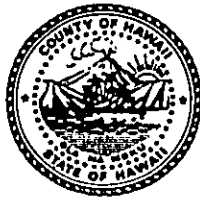


Stephen K. Yamashiro
Mayor



William G. Davis
Managing Director

Henry Cho
Deputy Managing Director

RECEIVED

'96 APR 25 P1:46

County of Hawaii

25 Aupuni Street, Room 215 • Hilo, Hawaii 96720-4252 • (808) 961-8337 • Fax (808) 961-8553
KONA: 75-5706 Kuakini Highway, Suite 103 • Kailua-Kona, Hawaii 96740
(808) 329-5226 • Fax (808) 326-5663

OFFICE OF ENVIRONMENTAL
QUALITY CONTROL

April 24, 1996

Mr. Gary Gill, Director
Office of Environmental Quality Control
220 South King Street
Central Pacific Plaza, Suite 400
Honolulu, HI 96813

Dear Mr. Gill:

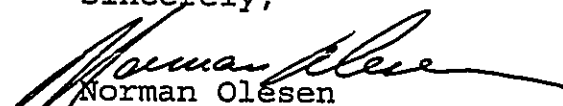
Subject: OEQC Bulletin Publication Form, Negative Declaration
for the PUNA EMERGENCY ACCESS ROAD, Puna District, Hawaii
Island, State of Hawaii, TMK (3rd) 1-6-13:81, 1-6-
45:073, & 1-6-65:109

The Environmental Notice Publication Form was inadvertently
omitted from the package regarding the subject negative
declaration. Please add to the original sending.

Please contact Norman Olesen, Deputy Planning Director, at
961-8565 if you have any questions.

Thank you for your kind attention to this matter.

Sincerely,


Norman Olesen
Deputy Planning Director

Enclosure

1998-05-08-HI-FEA - Puna Emergency Access Road

MAY 8 1996

FINAL ENVIRONMENTAL ASSESSMENT

FILE COPY

(NEGATIVE DECLARATION)

PUNA EMERGENCY ACCESS ROAD

MAY 1996

TMK (3rd) 1-6-13:81, 1-6-45:073 & 1-6-65:109
PUNA DISTRICT, HAWAII ISLAND, STATE OF HAWAII

APPLICANT:

County of Hawaii
25 Aupuni Street
Hilo Hawaii 96720

CONSULTANTS:

Ron Terry Ph.D.
HCR 9575
Keaau, Hawaii 96749

APPROVING AGENCY:

Office of the Mayor
25 Aupuni Street
Hilo, Hawaii, 96720

CLASS OF ACTION:

Use of County funds

OFFICE OF ENVIRONMENTAL
QUALITY CONTROL

96 APR 25 P3:14

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This document is prepared pursuant to the Hawaii Environmental Protection Act,
Chapter 343, Hawaii Revised Statutes (HRS), and
Title 11, Chapter 200, Hawaii Department of Health Administrative Rules (HAR).

**FINAL ENVIRONMENTAL ASSESSMENT
(NEGATIVE DECLARATION)**

PUNA EMERGENCY ACCESS ROAD

MAY 1996

TMK (3rd) 1-6-13:81, 1-6-45:073 & 1-6-65:109
PUNA DISTRICT, HAWAII ISLAND, STATE OF HAWAII

APPLICANT:

County of Hawaii
25 Aupuni Street
Hilo Hawaii 96720

CONSULTANTS:

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PART 1: ACTION DESCRIPTION

1.1 Project Location

The County of Hawaii proposes to fund construction improvements and assume maintenance and liability for an emergency access road that would connect State Highway 11 to State Highway 130, passing through the Hawaiian Acres and Ainaloa subdivisions.

The route begins at the junction of Old Volcano Trail (a County road) and 8 Road near Kurtistown in Hawaiian Acres; then proceeds southeast 4.5 miles along 8 Road to F Road; northeast 0.3 miles along F Road to 9 Road; southeast 0.50 miles along 9 Road to parcel 1-6-45:073 (hereafter referred to as the connector lot); northeast 0.3 miles across the connector lot to Ainaloa Blvd.; and then northeast 3.1 miles along Ainaloa Blvd. to its junction with Highway 130 (all distances approximate) (Fig. 1). The total length of roadway is approximately 8.7 miles.

The County will assume ownership and responsibility for the entire right-of-way associated with each road, which has a width of 60 feet in Ainaloa and 40 feet in Hawaiian Acres.

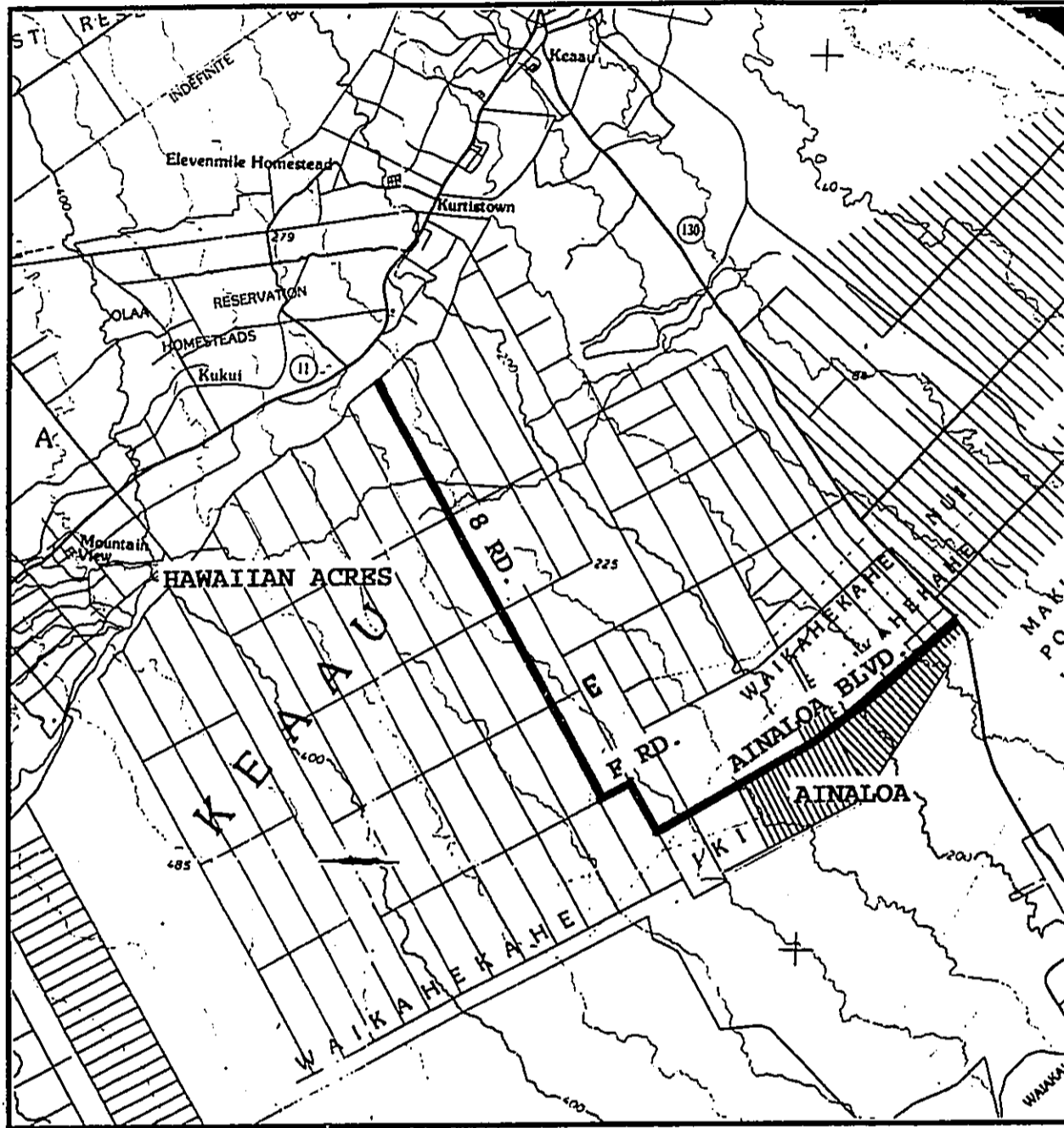
1.2 Purpose and Objectives of Action

The primary purpose of the project is to provide a paved road connecting Highway 130 and Highway 11 in order to improve Police Department, Fire Department, and ambulance services. It would also provide a bypass in case of accidents or Civil Defense emergencies that closed Highway 130 between Ainaloa and Keaau. Especially useful would be the ability of Hawaiian Acres residents who are prevented by flooding along the subdivision roads that connect to Highway 11 to exit via Ainaloa Blvd. The road would also be open for public travel and would serve residents for travel within and between the Hawaiian Acres and Ainaloa Subdivisions.

The project proposal developed as a combination of several ideas generated within the Hawaii County Fire Department, the Office of the Mayor, and the Hawaiian Acres and Ainaloa Community Associations.

The dedication of the road (albeit to emergency standards only) would enable future capacity and safety improvements to be paid for with fuel tax maintenance funds.

FIGURE 1
LOCATION MAP - PUNA EMERGENCY ROAD



Source: USGS County Series.
Hawaii County, Sheet 2 of 3
1980

Scale: 1:100,000

North



1.3 Project Description

Except for the connector lot mentioned above (a distance of approximately 1,800 feet), the road already exists. The project would widen, pave and otherwise improve the road as appropriate to meet the following standards:

- o Two paved 8-foot travel lanes, with center stripe;
- o Two paved 2-foot shoulders, striped for separation from travel lanes;
- o 2-inch AC pavement;
- o Sight distance appropriate to 25 MPH road.

All surfacing on the existing roads would be done over compacted base course that was installed about 30 years ago and has become overgrown from lack of maintenance. The new section on the connector lot would require grading and a base course in addition to paving. Because this section is an entirely new road, slightly higher standards requiring 20 feet of paved lanes, 6-foot shoulders, and 2-inch AC pavement over 4 inches of base course with 6 inches of sub-base (if necessary) will be applied.

Most road work would take place in Hawaiian Acres and in the connector lot, because Ainaloa Blvd. currently meets the above standards in most places and requires only minor widening and striping. Ainaloa Blvd and much of Road 8 (approximately 60 percent of the total route) are already paved.

Several sections of the road require safety modifications in order to meet minimum sight distance safety requirements. Because the roads are all straight, no adjustment of horizontal alignment is necessary. Blind hills impair sight distance in several locations, which will be improved mostly through placement of fill. A very limited area of cutting is required. Shoulder widening will take place in the right-of-way almost exclusively on areas that have already been graded. Minimal grading is necessary here.

The road would have a posted speed limit of 25 MPH.

A County Capital Improvement Fund of \$1,000,000 has been authorized to bring the route up to County emergency standards. These funds can only be applied after the County acquires ownership of the road.

1.4 Alternatives

Several alternatives to the proposed project have also been examined, as required by sound planning principles and State law. This section briefly describes the Alternatives considered. Section 2 contrasts the environmental impacts of the Alternative retained for further consideration with the impacts of the proposed project where they differ.

1.4.1 No Action

The roads would remain in private hands under the No-Action Alternative. No connection between Hawaiian Acres and Ainaloa would be built. County emergency services would remain difficult to provide in the area, and traffic attempting to exit Hawaiian Acres during floods would, as now, be obliged to cross the most flood-prone roads. No County funds would be expended, and no long term commitment to maintaining roads in the area would be incurred. It is reasonable to expect, however, that the project would eventually proceed in some form through private funding.

1.4.2 Alternatives Evaluated and Dismissed From Further Consideration

Several approaches to providing emergency access were considered but withdrawn because of feasibility or cost considerations. Alternate routes were initially evaluated, including the following:

- A) Substituting Orchidland Drive for Ainaloa Boulevard;
- B) Utilizing 9 Road for a longer segment of the route;
- C) Extending the route along 8 Road to G Road and from there to Ainaloa;
- D) Eliminating the jog down F Road and 9 Road by purchasing the lots extending between 8 and 9 Roads midway between F and G Roads.

Although each of these routes had some advantages, all were estimated to cost significantly more because of the need to create and/or upgrade longer segments of roadway. The length of such segments varied from a minimum of 0.35 miles under D and a maximum of 3.05 miles under A. The additional costs associated with these routes were not precisely calculated but were estimated to equal or substantially exceed \$300,000. It is relevant to note that none of the dismissed alternative routes would avoid any of the basic environmental impacts associated with the proposed project.

Also considered was the possibility of providing a County road in compliance with conventional road standards for lane and shoulder widths; curbs, gutters and sidewalks; and drainage structures. Cost estimates for this level of roadway exceeded \$17 million, which was far in excess of the County's ability to provide assistance. This design would have better accommodated high levels of traffic, although it also would have encouraged greater levels of traffic (see Section 2.4.1).

Finally, delaying action on the project was considered. This was rejected because of the risk of relying on a similar County Council appropriation in the future and the lack of obvious advantages.

1.5 Ownership

The roads in each subdivision comprise one TMK, 1-6-13:81 for Hawaiian Acres, and 1-6-65:109 for Ainaloa. Under the proposed project, those segments of these roads that are part of the route would have their metes and bounds registered separately and transferred to County control. The County would assume ownership and control over the entire right-of-way associated with each road. No subdivision would be necessary. The connector lot, TMK 1-6-45:073, is privately owned and must be purchased or condemned.

1.6 Land Use Designation and Controls

The route passes through areas within the State Land Use Agricultural District. Zoning in Ainaloa is A-1a (Agriculture 1 acre) with some Open zoning, and in Hawaiian Acres is A-3a (Agriculture 3 acre) with some A-5a (Agriculture 5 acres). Roads are permitted uses within these Land Use Districts and zoning classifications.

1.7 Agency/Public Consultation

As part of the consultation process for this Environmental Assessment (EA), the following agencies and organizations were contacted:

County:

Planning Department
County Council
Police Department

Department of Public Works
Fire Department
Civil Defense Agency

State:

Historic Preservation Division

Highways Division

Federal:

Fish and Wildlife Service

Geological Survey

Private:

Ainaloa Community Assoc.
Hawaii Speleological Survey

Hawaiian Acres Community Assoc.
Sierra Club

Copies of replies from those agencies and organizations with substantive comments are provided as Appendix 1B (and Appendix 2 for communications related to caves). Comments are discussed in the appropriate sections of the Environmental Assessment.

Two public meetings were held specifically to gather comments and information for this EA. These occurred in Ainaloa and Hawaiian Acres on January 10 and 11, 1996, respectively. Appendix 3 contains the sign-in sheets from these meetings along with a joint summary of concerns and questions that arose at the meetings. Input from these meetings is also discussed in the appropriate sections of the text.

Notice of the availability of the Draft EA was published by the Hawaii State Office of Environmental Quality Control (OEQC) in the *Environmental Notice* of February 23, 1996. This initiated a 30-day comment period during which the public was invited to respond to the Draft EA with comments or questions. In addition to the agencies, organizations and individuals listed above, the Draft EA was made available at all public libraries in Hilo and Puna, as well as the University of Hawaii at Hilo Library. Fifteen comment letters were received. These letters and the responses to them are included as Appendix 1A. The Final EA was revised in portions to incorporate corrections or clarifications supplied by these comment letters.

PART 2: ENVIRONMENTAL SETTING, IMPACTS AND PROPOSED MITIGATION MEASURES

2.1 Basic Geographic Setting

The elevation of the route at the junction of Highway 11 and Kuauli Street near Kurtistown is approximately 850 feet above mean sea level (amsl). The route then goes essentially perpendicular to the slope until on 9 Road between F and G roads, at an elevation of approximately 1,000 feet amsl, the route leads downslope along Ainaloa Blvd. to its junction with Highway 130 (the Keaau-Pahoa Road), losing approximately 500 feet elevation in about three miles.

The route begins near Kurtistown at the Mauna Loa/Kilauea lava divide but then runs entirely atop geologically recent Kilauea lava flows. Topography consists of gently undulating pahoehoe hummocks with a regional slope of 3 to 4 percent. Most of this area was covered as part of the 'Ai La'au lava flow about 340 years ago (Moore and Trusdell 1991). The route traverses mainly pahoehoe lava flows with poor soil development (soil types rLW, rKFD, and rKGD; U.S. Soil Conservation Service 1973). Limited pockets of shallow silty clay loams overlying somewhat older pahoehoe flows are also present (PeC). The annual rainfall in the area varies from approximately 150 to 170 inches (Giambelucca et al 1986), and temperatures are mild.

Land use in Hawaiian Acres and Ainaloa is primarily residences on small agricultural lots. Approximately 85 percent of the lots are vacant, and a relatively small proportion of occupied lots support actual agricultural endeavors.

2.2 Physical Environment

2.2.1 Drainage

Environmental Setting

Due to the relatively recent lava surface, no permanent streams drain this area. In general, the permeable surface readily soaks up even heavy rainfall. Flooding under natural conditions for most of Hawaiian Acres and Ainaloa usually consists of minor overland flow and is short in duration. Lot grading and other activities that reduce surface permeability have worsened flooding in several locations.

The northern portion of Hawaiian Acres, particularly between B Road and C Road, experiences occasionally severe flooding that is mostly derived from outside of the Kilauea surface. Several intermittent streams originate upslope on the ash-covered surface of Mauna Loa between Mt. View and Glenwood. These streams follow the Mauna Loa/Kilauea boundary and converge above South Kulani Road. As a response to periodic flood damage to homes and fields in Mountain View and Kurtistown, a number of flood control structures have been built. A 3,000-foot diversion wall built in 1937 appears to have transferred much of the flood problem into the Hawaiian Acres area, which was subdivided 20 years later. Since then, channelization and retention basins have been built in Mt. View. These measures achieved flood protection in those areas but did not solve the Hawaiian Acres problem (Community Management Associates, Inc., 1992: 20-22).

In response to community concerns, Hawaii County in 1994 requested a detailed flood study of the area by the U.S. Army Corps of Engineers. The Corps began the study in October of that year but then terminated it less than a year later. They concluded that the preliminary economic and engineering analyses resulted in a benefit/cost ratio too low to justify federal participation in any flood control project (Source: Hawaii County Department of Public Works files).

Impacts and Mitigation Measures

The proposed project would neither solve nor worsen the drainage problems of Hawaiian Acres. The existing surface is either already paved or substantially compacted, meaning that the project would add only a negligible amount of additional impermeable surface. This is particularly true between B and D Roads on 8 Road, which is already paved. The only new road surface is located in an area with few known drainage problems where a new road is not expected to create a noticeable increase in runoff.

It is recognized that continuing efforts among the subdivisions residents, the County, and the federal government will be necessary to provide a realistic solution to Hawaiian Acres' drainage problems. The dedication of the route to Hawaii County will provide further incentive for government involvement in such efforts.

The No-Action Alternative would have substantially the same impacts as the proposed project, because it is believed that Hawaiian Acres would eventually pave most of the route and many additional roads with private resources. Without County involvement, funds to ameliorate drainage problems near the road would be scarce, and drainage problems might worsen.

2.2.2 Lava Flow and Earthquake Hazards

Environmental Setting

The proposed road, along with much of the Big Island, is subject to geologic hazards, especially lava flows and earthquakes. The location on the buttressed north flank of Kilauea's East Rift Zone has a rating of Lava Flow Hazard Zone 3 (on a scale of ascending risk 9 to 1). Zone 3 areas have had 1 to 5 percent of their surfaces covered by lava since the year 1800, and 15 to 75 percent covered within the past 750 years. As such, there is considerable risk of lava inundation over relatively short time scales (see Heliker 1990).

The entire island of Hawaii is in Zone 3 on a scale of ascending risk 1 to 4 in the Seismic Probability Rating (Furumoto et al 1973:34). Major damage corresponding to a score of 7 or above on the Modified Mercalli Scale is possible.

Impacts and Mitigation Measures

In general, these hazard ratings impose no constraints on the project. All construction should conform with the lateral load specifications of the Uniform Building Code. See Section 2.2.5 for a discussion of caves.

2.2.3 Flora, Fauna and Ecosystems

Environmental Setting

Biological surveys of the route were conducted by the author on January 1996. Because of the location of the project along an existing road in an agricultural subdivision, the method was windshield survey for most of the route and walk-through as necessary. Lack of right-of-entry for the connector lot prevented direct access, although this section was examined from adjacent roads and through airphotos. In addition, the author consulted the U.S. Fish and Wildlife Service and Dr. Fred Stone of the University of Hawaii regarding endangered species and cave biology (Refer to Section 2.2.5).

Roadside vegetation has retained variable degrees of the character of the original vegetation, which was Lowland Wet Forest (Gagne and Cuddihy 1990). The effects of the original right-of-way bulldozing, modification for driveways, yards and fields, and the spread of weeds has altered vegetation substantially in many areas.

Nevertheless, the base flora of 'ohi'a (*Metrosideros polymorpha*) and uluhe fern (*Dicranopteris linearis*) is still dominant over much of the route. A low forest of scattered 'ohi'a trees surrounded by uluhe (often an indicator of fire) is typical, interrupted by more disturbed vegetation emanating from the roadside verge. Additional prominent floristic elements include native and alien sword ferns (*Nephrolepis* spp.), the

native species `uki`uki (Dianella sandwicensis), and the aliens guava (Psidium guajava), bamboo orchid (Arundina graminifolia), broomsedge (Andropogon virginicus), California grass (Brachiara mutica), wai`awi (Psidium cattleianum), and numerous others. Large monoculture patches of melastoma (Melastoma candidum) also dominate some of the right-of-way areas.

The quality of the native forest increases with distance from the road. Especially in the southern section of Hawaiian Acres (along the F Road portion of the route), a native forest apparently part of a kipuka contains `ohi`a trees up to 50 feet tall and a fairly well-developed understory containing such species as pilo (Coprosma spp.), kopiko (Psychotria spp.) and `ohe (Tetraplasandra hawaiiensis).

Lowland Puna in general contains few native forest birds, as these species are mostly confined to elevations above 2,000 feet. Such birds may occasionally visit patches of `ohi`a forest such as those found in the area. The Hawaiian hawk or `io (Buteo solitarius) is often seen in the area. The subject parcels may also provide habitat for Hawaii's only land mammal, Lasiurus cinereus semotus (the `ope`ape`a or Hawaiian hoary bat).

Although both the Hawaiian hawk and the hoary bat are endangered species, they are wide ranging. The general area is not considered to be part of essential habitat for either species. The specific area to be disturbed is unlikely to contain nests or roosts of either species because of the absence of large trees in the right-of-way, and no hawk nests or bat roosting areas are reported on the road right-of-way or in the connector lot.

Impacts and Mitigation Measures

According to information received from the U.S. Fish and Wildlife Service, other than the hawk and bat listed above, no listed, candidate or proposed endangered animal or plant species are found in the area. Because the proposed project would occur in an already disturbed right-of-way, it is unlikely that rare or endangered species would be in any way affected. In terms of conservation value, no other botanical or zoological resources requiring special protection are present.

It is unlikely that any adverse impact upon bats or hawks would result from the proposed project. However, should `io nests or bat roosts be found during construction on the roadway, activities in the immediate area will be suspended until contact is made with the Protection Forester, Division of Forestry and Wildlife (DOFAW) in Hilo and the Endangered Species Office of the U.S. Fish and Wildlife Service (FWS) in Honolulu. Construction activity will not resume until mitigation efforts (nest relocation or other requirements) are completed.

Impacts resulting from the No-Action Alternative would be nearly identical. Only a tiny fraction of total ongoing impacts to native species and habitat in Hawaiian Acres or Ainaloa could be attributed to the paving of this existing road.

