compiled by Kikuchi. PHRI requested more information on the cemetery, but Remoaldo indicated the files containing the information were not easily accessible and she didn't feel that they contained any information on the cemetery that would be of interest.

While PHRI was doing field work on the cemetery, two men visited the site and provided information on some of the

burials. The men, Yoshi Kinoshita and Philbert Nakamura, remembered a Ripkey or Repkey family being buried there (Wiebke according to other testimony presented below) and indicated that some of their family members may know more about burials in the cemetery. They suggested that PHRI contact Kiyoto Kinoshita and his wife, Eunice, whose grandparents were buried there, and Charles Kim, who also had family there.

Eunice Kinoshita was called and she confirmed that her grandparents had been buried there. She said they had been disinterred about 10 years ago and were moved to Kauai Memorial Park Cemetery. She mentioned that many Hawaiians who worked for the plantation and lived at Halehaka Camp were buried there (Site 503 was apparently associated with Grove Farm Plantation camps, which were formerly in the area), and that many of the Hawaiian graves did not have headstones as the Japanese did, but were simply marked with stones. She thought she may still have an uncle buried there, but was unsure. She also mentioned other burials she knew of in the area—the Kane Family, a lady named Emma Gray, and the Kumanaka's.

Mr. Charles Kim was contacted, and he stated that he was related to the Kane family of which Mrs. Kinoshita spoke. George Kane was his uncle and Emma Gray was his aunt (George's wife). He also thought that his grandparents (Charles Kane and wife) may have been buried there but was unsure. He remembered visiting the cemetery in 1937 with his mother. Since then he has not visited the area and is not sure if he can locate where his uncle was buried.

While reviewing old newspapers it was found that a Mr. Lyle Van Dresser was once manager of the Grove Farm plantation. Later it was also found that the same Mr. Van Dresser was the manager at the time the cemetery was listed in Kauai Health Department records (1973). Mr. Van Dresser was contacted and interviewed. He recalled that the first time he saw the cemetery (c. 1948) it appeared very old and contained about eight to ten graves (pers. comm.). In order to preserve the area, he instructed his workers not to use cane equipment in the area. He said that by 1961 the cemetery was no longer active.

Mr. Seichi Oyama, who was responsible for disinterring several burials from the cemetery some years ago, was also contacted. He did not remember any of the names of those he had disinterred.

In an effort to positively identify the boundaries of the cemetery, PHRI Hawaii Projects Manager Alan T. Walker met with Mr. Seichi Oyama, Mr. Charles Kim, and Mrs. Eunice

Kinoshita at the cemetery on June 18, 1991. Mrs. Kinoshita pointed out areas she remembered as containing graves. She indicated that some burials may have been present along the eastern side of the cemetery, closer to Halehaka Road than had previously been thought; she recalled, however, that backhoe trenching done east of the area did not reveal any burials. She recalled that members of the Wiebke family were buried in the cemetery. She also pointed out a few Hawaiian burial plots not previously noticed, as they were marked only with stones, and pointed out a grave of the Kia family marked with a concrete block.

None of the graves identified above were outside the project area limits set by PHRI.

BUFFER ZONE REQUIREMENTS

The limits of the cemetery have been determined by subsurface testing and documentary and informant information. Backhoe trenching was done approximately 3-5 m outside of the outermost known burials along the north, east, and west sides of the cemetery. Seven trenches were dug along the east side, six along the north side, and one on the west side (Figure 2). No additional burials were found. Since informant information indicated that burials perhaps were closer to the original eastern edge of the cemetery than previous thought, the eastern edge was extended outward another five meters.

Figure 2 shows the proposed cemetery boundaries. The boundaries include buffer zones (buffers are c. 5 m along the east side, c. 4 m along the south side, c. 15 m along the west (where the Halehaka landfill is situated), and c. 4 m along the north side. Buffer zones, or setbacks, are usually necessary in the preservation of historic properties in order to ensure that the integrity of the resource is maintained.

Landscaping and development will surround the cemetery, but will not infringe on the buffers.

PRESERVATION TASKS

Site preservation tasks can include, but are not necessarily limited to, (a) preservation "as is", (b) maintenance, (c) stabilization, (d) rehabilitation, (e) restoration, and (f) reconstruction.

Initial maintenance for the site would be minimal, and would include vegetation clearing, litter clearing, and possible landscaping of the buffer zone. The maintenance should be done by Grove Farm personnel.

In the event that no group or lineal descendants take responsibility for maintaining the cemetery, general maintenance and upkeep of the cemetery should be done by Grove Farm Properties, Inc. One item that should be considered is a permanent sign for the site.

EXHIBITION REQUIREMENTS

No public exhibition is intended for the site. Lineal descendants and friends, or those wishing to observe religious or cultural practices should have access to the site. In the event a local community group or lineal descendants take responsibility for the cemetery, any requirements or suggestions made by them regarding exhibition of the site should be strongly considered.

REQUIREMENTS FOR ARCHAEOLOGICAL RESEARCH TO IMPROVE INTERPRETATION

Because no exhibition of this site is intended, additional information designed to enhance interpretive development is not relevant. Should a local community group or lineal descendants take responsibility for the cemetery, suggestions they may have in order to improve interpretation of the site should be strongly considered.