2.2.4 Air Quality, Noise, and Scenic Resources

Environmental Setting

Air pollution in the area is minimal, although air quality is subject to periodic deterioration due to volcanic emissions ("vog") during southerly winds. Ambient noise is usually low in this rural area. Construction and agricultural activity may raise local noise to high levels for periods of hours to days. The scenery varies from suburban to rural/agricultural to semi-wilderness.

Impacts

Road paving and other road work will produce localized air pollution through fugitive dust and exhaust from construction vehicles. Because of the relatively sparse settlement and the dispersive effects of wind, these effects are expected to be minor.

Mitigation Measures

The County should restrict construction activity in the easement to daylight hours to the greatest extent feasible. Professional traffic control should be utilized as necessary. Dust and noise control should be implemented during construction. Best management practices should be observed to control excess runoff during construction.

2.2.5 Cave Resources

Soon after the County officials publicized the project, they began to hear concerns about impacts to lava tube caves. Members of the Hawaii Speleological Survey (HSS), including its chairman, Dr. William Halliday, met with a representative of the Mayor's Office to supply information on cave resources, to urge careful examination of impacts and to suggest mitigation measures.

Dissatisfied with what they perceived as inadequate consideration of its viewpoint, the HSS alerted individuals and organizations throughout the world. As a result, the County has received a large file of correspondence on the caves, which is reproduced in this EA as Appendix 2. The ensuing dialogue between the County of Hawaii and concerned citizens and organizations has helped provide information to the County and to clarify misunderstandings about the methods and context of the project. Because of the volume of correspondence and sincere concern on this issue, this EA provides an extended discussion of the topic.

Existing Environment

Lava tubes are an integral and common element of extrusive volcanic landscapes in shield volcanoes such as Kilauea and Mauna Loa. They are formed by the crusting over of active surface flows and provide an efficient means to transfer molten lava from the flow source to its terminus. After the molten lava drains away, an open segment of a roofed lava tube is often left behind. These caves vary in diameter from inches to tens of feet, and in length from several feet to over ten miles. They may contain multiple branches and layers braided together in a complex fashion. A lava tube system formed as one unit is often separated into multiple caves through collapse of intervening sections. Although their number cannot be ascertained precisely, it is certain that many thousands of lava tubes lie within the pahoehoe flows, which together with a'a flows and limited areas of ash compose the surface mosaic of the volcanoes.

Because the proposed project crosses essentially perpendicular to the gradient of an extensive field of pahoehoe lava flows known as the 'Ai La'au Flows (ca. 340 years B.P.; see Section 2.1), many lava tubes are crossed. These include several named tubes with impressive diameters and lengths, including Kazumura, Keala and Lower U'ilani Caves. The HSS has submitted an application to nominate 'Uilani Cave to the Hawaii Natural Area Reserve System based on its geological features.

For this EA, the HSS provided information on the location and characteristics of the following caves: Kazumura, Keala, Fern's, Pirate's, D-Road complex, and 'Uilani. The author of this EA and representatives of the Hawaii County Planning Department and the Department of Public Works (DPW) consulted with local speleologists, the United States Geological Survey (USGS), the U.S. Fish and Wildlife Service (USF&WS), the State Historic Preservation Division (SHPD), and the University of Hawaii to determine resources of and impacts to these caves and others that might be encountered along the route.

NOTE: No map of caves is provided in the EA because of mutual agreement among the consulted parties (including the State Historic Preservation Division and the Hawaii Speleological Survey) that such information might lead to unauthorized visitation and desecration of burials contained within. Disclosure might also burden the owners of the cave entrances with requests for visitation.

Lava tubes are valuable resources in several distinct ways:

Geology. The morphology and features of lava tubes provide important information on the mechanics and histories of eruptions. Apart from their scientific value, excellent examples of lava tubes may also be worthy of preservation for their geologic and educational interest to the general public.

Recreation. A growing number of cave enthusiasts with a variety of interests are known to be exploring lava tubes in Hawaii. Some ecotourism advocates see lava tubes as a unique and compelling tourist attraction. Cave explorers have reportedly connected collapsed sections of Kazumura Cave to make it the longest known traversable lava tube on Earth (approximately 37 miles) with the greatest elevation change of any cave in the United States (3,603 feet). Keala Cave is reportedly the second longest lava tube cave in Hawaii, at 5.3 miles. "Record setting" features such as these have attracted worldwide attention from cave enthusiasts and professional speleologists.

Biology. Rare communities of specialized invertebrates, many unique to Hawaii, make their homes in lava tubes and interstitial spaces. Of greatest concern are the troglobites, which are obligatory cave animals living in the lightless zone. The cave ecosystem relies on energy sources from the surface and soil that enter via plant roots, percolating groundwater, and animals that accidentally find their way into (but not out of) the caves. The 'ohi'a (*Metrosideros polymorpha*) tree supplies a major input of nutrients to the system, and preservation of natural vegetation above some cave ecosystems is considered vital to ecosystem health (Dr. Fred Stone, pers. comm., December 1995). F.G. Howarth (1981) analyzed species found in Kazumura Cave as part of the Hawaii International Biological Program research effort in the 1970s. He discovered blind crickets, planthoppers, mites, and spiders among the 31 taxa of animals within the cave, most of which are accidentals. Since that time, biologists have discovered additional species in this and other Puna caves (Dr. Fred Stone, pers. comm., December 1995).

Howarth noted that species diversity within lava tubes in Hawaii is highest in tubes of one hundred to several thousand years old, and in large, complex tubes with less human disturbance in the surface zone. Puna caves, especially those found in protected or undisturbed areas, meet these criteria. Although no species enjoying statutory protection under federal or state regulations (e.g., listed endangered species) is found within these caves, preservation of sufficient habitat to support Hawaii's unique cave fauna must be an integral part of efforts to preserve biodiversity in the Hawaiian Islands.

Historic Sites Related to Hawaiian Culture. Native Hawaiians utilized caves for a variety of activities, including shelter, water collection facilities, shrines, places of refuge, fortified sites, and work areas. Evidence of this use persists in

many sites. Lava tubes served for centuries as burial sites for Native Hawaiians. Hundreds of burials have been recorded within lava tubes on the Island of Hawaii. The traditional Hawaiian attitude of respect requires that such remains should not be disturbed, viewed or even visited by those not properly authorized. The State of Hawaii Burial Council often requests that lava tubes containing such remains be sealed off to prevent entry. Such decisions, however, are made on a case by case basis. No single opinion exists in the Hawaiian community regarding entry into lava tubes in general, although meetings and discussions generated by publicity over speleological interest in caves has demonstrated that some individuals and groups are uncomfortable with unlimited access.

These resource values may conflict. Any visitation (even by careful scientists) may damage delicate cave features such as lava stalactites and stalagmites, and may also damage cave organisms or habitat. Heavy use by recreational visitors (however sensitive) to caves may take a toll on the geological features and biology of some lava tubes. Most disturbing is the conflict between the wishes of many Native Hawaiians to exclude most visitation and the growing demand of recreational users to explore more and more caves on a more frequent basis. According to State Historic Preservation Officer Don Hibbard in his 18 December 1995 reply to HSS Chairman Halliday (see Appendix 2):

"...[you] note that scientific and other visitors to these caves contribute considerable sums to the economy of Hawaii Island. We note that our division does not encourage viewing lava tubes as an economic resource because uncontrolled visitation could and has damaged historic properties within lava tubes. A number of Native Hawaiians have also expressed concern that such visits are disrespectful when so many lava tubes were used for burial."

Location and Nature of Impacts

After a thorough, section-by-section review of the known cave locations and the type of construction activities planned above them, there is a consensus that the structural effects on all but Lower U'ilani and Pirate's Cave will be minimal. A reconnaissance of the proposed route by the Deputy Director of the Hawaii County Department of Public Works has determined that cutting or excavation will not be necessary in the areas of Hawaiian Acres over Keala, Kazumura, Fern's or the D-Road caves, a concern stated repeatedly in HSS communications. This means that fill emplacement and paving will be the only modification of the surface, which most agree should strengthen, not weaken, the caves.

One cave that may require collapse is Pirate's Cave, a low, broad cave that very shallowly underlies one of the project roads. In a letter of December 1995, Dr. Halliday expressed the opinion that Pirate's Cave was of minor importance and could be collapsed if necessary without objection by HSS (see Appendix 2).

In the Ainaloa Portion of the project, DPW engineers examined Lower U'ilani Cave to investigate reports that the cave ceiling was unstable and close to the surface, posing a potential disaster. This section of the cave has been partially filled by road construction debris and substantial amounts of household garbage, old tires, etc. In the portion of the cave that passes under the road, there is no indication of recent or imminent collapse. It is possible that some structural modification of the cave will ultimately be necessary, as determined by periodic inspections which the County will implement under its bridge maintenance program. Such a modification would probably alter the interior of the cave. However, as Dr. Halliday has stated in his monograph of this cave system:

"One obvious option for protecting vehicular traffic on Ainaloa Blvd. is placement of additional constructional fill in the cave. If this is done, it is likely that this would complete the filling of the cave passage at this point. In my opinion, this would do no significant harm to the cave, provided it is done in a manner consistent with the principal resources and values of the cave and access to them for those with need for that access. This is because additional clean fill in this short segment of the cave can do no further harm to the cave; past damage there is already maximal. In fact, if old garbage and trash is removed, the cave environment actually would be improved" (1993:3; see end of Appendix 2).

In the connector lot between Ainaloa Blvd. and 9 Road in Hawaiian Acres, it is not likely that any substantial caves will be located, according to Dr. Stephan Kempe, a speleologist concerned with preserving Puna cave resources. In his letter to the Mayor's Office of 5 January 1996, he states:

"The planned extension itself is in all probability free of major caves because it follows the northern edge of the Ainaloa Flow..."

In addition to *known* caves, in all probability dozens of other caves, mostly modest in dimension, underlie the area, as they do virtually all pahoehoe-covered areas of the Big Island. Over 300 miles of private and public roads, ranging from multi-lane highways to dirt tracks, form a dense matrix over the 'Ai La'au flows, which are rife with lava tubes. During road construction large lava tubes are sometimes encountered (on rare occasions with damaging results). For the most part the lava tubes lie far enough beneath the surface to avoid substantial disturbance. Because the project will take place on existing roads with a history of over 30 years of travel by heavy equipment including bulldozers and fire trucks, it is unlikely that large lava tubes will be uncovered. However, as pointed out by Dr. Kempe (Ibid.), there can be no guarantee that no damage whatsoever will result. Mitigation efforts will include a search for tubes in the limited area where cutting will occur (see below).

Impacts and Mitigation Measures

Impacts to Geological Resources: The loss of natural features or scientific value would be negligible. The small segments of Lower U'ilani and Pirate's Caves that may be affected are already well documented and have been adversely modified by placement of fill, trash, etc. Even considering the potential to encounter smaller lava tubes in the very limited sections contemplated for excavation, less than 0.001 percent of the *mapped* length of lava tubes in this section of Puna would be disturbed.

Mitigation Measures for Geological Impacts. Every effort will be made to avoid collapsing major lava tube caves. If a section of a lava tube cave with potential geologic value must be d, the United States Geological Survey and the State Historic Preservation Division will be informed, and their advice considering scientific investigation and preservation of access will be considered.

Impacts Related to Exposure to Hazards: During road construction, Pirate's Cave and any other lava tubes encountered near the surface will be evaluated on a case-by-case basis to determine whether collapse, fill or other structural modification is required. Lower U'ilani Cave has been inspected by Hawaii County engineers and is not considered unsafe at the present time. No structural modifications are currently proposed, although the cave will be more closely examined during modification of the road shoulders (the only construction activity proposed as part of this project along Ainaloa Blvd.).

Mitigation Measures for Exposure to Hazards. Lower U'ilani Cave will be monitored as part of the Hawaii County Bridge Maintenance program. Periodic evaluations of its stability, including debris measurements and cave roof inspections, will take place. Structural modifications will be designed and built as necessary, in consultation with the State Historic Preservation Division. For other areas, the USGS has offered to perform magnetic surveys to determine the precise location and approximate depth of lava tubes in the following sections: along the areas proposed for cutting, in the lot connecting Ainaloa Blvd. to 9 Road, and above Keala, Kazumura and the D Road complex. This location will help ensure that no lava tubes are inadvertently collapsed and that the geologic hazard potentially posed by as yet undetected lava tubes is identified and mitigated.

Impacts to Recreation: Other than the section of Pirate's Cave under the roadway, which is occasionally used by children, no loss of recreational cave areas would occur. It should be noted that all current recreation takes place on private land, often without owner's permission, and is not sanctioned by the County or community associations.

Mitigation Measures for Impacts to Recreation: None are proposed.

Impacts to Biology: The construction of a road above a lava tube may also affect subterranean fauna by removing vegetation whose roots penetrate into the subterranean spaces to provide nutrients, altering the flow of water and introducing pollutants. Because a road already exists above all but 0.31 miles of the proposed route, these effects will be negligible, although it should be noted that increasing the width or thickness of pavement above a cave may lead to less groundwater penetration with subsequent habitat dehydration. If a section of a cave is collapsed, the potential for alien species introductions increases, and airflow between segments may be lost.

Mitigation Measures for Impacts to Biology: If a section of a lava tube with substantial biological value must be collapsed, a culvert allowing airflow passage will be emplaced and the new entrance sealed to prevent alien species introduction.

Impacts to Historic Sites Related to Hawaiian Culture and Proposed Mitigation: The principal Hawaiian cultural issue pertains to archaeological features found within the lava tubes, especially those related to burials. As stated before, many native Hawaiians feel that the sanctity of burial areas may be violated by visitation of some lava tubes. In this sense, the greatest impact on this resource value has been the purposeful or inadvertent destruction of near-surface lava tubes during construction of roads, cesspools, and building sites. Deeper caves are protected from such problems, but the enthusiasm of those who seek to explore caves has also led to impacts on fragile and sensitive resources.

No lava tubes are expected to be impacted by the proposed project with the possible exception of Pirate's Cave. Archaeologists with the State Historic Preservation Division have concurred with the County of Hawaii's determination that road construction will entail no impact to historic sites associated with caves. The reader may refer to Section 2.3.2 for a full discussion of historic sites resources, impacts and mitigation.

Scale and Significance of Impacts

It is possible that by the end of the proposed project, no lava tubes will have been collapsed and physical effects on lava tubes will have been essentially zero. However, as stated above, it may be necessary for road safety to collapse, fill or place supporting structures within small portions of Lower U'ilani Cave, Pirate's Cave, and smaller tubes that may be encountered along the route.

Such modifications would not represent a significant impact as defined in Chapter 343, HRS, and Title 11, Chapter 200, HAR, which govern environmental impact analysis for such projects. No natural or cultural resources would be lost, no rare or endangered species or community would be substantially affected, nor would any other significant impacts occur, as specified in Part 5 of this EA.

It should be noted that the entire region surrounding the proposed project is an agricultural subdivision, crisscrossed by hundreds of miles of roads and driveways and occupied by hundreds of homes. Except in the situation when caves contain human burials, they do not enjoy substantial legal protection within private property in this area, and may be legally collapsed or used for a variety of purposes such as depositing yard wastes or storage. Although the County, State and federal governments do not authorize such uses, they have no authority to prevent them. Apart from these activities, lot grading associated with home construction and agriculture is substantial and will only grow in scale. According to one estimate, over 585 private landholdings exist over Kazumura Cave alone (William McClellan, pers. comm., January 1996). The environmental effects of paving/repaving of an existing road must be evaluated within this land use context.

The No-Action Alternative would not preclude impacts to caves, because Hawaiian Acres residents would eventually improve and modify this and other roads (as well as their own lots, which overly the vast majority of cave length) with their own resources. In fact, the protection to cave resources afforded by County involvement is considerably greater.

2.3 Social, Cultural and Economic Setting

2.3.1 Socio-Economic

Environmental Setting

The 1990 U.S. Census of Population counted 20,781 inhabitants in the Puna District (U.S. Census Bureau: STF1a CD-ROM). The rapid rate of growth experienced in Puna during the 1980s (76.8 percent) has probably slowed somewhat, but it is likely that Puna is home to at least 25,000 people in 1996. The steady growth is in part attributable to the ready availability of inexpensive building lots and rental housing within a reasonably close distance to Hilo, the major source of jobs and government services.

The economic structure of the Puna District has changed greatly since the era when sugar cane plantations dominated the landscape. The *Technical Reference Report, Puna Community Development Plan* (Community Management Associates, Inc. 1992) showed that in 1980, 36.3 percent of the Puna population were in the labor force. Of the total, 15.4 percent were managerial, 21.6 percent were involved in technical, sales, or administrative work, 13.0 percent were in service occupations, 15.8 percent in farming, forestry, or fishing, 15.1 percent in precision production, crafts, or repair work, and 6.2 percent were operators, fabricators, or laborers. Government workers made up 19.0 percent of the total, self-employed workers were 14.6 percent, and the remainder, 65.9 percent, were private wage and salary workers. Puna had and continues to have a diverse economy, even if many of the jobs are actually situated in Hilo. In contrast with former years, small businesses employ more workers than any large concerns.

Puna displays many of the characteristics of a disadvantaged region in its census statistics. The Keaau-Mt. View Division (which includes the entire study area) in 1989 had a median household income of only \$24,149, compared to \$29,712 for the County as a whole. Twenty percent of individuals had income below the poverty level, a rate nearly a third larger than Hawaii County. More than 27 percent of those age 25 years or over have less than a high school education, and almost 13 percent have a work disability, compared to 22.3 percent and 9.6 percent, respectively, for the County as a whole.

Many of Puna's problems are related to the rudimentary infrastructure of its sprawling subdivisions, which was well-suited for speculation but inadequate to serve the needs of the low and middle income families who have come to occupy the district. The lack of paved roads on routes used by hundreds of residents daily is an example of such deficiencies. The growing population continues to strain the substandard roads, worsening the impact. Because the roads are not public, fuel tax monies and other sources of maintenance available to County residents in better-off districts are unavailable to address these deficiencies.

Other problems often cited by Puna residents are typical of disadvantaged communities: crime, unemployment, and lack of public amenities such as recreational facilities.

Neither Hawaiian Acres nor Ainaloa are geographic areas monitored by the U.S. Census of Population. Recent informal counts by the community associations indicated that approximately 825 home structures (counted in January 1996) are present in Hawaiian Acres (out of 4,008 total lots). There are 650 homes in Ainaloa (out of 3,683 lots). Multiplying the number of home structures by the average occupancy rate, and then by household size for the respective census tracts, yields an estimated population of 1,744 for Hawaiian Acres and 1,634 for Ainaloa. These figures must be regarded as very rough estimates. Subdivision residents often commute to Hilo for work, while some operate home businesses or farms. A large proportion of residents are retired or for other reasons are not in the labor market.

Impacts

According to input received at public meetings (see Appendix 3) and personal interviews, most residents of the subdivisions feel that the road will bring a net positive impact to their community. The increased access to fire, police and medical emergency services was cited by many. Others welcomed the extension of public school bus service, which is unavailable to residents far from a paved road. Another factor cited by many was the increased level of safety that a paved, 16-foot road will provide. The creation of an alternate evacuation route for residents trapped by flood waters between B and C Roads is seen as essential. Lot owners recognize the substantial financial benefit of having the County maintain and assume liability responsibility for the road. Very few cited the slight increase in connectivity between Mt. View and Pahoa that the road will enable as a reason for support. A number of copies of a letter of support for the road were delivered

to the author at the January 11, 1996 meeting in Hawaiian Acres (see Appendix 3). In general, support for the road was more marked in Hawaiian Acres, where most of the improvements will be made, than in Ainaloa, where a paved road exists. It is important to note, however, that the Ainaloa Community Association Board of Directors voted almost unanimously to support the road.

The major potential adverse impacts cited by residents were loss of the rural atmosphere, busier traffic and the possibility of increased crime as criminals took advantage of easier access and getaway routes. Attendees at the public meetings made several suggestions for mitigating these impacts, most of which are incorporated in the list below. Ideas rejected by Hawaii County included gating the connection between Hawaiian Acres and Ainaloa (inadvisable for a public road and unwieldy to maintain). Traffic impacts are discussed in Section 2.4.1.

One result of the publicity that surrounded the publication of the Draft Environmental Assessment and Hawaii County Council meetings on condemnation of the connector lot is that it has become apparent that some Hawaiian Acres residents strongly oppose the road. Appendix 1A contains the Comments to the Draft Environmental Assessment, including letters from four individuals stating opposition to the project. They cite concerns about traffic volume, pedestrian safety, community ownership of the road, preserving the rural lifestyle of Hawaiian Acres, the need for recreation projects, and crime. Some of these individuals have also circulated petitions (a copy of pages mailed to author are attached in Appendix 1B) and submitted testimony at Council hearings. Conversely, a number of letters from residents who support the proposed project were also received. Some of these individuals have also testified at Council hearings.

Mitigation Measures

The following mitigation measures are proposed:

- o Monitoring of the crime rate within the subdivisions by Keaau Police in order to determine whether an increase ensues after road construction. The Hawaii County Police Department has expressed a willingness to keep these statistics. If justified, additional police patrols should be implemented.
- o Increased reliance and participation in Neighborhood Watch programs

The No-Action alternative would reduce access for criminals but also for police.

2.3.2 Archaeology and Historic Sites

Background

Recent inventory surveys have yielded abundant physical evidence that pre-Contact and early post-Contact Hawaiians used inland Puna extensively for habitation, gathering, temporary shelters, burials and other purposes. The rainforest environment provided plant and animal material for cordage, featherwork, medicine, dyes and ceremonial items.

In addition, lava tubes were also used for various purposes, especially burial, which have in some cases left behind sites of historic and/or cultural significance. The fact that the proposed route is located on the 'Ai La' au lava flow, only 340 years in age, reduces but does not eliminate the possibility that substantial historic sites may exist in Hawaiian Acres or Ainaloa.

The State Historic Preservation Division (SHPD) was consulted for guidance on determining archaeological resources in the area and necessary mitigation work.

Surface Resources

Although historic sites may be present in the region traversed by the road, they are not expected on or near the road itself, because the entire route (except the connector lot) was bulldozed to a width of 40-60 feet during the creation of the subdivision. The road has since experienced regular maintenance and brush clearing and is highly unlikely to contain any traces of its original surface or immediate subsurface. Examination of the road and its right-of-way revealed no historic sites. SHPD determined that the road construction in the existing right of way would probably have no effect on historic sites.

The connector lot has not yet been surveyed because the County has not yet been able to obtain right of entry. Although the geologic and land use setting make it unlikely that historic sites would be present, the presence or absence of the historic sites on this parcel is yet to be determined.

Lava Tube Resources

Section 2.2.5 (Cave Resources) discusses the extent and location of lava tubes in relationship to the proposed project. As explained in that section, of the known lava tubes that traverse the area under the proposed project, Keala, Kazumura, and the D-Road Complex (along with any historic sites that might be contained within) would not be affected by the proposed project.

The project as planned would not impact U'ilani Cave, although the County may in the future need to enter and perhaps modify sections of the cave if stability problems develop. U'ilani Cave contains historic sites, including a Hawaiian burial, in areas near (but probably not under) Ainaloa Boulevard.

As discussed in Section 2.2.5, Pirate's Cave is a small, shallow cave on F Road between 8 Road and 9 Road. This cave may need to be collapsed as part of the project. An archaeologist with SHPD visited the cave and determined that no historic sites are present.

Although local cave experts and ground survey indicate that no substantial lava tubes are present along the corridor, smaller lava tubes that could possibly contain historic sites or burials may be present.

Impacts

On the basis of the archaeological inspections conducted so far, the State Historic Preservation Division (SHPD) has determined that no impacts to historic sites are likely to occur in any caves (for discussion of U'ilani Cave, see *Mitigation* below) or for the road areas that have been surveyed. However, impacts to potential historic sites on the connector lot cannot be determined until this lot is adequately inspected.

Mitigation Measures

- o The County of Hawaii will conduct an inventory survey of the connector lot in consultation with and with the assistance of SHPD after right of entry is obtained. The County will comply with SHPD's requirements, if any, for data recovery and mitigation.
- o In the event that the County one day undertakes structural modification of U'ilani Cave as a result of information obtained through its periodic bridge maintenance inspections, SHPD will be consulted immediately. It is understood by the County that a mitigation plan to deal with the reported burial will need to be developed. If the burial proves to be located very near or under Ainaloa Blvd, then the Hawaii Island Burial Council will be asked to determine if the burial should be preserved in place or relocated. If the burial will not be directly affected by any proposed stabilization work but is still in the general vicinity of these actions, then the Burial Council will be asked if they would recommend to protect the burial.
- o As discussed in Section 2.2.5, the U.S. Geological Survey (USGS) has offered to perform magnetic surveys to determine the precise location and approximate depth of lava tubes in the following sections: along the areas proposed for cutting, in the lot connecting Ainaloa Blvd. to 9 Road, and above Keala, Kazumura and the D Road complex. This location will help ensure that no lava tubes are inadvertently collapsed and that the geologic hazard potentially posed by as yet undetected lava tubes is identified and

mitigated. SHPD will be provided a copy of any report that results from this research.

- o If any lava tubes are opened or collapsed during road improvements, or if any artifacts, charcoal, human remains, or lava tubes are discovered during construction the County will contact SHPD so that they may inspect the tube, determine if any historic sites or burials are present, evaluate the significance of the site if possible and determine if any mitigation work is necessary. The County will comply with all requirements of Chapter 6E, HRS.

The No-Action Alternative, as discussed in Section 2.2.5, would not preclude impacts to historic sites, because Hawaiian Acres residents would eventually improve and modify this and other roads with their own resources. In fact, the protection to historic sites afforded by County involvement is considerably greater.

2.4 Public Facilities and Services

2.4.1 Roads and Traffic

Existing Facilities

The Puna District, which is the size of O'ahu and contains almost 60,000 lots, is undersupplied with transportation facilities. The large majority of existing roads are private, and 500 miles are unpaved. The only two highways that provide access to the district converge at a bottleneck in Keaau. The daily traffic congestion on Highway 130 is evidence of the inadequacy of the road infrastructure.

Average daily traffic (ADT) is periodically monitored by the State Highways Division. ADT on Highway 130 approximately 1.4 miles southeast of Keaau in August 1994 was 18,518. ADT for Highway 11 at Kuauli Road near Hawaiian Acres was 10,861 (State DOT Planning Branch files). If current growth trends continue, these levels are forecast to at least double by the year 2020.

There is a clear need for a wide strategy of solutions to address Puna's circulation problems. Suggestions have included additional lanes on existing highways, new primary and secondary arterials, increased bus service, and new forms of mass transit such as light rail. A complementary approach developed in the *Puna Community Development Plan* (in draft) is to retrofit the subdivisions for a wider range of land uses. This could divert much Keaau/Hilo-bound traffic by providing alternate sources of jobs, goods and services. Regardless of the mixture of strategies employed, it is generally agreed that rural Puna roads require major improvement.

The existing road network in Hawaiian Acres and Ainaloa is entirely private. Ainaloa Blvd. provides the only entrance to Ainaloa and is paved along its entire distance. It provides access to secondary unpaved streets which front most of the subdivision's lots.

Hawaiian Acres has three entrances. The proposed route uses the central and busiest access. The existing roads in Hawaiian Acres have a problem with blind hills and narrow lanes. Traffic volume is not monitored by the State or County, and no standard statistics on (ADT) or peak-hour traffic are available. Observations by the Hawaiian Acres Community Association indicate a typical level of 60-80 vehicles/hour at the 8 Road/B Road intersection. There are numerous delays and safety problems when vehicles moving in opposite directions meet and one is obliged to stop at a wide spot and wait while the other passes. Large segments of the proposed route, including the 8 Road and 9 Road sections, access numerous driveways, and are inappropriate for high speed roads or traffic.

Road maintenance for both subdivisions has heretofore been the responsibility of subdivision lot owners through road maintenance corporations.

Impacts

The proposed project would provide a County road connection between State Highways 11 and 130. The distance between Mt. View and Pahoa using the State Highways is currently 12.2 miles; the proposed route would reduce this very slightly to 11.6 miles. While the principal purpose of the road is to provide better emergency (fire, police, civil defense and medical) services for the residents, non-emergency traffic will undoubtedly increase. Conceptually, the increase in traffic is the sum of five basic sources:

- A) Tendency of Hawaiian Acre residents who already use existing route to make more frequent trips because of increased safety, comfort and time savings.

This increase is expected to be minimal.

- B) Preferential use of newly paved sections of 8 Road, 9 Road and F Road by Hawaiian Acres residents who might otherwise have chosen alternate routes.

Because most residents of the middle to lower sections of Hawaiian Acres appear to use 8 Road preferentially already, this increase would be minimal, except perhaps on F Road, which heretofore experienced little traffic.

- C) Use by Hawaiian Acres residents to access Ainaloa, Pahoa and Lower Puna; use by Ainaloa residents to access Hawaiian Acres, Kurtistown, Mt.

View and other destinations found mauka on Highway 11.

An unknown but probably modest number of such trips will be made. The route provides a time and distance saving only for those within the interior of each subdivision, for example, mauka of the middle of Ainaloa Subdivision or beyond C Road in Hawaiian Acres. The State Highway route compensates for the slight increase in distance by its much higher design speed. However, some residents may choose to drive on the proposed road, regardless of a time savings or lack thereof, for reasons of scenery, slow pace or novelty.

- D) Use of the route by residents of Lower Puna (particularly those on the Pahoa side of Maku'u Drive) to shortcut around morning traffic jams on Highway 130.

Although there may be some initial explorations of this strategy by traffic-weary motorists from Lower Puna, the route would almost always involve more rather than less time. The distance to Keaau would be *approximately twice as long* using this "shortcut." Factoring in the much lower design speeds of the highway, even those who live in the mauka portions of Ainaloa would probably not benefit except during the worst traffic jams. In addition, the advantage of using the road will be at a minimum during the morning rush hour on Highway 130, because Hawaiian Acres residents will themselves be commuting on the road. For those Lower Puna commuters turning left onto Highway 11 bound for Mt. View or Volcano, the road may offer a true alternative. However, such traffic is thought to be a very small component of the morning peak hour volume.

- E) Use by non-residents of Hawaiian Acres and Puna to bypass Keaau on their way between Volcano and Pahoa.

As discussed in (3) above, the distance savings is minimal and considerably more time must be spent on the proposed road. Nevertheless, an unknown but not negligible number of motorists with such paths would likely use the road for its scenic or other values.

No traffic engineering or modeling was conducted to determine the exact quantity of increase, but it is thought by the County to be well within the absorptive capacity of the road and the State Highway intersections that will receive its traffic. Most observers believe that the considerably improved state of the road will offset any adverse impacts related to increased traffic flow. In the words of the Hawaii County Police Chief (see Appendix 1B, letter of 8 January 1996):

"On balance, this road would enhance vehicular movement which would improve the quality of life in our community."

Because of the uncertainty over the level of traffic, mitigation measures are recommended.

Mitigation Measures

- o The potential for speeding can be countered by a police presence, which should be especially prominent during a short period after the road is opened.
- o If a speeding problem persists, the use of road ripples should be considered. This currently experimental technique in road paving causes vehicles traveling at a certain level above the design speed to shake uncomfortably but does not affect vehicles traveling below this level.
- o The County should monitor Average Daily Traffic (ADT) and peak hour traffic. Alternatively, County personnel could train the Road and Traffic subcommittees of the community associations to perform these tasks.
- o Information from these activities can provide a baseline for future road planning and would help alert the County to potential traffic volume-related problems. Additional mitigation measures may be instituted as necessary. The eventual upgrading of the road to full County standards could occur if justified by traffic volume and community consensus.
- o Potential traffic increase at the outlets of State Highways 130 and 11 will be mitigated by two State projects currently in planning or construction. These will add full turning lanes on Highway 130 at Ainaloa and a left turn lane from Highway 11 onto Kuauli Street, which accesses the proposed project terminus at Old Volcano Trail in Hawaiian Acres.
- o The traffic impact will be mitigated if and when some of the road projects described in Section 2.7.4 are completed.

Because of the numerous driveway accesses, the conversion of the Puna Emergency Road into a primary or secondary arterial would be problematic. The relationship between the proposed project and other proposals to establish transportation corridors in the Central Subdivision area is discussed in Section 2.7.4.

The No-Action Alternative would avoid impacts related to traffic volume, but at the cost of continuing very substandard road conditions. Safety would continue to be a problem for roads burdened with blind hills and narrow lanes (particularly 8 Road).

2.4.2 Public Services

Existing Services

The Puna District is currently served by a Police Station staffed with 43 police officers and two clerks. Service is provided round-the-clock, and at any given time there are five officers on duty. Personnel at the facility have increased parallel with population growth in Puna, but the station still lags behind its optimum number (Acting Captain James Kelly, pers. comm., January 1996).

Fire and emergency services are available round-the-clock at Keaau Fire Station. Currently the station employs three captains and fifteen firemen on three shifts. Full emergency service including ambulance service is available. The station also relies the Kawaiiani, Waiakea, Kaumana (all in Hilo) and Pahoa stations for backup. Volunteer departments and/or minimal stations in several subdivisions also supply manpower and equipment. Emergency response to natural and civil disasters of Puna - which include lava flows, floods and brush fires - is provided by the Hawaii County Civil Defense Agency.

Ainaloa is served by Keonepoko Elementary School and the Pahoa Elementary, Intermediate and High Schools. Hawaiian Acres children attend Mt. View Elementary, Keaau Intermediate and Waiakea High Schools.

Impacts and Mitigation Measures

As indicated in communications in Appendix 1B and in numerous statements by fire, police, and civil defense officials at public meetings, the proposed project would greatly facilitate the provision of emergency services not only in Hawaiian Acres and Ainaloa but in Puna in general. The road is supported by these agencies.

The Hawaii Department of Education (DOE) does not plan to initiate any redistricting of schools on the basis of the proposed road (Horace Hara, DOE Facilities Planner, pers. comm., January 1996). During the next decade a number of additional schools are planned for Puna, including a new high school, elementary school and intermediate school in Keaau. Demographic trends and pressure on existing facilities will ultimately be the most important factors in redistricting decisions.

The No-Action Alternative would perpetuate problems in access and response time presently experienced by police, fire and emergency services. Eventual paving of the 8 Road by Hawaiian Acres residents would alleviate this to some degree, but the lack of a connection to Ainaloa would continue to present evacuation and emergency difficulties. Other roads proposed for the future might mitigate some of these impacts.

2.5 Secondary Impacts

The road improvement may induce some level of population increase as the lots become more accessible and the rate of subdivision infilling increases. Such an impact is called secondary because it is an indirect result of the project. Population growth may in turn produce further indirect positive impacts, such as economic opportunities, jobs, improvements to community services and recreational facilities, as well as adverse impacts, such as additional traffic, drainage problems, exposure to lava flow hazards, and deterioration of native ecosystems.

Realistically, the proposed project has the potential to generate secondary impacts only in the interior of Hawaiian Acres. The portion of Hawaiian Acres within 2 miles of Highway 11 already enjoys reasonable road access, and Ainaloa subdivision is already quite accessible and will not be made any more so by the proposed road. Hawaiian Acres, like other areas of Puna, has experienced continual infilling of homes and population since it was created in the late 1950s. There is little question that this will continue into the foreseeable future. It is probable that the proposed road will slightly accelerate this trend by increasing the liveability of the subdivision.

This potential must be seen, however, in the context of larger trends in Hilo and Puna. Major new residential subdivisions are approved and in planning stages in Puueo and Keaau. The W.S. Shipman, Ltd., development in Keaau in particular will present an intervening opportunity for many home or lot buyers who now must resort to the Puna subdivisions for affordable land. The current infrastructure crisis in these subdivisions is rapidly tarnishing their appeal, and Shipman's fully supplied development may offer powerful incentives that more than offset higher lot prices. If Shipman's development takes place as envisioned, it is quite possible that the current growth rate in all Puna subdivisions, including Hawaiian Acres, may be slowed greatly.

In summary, the proposed project would not involve substantial secondary impacts on population growth or public facilities. The level of impacts that would result would: a) not be substantial because of the relatively small degree of influence the road would exert; b) not involve a large area; and c) not be unintended, because the entire area is zoned for such use.

Mitigation

Any potential secondary impacts can be mitigated by continual attention to sensible development of Puna's infrastructure in keeping with the rural atmosphere of the district. These efforts are underway on a number of fronts, including the *Puna Community Development Plan* (see Section 2.7).

2.6 Required Permits and Approvals

County:

Grading Permit

2.7 Consistency with Government Plans and Policies

2.7.1 Hawaii State Plan

The Hawaii State Plan was adopted in 1978 and was revised in 1986 and again in 1991 (Hawaii Revised Statutes, Chapter 226, as amended). The Plan establishes a set of themes, goals, objectives and policies that are meant to guide the State's long-run growth and development activities.

The three themes that express the basic purpose of the Hawaii State Plan are *individual and family self-sufficiency, social and economic mobility and community or social well-being*. The proposed project would help accomplish these goals for the subdivision residents by promoting better emergency services and improving the quality of transportation.

2.7.2 State Transportation Functional Plans

The Hawaii State Plan provides for the preparation of Functional Plans by the State agencies responsible for certain program areas. There are twelve Functional Plans which deal with specific areas of concern, and each contains objectives, policies, and implementing actions necessary to accomplish the goals of the plan. State Functional Plans cover the program areas of agriculture, transportation, conservation lands, housing, tourism, historic preservation, energy, recreation, education, health, human services and employment. Relevant to the proposed project is the State Transportation Functional Plan.

- Objective I.A:** Expansion of the transportation system.
- Policy I.A.2:** Improve regional mobility in areas of the State experiencing rapid urban growth and road congestion.
- Policy I.B.1:** Close the gap between where people live and work through decentralization, mixed zoning, and related initiatives.

Objective I.D: Identification and reservation of lands and right-of-way required for future transportation improvements.

Policy III.A.2: Pursue private sector participation in the financing of transportation systems, developments, and projects.

The proposed project is consistent with objectives and policies to improve transportation in rural areas.

2.7.3 Land Transportation Master Plan

The State of Hawaii is now revising the *Island of Hawaii Long Range Transportation Plan* (Hawaii State Department of Transportation 1991), which presented current data on traffic volumes, projected future traffic volumes and offered a scenario of optimum highway planning. This document (now titled the *County of Hawaii Long Range Land Transportation Master Plan for 2020*) is currently in draft form. The present draft does not develop strategies to address circulation problems generated within the subdivisions and instead concentrates on improvements to the existing State highways. Although the proposed project is not currently represented among the road proposals for Puna, it would not conflict with any of the suggested measures.

2.7.4 General Plan and Puna Community Development Plan

The General Plan for the County of Hawaii is a policy document expressing the broad goals and policies for the long-range development of the Island of Hawaii. The plan was adopted by ordinance in 1989. The General Plan is organized into thirteen elements, with policies, objectives, standards, and principles for each. There are also discussions of the specific applicability of each element to the nine judicial districts comprising the County of Hawaii.

The Puna Community Development Plan (PCDP) was commissioned in 1991 and is still in draft form (Community Management Associates, Inc. 1995). The purpose of the PCDP is to develop specific measures that fulfill and enhance the goals expressed in the General Plan. Although not yet accepted or adopted, it contains many proposals that reflect current thinking on Puna's needs that are likely to themselves be adopted as policy.

The following General Plan recommended courses of action and PCPD-identified specific concerns and recommendations are relevant:

General Plan Courses of Action:

- o Consider, in conjunction with the community associations and property owners, the use of a variety of mechanisms to provide infrastructure in the non-conforming subdivisions.

PCDP Specific Concerns:

- o Congestion relief of rush-hour traffic between Pahoa and Hilo, especially focussed on the Keaau bottleneck.
- o Liability issues surrounding public use of privately owned subdivision collector roads.
- o Width deficiencies for private subdivision roads to meet County standards, and *cost of current standards*.

PCDP Recommendations:

- o Encourage the State to plan and implement development of a rural arterial corridor extending from the upper end of Kahakai Boulevard to the bottom of Hawaiian Acres, or another limited access in the same general area, and then through Hawaiian Acres at "Nine and a Half Road" (between Nine and Ten Roads) to Kuauli, then through the upper parts of Kurtistown and below Happy Home, to connect with the Komohana Extension in Hilo.
- o Plan for and seek design funding for implementation of the Central Subdivision Corridor as shown in the General Plan, seeking State and federal assistance, as a limited access route, based on appropriate engineering studies and seeking to protect the underground lava tubes in the vicinity.
- o Design upper ("Nine a Half Road") and lower (14th and 15th Streets) laterals and a Central Subdivision Corridor to preserve options for later conversion to street car or light rail, and to otherwise comply with ISTEA requirements for rural arterials.
- o Collaborate with the subdivisions for gradual County acceptance of approved subdivision collector streets.

The proposed project has not been intended and should not be interpreted as a solution to the District's needs for primary or secondary arterials. These needs would best be met by the routes suggested in the PCDP and in the Land Use Transportation Master Plan. Limited access roads (i.e., roads which do not provide access to a multitude of driveways) are probably necessary for such arterials.

However, the Puna Emergency Road could meet both emergency needs and provide an acceptable level of service for the modest level of every day traffic expected to utilize it. It represents a realistic approach to working with the existing subdivision infrastructure to address the most pressing transportation needs, particularly emergency access. The proposed project is part of a spectrum of responses that are developing to meet the concerns identified in the General Plan and the Puna Community Development Plan.

PART 3: SUMMARY OF ENVIRONMENTAL IMPACTS AND PROPOSED MITIGATION MEASURES

Listed below are impacts and proposed mitigation measures for categories in which impacts are apparent. Refer to Part 2 for detailed discussions.

3.1 Short Term Impacts

Construction Impacts: Short term impacts will result from landclearing and construction activities. The impacts will consist of temporary noise, dust and exhaust from machinery and heavy equipment.

Mitigation: The County should restrict construction activity in the easement to daylight hours to the greatest extent feasible. Professional traffic control should be utilized as necessary. Dust and noise control should be implemented during construction. Best management practices should be observed to control excess runoff during construction.

3.2 Long Term Impacts

Traffic Impact:

The proposed road would greatly improve traveling conditions for many residents of Hawaiian Acres. However, both Average Daily Traffic and peak-hour traffic can be expected to increase due to a combination of several factors related to within-subdivision, between-subdivision, and extra-subdivision trips.

Mitigation:

- o The potential for speeding can be countered by a police presence, which should be especially prominent during a short period after the road is opened. Alternate measures such as road rippling should be considered if the speeding problem persists.

- o The County should monitor Average Daily Traffic (ADT) and peak hour traffic. Alternatively, County personnel could train the Road and Traffic subcommittees of the community associations to perform these tasks.
- o Information from these activities can provide a baseline for future road planning and would help alert the County to potential traffic volume-related problems. Additional mitigation measures may be instituted as necessary. The eventual upgrading of the road to full County standards could be considered if justified by traffic volume and community consensus.
- o The traffic impact will be mitigated by State projects currently in planning or construction that will add full turning lanes on Highway 130 at Ainaloa and a left turn lane from Highway 11 onto Kuauli Street, and also if and when some of the road projects described in Section 2.7.4 are completed.

Impacts to Natural Resources:

Because the proposed project would take mostly within an existing road corridor, the potential to destroy or disrupt native species and communities is minimal. The proposed project has been evaluated with respect to the characteristics and location of caves. No cutting will take place in any areas of known caves and the limited degree of road work necessary on the existing road above these caves should not cause any structural harm to the caves below, with the possible exception of Pirate's Cave and Lower U'ilani Cave. Pirates's Cave has been evaluated as minor, already disturbed, and of limited value.

Mitigation:

Lower U'ilani Cave will be monitored as part of the Hawaii County Bridge Maintenance program. Periodic evaluations of its stability, including debris measurements and cave roof inspections, will take place. Structural modifications will be designed and built as necessary, in consultation with the State Historic Preservation Division. For other areas, the USGS has offered to perform magnetic surveys to determine the precise location and approximate depth of lava tubes in the following sections: along the areas proposed for cutting, in the lot connecting Ainaloa Blvd. to 9 Road, and above Keala, Kazumura and the D Road complex. This location will help ensure that no lava tubes are inadvertently collapsed and that the geologic hazard potentially posed by as yet undetected lava tubes is identified and mitigated.

If a section of a lava tube with potential biological value is required to be collapsed, a culvert allowing airflow passage will be emplaced and the entrance sealed to prevent alien species introduction.

Impacts to Archaeology and Historic Sites

Impacts to historic sites are not likely to occur. No lava tubes that are expected to be impacted by the project are known to contain burials or other historic features, as discussed in Section 2.3.2 above. Examination of the road and its right-of-way revealed no historic sites. The State Historic Preservation Division (SHPD) determined that the road construction in the existing right of way would probably have no effect on historic sites in either lava tubes or surface areas..

The connector lot has not yet been surveyed because the County has not yet been able to obtain right of entry. Although the geologic and land use setting make it unlikely that historic sites would be present, the presence or absence of the historic sites on this parcel is yet to be determined.

Mitigation Measures

The County of Hawaii has coordinated with SHPD to determine the following mitigation measures:

- o The County of Hawaii will conduct an inventory survey of the connector lot in consultation with and with the assistance of SHPD after right of entry is obtained. The County will comply with SHPD's requirements, if any, for data recovery and mitigation.
- o In the event that the County one day undertakes structural modification of U'ilani Cave as a result of information obtained through its periodic bridge maintenance inspections, SHPD will be consulted immediately. It is understood by the County that a mitigation plan to deal with the reported burial will need to be developed. If the burial proves to be located very near or under Ainaloa Blvd, then the Hawaii Island Burial Council will be asked to determine if the burial should be preserved in place or relocated. If the burial will not be directly affected by any proposed stabilization work but is still in the general vicinity of these actions, then the Burial Council will be asked if they would recommend to protect the burial.
- o As discussed in Section 2.2.5, the U.S. Geological Survey (USGS) has offered to perform magnetic surveys to determine the precise location and approximate depth of lava tubes in the following sections: along the areas proposed for cutting, in the lot connecting Ainaloa Blvd. to 9 Road, and above Keala, Kazumura and the D Road complex. This location will help ensure that no lava tubes are inadvertently collapsed and that the geologic hazard potentially posed by as yet undetected lava tubes is identified and

mitigated. SHPD will be provided a copy of any report that results from this research.

- o If any lava tubes are opened or collapsed during road improvements, or if any artifacts, charcoal, human remains, or lava tubes are discovered during construction the County will contact SHPD so that they may inspect the tube, determine if any historic sites or burials are present, evaluate the significance of the site if possible and determine if any mitigation work is necessary. The County will comply with all requirements of Chapter 6E, HRS.