966-012992

PRESERVATION PLAN

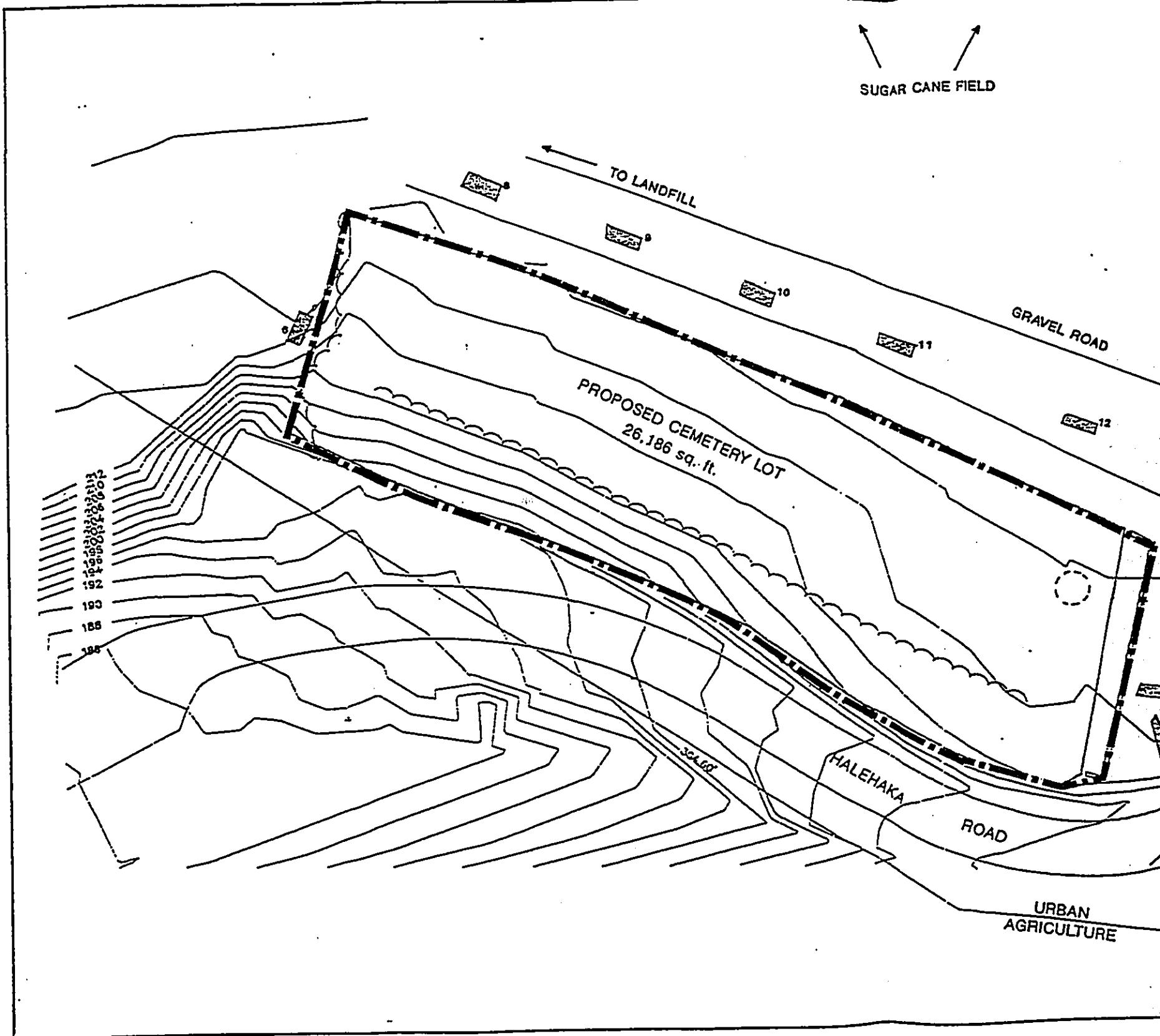
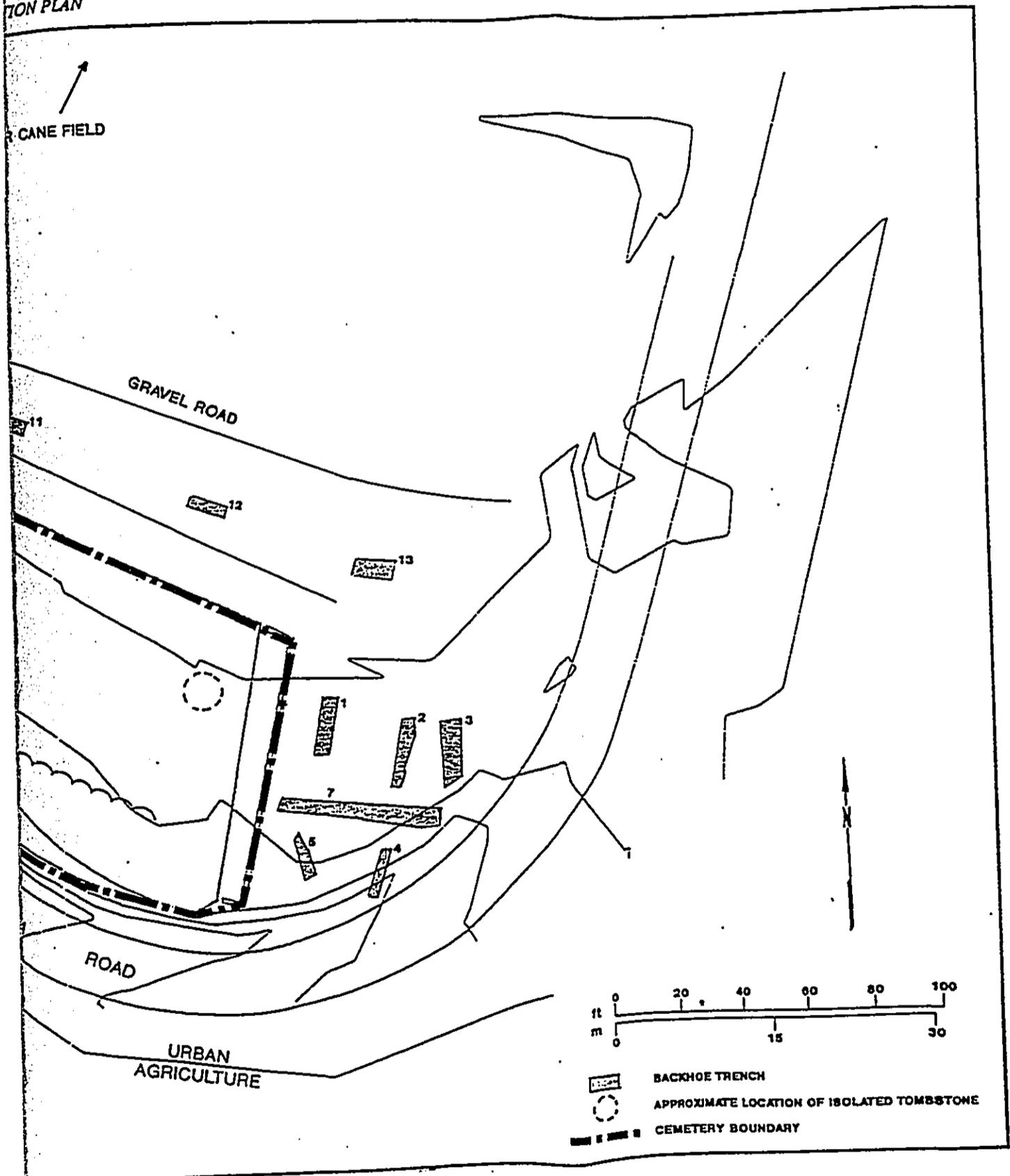


Figure 2. Map Showing Cemetery Boundaries and Backhoe Trenches

LOCATION PLAN



Boundaries and Backhoe Trenches

REFERENCES CITED**DLNR**

1987 Minimal Standards for Archaeological Data Recovery Studies and Reports. DLNR - Historic Sites Section.

Kalima, L., and A.T. Walker

1991 Archaeological Preservation Plan, Site 9390 - Historic Residence, Grove Farm Lihue/Puhi Project Area, Land of Nawiliwili, Lihue District, Island of Kauai. PHRI Report 966-061891. Prepared for Grove Farm Properties, Inc.