Impacts to Public Services:

The proposed project would greatly facilitate the provision of emergency services not only in Hawaiian Acres and Ainaloa but in Puna in general. It would also provide a bypass in case of accidents or Civil Defense emergencies that closed Highway 130 between Ainaloa and Keaau. The road is supported by the Fire and Police Departments and the Civil Defense Agency.

Secondary Impacts

The proposed project will not involve substantial secondary impacts, such as population changes or effects on public facilities. The level of impacts that would result would: a) not be substantial because of the relatively small degree of influence the road would exert; b) not involve a large area; and c) not be unintended, because the entire area is zoned for such use.

Mitigation

Any potential secondary impacts can be mitigated by continual attention to sensible development of Puna's infrastructure in keeping with the rural atmosphere of the district. These efforts are underway on a number of fronts, including the *Puna Community Development Plan*.

3.3 Impacts of the No-Action Alternative

The roads would remain in private hands under the No-Action Alternative. No connection between Hawaiian Acres and Ainaloa would be built. County emergency services would remain difficult to provide in the area, and traffic attempting to exit Hawaiian Acres during floods would, as now, be obliged to cross the most flood-prone roads.

The No-Action Alternative would avoid impacts related to traffic volume, but at the cost

of continuing very substandard road conditions. Safety would continue to be a problem for roads burdened with blind hills and narrow lanes (particularly 8 Road).

The No-Action Alternative would have substantially the same impacts as the proposed project in terms of drainage, flora and fauna, and historic sites, because it is believed that Hawaiian Acres would eventually pave most of the route and many additional roads by itself. County funds to ameliorate drainage problems near the road, however, would not be available. The protection to rare and endangered species and historic sites afforded by County involvement is considerably greater than if the subdivisions undertook improvements privately.

PART 4: DETERMINATION

The proposed project will not significantly alter the environment and impacts will be minimal. Therefore, the Hawaii County Mayor's Office has determined that the preparation of an Environmental Impact Statement is not warranted (see cover letter).

PART 5: FINDINGS AND REASONS

1. The proposed project will not involve an irrevocable commitment or loss or destruction of any natural or cultural resources. Only a small section of an agriculturally-zoned lot will be committed to a use other than the current use, which is roadway.
2. The proposed project will not curtail the range of beneficial uses of the environment.
3. The proposed project will not conflict with the State's long-term environmental policies.
4. The proposed project will not substantially affect the economic or social welfare of the community or State. It will help provide emergency services and allow better transportation for Hawaiian Acres and Ainaloa residents.
5. The proposed project does not substantially affect public health in any detrimental way.
6. The proposed project will not involve substantial secondary impacts, such as population changes or effects on public facilities. Some secondary impacts may occur as a result of the road's tendency (among many unrelated factors) to influence in filling of home construction in the agricultural lots. The level of impacts that would result would: a) not be substantial because of the relatively small degree of influence the road would exert; b) not involve a large area; and c) not be unintended, because the entire area is zoned for such use.

7. The proposed project will not involve a substantial degradation of environmental quality.
8. The proposed project will not substantially affect any rare, threatened or endangered species of flora or fauna or habitat. No endangered species of flora or fauna are known to exist on the project site, other than the possibility of use by the wide-ranging species Hawaiian hawk or 'io (Buteo solitarius), and the 'ope'ape'a or Hawaiian hoary bat (Lasiurus cinereus semotus). Mitigation measures have been developed in the unlikely event that such species are disturbed.
9. The proposed project is not one which is individually limited but cumulatively may have considerable effect upon the environment or involves a commitment for larger actions.
10. The proposed project will not detrimentally affect air or water quality or ambient noise levels.
11. Although the proposed project is located in an zone exposed to some earthquake and volcanic hazard, there are no reasonable alternatives. The proposed action is intended partly to mitigate hazard exposure for residents isolated by flooding by providing an alternate evacuation risk. The project would provide better County emergency services to a broad area.

For the reasons above, the proposed project will not have any significant effect in the context of Chapter 343, Hawaii Revised Statutes and section 11-200-12 of the State Administrative Rules.

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APPENDIX 1A

COMMENTS AND RESPONSES

TO DRAFT EA



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
STATE HISTORIC PRESERVATION DIVISION
31 SOUTH KING STREET, 8TH FLOOR
HONOLULU, HAWAII 96813

LOCALS, S. WILSON, CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES

OFFICE OF THE
DEPUTY COMMISSIONER

AGRICULTURE DEVELOPMENT PROGRAM
AQUATIC RESOURCES
CONSERVATION AND ENVIRONMENTAL AFFAIRS
CONSERVATION AND RESOURCES DEVELOPMENT
CONSERVATION
FORESTRY AND HISTORIC PRESERVATION DIVISION
LAND MANAGEMENT
STATE PLANTS
WATER AND LAND DEVELOPMENT

January 9, 1996

Dr. Ron Terry, Geo Metician
HCR 9575
Keaau, Hawaii 96749

LOG NO. 16198
DOC NO. 9601HRM01

Dear Dr. Terry:

SUBJECT: Environmental Assessment for Emergency Road Connecting
Highways 130 and 11 (County of Hawaii)
Keaau and Waikabehahe Nui and Iki
[6: various plots and parcels]

Thank you for your letter of December 19, 1995 concerning the preparation of an Environmental Assessment (EA) for a County-funded emergency road in Puna. The proposed project would, with one exception, improve existing roads to bring them up to County standards for emergency roads. Thank you, also, for meeting with our staff archaeologist in Hilo, Marc Smith, to discuss specific concerns we have about the potential effects of road construction and use on historic sites. The outline below reiterates the issues that we believe should be addressed in the Environmental Assessment. Also considered in this discussion is information we received about the project in a letter from the Planning Department of Hawaii County (Olesen to Hibbert, December 28, 1995).

i. Archaeological Inventory Survey of Known or Potential Lava Tubes. As you are aware, several extensive lava tubes run beneath the proposed emergency road and other, smaller tube formations may also be present. Some segments of these longer tube systems are known to contain burials and other remains of past Hawaiian use while the presence of such remains is also likely in the smaller tube formations. In order for us to assess the potential effect of road improvements on historic sites, we need to know if any archaeological remains or burials are located in known or potential tube segments that lie immediately beneath or adjacent to the road corridor. For the large, known tube systems, this means that the tubes must be mapped with sufficient accuracy to allow archaeologists to know when they are directly under the road during their inspection and assessment. In addition, an attempt should be made to identify previously unknown lava tubes. This could be done by examining aerial photographs to locate tube entrances in the general vicinity of the road and by interviewing local residents if entrances are identified, they should be explored to see if they run beneath the road and contain

R. Terry
Page 2

any historic sites. This search may vary in intensity along the length of the road if it can be argued that certain segments of the road are less likely to have lava tubes or that road work will have little impact because improvements will not expand beyond the original road surface and will not create conditions greater than current traffic loads.

In presenting this material to the general public, we ask that some attempt be made to keep entrances to these lava tubes confidential. We realize that this is not always easy because public disclosure is the primary intent of Environmental Assessments and the public does have a right to know which resources may be impacted and that adequate methods were used to make these assessments. Any effort to find a balance between disclosure and confidentiality for the protection of these resources would be appreciated.

2. Indirect Discovery of Lava Tubes During Road Construction. The EA should clearly specify what measures will be taken if any lava tubes are inadvertently opened or breached during construction. These measures should include notifying an archaeologist as soon as possible to determine the presence or absence of historic sites or burials within the vicinity of the break and, if present, to evaluate their significance. The EA should also explain what mitigation measures are probable in these circumstances and should reaffirm a commitment to comply with Chapter 6-E (H.R.S.) if human remains are discovered.

3. Grading Plans for Road Improvements. If we understand correctly, the current plan calls for different levels of road improvement in different segments of the emergency road. We ask that plans calling for fill to even the grade of the road instead of cutting raised areas be applied to the entire road corridor and not just those segments located directly above known lava tubes. We would concur with this approach because it would help preserve the integrity of known and unidentified tube systems. We ask that the grading plans be clearly described in the EA and that a commitment be made to the kinds of approaches that would minimize potential impacts. The December 28th letter refers to "slight widening" of some road segments. If this means the alteration of previously undisturbed ground surfaces to either side of the current road, this should be stated clearly.

4. Archaeological Inventory Survey of Undeveloped Lot. In regard to the undeveloped lot which the County plans to purchase, we ask that the parcel be surveyed for historic sites unless the ground surface of the parcel has been severely altered in the past and there is sufficient information to indicate that lava tube segments are absent or unlikely beneath the parcel. The December 28 letter states that "local cave experts" say there are no known large or significant lava tubes in this section. We have no reason to doubt this assessment but are concerned that smaller tube segments may be present on the parcel and that these could contain human burials even if the lava tube itself is not considered "large and significant" by cavers

If you have any questions, please call Marc Smith (933-4346) at our Hilo office or Holly McElowney (587-0047) in Honolulu.

Aloha,

Ron Terry

DON HIBBARD, Administrator
State Historic Preservation Division

HM:amk

c: Virginia Goldstein, Planning Dept., County of Hawaii

Ron Terry
HCR 1 Box 9575
Keaau Hawaii 96749

April 17, 1996

Don Hibbard, Administrator
State Historic Preservation Division
33 South King Street, 6th Floor
Honolulu, Hawaii 96813

Dear Mr. Hibbard:

Subject: Comments to Draft Environmental Assessment for Emergency Road
Connecting Highway 130 and 11, Keaau and Waikahakahi Nui and
Iki, Hawaii County; THIKs (3rd) 1-6-13:81, 1-6-45:073 & 1-6-65:109

Thank you for your comment letter dated 9 January 1996 in response to our request for information concerning the Puna Emergency Road Environmental Assessment (EA). As Hawaii County Deputy Planning Director Norman Oleson informed you in his letter of 11 March 1996, we did not receive your letter in time for its inclusion or consideration in the EA. Considering this, your letter will be treated in the Final EA as a comment letter.

To follow up on several points you made, that were in turn responded to by Mr. Oleson:

1. *Archaeological Survey of Known or Potential Lava Tubes.* Except for Lower U'ilani Cave, the major lava tubes known to exist in the area (Kazumura, Keala, and the D-Road Complex; it is unlikely that any major tubes have not yet been discovered) are all at depths between 10 and 30 feet below the surface in areas where no excavation will occur. Lower U'ilani Cave has been inspected by Hawaii County engineers and is not considered unsafe at the present time. No structural modifications are currently proposed, although the cave will be more closely examined during modification of the road shoulders (the only construction activity proposed as part of this project along Ainaloa Blvd.). After a thorough, section-by-section review of the known cave locations and the type of construction activities planned above them, there is a consensus that the structural effects on caves except Pirate's Cave will be minimal. Marc Smith of your office can confirm that Pirate's Cave does not contain artifacts, remains or historic sites of any type.
2. *Inadvertent Discovery of Lava Tubes During Construction.* The Final EA specifies that if any lava tubes are inadvertently opened or breached during construction, the County will contact SHPD so that they may inspect the tube, determine if any historic sites or burials are present, evaluate the significance of the site if possible and determine if any mitigation work is necessary. All requirements of SHPD will be adhered to. The EA also states that the County

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

will comply with Chapter 6-E (HRS) if human remains are discovered, as you have requested.

3. *Grading Plans for Road Improvements.* As Mr. Oleson stated in his letter:

"The decision about whether to cut and fill must be dictated first by safety and secondly by economic considerations. Our experience in road design clearly shows that at least some cutting is necessary in order to achieve road profiles that meet safety requirements. The blind hills currently present on 8 Road could not be eliminated if construction methods were limited to fill. We wish to emphasize that the County has gone to great lengths to minimize the length of segments requiring cuts. (All known tubes in the area are located away from the areas contemplated for cuts.) The U.S.G.S. has offered to use geomagnetic techniques to help locate tubes in the small section proposed for cutting that are either large or near the surface, where the likelihood of finding historic sites is greatest. If lava tubes are discovered in this section, we will consider reasonable modifications to road design in order to mitigate impacts."

The road will be widened the existing the right-of-way, most of which has been graded. The Final EA clarifies that "Shoulder widening will take place in the right-of-way almost exclusively on areas that have already been graded. Minimal grading is necessary here."

4. *Archaeological Survey of Undeveloped Connector Lot.* The connector lot has not yet been surveyed because the County has not yet obtained right of entry. In consultation with your office, the County will perform an inventory survey as required by SHPD upon obtaining right of entry.

Following are the mitigation measures for impacts to historic sites that the County of Hawaii will institute. All have been included in the Final EA.

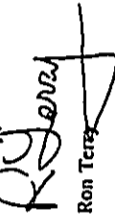
- o The County of Hawaii will conduct an inventory survey of the connector lot in consultation with and with the assistance of SHPD after right of entry is obtained. The County will comply with SHPD's requirements, if any, for data recovery and mitigation.
- o In the event that the County one day undertakes structural modification of U'liani Cave as a result of information obtained through its periodic bridge maintenance inspections, SHPD will be consulted immediately. It is understood by the County that a mitigation plan to deal with the reported burial will need to be developed. If the burial proves to be located very near or under Ainaloa Blvd, then the Hawaii Island Burial Council will be asked to determine if the burial should be preserved in place or relocated. If the burial will not be directly affected by any proposed stabilization work but is still in the general vicinity of these actions,

then the Burial Council will be asked if they would recommend to protect the burial.

- o As discussed in Section 2.2.5 [of the Final EA], the U.S. Geological Survey (USGS) has offered to perform magnetic surveys to determine the precise location and approximate depth of lava tubes in the following sections: along the areas proposed for cutting, in the lot connecting Ainaloa Blvd. to 9 Road, and above Keala, Kazumura and the D Road complex. This location will help ensure that no lava tubes are inadvertently collapsed and that the geologic hazard potentially posed by as yet undetected lava tubes is identified and mitigated. SHPD will be provided a copy of any report that results from this research.

- o If any lava tubes are opened or collapsed during road improvements, or if any artifacts, charcoal, human remains, or lava tubes are discovered during construction the County will contact SHPD so that they may inspect the tube, historic sites or burials are present, evaluate the significance of the site if possible and determine if any mitigation work is necessary. The County will comply with all requirements of Chapter 6E, HRS.

Sincerely,


Ron Terzaghi

Hawaii Speleological Survey

of the
National Speleological Society

WILLIAM R. HALLIDAY
Chairman

P.O. Box 1525
Hilo, HI 96721

March 3, 1996

Hon. Stephen Yamashiro
Office of the Mayor
25 Aupuni Street
Hilo, HI 96720

Re: Draft Environmental Assessment
Puna Emergency Access Road

Dear Mayor Yamashiro:

This letter is written after review of the Draft Environmental Assessment for the Puna Emergency Access Road, and supercedes previous correspondence about this proposed road.

As Chairman of the Hawaii Speleological Survey of the National Speleological Society, I commend you, your County staff, and your consultant Dr. Ron Terry, for formulating and including plans to protect significant caves crossed by this road.

In my opinion, the details specified in this Draft Environmental Assessment provide adequate protection for these caves. From the speleological standpoint, no Environmental Impact Statement is needed for it. I am confident that other leading vulcanospeleologists will join me in this conclusion. The Hawaii Speleological Survey thus anticipates and concurs in your preparation of a Megalithic Declaration/Final Environmental Assessment containing these details.

In this Draft Environmental Assessment I noticed several errors or misunderstandings about peripheral matters which should be corrected in the final document. These are specified in the attached appendix. Primarily these concern differentiation between lava tubes and lava tube caves, with misunderstandings about the number and size of caves in Puna and the large number of them which are not burial caves, and about legal protection for lava tube caves in Hawaii. If the Hawaii Speleological Survey can provide further information or be of service in some other way, please do not hesitate to call on us. The H.S.S. is a non-profit public service organization and makes no charge for any service other than excessive photocopying.

Again our commendation and thanks for developing this acceptable method of protecting these world-class caves without impeding the road project.

Sincerely yours,

William R. Halliday
William R. Halliday



APPENDIX

1) Differentiation of caves from lava tubes.

The Draft EA (and also Mr. Norman Olesen's letter to the President of the National Speleological Society dated 26 December 1995, in the Appendix of the Draft EA) suffers from repeated confusion between lava tubes and lava tube caves. Several sections need to be rewritten, and correct terms need to be substituted in several places.

In the last paragraph on page 15, it is notably incorrect to assert "...in all probability dozens of other caves, mostly modest in dimension, underlie the area, as they do virtually all pahoehoe-covered areas of the Big Island." On the basis of unpublished field data of the H.S.S. and present geological knowledge of the area from other sources, it will be surprising if more than three or four other significant caves underlie this Draft EA area.

Caves are defined as natural underground spaces, large enough for human entry, and with some portion in essentially total darkness. Some open, roofed lava tubes are caves. Others are too small or too short. As indicated below, in Hawaii this differentiation is especially important.

On page 12, paragraph 1, the first two sentences are basically correct although the second sentence specifies only one of several mechanisms for the formation of lava tubes. The third sentence is incorrect, conflicting with the second sentence. It could be corrected by substituting:

...an open segment of a roofed lava tube is often left...

The fourth sentence of this paragraph is especially erroneous. Almost no open, roofed lava tubes less than 12 inches in diameter qualify as caves. In fact, very few open, roofed lava tubes less than 3 or 4 feet in diameter qualify as caves in this area.

The remainder of this paragraph is accurate but the last sentence is irrelevant and misleading. It is quite true that there are "many thousands of lava tubes" in Hawaii County. However, most of these are too small or too short to be considered caves. On the basis of scientific exploration of about 100 caves and 50 miles' mapping in all of north Puna, we believe that the final count of significant caves in this -- the world's greatest lava cave area -- will be about 200, not "thousands." This is approximately the same as in Mammoth Cave National Park, Kentucky, which many experts consider the world's greatest limestone cave area.

To differentiate correctly between lava tubes and lava tube caves, the phrases tube(s) and lava tube(s) should be changed to lava tube cave(s) or cave(s) in the following locations:

page 12, line 3 (twice)

page 13, lines 1, 2, 4, 7, 7-8, 10, 16, 29 (twice), 30 and last

page 14, lines 5, 6, 13, 20, 21-22, 23. (Note: the term lava tube is correct in line 1. Many burials are understood to be in lava tubes which are not caves.)

page 15, lines 28, 29, 30, 33, 35

page 16, lines 5, 6, 10, 21, 24, 25, 31

page 17, lines 1, 5, 7, 17, 18, 20

page 20, lines 16, 25

page 21, line 10

page 31, lines 25, 27, 28, 30

page 32, line 3.

2) Legal protection for Hawaiian caves.

It is incorrect to say (page 17): "The caves do not enjoy legal protection of any sort within this area."

The Hawaii State Environmental Policy (Chapter 344, section 3, (1) provides that it shall be the policy of the state

to conserve the natural resources, so that land, water, mineral, visual, air and other natural resources are protected by...preserving or augmenting natural resources

of which caves are an example (page 13 of this Draft EA and the cited Community Management Associates, Inc., 1995). As such, caves and sections of caves are natural resources in their own right and some contain other natural resources.

Caves subject to the Environmental Assessment process are protected under Title 11 Ch. 200 Subch. 5, section 12(b) (1) and sometimes (2) and (7)-(11). This statement on page 17 needs to be corrected accordingly. It should be noted that a similar misstatement appears in the letter dated 26 December 1995 from Mr. Norman Olesen to Dr. Stephan Kempe in the Appendix of the Draft EA.

Especially considering the dreadful past record of devastation of caves and parts of caves throughout Hawaii County (such as Jaggar's Cave in Hawaii Volcanoes National Park, Eldon English Cave in Puna, Roadcut Cave in Kau, once-celebrated Lanikaea Cave in Kailua-Kona, and even parts of Kaumana Cave County Park in the suburbs of Hilo, it would be very inappropriate for the final document to imply in any way that Hawaii County has so many caves that the cited state policy should be ignored.

Further, the details of this Draft EA demonstrate that Hawaii County has moved admirably from being the major existing threat to major lava tube caves of Puna to protecting them as valuable resources. The final paragraph on page 17 should be rewritten in a less negative tone, reflecting this admirable advance, giving credit where credit is due, and urging private landowners to follow its example. If Hawaii County requirements for grading permits, sewage disposal and the like are really out of compliance with the cited state policy, as seems to be implied on page 17, these should be brought into compliance with all due deliberate speed.

In similar vein, a section on Mitigation Measures for Geological Impacts should parallel the similar section for biological impacts. It should read:

Every effort will be made to avoid collapsing major lava tube caves. If a section of a lava tube cave with potential geologic value must be collapsed, a culvert allowing passage for geologists and other scientists will be replaced.

This would be in conformity with the first indented subparagraph on page 15.

3) Misunderstandings about troglolites.

Hawaiian troglolites inhabit extensive subterranean interstitial spaces in addition to caves and smaller lava tubes, and the final document should reflect this.

Further, some caves beneath cultivated areas and even beneath bare pahoehoe lava contain significant ecosystems. Others do not. Generalizations in the final document should not be limited to caves beneath ohia forests (as is the case in this Draft EA).

On page 13, line 3 (Biology section) should be corrected to read approximately:

...make their home in open roofed tubes and interstitial spaces.

In the next line, the word cave should be deleted in two places.

Also on page 13, the sentence regarding preservation of natural vegetation should read:

...vegetation above some cave ecosystems....

On page 16, line 31 should read:

...may also affect subterranean fauna..

In the next line, the words the tube should be changed to subterranean spaces.

On page 14, line 13, will should be changed to may, and many should be changed to some. (Note: many Hawaiian lava tube caves have some of the vulnerable geological features of Biology.)

On page 16, regarding "Impacts to Biology", it should be mentioned that increasing the width and/or thickness of pavement tends to dehydrate underlying cave environments and thus may subdivide sparse populations of subterranean fauna.

In line 3, page 17, the word may should be added before the word entrance, and in the previous line, the word unusual should be substituted for potential. (Note: virtually every Puna lava tube cave has potential biological value, but most contain only common troglolites. Also the entrance to be collapsed according to the present wording is likely to be on private property, yards to miles distant.)

4) Impacts to Geological Resources and Hawaiian Culture, and Mitigation Measures.

On pages 14, 16, and 17 are several misunderstandings about occurrences of "archaeological, historical, or burial site findings" in caves in this area, about the need for mitigation measures for geological impacts, and about "the traditional Hawaiian attitude."

Roughly 83% of the near-100 Puna caves known to the Hawaii Speleological Survey records are NOT burial caves. Taken in 40-foot increments (the width of the proposed road in Hawaiian Acres Sub-division), approximately 99% of the lengths of known Puna caves have no burial sites, nor archaeological or historical findings. The likelihood of such "findings" in a previously unknown length of cave opened by road excavation here obviously is even less.

The state of Hawaii does NOT require investigation by DLNR of newly-opened lava tube caves if no such "findings" are present. The specifications of current state contracts are as follows:

Whenever the Contractor encounters possible archaeological, historical, or burial site findings, the Contractor shall immediately suspend the operation and inform the Engineer verbally and follow up with a written letter. The Engineer will contact the Department of Land and Natural Resources (DLNR) and other agencies to evaluate such findings and decide the course of action. The contractor shall not resume operations suspended without the prior written acceptance of the Engineer. The Archaeologist will decide the limits of the site. Also the Archaeologist will decide, with the Engineer, the best means for protecting the site from further disturbances which requires further investigation or salvage as determined by the SHPO (State Historic Preservation Officer). Protection may include barricades, roping off, temporary fencing, or other means.