Walker, A.T., and P.H. Rosendahl

1988 Interim Report: Summary of Findings, and General Significance Assessments and Recommended General Treatments, Archaeological Surface and Subsurface Inventory Survey Grove Farm Lihue/Puhi Project Area, Lands of Nawiliwili, Niumalu, and Haiku, Lihue District, Island of Kauai. PHRI Project 498-120788. Prepared for Grove Farm Properties, Inc.

ADDENDUM

Paul H. Rosendahl, Ph.D., Inc. (PHRI) has prepared this addendum at the request of the DLNR-SHPD. This addendum addresses SHPD comments and questions on the main text of this report (letter dated October 28, 1991, from D. Hibbard to P. Rosendahl).

The following summarizes the DLNR questions and comments. Following each summary are PHRI answers and comments:

1. *Since we do not have a copy of the cemetery work Dr. Kikuchi has been doing, our current approach to inventorying cemetery sites has been to have a plot plan. Your map only shows the buffer/boundaries. Please provide such a plan, along with sketches/photos of headstones/markers with inscriptions.*

Figure A-1 is a copy of a map (from work done by Dr. William Kikuchi) that shows the locations of plots within Halehaka Cemetery. Figures A-2 through -4 are photos of various headstones within the cemetery.

2. *Please include a tax map key reference for this site.*

The tax map key for this site is 4-3-3-03:Por.1.

3. *Is there a need for an interim protection measure to insure the cemetery's safety during construction? Is a protective fence needed? Or will the proposed landscaping be done before construction starts, and will the landscaping serve as a protective measure?*

We suggest that during construction a temporary fence be erected between the cemetery and the area of development. Landscaping will not be done before construction starts.

4. *What is proposed as far as development and landscaping? Is the cemetery to be fenced?*

Due to trees in the area, little if any landscaping is necessary. Grove Farm has stated they plan to keep the cemetery cleared and in good condition, and the buffer zone surrounding the cemetery will be observed at all times. No plans have been made to erect a permanent fence around the cemetery.

5. *Please suggest the text and design for a permanent sign to be erected at the cemetery.*

See Figure A-5. The suggested wooden sign would measure approximately 1 by 2 ft and—once improvements have been made to the area—would be mounted on a post near the cemetery's entrance.

6. *Text on page 4 of your plan calls for no exhibits, but the previous section discusses the permanent sign. We assume by exhibits, you are not referring to the permanent sign.*

Neither the cemetery nor the permanent sign are intended to be public exhibits. The sign will simply serve as a marker for the cemetery.

7. *Is the cemetery listed as closed by the Department of Health? Is it still maintained by the Department of Health?*

Figure A-6 is a copy of the letter from the Department of Health stating the cemetery has been officially closed. The Department of Health does not currently maintain the cemetery.