--Dept. of Transportation, 1996. Notice of Determination, Negative Declaration for the proposed Keaau-Pahoehoe Road, Keaau Town Section (Project No. 130B-01-92). P. 20-21.

As shown above in this Appendix, statistically it is extremely unlikely that such provisions would be applicable to the proposed road. Except as otherwise noted, the H.S.S. however sees only minor problems with the mitigation measures on pages 17 and 31; it is commendable for the County to consult with DLNR even when it is not required to do so. In fact, the H.S.S. is prepared to offer field assistance to DLNR, when desired, so that DLNR can make more extensive investigations than otherwise might be possible. Conversely, the presence of significant geological resources in such caves is more probable than not. The H.S.S. usually is prepared to inventory such resources and advise on them, no short notice. We suggest that such inventories and guidance be included as Mitigation Measures for Geological Impacts. This would obviate any question of destruction of inventoried geological resources.

Unfortunately, the last sentence in "Impacts to Geological Resources" is unintelligible and apparently incorrect. It should be rewritten, reflecting the new data in this Appendix and Dr. Stephan Kempe's correction of the misapprehension that only "smaller caves" are likely to be encountered during excavation.

Regarding "traditional Hawaiian attitudes", the statement on line 2 of page 14 needs to be rewritten. Extensive documentation exists concerning the variations in traditional Hawaiian attitudes toward burials. These ranged from those cited in this Draft EA to especially deplorable theft of bones for the purpose of obtaining the mana which accompanied them, or, alternately, to deliberately desecrate the remains of one's enemies. Even today, the kupuna advising Hawaii Volcanoes National Park does not agree within itself on whether Park officials should administratively exclude haoles from burial caves in that Park. The final document should not imply County favoritism toward any faction of Native Hawaiians until and unless the County Council takes formal action or according to law.

5) General corrections and clarifications.

- a) addition of missing reference (cited on page 7: Trusdell and Moore, 1991) on page 35.
- b) correction of name of Lower Uliani Cave throughout.
- c) For uniformity, references to the State Historic Preservation Division (SHPD) should be changed to DLNR.
- d) The sanctity of burial areas is not a "resource value" as asserted in paragraph 2 of page 17, and a proper term should be used. Also in the same line, the word many should replace some, thus conforming with the indented paragraph at the top of page 14.

e) Regarding use of the term "pseudostalactite" on page 14, this term is not used in the mainstreams of volcanology nor speleology. It is not comprehensible in the context of this Draft EA. Either its meaning should be explained, or (preferably) it should be replaced by a standard term such as those in Charles V. Larson's Illustrated Glossary of Vulcanospeleology.

f) Keala Cave's length. The statement on page 13 is incorrect. Its length is 5.3 miles. It may be the second longest cave in Hawaii (data are lacking on several others), but it is not the second longest lava tube cave in the world.

g) Kazumura Cave's length. Mapped length (including all known passages) is 36.88 miles. Depth is 3603 feet.

h) Squeezelaps (page 14, line 11) are among the least vulnerable of cave features, and are uncommon in caves in this area. A commoner and/or more vulnerable type of feature (such as lava stalagmites) should be cited instead.

i) Line 5 of page 14's next-to-the-last paragraph has an extra be. It should be deleted, to read:
...excavation will not be necessary....

Hawaii Speleological Survey

of the
National Speleological Society

WILLIAM R. HALLIDAY
Chairman

P.O. Box 1526
Hilo, HI 96721

5 March 1996

Ron Terry, PhD
HCR 9575
Keaau, HI 96749

Dear Dr. Terry:

I regret that your copy of the H.S.S. response to the Puna Emergency Access Road Draft EA entered the mail with an incorrect page 5-6. Enclosed is a correct page. We would appreciate your taking the time to discard the first and to replace it with the enclosed. The original (hand-delivered) to the office of the Mayor) has the correct version. My apologies for this error and for troubling you in this way.

After promulgation of the Final Document, I would like to get together with you to discuss the lava tube caves of the Big Island and their environments. Probably this would be in late June or early July. If this is agreeable to you, I will call at that time to set up a meeting at your convenience.

Sincerely yours,

W. R. H

William R. Halliday

cc: HSS ExCom

As shown above in this Appendix, statistically it is extremely unlikely that such provisions would be applicable to the proposed road. Except as otherwise noted, the H.S.S. however sees only minor problems with the mitigation measures on pages 17 and 31; it is commendable for the County to consult with DLNR even when it is not required to do so. In fact, the H.S.S. is prepared to offer field assistance to DLNR, when desired, so that DLNR can make more extensive investigations than otherwise might be possible. Conversely, the presence of significant geological resources in such caves is more probable than not. The H.S.S. usually is prepared to inventory such resources and advise on them, no short notice. We suggest that such inventories and guidance be included as Mitigation Measures for Geological Impacts. This would obviate any question of destruction of uninventoried geological resources.

Unfortunately, the last sentence in "Impacts to Geological Resources" is unintelligible and apparently incorrect. It should be rewritten, reflecting the new data in this Appendix and Dr. Stephan Kempe's correction of the misapprehension that only "smaller caves" are likely to be encountered during excavation.

Regarding "traditional Hawaiian attitudes", the statement on line 2 of page 14 needs to be rewritten. Extensive documentation exists concerning the variations in traditional Hawaiian attitudes toward burials. These ranged from those cited in this Draft EA to especially deplorable theft of bones for the purpose of obtaining the mana which accompanied them, or, alternately, to deliberately desecrate the remains of one's enemies. Even today, the kupuna advising Hawaii Volcanoes National Park does not agree within itself on whether Park officials should administratively exclude haoles from burial caves in that Park. The final document should not imply County favoritism toward any faction of Native Hawaiians until and unless the County Council takes formal action or according to law.

5) General corrections and clarifications.

- a) addition of missing reference (cited on page 7: Trusdell and Moore, 1991) on page 35.
- b) correction of name of Lower Uilani Cave throughout.
- c) For uniformity, references to the State Historic Preservation Division (SHPD) should be changed to DLNR.
- d) The sanctity of burial areas is not a "resource value" as asserted in paragraph 2 of page 17, and a proper term should be used.

Also in the previous line, the word some should replace the word many, thus conforming with the indented paragraph at the top of page 14.

e) Regarding use of the term "pseudostalactite" on page 14, this term is not used in the mainstreams of volcanology nor speleology. It is not comprehensible in the context of this Draft EA. Either its meaning should be explained, or (preferably) it should be replaced by a standard term such as those in Charles V. Larson's Illustrated Glossary of Vulcanospeleology.

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i) Line 5 of page 14's next-to-the-last paragraph has an extra be. It should be deleted, to read:
...excavation will not be necessary...

Ron Terry
HCR 1 Box 9575
Keaau Hawaii 96749

April 3, 1996

Dr. William R. Halliday
P.O. Box 1526
Hilo, HI 96721

Dear Dr. Halliday:

Subject: Comments to Draft Environmental Assessment for Emergency Road
Connecting Highway 130 and 11, Keaau and Waikahakahe Nui and
Iki, Hawaii County; TMKs (3rd) 1-6-13:81, 1-6-45:073 & 1-6-65:109

Thank you for your thorough review of the Environmental Assessment (EA) for the Puna
Emergency Road contained in your letters of March 3 and March 5, 1996. After the extensive
attention to cave resources undertaken as part of this EA, we are in agreement with your
conclusion that these resources will be adequately protected.

In response to your appendix detailing requested corrections, I have taken many of your
suggestions to the letter. However, I have retained some of the text as-is (or modified it less
extensively) in the interest of keeping the document non-technical, as encouraged by Chapter
343, HRS. One major difference involves the use of the term "cave." This term is both general
(to laymen) and technical (to speleologists). Webster's defines a cave as "a natural underground
chamber open to the surface," a meaning not nearly as specific as the one you propose. It should
also be pointed out that the ability of a cave to accommodate human entry is not necessarily a
critical criterion when assessing the biological habitat value of a cave.

Please to refer to the Final EA (which you will receive shortly after publication, approximately
April 30, 1996) in order to see exactly how your suggestions were treated. You may be
interested in the following specific modifications:

1. **Legal Protection:** I have restated the relevant sentence (p. 17, Draft EA) thus:
"Except in the situation when caves contain human burials, they do not enjoy
substantial legal protection within private property in this area, and may be
legally collapsed or used for a variety of purposes such as depositing yard wastes
or storage."

This is based on the opinion of state, federal and County authorities that private property owners
may make use of caves on their land just as they would any other geological and biological
feature that was not explicitly protected. Such uses may in some cases conflict with preservation
of valuable caves. This situation, as you have pointed out, is an important reason to educate

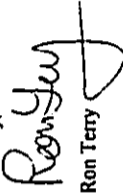
landowners whose property overrites significant caves. For caves impacted by projects on public
property, reviews in accordance with state and federal laws and regulations must be adhered to
of course.

2. **SHPD vs DLNR.** The references to the State Historic Preservation Division (not DLNR)
have been retained. This is the entity specified in federal and state regulations dealing with
historic preservation matters.

3. **Sacredity of Burial Areas as a Resource.** The issue of what is and what isn't a resource
value is admittedly unclear. Locations that native peoples find culturally significant are
generally considered among a site's resources. For lack of a better term, the existing discussion
has been retained.

Again, thank you for the review. I appreciate your offer to discuss the lava tube caves of the Big
Island and I look forward to your call in June or July.

Sincerely,


Ron Terry

Marilyn Haymore
P O Box 437
Kuniohono, Hawaii 96760
966-8865

March 17, 1996

Brian DeLima, Committee Chair
and Members of the Human Services and Public Works Committee
Hawaii County Council
25 Aupuni Street
Hilo, Hawaii 96720

Regarding: Resolution 287

I have followed, stayed informed and supported the Emergency Access Route since its inception in December 1994.

It is my belief this proposal incorporated a variety of critical issues and provides one logical solution at a time when solutions are hard to come by.

After the Mayor proposed the present route in December 1994, Hawaiian Acres and Ainaloa Community Associations immediately set to work, evaluating the plan, holding numerous meetings to discuss the plan and publicizing all the available information. Certainly the plan was criticized and questioned from the outset basically due to understandable fears each community had. Crime, liability, road quality and safety were all issues that were reckoned with. In time those who actively participate with community issues in these subdivisions came to the nearly unanimous conclusion the proposal was an excellent idea.

Within the last month or two, as the EA was being written and published, a new wave of community members became involved and have taken an active opposition to the proposal. Many of their fears are the same as those initially expressed in 1994.

Unfortunately the new wave of opposition had not participated in the numerous brainstorming sessions which included representatives from Police, Fire, Civil Defense, County, Engineers and Spelologists. In essence, we continue to need to explore answers to the same questions as they arise now again. As I have listened to those recently opposed, I fear a certain level of misinformation is being circulated, perhaps because individuals did not receive answers to questions the first time around. Lengthy articles were placed in the first two 1995 editions of the Hawaiian Acres Newsletter. The first newsletter prompted approximately 200 support letters being sent to the Mayor, only one vehemently opposed and one letter suggesting a better solution to be sought.

It is my opinion that the greater majority support this plan. They may not be present at today's meeting because:

1. They have other jobs and commitments which prevented them from attending.
2. They did not want to openly testify their support in a room of neighbors, known and unknown, where there was a feeling of hostility.
3. They have already expressed their support to the County on this proposal.
4. They may not be aware of today's hearing.
5. The support from the Public Service Agencies is a given.

Of all the recent reasons I have heard to oppose the project, I would like to comment on:

1. The idea that this project was deceptively engineered
2. That it should be opposed because it will increase crime
3. The safety risk it will create

DECEPTION

The project proposal developed as a combination of several ideas generated within the Hawaii County Fire Department, the Hawaii County Police Department, the Office of the Mayor, Community Associations as well as Keiko Bonk's Office.

Since the project definition has not changed since December 1994 it is incorrect to claim deception. It was understood from the outset this county route would be open access to the public for use. The word emergency simply supports the primary intentions that were the catalyst for the project. This project fulfills a variety of needs in the area. The bottom line is emergency access. Other access purposes were openly implied from the very beginning and may be defined as secondary uses.

We need to remember that private individuals within the area may also have medical emergencies where every minute counts whether the emergency service is coming to you or you are going out to it.

CRIME

This is a speculation, held by some in both subdivisions. Subdivision residents who have expressed this worry seem to fear the "criminals" from the "other subdivision."

To oppose the project based on speculated increased crime may be an unfair blending of issues. Measures to curb crime should always be a primary concern in our neighborhoods. We must also be concerned with adequate emergency access and quality of roads as well. When the region and public service agencies require better routes and roads to accommodate the growing population and the demands that follow, the upgrade of access and roads does not become an either/or with the crime issue. To prevent a much needed (and available) route connection and road improvements to curb crime is irresponsible. The emergency access route is needed as well as a continued campaign against crime.

SAFETY

Absolute safety cannot be "guaranteed" no matter what the human activity is. To speculate that widening a one lane, pavement-worn-out-road to a two lane paved road will create more hazard is opinion. The objective of the proposed emergency route is to create a more reasonable situation in light of the present and projected traffic volume. This is fair and justified.

Road 8 in Hawaiian Acres is estimated to be busier than the Saddle Road now. Sometimes a road is considered a "life line" to essential emergencies or other services. At present I would estimate 500 - 600 homes (not individuals) are dependent on Road 8 for their only access to the one state highway.

Those worried that the population of the Acres will increase as a result of the improved access must understand the population is increasing at a good 10% a year, doubling in 10 years even without the improved access road. The present conditions are inadequate to safely serve the growing number of tax paying residents of this County.

Sincerely,

Marilyn Haymore

DOMINIC J. CAYetano
GOVERNOR



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

HAWAII DISTRICT
300 W. PALA STREET
P.O. BOX 1000
HILO, HAWAII 96720
TELEPHONE (808) 933-3443 • FAX (808) 933-4724
March 18, 1996

HAWAIIAN
DIRECTION
DEPARTMENT OF TRANSPORTATION
JERRY M. BAILEY
CLEVELAND, OHIO 43015

WIRE REFERENCE
HWY-H
96-2-0341

Ron Terry
HCR 1 Box 9575
Keaau Hawaii 96749

April 3, 1996

Marilyn Haymore
P.O. Box 437
Kuniatown, HI 96760

Dear Mrs. Haymore:

Subject: Comments to Draft Environmental Assessment for Emergency Road
Connecting Highway 130 and 11, Keaau and Waikahahe Nui and
Iki, Hawaii County; THKs (3rd) 1-6-13:81, 1-6-45:073 & 1-6-65:109

Thank you for sending a copy of your 17 March 1996 testimony before the Hawaii County
Public Works and Human Services Committee as a comment letter concerning the Puna
Emergency Road Environmental Assessment (EA).

Your testimony and this response will be published as part of the Final EA for the project, which
will be available at the Mayor's Office and at all four public libraries in the Hilo and Puna areas.

Sincerely,

Ron Terry
Ron Terry

Mr. Ron Terry
Geo Hebekehan
HCR 9575
Kea'au, Hawaii 'i 96749

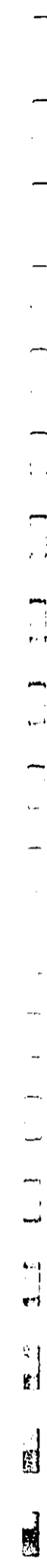
Dear Mr. Terry:

SUBJECT: Draft Environmental Assessment for the Puna
Emergency Access Road

We have received and reviewed the Draft Environmental Assessment
for the Puna Emergency Access Road. Our comments contained in
letter number HWY-H 95-2.1309 dated December 27, 1995 remain
applicable.

Very truly yours,

Stanley M. Tamura
STANLEY M. TAMURA
Acting Hawaii'i District Engineer



Ron Terry
HCR 1 Box 9575
Keau Hawaii 96749

April 3, 1996

Stanley M. Tamura
Acting Hawaii District Engineer
Highways Division
Hawaii State Department of Transportation
P.O. Box 4277
Hilo, Hawaii 96720

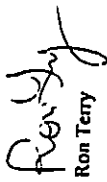
Dear Mr. Tamura:

Subject: Comments to Draft Environmental Assessment for Emergency Road
Connecting Highway 130 and 11, Keau and Waikahakahe Nui and
Iki, Hawaii County; TRMS (3rd) 1-6-13:81, 1-6-45:073 & 1-6-65:109

Thank you for your comment letter dated 18 March 1996 concerning the Puna Emergency Road
Environmental Assessment (EA).

As stated in the Draft EA, the County of Hawaii Department of Public Works will maintain an
active consultation with the State Highways Division during all phases of design and
construction.

Sincerely,


Ron Terry

David P. Harris
P.O. Box 1028
Kurtistown, HI 96760

D.
Norman

March 19, 1996

Dear Mayor Yamashiro,

I do not support the County
Plan to take over Hawaiian Acres
roads. I think that the cost involve
to construct, maintain and police
them could be put to better purposes.
Golf Courses, Swimming Pools, anything
that could be put to community
recreational use, where people
can sit down and enjoy it.

The County takeover of our
roads will not give the Community

7/19/92

-2-

any pleasure or recreational use at all in my opinion.

In the 10 years I lived here, (I moved here because of the way Hawaiian Acres is) there has only been one instance of a child being hit by a vehicle, and if I'm not mistaken, this was on pavement. Mayor Yamashiro can you say that about Paradise Park? Recently, since the improvements the Community Association has done to the road in front of my home, (I live on 8 road off pavement between F and G) my 3 children ranging from ages 12 to 2 years old were almost and I say almost hit by a car. That same car that

-3-

almost hit my children ran over my 12 week old puppy. I called the police and they told me that there was nothing they could do about the speed limit in Hawaiian Acres. I feel that if you can enforce one or two of the following, ie drivers license, registration, insurance, then you should be able to enforce them all or none of them.

Mayor Yamashiro, a lot of people live out here because we want to. We knew the condition of the roads when we moved here and for a lot of us that was a plus, it keeps our neighborhood private. As far as crimes go, most of our crimes are committed by the people or their children who live here, not from the outside.

Remember Mr. Yamashiro in

4

in this election year, we are registered voters and we will exercise our rights at the polling places to choose who will represent us, not a non-profit organization with aspirations of becoming a Quasi-governmental body. Mr. YamaShiro Hawaiian Acres Community Association or Hawaiian Acres Community Council is a non-profit organization, not a governing body of a community, they do not represent me at all. I represent myself. For the people whom I choose to represent me at the County, State, and Federal level, I go to the polling place and cast my ballot. These are the people I choose to represent me, not Hawaiian Acres Community Association.

5

Thank you for your time and reading this.

David S. Wain

P.S. I'm sending a copy of this to Ms. Bonk-Abramson, who represents my District.

Ron Terry
HCR 1 Box 9575
Keaau Hawaii 96749

Your letter and this response will be published as part of the Final EA for the project, which will be available at the Mayor's Office and at all four public libraries in the Ilio and Puna areas

Sincerely,


Ron Terry

April 3, 1996

David P. Harris
P.O. Box 1028
Kurtistown, HI 96760

Dear Mr. Harris:

Subject: Comments to Draft Environmental Assessment for Emergency Road Connecting Highway 130 and 11, Keaau and Waikahahe Nui and Iki, Hawaii County; TMKS (3rd) 1-6-13:81, 1-6-45:073 & 1-6-65:109

Thank you for your comment letter dated 19 March 1996 concerning the Puna Emergency Road Environmental Assessment (EA). In response to your individual points:

- 1. Recreation Projects Should Have Priority.** You state that County funds would be better spent on recreation than roads. The fact is that County has many responsibilities to its citizens, not just recreation. The proposed project is a response to the County's duty to provide for the health, welfare and safety of its citizens. The proposal developed out of ideas generated within the Hawaii County Fire Department, the Office of the Mayor, and the Hawaiian Acres and Ainaloa Community Associations. The connection of Highway 130 and Highway 11 would improve police, fire, and ambulance services. It would also provide a bypass in case of accidents or Civil Defense emergencies that closed Highway 130 between Ainaloa and Keaau. Especially important for residents of Hawaiian Acres is its utility as an escape route for those prevented by flooding from exiting at Highway 11. The dedication of the road (albeit to emergency standards only) would enable future capacity and safety improvements to be paid for with fuel tax maintenance funds.
- 2. Safety of Children.** It is regrettably true that road improvements often lead to higher speeds, which can decrease traffic safety. You mention an existing problem on your private road, where the police cannot currently enforce speed limits. Incorporating 8 Road in the County Road system will permit speed limit enforcement. Please note that the accidents involving children in Paradise Park occurred on private, paved roads - not on County roads.
- 3. Opposition to Road.** The Final EA will be revised to include the fact that a number of Hawaiian Acres residents have stated opposition to the project in letters, phone calls and testimony since the Draft EA was completed.

BENJAMIN J. CAVETANO
GOVERNOR



GARY GILL
DIRECTOR

STATE OF HAWAII
OFFICE OF ENVIRONMENTAL QUALITY CONTROL
220 SOUTH KING STREET
FOURTH FLOOR
HONOLULU, HAWAII 96813
TELEPHONE: (808) 524-4198
FACSIMILE: (808) 524-4198

March 21, 1996

Mr. Norman Olesen
Deputy Planning Director
County of Hawaii
25 Aupuni Street, Room 215
Hilo, Hawaii 96720-4252

Dear Mr. Olesen:

Subject: Draft Environmental Assessment for the Puna Emergency Road

Thank you for the opportunity to review the subject document. We have the following comments.

1. Please name the relevant roads shown on Figure 1 to enable readers to locate the streets described in the text of the document. Also, make a distinction between State, County, and private roads.
2. Please describe any County of Hawaii or Army Corps of Engineers' plan to solve the flooding problem in this area. How would this roadway project affect any flood control plan?
3. Please indicate what plan of action will be taken should any lava tube unexpectedly collapse during construction.

Should you have any questions, please call Jeyan Thirugnanam at 586-4185. Mahalo.

Sincerely,

Gary Gill
Director

cc: Ron Terry

Ron Terry
HCR 1 Box 9575
Keaau Hawaii 96749

April 3, 1996

Gary Gill, Director
Hawaii State Office of Environmental Quality Control
220 South King Street, Fourth Floor
Honolulu, Hawaii 96813

Dear Mr. Gill:

Subject: Comments to Draft Environmental Assessment for Emergency Road Connecting Highway 130 and 11, Keaau and Waikahikahe Nui and Iki, Hawaii County; TMMs (3rd) 1-6-13-81, 1-6-45:073 & 1-6-45:109

Thank you for your comment letter dated 21 March 1996 concerning the Puna Emergency Road Environmental Assessment (EA). We offer the following responses to your specific comments

1. *Changes to Maps.* The changes you suggested have been made to Figure 1 (copy attached).
2. *Flood Plans.* No plans are currently underway that would address the flooding problem in the Hawaiian Acres area. As discussed in Section 2.2.1 of the Draft EA, Hawaii County in 1994 requested a detailed flood study of the area by the U.S. Army Corps of Engineers. The Corps began the study in October of that year but then terminated it less than a year later. They concluded that the preliminary economic and engineering analyses resulted in a benefit/cost ratio too low to justify federal participation in any flood control project. Since that time, no new flood control plans have been developed. The Puna Community Development Plan (still in draft) will outline potential flood control programs. Importantly, the proposed project does not pose a conflict with flood control plans in the area, which all must assume the continued existence of Road 8, the principal route across Hawaiian Acres.
3. *Plan of Action in Case of Lava Tube Collapse.* The Final EA will specify that if any lava tubes are inadvertently opened or breached during construction, SHPD will be consulted to determine whether archaeological investigation is warranted, and all requirements of SHPD will be adhered to. The EA will also affirm that the County will comply with Chapter 6-E (HRS) if human remains are discovered.

Sincerely,

Ron Terry

PETITION

I AM A CITIZEN/RESIDENT OF THE UNITED STATES AND A TAXPAYER IN HAWAII COUNTY
 I OPPOSE THE CONSTRUCTION OF THE PROPOSED PUNA EMERGENCY ACCESS ROAD THAT
 WOULD CONNECT STATE HIGHWAY 130 TO STATE HIGHWAY 11 VIA AINALOA BLVD. THAT
 SOUTHWEST ALONG PARCEL 1-6-45-073 TO ROAD 9 IN HAWAIIAN ACRES; NORTHWEST
 ALONG ROAD 9 TO F ROAD; SOUTHWEST ALONG F ROAD TO 8 ROAD; AND NORTHWEST
 ALONG 8 ROAD TO THE CONNECTOR ROAD TO HIGHWAY 11 NEAR KURTISTOWN.

Letter of Protest
Against
The Proposed County of Hawaii Emergency Access Road

Date 3-21-76

Dear Sen Terry P.H.D.

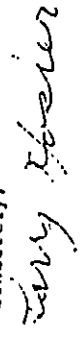
Please acknowledge my protest against the proposed County of Hawaii Puna 'Emergency' Access Road Project.

In recent Hawaiian Acres Community Association (HACA) meetings, not only I but the major majority of residents living in Hawaiian Acres are very strongly opposed to the taking of our private community Road 8 by the County for a public access road. The word 'Emergency' is really a misnomer and we intend to treat all emergencies according to the needs as they occur. County invasion of our right to private property and roads is in direct violation of our freedom of choice for our community.

We are drafting our own community plan with all Hawaiian Acres roads remaining private roads.

I am including a ten page partial list of an ongoing petition in protest of the construction of a County access road through Hawaiian Acres to emphasize that the majority of our residents at the HACA meetings have been voting against the construction of this proposed road.

Sincerely,



Enc: 10

Name (please print)	Signature	Address	Zip	Phone
Maurice K. Soares	Maurice K. Soares	PO Box 24, Kona, HI	96625	944-6525
David A. Soares Sr.	David A. Soares	PO Box 24, Kona, HI	96625	944-6525
Nathaniel W. J. Clarke	Nathaniel W. J. Clarke	P.O. Box 475, Kona, HI	96625	944-6525
Josiah K. Kalika	Josiah K. Kalika	P.O. Box 378, Kurtistown, HI	96625	944-6525
Jack HARTSHORN	Jack HARTSHORN	PO Box 1025, Kurtistown, HI	96625	944-6525
Lia Jones	Lia Jones	PO Box 475, Kona, HI	96625	944-6525
Duke DUBOIT	Duke DUBOIT	PO Box 475, Kona, HI	96625	944-6525
JAMES FRANKBARGER	JAMES FRANKBARGER	Civil, Kurtistown, HI	N/A	N/A
FRED COSGIE	FRED COSGIE	PO 1220, Kurtistown, HI	96625	944-6525
Stephen Luke	Stephen Luke	998, Kurtistown, HI	96625	944-6525
Curtis Gibson	Curtis Gibson	PO Box 1268, Kurtistown, HI	96625	944-6525
PHILIP SWINNEY	PHILIP SWINNEY	PO Box 1513, Kurtistown, HI	96625	944-6525
Hubert Motzels	Hubert Motzels	PO Box 909, Kona, HI	96625	944-6525



PETITION

I AM A CITIZEN/RESIDENT OF THE UNITED STATES AND A TAXPAYER IN HAWAII COUNTY. I OPPOSE THE CONSTRUCTION OF THE PROPOSED PUNA EMERGENCY ACCESS ROAD THAT WOULD CONNECT STATE HIGHWAY 130 TO STATE HIGHWAY 11 VIA AINALOA BLVD., SOUTHWEST ALONG PARCEL 1-6-45:073 TO ROAD 9 IN HAWAIIAN ACRES; NORTHWEST ALONG ROAD 9 TO F ROAD; SOUTHWEST ALONG F ROAD TO 8 ROAD; AND NORTHWEST ALONG 8 ROAD TO THE CONNECTOR ROAD TO HIGHWAY 11 NEAR KURTISTOWN.

Name (please print)	Signature	Address Zip	Phone
PANIEL PRINCE	<i>PANIEL PRINCE</i>	PO Box 1888 Kurtistown 96713	✓
ELZA L HOSIER	<i>ELZA L HOSIER</i>	PO Box 212 Kurtistown 96713	✓
LEWIS HANFELL	<i>LEWIS HANFELL</i>	PO Box 788 Kurtistown 96713	
LUCIA HANFELL	<i>LUCIA HANFELL</i>	PO Box 788 Kurtistown 96713	
ANTHONY CASEY SWAN	<i>ANTHONY CASEY SWAN</i>	PO Box 1888 Kurtistown 96713	
JOSEPH V.S. JIM	<i>JOSEPH V.S. JIM</i>	PO Box 1821 Kurtistown 96713	
LAUREY KOKUGAWA	<i>LAUREY KOKUGAWA</i>	PO Box 614 Kula 96632	
ANTHONY SUWAINA	<i>ANTHONY SUWAINA</i>	PO Box 212 Kurtistown 96713	
MALLY BOMAS	<i>MALLY BOMAS</i>	PO Box 212 Kurtistown 96713	
PARENT GALAGALE	<i>PARENT GALAGALE</i>	PO Box 467 Kula 96632	
S.D. MCDONALD	<i>S.D. MCDONALD</i>	PO Box 212 Kurtistown 96632	
ELAINE LATIMER	<i>ELAINE LATIMER</i>	PO Box 212 Kurtistown 96632	
PAULA JACKSON	<i>PAULA JACKSON</i>	PO Box 212 Kurtistown 96632	
STEVEN PEREIRA	<i>STEVEN PEREIRA</i>	PO Box 124 Kurtistown 96713	
ZARIE FOLK	<i>ZARIE FOLK</i>	PO Box 1540 Kula 96632	
EDWARD CHOI	<i>EDWARD CHOI</i>	PO Box 1540 Kula 96632	
DIXIE SAKAMOTO	<i>DIXIE SAKAMOTO</i>	PO Box 1540 Kula 96632	
JAMES HARRISON	<i>JAMES HARRISON</i>	PO Box 1540 Kula 96632	
MATTHEW TAYLOR	<i>MATTHEW TAYLOR</i>	PO Box 1540 Kula 96632	
STEVE SULLIVAN	<i>STEVE SULLIVAN</i>	PO Box 1540 Kula 96632	
MARY SULLIVAN	<i>MARY SULLIVAN</i>	PO Box 1540 Kula 96632	
HARVEY T. KEA	<i>HARVEY T. KEA</i>	PO Box 182 Kurtistown 96713	
LUCILLE KEA	<i>LUCILLE KEA</i>	PO Box 182 Kurtistown 96713	
HILIT BAY-FEAT	<i>HILIT BAY-FEAT</i>	PO Box 182 Kurtistown 96713	
PAUL JACKSON	<i>PAUL JACKSON</i>	PO Box 182 Kurtistown 96713	

PETITION

I AM A CITIZEN/RESIDENT OF THE UNITED STATES AND A TAXPAYER IN HAWAII COUNTY. I OPPOSE THE CONSTRUCTION OF THE PROPOSED PUNA EMERGENCY ACCESS ROAD THAT WOULD CONNECT STATE HIGHWAY 130 TO STATE HIGHWAY 11 VIA AINALOA BLVD., SOUTHWEST ALONG PARCEL 1-6-45:073 TO ROAD 9 IN HAWAIIAN ACRES; NORTHWEST ALONG ROAD 9 TO F ROAD; SOUTHWEST ALONG F ROAD TO 8 ROAD; AND NORTHWEST ALONG 8 ROAD TO THE CONNECTOR ROAD TO HIGHWAY 11 NEAR KURTISTOWN.

Name (please print)	Signature	Address Zip	Phone
LARRY H. GOMES	<i>LARRY H. GOMES</i>	PO Box 713 Kula 96632	✓
ANTHONY CHARLES	<i>ANTHONY CHARLES</i>	PO Box 127 Kurtistown 96713	✓
MAHLE SENTIRE	<i>MAHLE SENTIRE</i>	PO Box 1888 Kurtistown 96713	✓
VICTORIA HENRI	<i>VICTORIA HENRI</i>	PO Box 1888 Kurtistown 96713	
DALE D. REYES	<i>DALE D. REYES</i>	PO Box 1888 Kurtistown 96713	
CRAIG RICHARDS	<i>CRAIG RICHARDS</i>	PO Box 1888 Kurtistown 96713	
LARRY SANTOS	<i>LARRY SANTOS</i>	PO Box 5917 Kula 96713	
LARRY MCHAMBER	<i>LARRY MCHAMBER</i>	PO Box 1888 Kurtistown 96713	
MARGARET MADONAS	<i>MARGARET MADONAS</i>	PO Box 527 Kula 96632	
JOSHUA JORDAN	<i>JOSHUA JORDAN</i>	150 Ainaloa Ave 96632	
PHILIP JORDAN	<i>PHILIP JORDAN</i>	1150 Ainaloa Ave 96632	
EDWARD GOMES	<i>EDWARD GOMES</i>	PO Box 509 Kula 96632	
GREEN FERLIN	<i>GREEN FERLIN</i>	PO Box 1888 Kurtistown 96713	

PETITION

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 ALONG ROAD 9 TO F ROAD; SOUTHWEST ALONG F ROAD TO 8 ROAD; AND NORTHWEST
 ALONG 8 ROAD TO THE CONNECTOR ROAD TO HIGHWAY 11 NEAR KURTISTOWN.

Name (please print)	Signature	Address	Zip	Phone
1 ARTHUR K HESS	[Signature]	P.O. Box 11007	968-8307	
2 KENNETH SIMONS	[Signature]	P.O. Box 492, Kapaemahu	968-8307	
3 TIMOTHY MURPHY	[Signature]	P.O. Box 908	966-5080	
4 TERESA SERRAVALLO	[Signature]	P.O. Box 987 Kapaemahu	966-7504	
5 PAUL M. ELLIS	[Signature]	P.O. Box 100 Kapaemahu	966-5046	
6 SANGUKI DEJONIA	[Signature]	P.O. Box 267	968-8256	
7 MIKA DEJONIA	[Signature]	P.O. Box 267	968-8256	
8 DARNEL E. ANDERSON	[Signature]	P.O. Box 267	968-8256	
9 ANASTASIA POKIT	[Signature]	P.O. Box 267	968-8256	
10 [Name]	[Signature]	[Address]	[Zip]	[Phone]
11 ALICE SUNDSTAD	[Signature]	P.O. Box 7, Kapaemahu	988-8255	
12 JERRY EDWELL	[Signature]	P.O. Box 1022	988-8255	
13 PAUL SUNDSTAD	[Signature]	Box 958	[Zip]	[Phone]
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PETITION

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Name (please print)	Signature	Address	Zip	Phone
1 [Name]	[Signature]	[Address]	[Zip]	[Phone]
2 [Name]	[Signature]	[Address]	[Zip]	[Phone]
3 [Name]	[Signature]	[Address]	[Zip]	[Phone]
4 [Name]	[Signature]	[Address]	[Zip]	[Phone]
5 [Name]	[Signature]	[Address]	[Zip]	[Phone]
6 [Name]	[Signature]	[Address]	[Zip]	[Phone]
7 [Name]	[Signature]	[Address]	[Zip]	[Phone]
8 [Name]	[Signature]	[Address]	[Zip]	[Phone]
9 [Name]	[Signature]	[Address]	[Zip]	[Phone]
10 [Name]	[Signature]	[Address]	[Zip]	[Phone]
11 [Name]	[Signature]	[Address]	[Zip]	[Phone]
12 [Name]	[Signature]	[Address]	[Zip]	[Phone]
13 [Name]	[Signature]	[Address]	[Zip]	[Phone]
14 [Name]	[Signature]	[Address]	[Zip]	[Phone]
15 [Name]	[Signature]	[Address]	[Zip]	[Phone]
16 [Name]	[Signature]	[Address]	[Zip]	[Phone]
17 [Name]	[Signature]	[Address]	[Zip]	[Phone]
18 [Name]	[Signature]	[Address]	[Zip]	[Phone]
19 [Name]	[Signature]	[Address]	[Zip]	[Phone]
20 [Name]	[Signature]	[Address]	[Zip]	[Phone]
21 [Name]	[Signature]	[Address]	[Zip]	[Phone]
22 [Name]	[Signature]	[Address]	[Zip]	[Phone]
23 [Name]	[Signature]	[Address]	[Zip]	[Phone]
24 [Name]	[Signature]	[Address]	[Zip]	[Phone]
25 [Name]	[Signature]	[Address]	[Zip]	[Phone]
26 [Name]	[Signature]	[Address]	[Zip]	[Phone]
27 [Name]	[Signature]	[Address]	[Zip]	[Phone]
28 [Name]	[Signature]	[Address]	[Zip]	[Phone]
29 [Name]	[Signature]	[Address]	[Zip]	[Phone]
30 [Name]	[Signature]	[Address]	[Zip]	[Phone]
31 [Name]	[Signature]	[Address]	[Zip]	[Phone]
32 [Name]	[Signature]	[Address]	[Zip]	[Phone]

PETITION

I AM A CITIZEN/RESIDENT OF THE UNITED STATES AND A TAXPAYER IN HAWAII COUNTY
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 ALONG ROAD 9 TO F ROAD; SOUTHWEST ALONG F ROAD TO 8 ROAD; AND NORTHWEST
 ALONG 8 ROAD TO THE CONNECTOR ROAD TO HIGHWAY 11 NEAR KURTISTOWN.

Name (please print)	Signature	Address	Zip	Phone
Ken Jones	<i>Ken Jones</i>	P.O. Box 975	968-2057	968-2057
Grant Shields	<i>Grant Shields</i>	H.P. Keane		
JIM M. SAUNDERS	<i>J.M. Saunders</i>	1001 Kapaemahu		
DEAN	<i>Dean</i>	P.O. Box 665		
D. FRYMAN	<i>D. Fryman</i>	P.O. Box 1258	96760	968-6271
PAT BALLES	<i>Pat Bales</i>	Box 6 KURT	968-6023	
BRUCE THOMPSON	<i>Bruce Thompson</i>	P.O. Box 901	96711	968-6489
Samuel GARD	<i>Samuel Gard</i>	Box 432		
DAN BOHARSKI	<i>Dan Boharski</i>	Box 432		
HOWARD BROWN	<i>Howard Brown</i>	Box 327		968-8778
NICK FERRELLI	<i>Nick Ferrelli</i>	Box 327		968-5132

PETITION 10

I AM A CITIZEN/RESIDENT OF THE UNITED STATES AND A TAXPAYER IN HAWAII COUNTY
 I OPPOSE THE CONSTRUCTION OF THE PROPOSED PUNA EMERGENCY ACCESS ROAD THAT
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 ALONG ROAD 9 TO F ROAD; SOUTHWEST ALONG F ROAD TO 8 ROAD; AND NORTHWEST
 ALONG 8 ROAD TO THE CONNECTOR ROAD TO HIGHWAY 11 NEAR KURTISTOWN.

Name (please print)	Signature	Address	Zip	Phone
Col. Nickless	<i>Col. Nickless</i>	P.O. Box 169		968-9720
Bruce Munnell	<i>Bruce Munnell</i>	P.O. Box 169		968-9720
RUTH MIZUHAN	<i>Ruth Mizuhan</i>	P.O. Box 169		968-9720
Theresa Goodell	<i>Theresa Goodell</i>	1181 Box 5296	96749	MC 961-7614
Sandra C. Hargrave	<i>Sandra C. Hargrave</i>	P.O. Box 10355		935-4103
		P.O. Box 63		966-7111

Please return completed petition to: Citizen's Rights Association
 Larry Hosier
 P.O. Box 212
 Kurtistown HI 96760
 PH # 968-2057

PETITION 9

I AM A CITIZEN/RESIDENT OF THE UNITED STATES AND A TAXPAYER IN HAWAII COUNTY
I OPPOSE THE CONSTRUCTION OF THE PROPOSED PUNA EMERGENCY ACCESS ROAD THAT
WOULD CONNECT STATE HIGHWAY 130 TO STATE HIGHWAY 11 VIA AINALOA BLVD.,
SOUTHWEST ALONG PARCEL 1-6-45:073 TO ROAD 9 IN HAWAIIAN ACRES, NORTHWEST
ALONG ROAD 9 TO F ROAD; SOUTHWEST ALONG F ROAD TO B ROAD; AND NORTHWEST
ALONG B ROAD TO THE CONNECTOR ROAD TO HIGHWAY 11 NEAR KURTISTOWN.

Name (please print)	Signature	Address	Zip	Phone
Larry Murphy	<i>Larry Murphy</i>	90 Pr 55	96760	
Dennis D. J. & Barbara	<i>Dennis D. J. & Barbara</i>	P.O. Box 12556	96760	967-8349
Ray Figueroa	<i>Ray Figueroa</i>	P.O. Box 1443	96760	1 1 1 1
Paul Clarke	<i>Paul Clarke</i>	P.O. Box 1456	96760	968-0367
Walter Clarke	<i>Walter Clarke</i>	P.O. Box 1456	96760	

Ron Terry
HCR 1 Box 9575
Keau Hawaii 96749

April 3, 1996

Larry Hosier
P.O. Box 212
Kurtistown, Hawaii 96760

Dear Mr. Hosier:

Subject: Comments to Draft Environmental Assessment for Emergency Road Connecting Highway 130 and 11, Keauau and Waikalekale Nui and Hl, Hawaii County; TMKs (3rd) 1-6-13:81, 1-6-45:073 & 1-6-65:109

Thank you for your comment letter dated 21 March 1996 concerning the Puna Emergency Road Environmental Assessment (EA). Our responses to the individual points raised in your letter are as follows:

1. *Opposition to Road.* The Final EA will be revised to include the fact that a number of Hawaiian Acres residents have stated opposition to the project in letters, phone calls and testimony since the Draft EA was completed.
2. *County Use of Private Property and Roads.* The initiative to create the Puna Emergency Road originated with needs identified by Hawaiian Acres residents in meetings with the Mayor, the County Council, and the Police and Fire Departments. A very real need exists to connect the subdivisions of Lower Puna with those of Upper Puna in order to provide alternate escape routes in case of fire, floods, and civil defense and traffic emergencies. The project is supported by the Hawaiian Acres Community Association and the Ainaloa Community Association, as well as by the Puna Community Council, the Puna Traffic Safety Committee, the Hawaii County Police Department, Fire Department, Civil Defense Agency, and the Hawaii County Council, including the two Council members from the Puna District. Although no project can expect a consensus, a very large number of individuals and agencies have expressed support for the project.

The subdivision ordinance creating Hawaiian Acres specifically permits the County of Hawaii to assume ownership of the roads at its discretion.

Please return completed petition to: Citizen's Rights Association
& Larry Hosier
P.O. Box 212
Kurtistown HI 96760
PH # 966987

Please note that your petition and letter, along with this response, will be published as part of the Final EA for the project, which will be available at the Mayor's Office and at all four public libraries in the Hilo and Puna areas.

Chartered 1961



POST OFFICE BOX 368 KURTISTOWN, HAWAII 96760 PHONE: (808) 966-9892

Dr. Ron Terry, PhD
HCR 9575
Keaau, HI 96749

RE: Draft Environmental Assessment
Puna Emergency Access Road

Dear Dr. Terry:

After review of the Draft Environmental Assessment for the Puna Emergency Access Road we would like to commend the Mayor, Mr. Norm Oleson and Dr. Ron Terry for the excellent work in the preparation of this thorough document.

It is still the desire of the majority of Hawaiian Acres Community Association members, Hawaiian Acres residents and Hawaiian Acres property owners to have the County of Hawaii take over our existing roads (portions of 8, 9 and F) to effect the installation of the Puna Emergency Access Road.

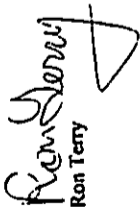
Recently there has been a small vocal group of individuals who oppose the road. However their opposition is either non-specific or their reasons non-existent. They further offer no alternatives to a problem whose time has come to be resolved.

Since the inception of this project in April of 1993 every survey that we have taken, every vote that has been counted, every council that had been elected and every study that has been conducted has overwhelmingly called for the construction of the Emergency Access Road that would allow ingress and egress to lower Puna.

Since this Puna Emergency Access Road affects all of Puna we have elicited and received the unanimous support of the Puna Traffic Safety Council and the Puna Community Council representing 33 subdivisions in Puna.

A recent study by Sen. Andrew Levin showed that, per capita, Puna experienced more elderly, spousal and child abuse than

Sincerely,


Ron Terry

any other district in the State. Burglaries are higher in Puna than anywhere else in the State and yet there are fewer police and emergency services here to meet the needs of the residents that those statistics require. Last week there was another brush fire in Hawaiian Paradise Park. If Highway 130 had to be shut off as it did last time all of lower Puna would have been trapped. Parents would not have been able to get home to their children and emergency vehicles would have been unable to reach Hilo medical facilities. Over the past 37 years that Hawaiian Acres has been an isolated subdivision with 4,000 3-acre lots over a 12,000 acre area with 72 miles of roadways, many homes have burned (no County water here) and people have died due to lack of ready emergency services. The Emergency Access Road is long overdue, greatly appreciated and a true mandate of the people having used our democratic system to implement this needed change.

Sincerely,



David C. Taylor
President, HACA

Ron Terry
HCR 1 Box 9575
Keeau Hawaii 96749

April 3, 1996

David C. Taylor, President,
Hawaiian Acres Community Association
P.O. Box 368
Kurtistown, HI 96760

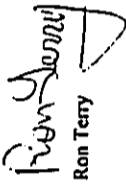
Dear Mr. Taylor:

Subject: Comments to Draft Environmental Assessment for Emergency Road
Connecting Highway 130 and 11, Keeau and Waikahahe Nui and
Iki, Hawaii County; TMKs (3rd) 1-6-13:81, 1-6-45:073 & 1-6-65:109

Thank you for your comment letter concerning the Puna Emergency Road Environmental Assessment (EA).

Your letter and this response will be published as part of the Final EA for the project, which will be available at the Mayor's Office and at all four public libraries in the Hilo and Puna areas

Sincerely,



Ron Terry

Elaine Latimer
P.O. Box 212
Kurtistown, Hawaii 96760
March 22, 1996

Mr. Ron Terry
HCR 2 Box 9575
Keaau, Hawaii 96749

Dear Mr. Terry:

I am writing this letter to express how strongly I am opposed to the County's proposal to construct a two-lane, paved road through Hawaiian Acres, connecting from Ainaloa subdivision. Supposedly, the road will be used for emergency access purposes but the words "emergency access" is merely a label.