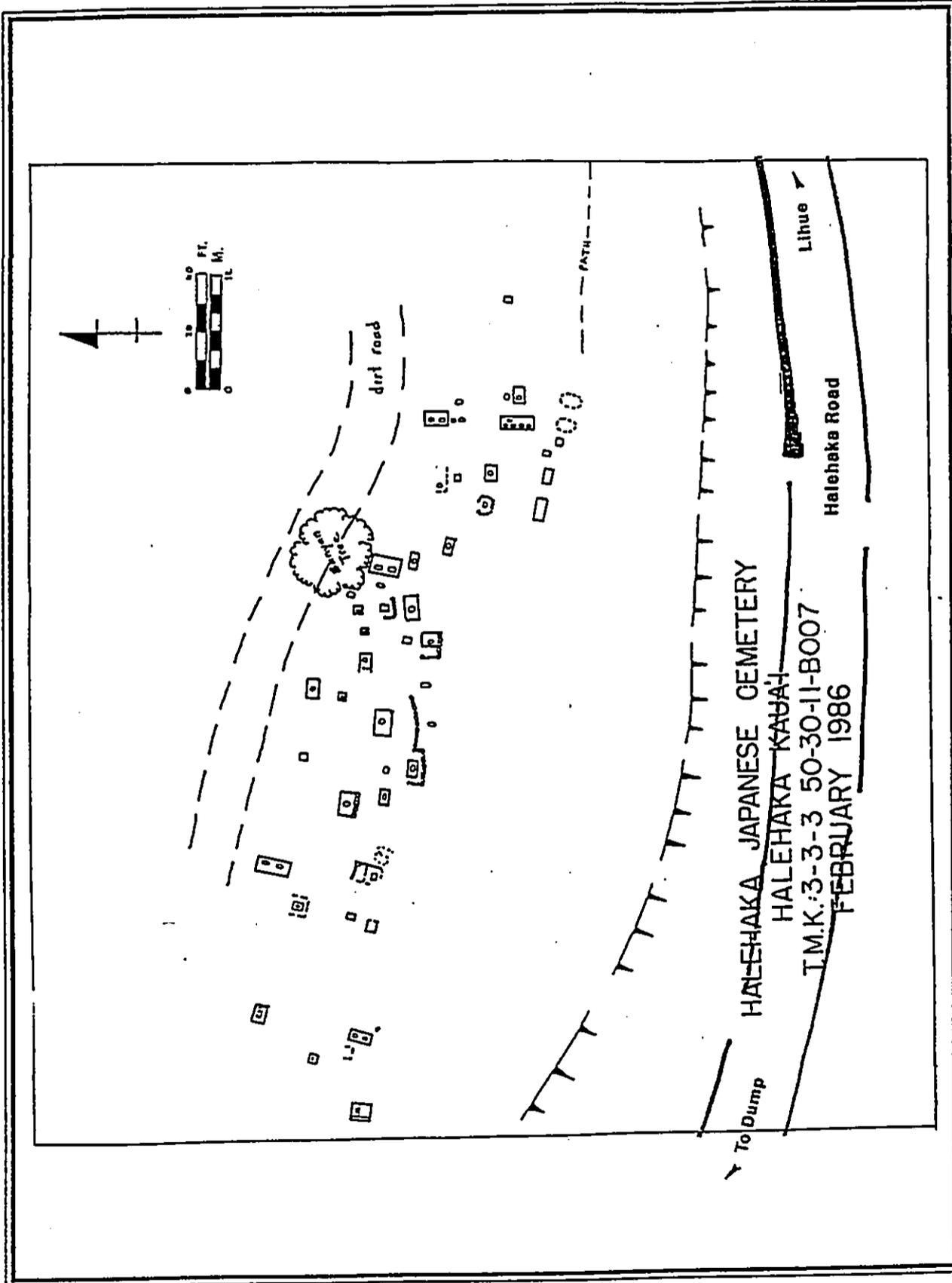


Figure A-1. LOCATIONS OF PLOTS WITHIN HALEHAKA CEMETERY

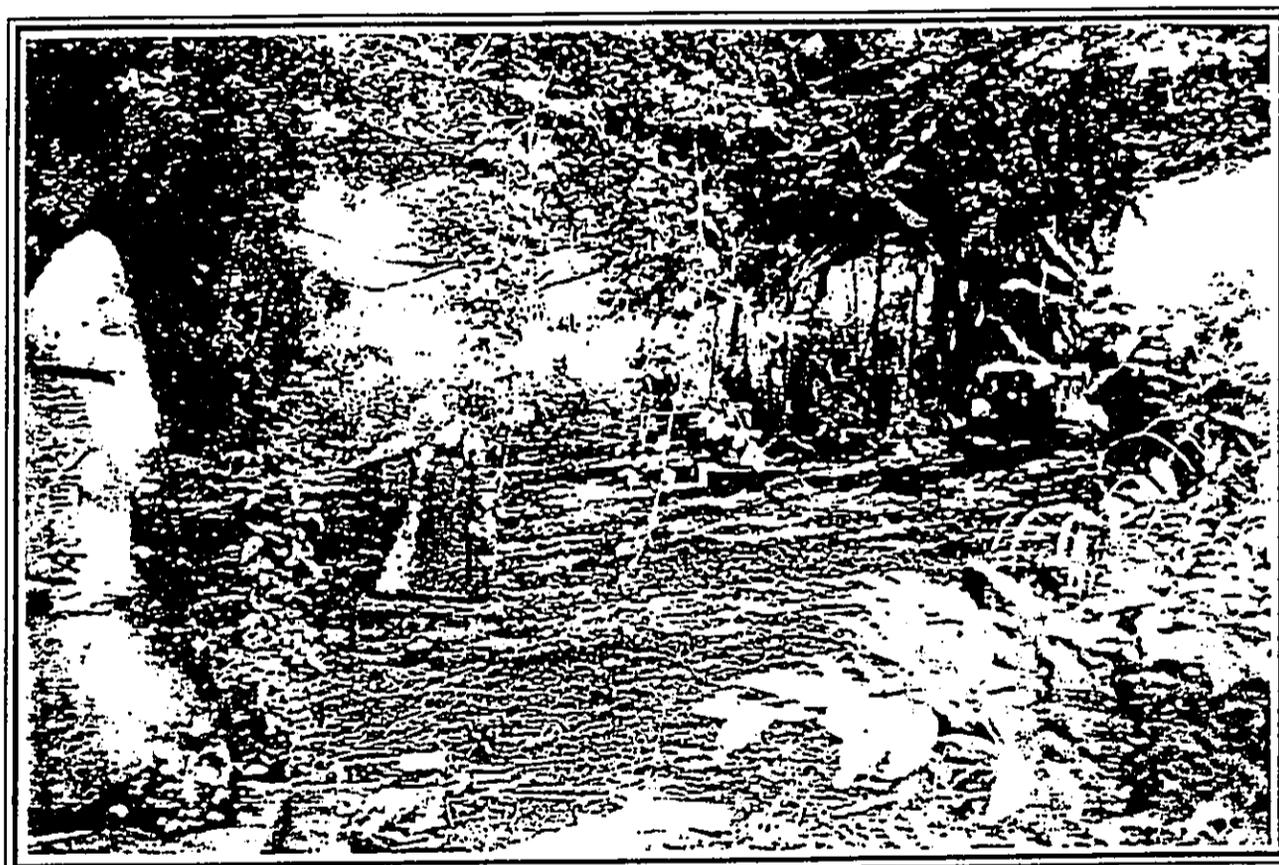


Figure A-2. HEADSTONES WITHIN HALEHAKA CEMETERY

DOCUMENT CAPTURED AS RECEIVED

966-012992

ADDENDUM

ADD-4



Figure A-3. HEADSTONES WITHIN HALEHAKA CEMETERY

HALEHA
CEMETE

1/2 Actual Size

Figure A-5. SUGGESTED SIGN TEXT AND DESIGN

DUM

ADD-6

HAKA

TERY

IGN TEXT AND DESIGN

JOHN WAINEE
GOVERNOR OF HAWAII



STATE OF HAWAII
DEPARTMENT OF HEALTH
P. O. BOX 2378
HONOLULU, HAWAII 96801

Greg
DWP XXX

JOHN C. LEWIN, M.D.
DIRECTOR OF HEALTH

IN FURTHER, BUREAU PERMIT 101

December 16, 1991

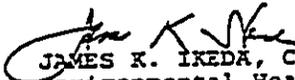
Mr. Greg Kamm, Vice President
Grove Farm Properties, Inc.
P. O. Box 2069 Puhi Rural Branch
Lihue, Kauai 96766-7069

Dear Mr. Kamm:

The application received from Grove Farm Company to close the Halehaka Cemetery from further burials located in Puhi, Kauai, Hawaii, designated as Tax Map Key 3-3-03: Parcel 1 is hereby approved in accordance with Chapter 11-22, Mortuaries, Cemeteries, Embalmers, Undertakers and Mortuaries Authorities, Title 11, Administrative Rules, State of Hawaii.

Please be advised that this approval does not include the disinterment of the burials in the cemetery, the undedication of the land from cemetery use or the reconfiguration of the cemetery site.

Sincerely,


JAMES K. IKEDA, Chief
Environmental Health
Services Division

- c: Chief, Office of Health Status Monitoring
- N. McMahon, DLNR
- Chief, Sanitation Branch
- Chief Sanitarian, Kauai
- DHSA, Kauai

Figure A-6. COPY OF DOH LETTER

R.W. BECK
AND ASSOCIATES

2101 Fourth Avenue, Suite 600 ■ Seattle, Washington 98121-2375 ■ USA
Telephone (206) 441-7500 ■ Fax (206) 441-4964 Consulting, (206) 441-4962 Engineering, (206) 441-4960 General Office
Telex 4990402 BECKSEA

WW-1737-CA1-AA
3104.2

August 11, 1993

Mr. Don Hibbard
Historic Preservation Division
33 S. King Street, 6th Floor
Honolulu, Hawaii 96813

Dear Dr. Hibbard:

Subject: **Environmental Assessment
for the Halehaka Landfill Closure Project**

R. W. Beck and Associates is working for the County of Kauai as their design engineer for the closure of the Halehaka Landfill. Proper closure of the landfill will ensure stable slopes that promote drainage away from the fill area through proper surface water management, provide an impermeable cap that will greatly reduce the infiltration of precipitation and the subsequent production of leachate, and provide an active landfill gas extraction system that will eliminate the health and safety hazards of any methane gas generated by the landfill.

As part of the closure process, we are preparing an Environmental Assessment (EA) for the project. An important step in the EA preparation process is to consult with concerned agencies to ensure that all of the pertinent issues related to the project are addressed.

Attached is a preliminary grading plan that illustrates the basic site configuration (approximately 21 acres) and limits of construction. R. W. Beck was advised by the owner of the landfill property, Grove Farm Company, Inc., to consult with the Kauai Burial Council regarding any work that might need to be done in the vicinity of a cemetery, which is located adjacent to the southeast corner of the project site, during the construction of the closure improvements. I called Mr. Ayau, the Hawaiian Burial Council Coordinator, to discuss the project. Mr. Ayau knew of this particular cemetery and suggested that I write to you since he believed that the cemetery was under your jurisdiction rather than his.

WRB.043

Boston, MA ■ Columbus, NE ■ Denver, CO ■ Indianapolis, IN ■ Minneapolis, MN
Nashville, TN ■ Orlando, FL ■ Phoenix, AZ ■ Sacramento, CA ■ Seattle, WA

A National Pure Earth

We would like to assure you that we do not intend to impact the cemetery in any way with our closure improvements. The construction specifications for the project will require that during construction of the subject project, the contractor will install a temporary chain link fence along the landfill/cemetery interface to ensure that the cemetery is protected from damage due to the contractor's equipment or workers.

We would also appreciate any input you would like to offer regarding protection of the cemetery during the construction of the closure improvements. At a minimum, we would like to request an acknowledgement of this letter.

We are currently preparing an Environmental Assessment document and would like to submit it by the end of August. Anything you can do to accommodate this deadline would be appreciated.

Please feel free to contact me at (206) 727-4501 if you have any questions.