I have lived on the corner of Roads A and B for eleven years. I have seen (and heard) more and more cars travel through this area every day as the years have gone by. About four years ago, it was estimated that 600 cars came through per day. Now, I'm sure there must be at least 800 or 1,000. So, given the potential by the County for ALL of Puna to use Road B, can we possibly imagine how many more cars will be coming through? And add to that the bogus idea that this road could possibly help to save someone's life since a fire truck or ambulance could save them faster! Preposterous! It takes nine minutes to travel on the Pahoehoe Highway from the Pahoehoe Fire Station to Uchidland Boulevard, which is a little closer to us than Ainaloa. It takes five minutes for an ambulance to reach Road A where I live coming from the Keaau Fire Station. I know this from first hand experience, having called an ambulance for my mother once. If a person were to be in a life threatening situation, he or she only has four to six minutes to get help. What good would an emergency access road do for such a person if the emergency vehicle couldn't reach them before those six minutes were up?

The answer to the above question lies in something further the County would "have to do" for us: build a fire station in our area; rezone all of our agricultural land into residential, enabling our local and State politicians to collect more tax revenue from us, thus making it very easy for real estate brokers to sell land at more lucrative prices; open doors for more schools, businesses, golf courses (there's already one of those "in the making" in Ainaloa) to be constructed in our area and generally, to pave the way for us to become a "little suburb" of Hilo! Having attended the last few meetings of our Community Association personally, I know that our residents do not want this, two to one. We all moved into Hawaiian Acres to enjoy the country life and we want our community to be left alone by the County and remain as it is today. There are some other things we don't want in Hawaiian Acres.

We don't want the crime that will increase because of one more outlet for thieves and other offenders to have access to. (One Puna police officer agrees wholeheartedly with this). We don't want the noise pollution caused by more and more vehicles, their drivers and passengers, whooping and hollering, boom-boxing down the road at all hours of the night and day, not to mention the speed demons who can't seem to make it around the corner without having an accident, notwithstanding the fact that there have been 15 MPH signs put up for a few years now that they invariably ignore (if the County took over the road they would probably have to put speed bumps there). We don't want anymore unsightly litter alongside the road than we already have now to destroy the natural beauty of our area. We don't want a County two-lane road to be the cause of more deaths than fires or emergency situations would, being that the County only has \$1,000,000 for this project and I am wondering what kind of a "quality road" are we talking about anyway? Most of all, we don't want our rights as American citizens to slip away from us by just a few people with their own interests in mind for our community. We intend to make our voice heard because we have a right to do so, just as those who are in favor of this project. It is my opinion that until this "late date" when the County is finally forcing this upon us, we have not been given a fair say in what we want for our community. I for one will do anything I can possibly do to continue my stance of opposition to the Puna Access Road Project and or other major ideas for developing a place I have enjoyed living in for so long.

Sincerely,

Elaine Latimer

Elaine Latimer
P.O. Box 212
Kurtistown, Hawaii 96760
March 24, 1996

Mayor Stephen Yamashiro
Russell Kokubun
Keiko Bonk-Abramson
Norman Olesen
County of Hawaii
25 Aupuni Street
Hilo, Hawaii 96720

Dear Mr. Olesen:

I am writing this letter to express how strongly I am opposed to the County's proposal to construct a two-lane, paved road through Hawaiian Acres, connecting from Ainaloa subdivision. Supposedly, the road will be used for emergency access purposes, but the words "emergency access" is merely a label. Logically, the implication is that this road would be a locked, gated road to be opened only on occasions of emergencies. I don't think the proponents of this project or the County cares if the road is locked and gated.

I have lived on the corner of Roads A and 8 for eleven years. I have seen (and heard) more and more cars travel through this area every day as the years have gone by. About four years ago, it was estimated that 600 cars came in and out per day. Now, I'm sure there must be at least 800 or 1,000. So, given the potential by the County for ALL of Puna to use Road 8, can we possibly imagine how many more cars will be coming through? And add to that the bogus idea that this road could possibly help to save someone's life since a fire truck or ambulance could get to them faster! POSTEROUS! It takes nine minutes to travel on the Pahoehoe Highway from the Pahoehoe Fire Station to Orchidland Boulevard, which is a little closer to us than Ainaloa. It takes five minutes for an ambulance to reach Road A where I live coming from the Keau Fire Station. I know this from first hand experience, having called an ambulance for my mother once. If a person were to be in a life threatening situation, he or she only has four to six minutes to get help. What good would an emergency access road do for such a person if the emergency vehicle couldn't reach them before those six minutes were up?

Your answer to the above question lies in something further the County would "absolutely have to do" for us: build a fire station in our area; rezone all of our agricultural land (a good number of us depend on agriculture as a livelihood), thus enabling our local and State politicians to collect more tax revenue from us and making it very easy for real estate brokers to sell land at more lucrative prices; open doors for more schools, businesses, golf

courses (there's already one of those "in the making" in Ainaloa) to be constructed in our area and generally, to pave the way for us to become a "little suburb" of Hilo! Having attended the last few meetings of our Community Association personally, I know that our residents do not want this, two to one. We all moved into Hawaiian Acres to enjoy the country life and we want our community to be left alone by the County and remain as it is today.

There are some other things we don't want in Hawaiian Acres. We don't want the crime that will increase because of one more outlet for thieves and other offenders to have access to. (One Puna police officer agrees wholeheartedly with this). We don't want the noise pollution caused by more and more vehicles, their drivers and passengers, whooping and hollering, boom-boxing, their speed demons who will not be able to make it around the corner without having an accident, notwithstanding the fact that there have already been 15 MPH signs posted for a number of years that even presently they invariably ignore. (If the County takes over the road, they will probably have to put speed bumps on the corners). We don't want anymore unsightly litter alongside the road than we already have now to destroy the natural beauty of our area. We don't want a County two-lane road to be the cause of more deaths than fires or emergency situations would, being that the County only has \$1,000,000 for this project and seeing that won't stretch too far to do much good, I am wondering what kind of a "quality road" are we talking about anyway?

All of the roads in Hawaiian Acres are owned by its residents. In essence, what this means is that the County's decision to use Road 8 or any of the other roads in Hawaiian Acres amounts to nothing but theft. Conversely, if the County were to pay each lot owner for their portion of the road, it would cost \$400,000. From this perspective, the County's offer to spend \$1,000,000 of taxpayers money to construct a road that will not even meet their own standards as a County road should not sound as desirable a deal to our residents as the County might think!

Lastly, and most important of all, we residents of Hawaiian Acres don't want our rights as American citizens to slip away from us because of a few people who have their own interests and agenda in mind for our community. We intend to make our voice be heard because we have a right to do so, just as those do who are in favor of this project. It is my opinion that until this "late date" when the County is finally forcing this upon us, we have not been given a fair say in what we want for our community. I for one will do anything I can possibly do to continue my stance of opposition to the Puna Access Road Project and any other major projects for developing a pleasant rural place I have lived in and enjoyed for eleven years.

In conclusion, I want to invite you, Mr. Mayor, to our meetings. If I have my information correct, you were not present at the meeting a while back when just a few people with their own interests in mind voted to have this road constructed. I'm sure you must be quite surprised to find that there are opponents

to this project. It just seems clearer and clearer to me that we citizens who oppose haven't been heard yet. I suppose this is how the County generally does things when they decide to since as long as things are done quietly with as little information given to the public as possible, there really isn't much opposition.

Sincerely,
Elaine Lalimer

Ron Terry
HCR 1 Box 9575
Keau Hawaii 96749

April 3, 1996

Elaine Lalimer
P.O. Box 212
Kurtistown, Hawaii 96760

Dear Ms. Lalimer:

Subject: Comments to Draft Environmental Assessment for Emergency Road Connecting Highway 130 and 11, Keau and Waikahakahe Nui and Iki, Hawaii County; TMKS (3rd) 1-6-13:81, 1-6-45:073 & 1-6-65:109

Thank you for your comment letters dated 22 March and 24 March 1996 concerning the Puna Emergency Road Environmental Assessment (EA). Our responses to the individual points raised in your first letter (and separate points raised in your second letter are as follows:

1. *Opposition to Road.* The Final EA will be revised to include the fact that a number of Hawaiian Acres residents have stated opposition to the project in letters, phone calls and testimony since the Draft EA was completed.
2. *Response Time for Emergency Vehicles.* Although you may be situated in an area of Hawaiian Acres accessible within five minutes by emergency vehicles, most residents are not. For those living near G-Road, access from Ainaloa Boulevard may be quicker. It has also been the case during floods and fires that the back of Hawaiian Acres has been very difficult to reach. In such cases, the only practical routes for emergency vehicles might be via the proposed Puna Emergency Road. Your statement that emergency vehicles must arrive within four to six minutes in order to be of use is not supported by the experience of Big Island ambulance and fire crews, who must often arrive ten or more minutes after the beginning of medical emergencies yet are still able to save many lives.
3. *County Plans to Urbanize Hawaiian Acres.* Your concerns about County plans to invest heavily in infrastructure in Hawaiian Acres should be taken up with your County Council representative and the Mayor's Office. To my knowledge, no such plans exist. In any case, the Puna Emergency Road is a stand-alone project that is unrelated to other proposals to alter transportation, land use, or zoning in Puna.

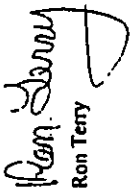
4. *Relationship Between Road and Crime.* Acting Captain James Kelly of the Keaua Police Substation has been actively involved in planning for the road and discussion of its social impacts. He attended a meeting of the Hawaiian Acres Community Association in January to discuss this very issue. The Police Department supports the road because the increased accessibility and ability to patrol will allow them to do a better job in servicing Puna. There is no indication that improving roads in an area increases crime.

5. *Appropriateness of "Emergency Road" Terminology.* Roads are classified by their adherence to standard criteria on pavement thickness and width, shoulder paving and width, speed limit, and other factors. Roads built to emergency standards are less expensive to construct but are considered suitable only for areas in which standard roads do not exist and cannot be constructed, or for which the primary intended use is for emergencies. In the case of the Puna Emergency Road, a major factor in planning and funding the road has been the support it will give to medical, fire, police and civil defense emergencies. If this were the only intended use, gating the road might be appropriate. However, this would prevent residents from using the road for ordinary travel, which would benefit many. Furthermore, gating public roads can only be justified when there are extraordinary reasons to do so.

6. *Right of County to Assume Maintenance and Ownership of Road.* The subdivision ordinance creating Hawaiian Acres specifically permits the County of Hawaii to assume ownership of the roads at its discretion.

Please note that your letter and this response will be published as part of the Final EA for the project, which will be available at the Mayor's Office and at all four public libraries in the Hilo and Puna areas.

Sincerely,


Ron Terry

Letter of Protest

against

The Proposed County of Hawaii Puna Access Road

Date: 3-23-96

Mayor Steven Yamashiro

25 Aupuni St.

Hilo, Hawaii

96720

Dear Mayor Yamashiro,

I am opposed to the Puna Access Road proposed by the County of Hawaii through Hawaiian Acres Subdivision rd. 8 because the design-proposed route is divisive and destructive to our agriculture community.

The major majority of our residents at the community association (HACA) meetings are against the taking of any of our privately owned roads and we feel that we are not being represented. Our private agricultural community is planning to develop as a rural agriculture community at our own design and pace and with respect for the nature of our land and without major county therofares.

The Hawaiian acres community is against this in our area and the majority of our voters emphatically against this proposal.

COUNTY OF HAWAII
25 AUPUNI STREET
HILO, HAWAII 96720

Sincerely, Dan Brouillette

PO Box 688

Kurt...

Ron Terry
HCR 1 Box 9575
Keauau Hawaii 96749

April 3, 1996

Dan Brouillette
P.O. Box 688
Kurtistown, Hawaii 96760

Dear Mr. Brouillette:

Subject: Comments to Draft Environmental Assessment for Emergency Road
Connecting Highway 130 and 11, Keauau and Waikakabe Nui and
Iki, Hawaii County; TMKs (3rd) 1-6-13:81, 1-6-45:073 & 1-6-65:109

Thank you for your comment letter dated 23 March 1996 concerning the Puna Emergency Road Environmental Assessment (EA). Our responses to the individual points raised in your letter are as follows:

1. *Opposition to Road.* The Final EA will be revised to include the fact that a number of Hawaiian Acres residents have stated opposition to the project in letters, phone calls and testimony since the Draft EA was completed.

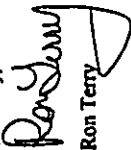
2. *Choice of Route.* Several other routes, including use of a longer segment of 9 Road and a route midway between F and G Roads from 8 to 9 Road, were also considered. The costs associated with these roads would have been at least \$100,000 greater. Therefore they were dropped from consideration.

3. *Major Thoroughfares Not Needed.* The Puna Emergency Road could hardly be classified as a major thoroughfare. The standards for the road are as follows:

- o Two paved 8-foot travel lanes, with center stripe;
- o Two paved 2-foot shoulders, striped for separation from travel lanes;
- o 2-inch AC pavement;
- o Sight distance appropriate to 25 MPH road.

Please note that your letter and this response will be published as part of the Final EA for the project, which will be available at the Mayor's Office and at all four public libraries in the Hilo and Puna areas.

Sincerely,


Ron Terry

March 24, 1996

From: Bob Jacobson
P.O. Box 900
Kurtistown, Hawaii, 96760

To: Mayor Steven Yamashiro
County of Hawaii

To the Honorable Mayor,

Please approve funding and complete the 3 Road project as planned in Hawaiian Acres. It is only after careful thought and consideration that I have come to believe in the necessity of this project.

I helped write and tabulate our recent questionnaire in Hawaiian Acres. Due to remarks made by Norman Oleson at a public meeting last year, I believed the 8 Road plan was already decided and underway. Therefore, I neglected to ask any specific question about 8 Road. From an analysis of allied questions, I postulate that there is neither stalwart opposition to, nor a strong desire for 8 Road from the 500+ respondents. There is definite opposition to new highways cutting through Hawaiian Acres. Therefore, a residential access road that allows for access for public safety vehicles, ambulances, school buses, and other important transportation needs, but doesn't become a dangerous highway, would be in the best interests of the public. Such a road would honor the responsibility our county has to taxpayers in Hawaiian Acres. Likewise, it would address potential liabilities involved with the existing substandard road.

I serve on the health and safety sub-committee of Hawaiian Acres Planning Committee. This group includes 3 nurses, 2 teachers, and a massage therapist. We came to agreement on the necessity of a safe road in and out of our subdivision. We have specific suggestions for what is needed to maximize the safety on 8 Road improvements:

- 1) Width of pavement should be at least 16 feet. Width of shoulders should be maximized to the extent possible. 8 feet or prevent vehicles from colliding with poles.
- 2) Blind hills should be eliminated now, before any new paving occurs in those areas. Excess material can be used for construction instead of purchasing rock. Where it is not feasible or possible to eliminate the blind hills, adequate shoulder, warning signs and appropriate speed limits must be posted.

3) Speed limits must be enforced to enhance safety and prevent

Road from becoming a shortcut from Kurtistown to Paheka. Local access is the goal.

4) The road must be properly maintained to fulfill its promise and purpose.

5) Adequate signs need to be installed when possible at cross streets and at other dangerous areas. Both dots (the reflectors at the edge and middle of the road) are needed.

6) A bicycle and pedestrian trail should be cleared on the 5 foot wide area of road easement between the power poles and the survey pins on the makai side of 8 Road. Doing this now will save lives later.

7) Flooding and drainage issues have to be dealt with, and problem areas must be posted.

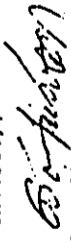
8) No herbicides should be used.

9) Streetlights are not necessary.

10) Interim routes need to be identified and posted during construction and paving.

I am employed as a RN in an intensive care unit and I feel these are valid and important safety needs. As a 14 year resident of Hawaiian Acres, I recognize the need to proceed with the 8 Road project. Though I realize some potential drawbacks of such a project, in the balance, the public good outweighs these drawbacks and Hawaiian Acres will benefit from this project.

Sincerely,


Bob Jacobson

Ron Terry
HCR 1 Box 9575
Keaau Hawaii 96749

April 13, 1996

Bob Jacobson
P.O. Box 900
Kurtistown, HI 96760

Dear Mr. Jacobson:

Subject: Comments to Draft Environmental Assessment for Emergency Road Connecting Highway 130 and 11, Keaau and Waikahakaha Nui and Iki, Hawaii County; TMKS (3rd) 1-6-13-81, 1-6-45-073 & 1-6-65-109

Thank you for your comment letter dated 24 March 1996 concerning the Puna Emergency Road Environmental Assessment (EA). In response to the specific points you raised:

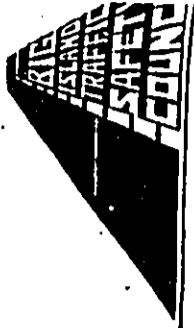
1. *Roadway Width.* The County of Hawaii is limited by its budget for this project to the current specifications, which call for the following:

- o Two paved 8-foot travel lanes, with center stripe.
- o Two paved 2-foot shoulders, striped for separation from travel lanes.
- o 2-inch AC pavement.

It is important to note that the dedication of the road (albeit to emergency standards only) would enable future capacity and safety improvements to be paid for with fuel tax maintenance funds

2 & 5. *Phasing of Blind Hill Removal/Signage.* Blind hills will be dealt with mainly through emplacement of fill, which must of course occur prior to paving. Signage and a 25 MPH speed limit are part of the project's design. Reflector dots are not currently planned for the road, but future upgrades may include this feature.

3. *Enforcement of Speed Limit.* The Hawaii County Police Department, which currently cannot enforce speed limits on private roads, will be able to patrol and perform speed limit enforcement after the road is dedicated to the County. The degree to which this can occur will be dependent on police budget and manpower resources. Acting Captain James Kelly of the Keaau Substation is seeking active involvement with citizens in Hawaiian Acres concerned with safety and crime.



North Side Traffic Safety Committee
 South Side Traffic Safety Committee
 Honoahu Traffic Safety Committee
 North Side Traffic Safety Committee
 South Side Traffic Safety Committee
 East Side Traffic Safety Committee
 West Side Traffic Safety Committee
 Puna Traffic Safety Council

March 25, 1996

4. **Road Maintenance.** The County of Hawaii will schedule maintenance for this road.
6. **Bicycle and Pedestrian Trails.** Bicycle and pedestrian trails are not included in emergency road standards and are beyond the scope and budget of this project. We suggest that you discuss plans for private involvement in creating such trails with the Hawaii County Department of Public Works.
7. **Flooding and Drainage.** According to the County of Hawaii, the budget of \$1 million is far too small to address drainage problems in any major way. Further work on the drainage problems of Hawaiian Acres must await a more comprehensive program.
8. **Herbicides.** The County of Hawaii is willing to discuss designating the Hawaiian Acres roadways as areas where herbicides will not be used. It is suggested that residents interested in volunteering time to help clear around areas difficult to brushcut or mow (e.g., power poles) organize a program of roadside vegetation maintenance in order to keep the roadside clear for safety purposes.
9. **Streetlights.** No streetlights are planned for the route.
10. **Interim Routes During Construction.** The Hawaii County Department of Public Works will develop a construction traffic plan for the construction period.

Your letter and this response will be published as part of the Final EA for the project, which will be available at the Mayor's Office and at all four public libraries in the Hilo and Puna areas.

Sincerely,


 Ron Terry

Dr. Ron Terry, Ph.D.
 HRC 9575
 Keaau, Hawaii 96749

RE: Draft Environmental Assessment Statement - Support

Dear Dr. Terry:

We thank you for your excellent and exhaustive work on the Environmental Assessment Statement for the Puna Emergency Access Road Project.

The Puna Traffic Safety Council representing the traffic and safety concerns of 33 subdivisions wholeheartedly supports this project to its completion. Since the closure of the Pahoa-Volcano Park Highway at Kulaupana an alternate escape route for lower Puna residents has been a major concern of this Council. We've held public meetings in the past three years to discuss every aspect of this connecting road from Highway 130 to Highway 11. Present at those meetings were representatives from DOT, Public Works, Puna Community Council, Police Department and County Council. In all instances, and in consideration of all concerns from the various agencies, there was always unanimous support for this project.

If there is anything we can do to bring this project to formation, please call us at anytime.

Sincerely,

PUNA TRAFFIC SAFETY COUNCIL


 David Taylor
 President

/dt

cc: Mayor Stephen Yamashiro
 Mr. Norm Oleson
 Chair Counciltwoman Bonk-Abramson
 Vice-Chair Jim Raitt
 Councilman Takashi Domingo
 Councilman Brian DeLima
 Councilman James Arakaki
 Councilman Elroy Osofo
 Councilman Al Smith
 Councilman Keola Childs
 Councilman John Ray

PUNA COMMUNITY COUNCIL
P. O. BOX 1230
KEAAU, HAWAII 96749

March 25, 1996

Honorable Mayor Stephen Yamashiro
County of Hawaii
25 Auapau Street
Hilo, Hawaii 96720

Dr. Ron Terry, Ph.D.
HRC 9575
Keauau, Hawaii 96749

RE: Draft Environmental Assessment Statement Letter of Support

Dear Mayor Yamashiro and Dr. Terry:

The Puna Community Council comprised of 33 subdivisions in the Puna district would like to express our gratitude to you, Dr. Ron Terry and Norm Oleson for the excellent work you have done to bring the Puna Emergency Access Road project to a reality.

Past and present Puna Community Council presidents Ginny Aste, Jon Olson, and myself have given public testimony before the County Council as to our support for and the necessity of this Emergency Road.

We appreciate that this administration is responsive to the health and safety needs of the residents of Puna and is doing something to improve the infrastructure in our sub-standard, sub-divisions. The input of this one million dollar emergency access road is a highly appreciated return on the millions of dollars of tax revenues that Puna district has provided the County over the years.

We thank you in advance for the attention you've given to this matter and encourage it's speedy completion.

Sincerely,

PUNA COMMUNITY COUNCIL


David Taylor
President

At
cc: Mr. Norm Oleson
Chair Councilwoman Book-Abramson
Vice-Chair Jim Rath
Councilman Takashi Domingo
Councilman Brian DeLima
Councilman James Arakaki
Councilman Elroy Osorio
Councilman Al Smith
Councilman Keola Childs
Councilman John Ray

TELEPHONE 127

Ron Terry
HCR 1 Box 9575
Keauau Hawaii 96749

April 3, 1996

David C. Taylor, President,
Puna Traffic Safety Council
c/o Keauau Police Station
Keauau, Hawaii 96749

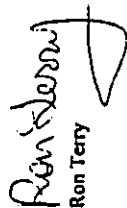
Dear Mr. Taylor:

Subject: Comments to Draft Environmental Assessment for Emergency Road
Connecting Highway 130 and 11, Keauau and Waikohakoha Nui and
IM, Hawaii County; TMKs (3rd) 1-6-13:81, 1-6-45:073 & 1-6-45:109

Thank you for your comment letter dated March 25 concerning the Puna Emergency Road Environmental Assessment (EA).

Your letter and this response will be published as part of the Final EA for the project, which will be available at the Mayor's Office and at all four public libraries in the Hilo and Puna areas.

Sincerely,


Ron Terry

APPENDIX 1B

AGENCY LETTERS

AND COMMENTS

PRIOR TO DRAFT EA

BENJAMIN J. CAYETANO
GOVERNOR



KAZU HAYASHIDA
DIRECTOR

DEPUTY DIRECTORS
JERRY M. MATSUDA
GLENN M. OKIMOTO

**STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION**

HAWAII DISTRICT
50 MAKAALA STREET
P.O. BOX 4277
HILO, HAWAII 96720
TELEPHONE (808) 933-4840 • FAX (808) 933-4738

IN REPLY REFER TO:

HWY-H
95-2.1309

December 27, 1995

Mr. Ron Terry
Geo Metrician
HCR 9575
Keaau, Hawaii 96749

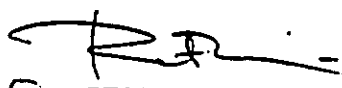
Dear Mr. Terry:

**SUBJECT: Environmental Assessment for Emergency Road
Connecting Highway 130 and Highway 11**

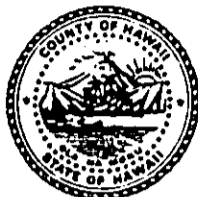
Thank you for your letter of December 18, 1995, requesting comments for preparation of the Emergency Road Draft Environmental Assessment.