Very truly yours,

R. W. BECK AND ASSOCIATES

Allen Fitz for Wendy Butcher
Wendy R. Butcher
Project Engineer

WRB:mlk

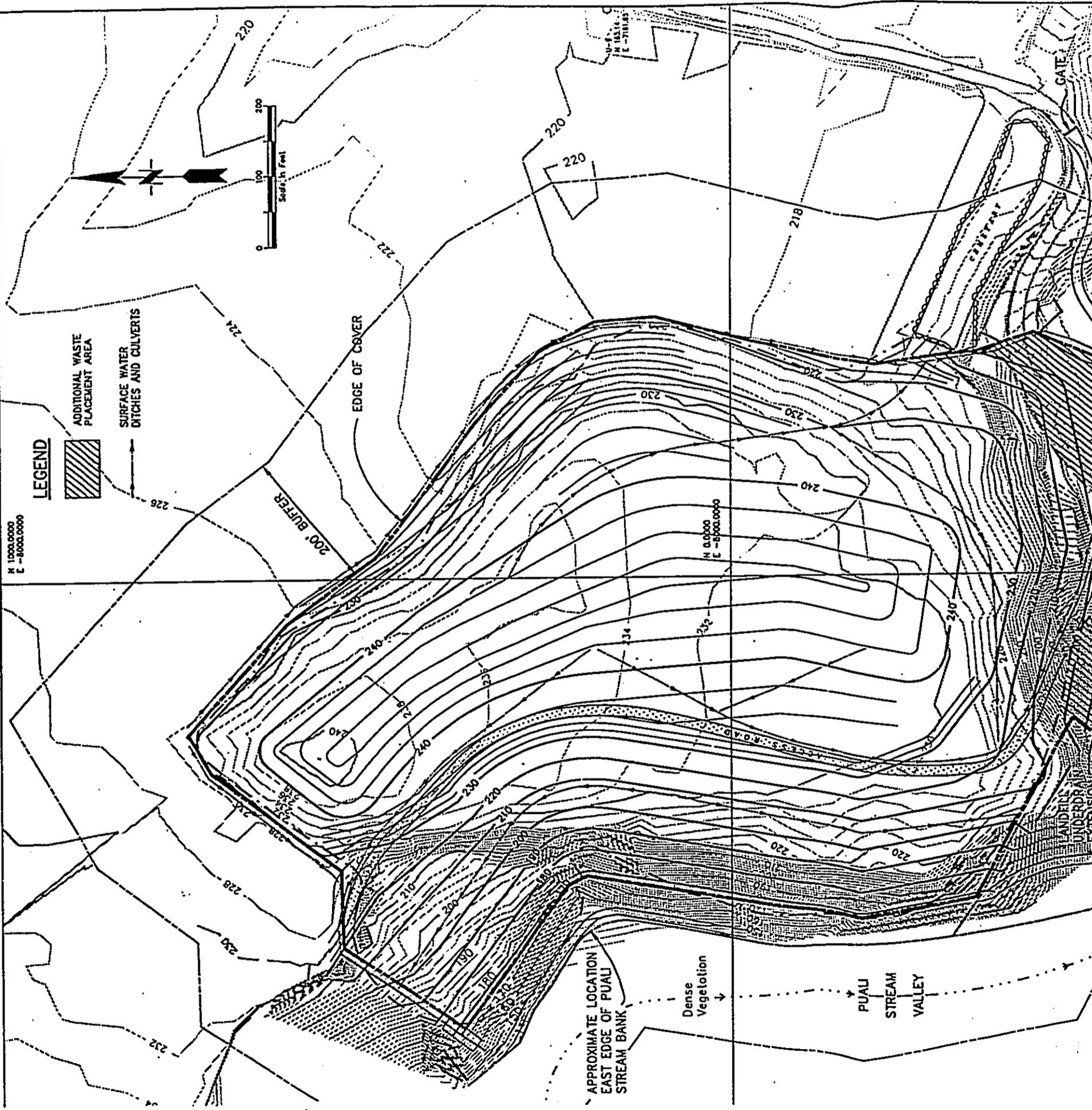
Enclosure

c: Allen Fitz, RWB
Pat Tangora, RWB

WRB.043

R.W. BECK
AND ASSOCIATES

A Recycled Paper Product



N 1000.0000
E -8000.0000

N 0.0000
E -8000.0000

GATE

LAND'S UNDERDRAIN

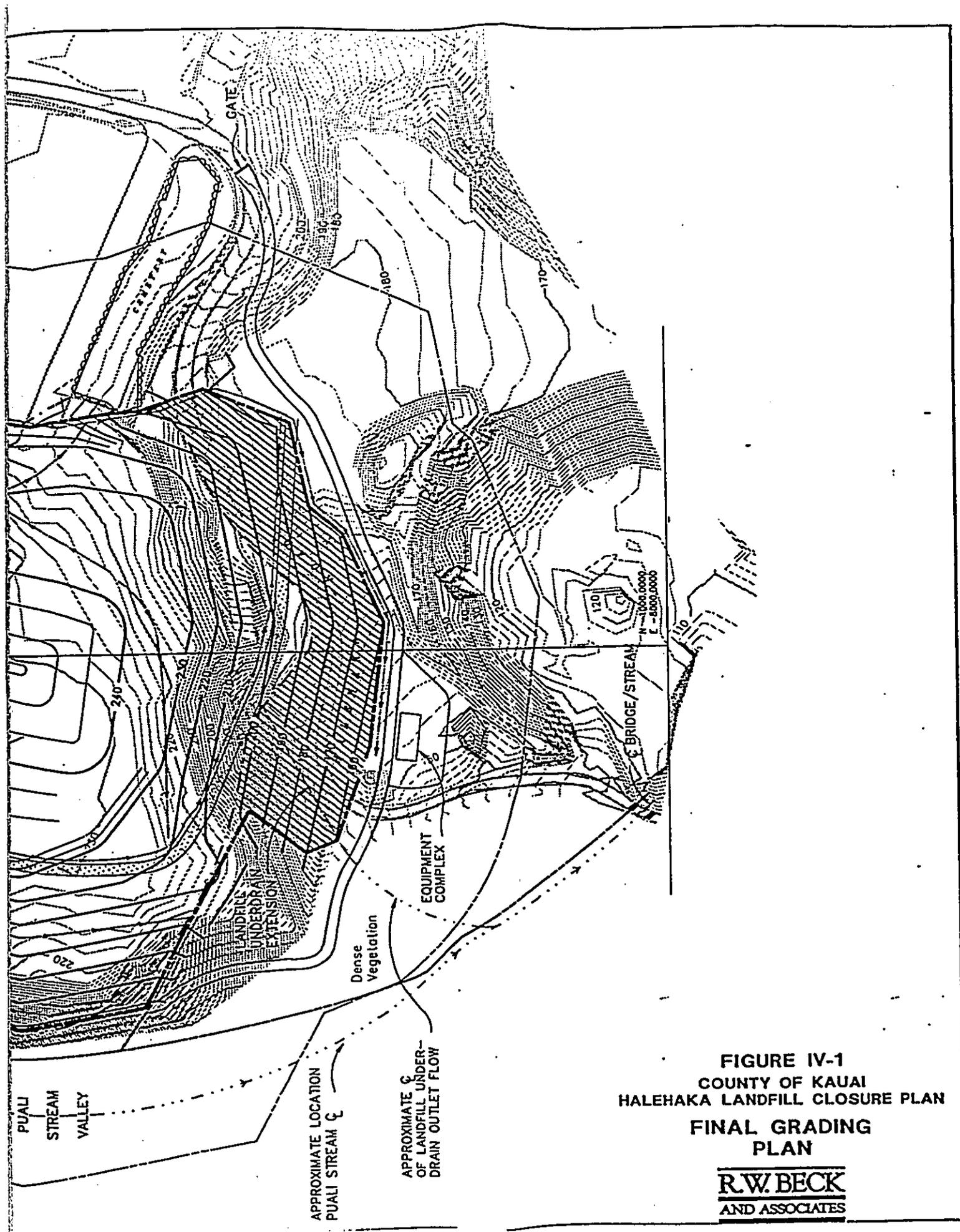


FIGURE IV-1
 COUNTY OF KAUAI
 HALEHAKA LANDFILL CLOSURE PLAN
 FINAL GRADING
 PLAN

R.W. BECK
 AND ASSOCIATES

JOHN WAHNEE
GOVERNOR OF HAWAII



RECEIVED
SEP 20 1993

R.W. BECK & ASSOCIATES
SEATTLE, WA.

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
STATE HISTORIC PRESERVATION DIVISION
33 SOUTH KING STREET, 6TH FLOOR
HONOLULU, HAWAII 96813

KEITH AHEE, CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCE

DEPUTIES

JOHN P. KEPPeler II
DONA L. MANAKE

AQUACULTURE DEVELOPMENT
PROGRAM

AQUATIC RESOURCES
CONSERVATION AND

ENVIRONMENTAL AFFAIRS
CONSERVATION AND
RESOURCES ENFORCEMENT
CONVEYANCES

FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
DIVISION

LAND MANAGEMENT
STATE PARKS
WATER AND LAND DEVELOPMENT

September 13, 1993

Ms. Wendy Butcher, Project Engineer
R.W. Beck and Associates
2101 Fourth Avenue, Suite 600
Seattle, Washington 98121-2375

LOG NO: 9172
DOC NO: 9309NM05

Dear Ms. Butcher:

**SUBJECT: Historic Preservation Review – EA for the
Halehaka Landfill Closure Project
Puhi, Lihue, Kauai**

Thank you for your letter of August 11, 1993. We took your plans to our Kaua'i Island Burial Council on September 1, 1993 for their comments. We concur with their comments and concerns, as follows: In general the grading plans for the landfill, appear to have "no effect" on the Halehaka Cemetery. There is a concern that the grading near the southwest end of the cemetery is fairly close to its border. Therefore to ensure a "no effect" for this project and to ensure the site's protection, the protective fence that currently exists around the Halehaka Cemetery (site 503) must remain in-place during grading.

If you have any questions, please contact Ms. McMahon, our staff archaeologist for the County of Kaua'i, at 587-0006.

Sincerely,

DON HIBBARD, Administrator
State Historic Preservation Division

NM:amk

c: Grove Farm Properties
County of Kauai, Public Works and Planning Department
Kauai Island Burial Council

R.W. BECK
AND ASSOCIATES

2101 Fourth Avenue, Suite 600 ■ Seattle, Washington 98121-2375 ■ USA
Telephone (206) 441-7500 ■ Fax (206) 441-4964 Consulting, (206) 441-4962 Engineering
Telex 4990402 BECKSEA

August 6, 1993

WW-1737-CA1-AA
3104.2

Mr. Michael Lee
Operations Division
Corps of Engineers
Building 230
Ft. Shafter, Hawaii 96858

Dear Mr. Lee:

Subject: **Environmental Assessment
for the Halehaka Landfill Closure**

R. W. Beck and Associates is working for the County of Kauai as their design engineer for the closure of the Halehaka Landfill. Proper closure of the landfill will ensure stable slopes that promote drainage away from the fill area through proper surface water management, provide an impermeable cap that will greatly reduce the infiltration of precipitation and the subsequent production of leachate, and provide an active landfill gas extraction system that will eliminate the health and safety hazards of any methane gas generated by the landfill.

As part of the closure process, we are preparing an Environmental Assessment (EA) for the project. An important step in the EA preparation process is to consult with concerned agencies to ensure that all of the pertinent issues related to the project are addressed.

Attached is a preliminary grading plan that illustrates the basic site configuration (approximately 21 acres) and limits of construction. Although the west edge of the property is adjacent to the Puali Stream, the project limits in that area have been specifically located to avoid the stream. Additionally, during the construction of the closure improvements, the Contractor will be required to provide erosion control measures to protect the stream from siltation until a vegetative layer has been established on the western slope of the landfill.

After discussing the project over the telephone with Warren Kanai of your office on 7/30/93, he determined that since the project does not disturb the stream in any way, the Corps would not have a regulatory role in the project. Mr. Kanai referred me to you for a written

WRB.042

Boston, MA ■ Columbus, NE ■ Denver, CO ■ Indianapolis, IN ■ Minneapolis, MN
Nashville, TN ■ Orlando, FL ■ Phoenix, AZ ■ Sacramento, CA ■ Seattle, WA

Mr. Michael Lee
Corps of Engineers

2

August 6, 1993

response from the Corps that could be included in the Environmental Assessment document. We would like to submit the EA by the end of August and would appreciate anything you can do to accommodate this deadline.

Please feel free to contact me at (206) 727-4501 if you have any questions.

Very truly yours,

R: W. BECK AND ASSOCIATES

WRB

Wendy R. Butcher
Project Engineer

WRB:mlk

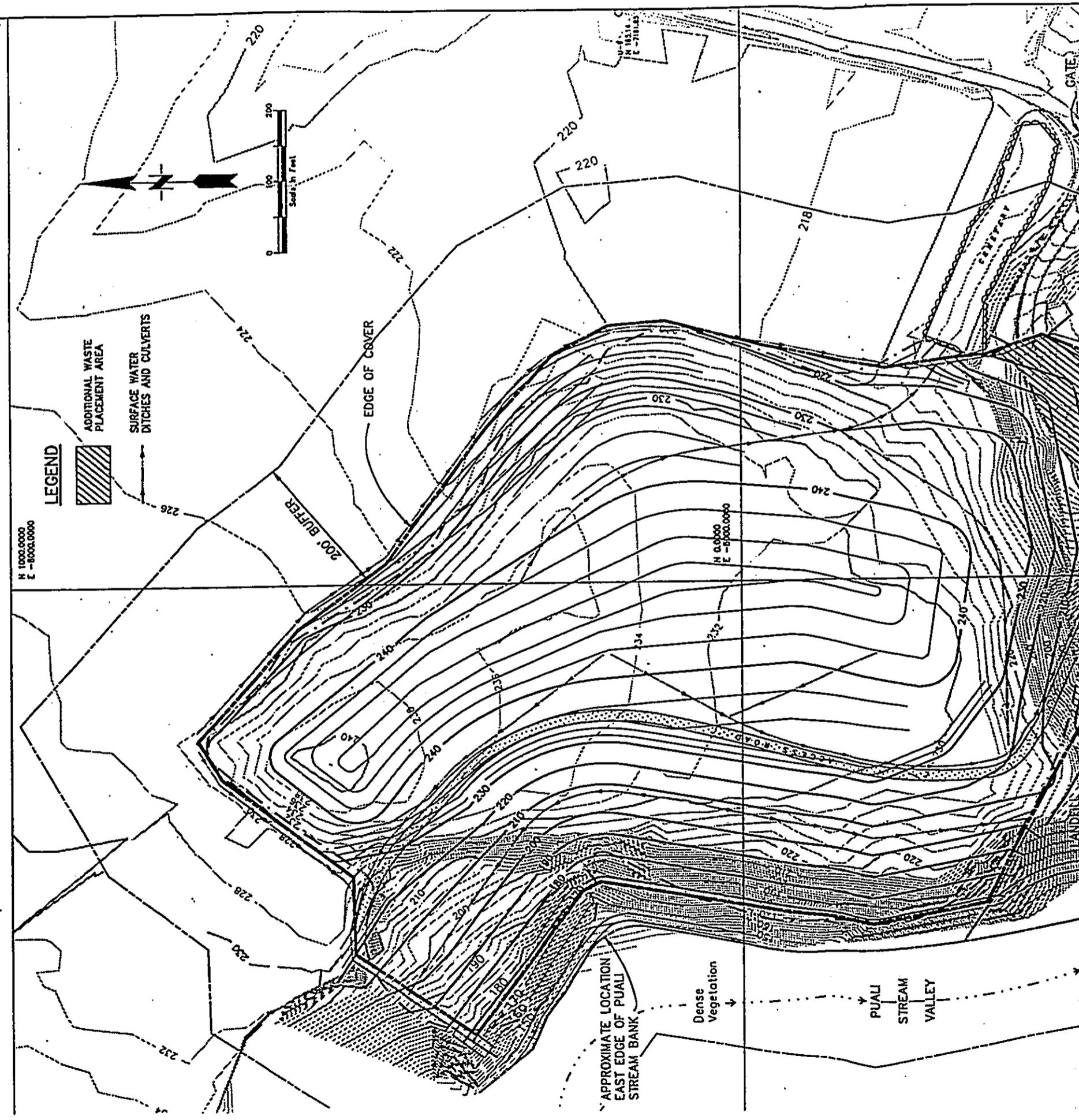
Enclosure

c: Allen Fitz
Pat Tangora

WRB.042

R.W. BECK
AND ASSOCIATES

3 1/2" X 4" (Scale) 5-25-83 © 11114



N 1000.0000
E - 8000.0000

N 0.0000
E - 8000.0000

LEGEND



ADDITIONAL WASTE
PLACEMENT AREA



SURFACE WATER
DITCHES AND CULVERTS

EDGE OF COVER

200' BUFFER

APPROXIMATE LOCATION
EAST EDGE OF PUALI
STREAM BANK

Dense
Vegetation

PUALI
STREAM
VALLEY

LANDRELL
LANDRELL
LANDRELL

GATE

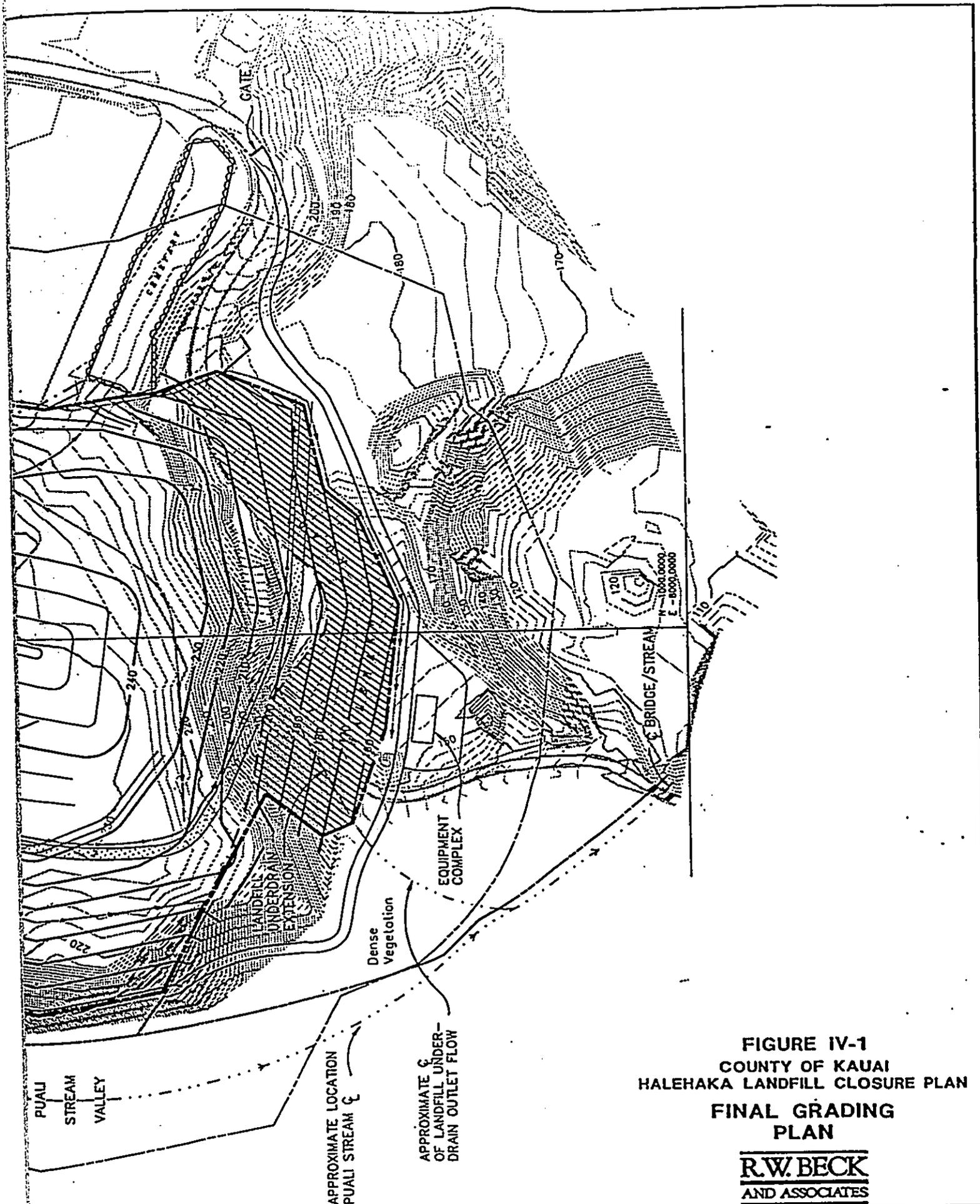


FIGURE IV-1
 COUNTY OF KAUAI
 HALEHAKA LANDFILL CLOSURE PLAN
 FINAL GRADING
 PLAN

R.W. BECK
 AND ASSOCIATES

PUALU
 STREAM
 VALLEY

GATE

Dense
Vegetation

EQUIPMENT
COMPLEX

LANDFILL
UNDERDRAIN
EXTENSION

BRIDGE/STREAM

APPROXIMATE LOCATION
 OF PUALU STREAM

APPROXIMATE LOCATION
 OF LANDFILL UNDER-
 DRAIN OUTLET FLOW

120
 N - 1000.0000
 E - 1000.0000

JOHN WAIHEE
GOVERNOR



BRIAN J. J. CHOY
Director

STATE OF HAWAII
OFFICE OF ENVIRONMENTAL QUALITY CONTROL
220 SOUTH KING STREET
FOURTH FLOOR
HONOLULU, HAWAII 96813
TELEPHONE (808) 686-4186

December 21, 1993

Mr. Edmond P.K. Renaud, Deputy County Engineer
Department of Public Works
3021 Umi Street
Lihue, Kauai, Hawaii 96766

Attention: Dale Burton

Dear Mr. Renaud,

Subject: Halehaka Landfill Closure Draft Environmental Assessment

Thank you for the opportunity to review and comment on the subject document. Since you are soliciting comments from numerous State and Kauai County agencies, who will request consideration of their particular concerns, we will restrict our comments to general issues.

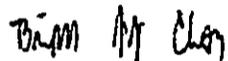
We anticipate that the Final Environmental Assessment will include the following:

- 1) A discussion of the types of waste being stored at the landfill. Based on this waste profile, describe a sampling and laboratory analysis plan for on-site and near-site soil and water samples. The laboratory information will be useful in determining if the proposed landfill closure procedures are adequate. Detectable levels of heavy metals, organics, PCB's and pesticides are of particular concern.
- 2) A schedule and more detailed description of post-closure care period activities, including a map of ground water monitoring wells.
- 3) A map of ground water sources near the landfill particularly downstream of the landfill. Is it possible that landfill leachate could inadvertently impact water sources of the adjacent Lihue/Puhi development project?

Page 2
December 21, 1993

In addition, please consult with community groups in the area. If you have any questions, please call Faith Caplan at 586-4185.

Sincerely,


BRIAN J.J. CHOY
Director

BC:fc

c: R.W. Beck and Associates