We are concerned about the roadway connections to Route 130 and Route 11 and should be consulted in all phases of design and construction. Please send us a copy of the draft EA when completed.

Very truly yours,


STANLEY TAMURA
Acting Hawaii District Engineer

Stephen K. Yamashiro
Mayor



Nelson M. Tsuji
Fire Chief

Edward Bumatay
Deputy Fire Chief

County of Hawaii

FIRE DEPARTMENT

777 Kilauea Avenue • Mail Lane, Room 6 • Hilo, Hawaii 96720-4239
(808) 961-8297 • Fax (808) 961-8296

December 28, 1995

Ron Terry, Ph.D.
Geo Metrician
HCR 9575
Keaau, HI 96749

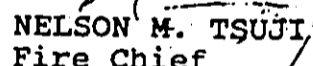
Dear Dr. Terry:

Thank you for your letter of December 19, 1995.

The Hawaii County Fire Department is in favor of the by-pass road connecting State Highway 130 to State Highway 11 for both fire and emergency medical services.

It is not necessary for us to get a copy of the Draft Environmental Assessment when completed.

Sincerely,


NELSON M. TSUJI
Fire Chief

NMT/mo



Stephen K. Yamashiro
Mayor



Wayne G. Carvalho
Police Chief

James S. Correa
Deputy Police Chief

County of Hawaii
POLICE DEPARTMENT

349 Kapiolani Street • Hilo, Hawaii 96720-3998
(808) 935-3311 • Fax (808) 961-2702

January 8, 1996

Mr. Ron Terry, Ph.D.
Geo Metrician
HCR 9575
Keaau, Hawaii 96749

Dear Doctor Terry:

SUBJECT: ENVIRONMENTAL ASSESSMENT FOR EMERGENCY ROAD CONNECTING
HIGHWAY 130 TO HIGHWAY 11

Thank you for allowing us to comment on the Puna emergency access road between Ainaloa and Hawaiian Acres. This has been a long-awaited project for many residents of the community.

Flooding of Road 8 during heavy rains is a major problem. The infrastructure needed to resolve this problem should be accomplished before the road is approved.

One benefit of a bypass road is to facilitate access between upper and lower Puna. This would be a boon to area residents and a much needed avenue of response for emergency service vehicles.

While the ease of access may increase traffic, because of its remoteness, police patrols would only be conducted on an as needed basis.

On balance, this road would enhance vehicular movement which would improve the quality of life in our community.

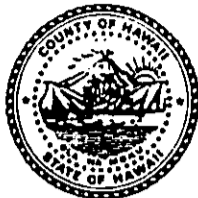
We would appreciate a copy of the Draft Environmental Assessment upon its completion.

Sincerely,

Wayne G. Carvalho
WAYNE G. CARVALHO
POLICE CHIEF

JK:lk

Stephen K. Yamashiro
Mayor



Harry Kim
Administrator

Bruce D. Butts
Assistant Administrator

County of Hawaii

CIVIL DEFENSE AGENCY

920 Ululani Street • Hilo, Hawaii 96720
(808) 935-0031 • Fax (808) 935-6460

January 8, 1996

Ron Terry, Ph.D.
HCR 9575
Keaau, HI 96749

ENVIRONMENTAL ASSESSMENT FOR EMERGENCY ROAD CONNECTING HIGHWAY 130 to HIGHWAY 11

Following is in response to your correspondence dated
December 18, 1995:

The area identified for the proposed roadway does pass over several areas which are heavily affected during periods of heavy rain.

Impact is largely due to runoffs from the higher elevation areas but, due to terrain and poor drainage, ponding of water does also occur in various areas. Impact has made some areas of the proposed roadway impassable during heavy rains.

Careful review of flood impact must be done, especially to the connector road from Highway 11 and Road 8.

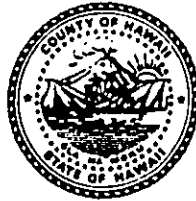
A handwritten signature in cursive script, appearing to read "Harry Kim".

HARRY KIM, ADMINISTRATOR

dy/0331P



Stephen K. Yamashiro
Mayor



Virginia Goldstein
Director

Norman Olesen
Deputy Director

County of Hawaii

PLANNING DEPARTMENT

25 Aupuni Street, Room 109 • Hilo, Hawaii 96720-4252
(808) 961-8288 • Fax (808) 961-9615

January 19, 1996

Mr. Ron Terry
Geo Metrician
HCR 9575
Keaau, HI 96749

Dear Mr. Terry:

Draft Environmental Assessment for the Proposed Puna Emergency Road Connecting Highway 130 to Highway 11

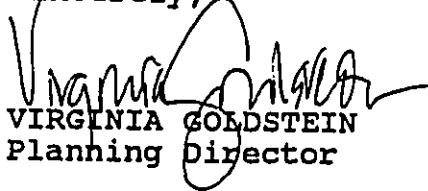
Thank you for your letter dated December 18, 1995, requesting our preliminary comments regarding the preparation of a draft environmental assessment of the proposed Puna emergency road improvements in accordance with the requirements of Chapter 343, Hawaii Revised Statutes regarding Environmental Impact Statements. We offer the following comments for your consideration:

1. William Halliday, Chairman of the Hawaii Speleological Survey, has made his concerns regarding the proposed improvements widely known. We recommend that the draft EA contain a map identifying the locations and alignments of all known caves within the immediate vicinity of the emergency road alignment. The draft EA should also contain a discussion of alternatives to the proposed emergency road alignment which were considered by the County and the reasons why those alternative alignments were not selected.
2. We think that the term "emergency road" is not entirely appropriate. It gives the impression that the road will be utilized solely for emergencies. "Emergency access roads" we have seen are blocked with "knock-down" barricades, which would not be possible in this instance since the proposed alignment provides access to many lots within Hawaiian Acres Subdivision. With the improvement of the "emergency road", an increase in through traffic could be anticipated as people wish to take advantage of a "short-cut" bypassing Keaau. The draft EA should provide a discussion regarding the anticipated impacts associated with the increase in traffic through Hawaiian Acres and Ainaloa subdivision.

Mr. Ron Terry
Page 2
January 19, 1996

We will reserve further comment upon receipt of the draft EA. In the meantime, please feel free to contact me or Daryn Arai of this office should you have any questions.

Sincerely,


VIRGINIA GOLDSTEIN
Planning Director

DSA:dmo/mjs
LCavRd02.dsa

xc w/ltr: Mayor's Office
Department of Public Works



United States Department of the Interior

FISH AND WILDLIFE SERVICE
PACIFIC ISLANDS ECOREGION
300 ALA MOANA BOULEVARD, ROOM 3108
BOX 50088
HONOLULU, HAWAII 96850
PHONE: (808) 541-3441 FAX: (808) 541-3470

In Reply Refer To: JMB

Dr. Ron Terry
Geo Metrician
HCR 9575
Keaau, Hawaii 96749

FEB 9 1 1996

Re: Notice of Intent to Prepare an Environmental Assessment for an Emergency Road Connecting Highway 130 to Highway 11, Puna, Hawaii.

Dear Dr. Terry:

The U.S. Fish and Wildlife Service (Service) has received your December 18, 1995, letter requesting information on the presence of federally listed, proposed, and candidate endangered and threatened species within a road corridor in Puna, Hawaii. We regret that our reply was delayed due to the recent Federal furlough. The Service offers the following comments for your consideration.

The proposed project involves the paving, widening and upgrading of existing roads, and construction of a new road segment approximately 1500 feet long, in order to establish a usable route for emergency vehicles. Public use is also anticipated.

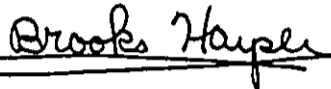
The Service has reviewed the maps provided with your request and pertinent information in our files, including maps prepared by the Hawaii Heritage Program of The Nature Conservancy. To the best of our knowledge, two endangered species exist within or near the project boundaries. These are *Buteo solitarius*, the 'Io or Hawaiian hawk, and *Lasiurus cinereus semotus*, the 'Ope'ape'a or Hawaiian hoary bat. These species may roost, nest or forage near the existing road corridor or on the undeveloped parcel to be impacted by road construction (TMK 1-6-45:073). Project plans detailed in the Environmental Assessment should include contingency actions to be taken to avoid disturbance of nesting or roosting hawks or bats, if they are observed adjacent to the road work corridor or on the undeveloped parcel.

The proposed road work will occur in an area known to contain lava tubes, many of which support rare communities of specialized endemic invertebrates. To date, none of these invertebrate species is listed as threatened or endangered, or is a candidate for such listing. However, further research may show that many of these species are potential candidates due to very limited ranges and threats

to their habitats. The Service suggests that impacts to these rare communities be avoided or minimized where possible. Construction activities that create openings in caves can lead to altered airflow patterns, increased alien species access, and increased human visitation, all of which degrade the cave habitat. Removal of 'ohi'a forest above or adjacent to caves also severely impacts cave communities by cutting off the tree roots that are the main food source.

We appreciate your concern for endangered species, and we look forward to reviewing the Environmental Assessment for the proposed project. If you have any questions, please contact Fish and Wildlife Biologist Jeff Burgett at (808) 541-3441.

Sincerely,

A handwritten signature in cursive script that reads "Brooks Harper". The signature is written in dark ink and is positioned above a horizontal line.

Brooks Harper
Field Supervisor
Ecological Services

cc: Chief, Interagency Cooperation

Stephen K. Yamashiro
Mayor



Wayne G. Carvalho
Chief of Police

County of Hawaii
POLICE DEPARTMENT
349 Kapiolani Street Hilo, Hawaii 96720-3998
(808) 961-2244 Fax (808) 961-2389

February 8, 1995

Ms. Donna Fay K. Kiyosaki
Chief Engineer
Department of Public Works
County of Hawaii
25 Aupuni Street
Hilo, Hawaii 96720

Dear Ms. Kiyosaki:

The Hawaii County Police Department supports the proposed Emergency Access Road that would pass through the Ainaloa and Hawaiian Acres subdivisions in Puna.

Presently, Route 130 which connects Keaau and Pahoa, is the only defined roadway linking lower Puna to the rest of the island. An emergency access road along the proposed route would not only provide emergency access for lower Puna in the event Route 130 became impassable, it would also provide an alternate conduit for police officers responding between the upper Puna communities located above Kurtistown and the lower Puna communities located around Pahoa.

Sincerely,

Wayne G. Carvalho
WAYNE G. CARVALHO
POLICE CHIEF

DF:if

cc: ✓ Councilwoman Keiko Bonk-Abramson

Stephen K. Yamashiro
Mayor



Harry Kim —
Administrator
Bruce D. Butts
Assistant Administrator

County of Hawai'i
CIVIL DEFENSE AGENCY
920 Ulukani Street • Hilo, Hawaii 96720
(808) 935-0031 • Fax (808) 935-6460

OFFICE
COURT REPORTER
95 FEB 9 11 17 55
SEERS

TO: Keiko Bonk-Abramson, Councilwoman, District 6
FROM: Harry Kim, Administrator, Civil Defense *H/K*
DATE: February 7, 1995
SUBJECT: Hawaiian Acres Emergency Access Road

The proposed emergency access road, connecting highway 130 and highway 11 through Ainaloa subdivision and Hawaiian Acres subdivision, is fully supported for two major reasons.

1. It provides the residents of upper and lower Puna an alternate route to and from their place of residence or work.
2. It provides an alternate route for emergency responders within the subdivisions of Ainaloa, Orchid Land, Fern Acres, and Hawaiian Acres, as well as upper and lower Puna.

The problems of these roads are well known to residents and emergency responders. It was only the major problem of financing the solution that could not be resolved. This proposal would undoubtedly help.

Please call if additional information is needed.

dy



APPENDIX 2

AGENCY LETTERS

AND PUBLIC COMMENTS RELATED TO CAVES

PRIOR TO DRAFT EA

FEB 07 '96 10:32 AM 007 5 11

Mr. Yuri Slezin
Inst. of Volcanic Geology & Geochemistry
9 Piip Street, Petropavlovsk-Kamchatsky.
683006 RUSSIA

Mayor Stephen Yamashiro
25 Akupuni Street, Hilo, HI USA 96720

1 January, 1996. Petropavlovsk-Kamchatsky

Dear Mayor,

I am volcanologist who especially interested in volcanic lavn caves, and studied such caves in Kamchatka. I want to come to Hawaiian Islands to do field work in the caves, and am very concerned about new road construction, that planned in the one of the richest and most interesting cave areas in the world.

As I knew from the Commission on volcanic caves newsletter #9, December 1, 1995, the road construction would partly destroy some caves and the longest lavn tube cave in the World (Kazumura cave) among them. Such Nature Monuments of the World significance should not be touched without thoroughfull Fullscale Impact Assessment. We must be sure that no damage to these objects would be done that could be avoided. Unique caves must be saved. I believe that it will be that.

Sincerely yours,

Y. Slezin
Yu. Slezin

CAVE EXPLORATION GROUP
OF EAST AFRICA

P.O. BOX 47583

NAIROBI, KENYA.



TEL. & FAX - Nairobi 254-2-520083

His Worship the Mayor,
Hon. Stephen Kamukiro,
25 Apurani Street,
Hilo, Hawaii, 96720,
U.S.A.

4th. January, 1996.

Dear Mr. Mayor,

As a member of the Commission on Volcanic Caves of the International Union of Speleology, it was with considerable concern that I read of proposed road works in your county which were likely to lead to damage to internationally significant Hawaiian lava tube caves and particularly to the possible collapse and killing of parts of Kazumura Cave, the world's longest lava tube system!

For us in a 'Third World' country, who tend to look towards the U.S.A. for leadership in the field of conservation, it seemed very surprising indeed that damage to such unrivalled geological phenomena could possibly be allowed without a fully comprehensive environmental impact study on both surface and underground resources being undertaken to seek alternative solutions against damage and so that all interests could be accommodated.

But I am now delighted to hear from Dr. Bill Halliday, Chairman of the I.U.S. Commission on Volcanic Caves, that you have recently been able to make decisions which will ensure that both the Kazumura and Keala Caves will be protected and offer you my sincerest congratulations on your enlightened concern and foresight.

Here in Kenya, we recognise areas of unusual natural phenomena and habitats, including caves. Although we lack the financial resources of your own country, these are gradually being preserved not only to provide additional attractions for our tourism-based economy but to protect the resources in their own right as part of the national heritage. Many of our lava caves, including the 12.5 km-long Leviathan Cave which was once the world's longest before Kazumura, now lie in a National Park and this has even recently been extended so as to protect smaller, but no less geologically important, lava tubes.

Unfortunately, I was not able to attend the 6th. International Symposium on Volcanospeleology, organised and chaired by Dr. Bill Halliday, in Hawaii in 1991, so have not had the pleasure of visiting your caves to make comparisons with ours in Kenya. I am however much aware that those in your county represent the greatest single concentration of lava tubes in the world and as such earnestly hope that the current mood towards conservation will continue so that protection can be expanded to include other lava tubes in your area as part of Hawaii's and the world's natural heritage.

In this respect, Dr. Bill Halliday and members of the Hawaiian Speleological Survey have much valuable information and experience to impart. Dr. Halliday is not only a cave explorer of world repute but also a recognised authority on lava tube caves and has had much to do with the documentation of Kazumura and others worldwide. He has also twice visited Kenya, giving us valued advice and assistance on cave conservation, and is currently involved with our organisation of the 8th. International Symposium on Volcanospeleology to take place in Kenya in 1993. I therefore hope you will be able to further follow their advice and recommendations on cave conservation.

I wish you success in your future endeavours and look forward to the possibility that this might result in a leading policy of conservation of lava tubes in Hawaii and one that could be emulated elsewhere.

Yours faithfully

J. V. E. SIMONS
(Hon. Chairman CECA)

NOV 1 10 47 AM '96

RECEIVED
COUNTY OF HAWAII
NOV 13 1996

Stephen K. Yamashiro
Mayor



William C. Davis
Managing Director
Henry Cho
Deputy Managing Director

County of Hawaii

23 Aupuni Street, Room 215 • Hilo, Hawaii 96720-1233 • (808) 941-4211 • Fax (808) 941-4553
KONA: 75-5708 Kulaoni Highway, Suite 101 • Kailua-Kona, Hawaii 96740
(808) 328-5226 • Fax (808) 328-5643

January 25, 1996

Dr. Horton H. Hobbs III
Professor and Chair
Department of Biology
Wittenberg University
P.O. Box 720
Springfield, OH 45501-0720

Dear Dr. Hobbs:

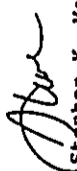
Thank you for your letter regarding the lava tube system that runs throughout the Big Island and the proposed paving of the Puna Access Road.

It is the intent of the County to respond to requests from area residents and make this existing road safe for travel. If you believe that additional studies or more stringent construction procedures are needed, would the National Speleological Society provide the money to pay for the additional costs?

The Environmental Assessment will identify areas of concern and the community will be involved in the decision-making process regarding this project.

Your letter will be included in the EA document. Thank you for expressing your concerns on this issue.

Sincerely,


Stephen K. Yamashiro
MAYOR

cc: Dr. Ron Terry



WITTENBERG
UNIVERSITY

January 10, 1996

Honorable Stephen Yamashiro
Office of the Mayor
25 Aupuni Street
Hilo, Hawaii 96720

Dear Honorable Stephen Yamashiro:

It is my understanding that Hawaii County is planning to construct an "emergency road" through the Puna lava cave area using mostly existing roads and cut-and-fill techniques. On a global scale, the area targeted for construction is certainly unique, having one of the world's most dense concentrations of lava tube caves. In addition, one of the caves to be crossed and thus heavily impacted is Kazumura Cave, the longest lava tube cave in the world (>68 km total length).

This is an extremely significant area with critically important resources for scientific study. Many of the features are known only from the Puna area and thus could not be observed or studied anywhere else in the world.

The need for emergency access into the area is certainly real and is an important undertaking. In so doing I hope that any development plan that is initiated considers these valuable natural resources. These are unique features that are of global significance and I urge and recommend that within a development plan a means for their protection be provided.

I would be most appreciative if this letter could be included in the Environmental Assessment document and appended to the Environmental Impact study. Thank you for your attention and consideration.

Very truly yours,



Horton H. Hobbs III, Ph.D.
Professor and Chair
Department of Biology
National Speleological Society, Fellow
Explorer's Club, Fellow

HHH:er

cc: Mr. Norman Olesen ✓

Technische Hochschule
Darmstadt

04387 Darmstadt, 341 600 0000
Telefon (06151) 15 21 71
Telefax (06151) 15 64 39

Prof. Dr. Stephan Kempe

Tel: 06151/ 16 2471
E-Mail: skempe@tch.darmstadt.de
5. January 5th, 1996

Mr. Norman Olesen
Deputy Planning Director
County of Hawaii
25 Aupuni Street, Room 215
Hilo, Hawaii 96720-4752

Fax: 808 961-6553

Dear Mr. Olesen,

Thank you very much in deed for your letter dated December 7th containing a detailed road map and the affirmation that the planned Puna emergency road across the Kānāmura and Keala caves will not be cut into bedrock. I agree with you that most probably this will leave the caves intact since both are relatively deep seated.

Nevertheless, I have strong reservations regarding the conclusion that the passage of 20 ton fire engines is proof to the long-term stability of a cave roof. In some places (like below Orchid Lane Drive) piles of fresh breakdown do indicate gradual disintegration of the cave roof. By spreading plastic sheets over the present breakdown one could easily monitor the further development quantitatively over the years. Breakdown below roads is not surprising, considering the structure of the cave roof from an engineering standpoint. It is a natural vault, consisting of several layers (the lava sheets) not cemented. The layers themselves are vertically jointed because of the shrinking of the lava during the initial cooling. Therefore, the entire structure is that of a stacked multi-layered arch. Putting pressure on such a structure from above solidifies the structure in general. However, the vertical joints are not all equally spaced nor of the same angle, it therefore happens that joint controlled blocks have the shape of upright pyramids. Such blocks should not be used in building arches. Putting pressure on them may result in their gradual extrusion downward and the eventual collapse of the arch segment. Furthermore, the building blocks are not solid, but highly porous. By putting pressure on such stones, the outer faces can partly disintegrate because the vesicle walls can collapse into the pores. Pressure waves rolling over a cave roof (caused by a passing truck) would induce a sort of grinding between the blocks and could lead in a long-term instability of the roof. The deeper the cave is, the smaller its vault spans, and the lower the porosity of the lava is, the longer will the roof hold.

You mention earthquakes in your letter. Dr. Werner, whom you are familiar with, witnessed a M 6.2 event in a cave and I and my wife had the "luck" to be in a cave during a M 4.9 quake. No rocks fell from the ceiling in either of the caves even though the shaking was appreciable. This is probably due to the fact that the wave length of the pressure wave is quite long, i.e. hundreds of meters. The complete cave is compressed laterally (which even produces the sound like that of a passing subway), while the passing of a truck causes instabilities with wave lengths of meters, loading and unloading small sections of the roof vertically.

I am somewhat amazed about your sentence "There are no Federal, State, or county laws protecting lava tubes". To my knowledge there are, just to mention the Federal Cave

Resources Protection Act of 1988 which protects caves on federal lands. It may not be applicable to Kānāmura and Keala because they are on private lands. However, in the spirit of that law one should, as you will be doing, avoid any public action endangering caves. I am quite sure that in the future laws will be passed to protect outstanding natural features regardless where they occur. Certainly Kānāmura and Keala are world class natural features well worth to be declared a National Monument. Damage done now to such features can never be repaired.

You asked where Kānāmura crosses Highway 130. I was on the mapping team which made the first rough survey of this stretch of Kānāmura, but the cave has since been remapped by Kevin Allred and his team (address: Kevin Allred, Box 376, Haines, AK 99827 USA). According to his map the tube passes below Orchid Lane Drive just below the WIKI WIKI and probably crosses HW 130 a few m north of the junction with Orchid Lane Drive. I do not have a copy of his high resolution map, so that I cannot give you a more precise location. Apparently the tube is so far below ground at this point, that no immediate danger exists.

More problematic is the crossing of Ainaloa Boulevard over Lower Ulouli Cave. There the roof is thin and apparently sheathing breakdown already, I gather from Dr. Halliday's letters that your department has been informed about this problem already and I hope that it will be taken care of in a sensible way also. Furthermore, I ask you to maintain from using lava bedrock on top of Pole 16 Cave. From our field studies and from evaluating aerial photographs, we would not be surprised, if there are a couple of other major tubes crossing 8th and 9th road. Specifically we find indications that 200-300 m south of Kānāmura, another tube may exist which would be crossed about 0.15 miles to the north of the junction of 9th road with the planned extension of Ainaloa Boulevard. The extension itself is to all probability free of major caves because it follows the northern edge of the Ainaloa Flow (which contains Jolua Martin's Cave to the south of the road project).

If you should be interested in visiting Keala System and to see for yourself what the problems are underground I would be happy to take you along in March. I will be back for further field work February 26th to March 30th with my students. Contacts can be easily made via Dr. Werner.

Apart from being a geologist doing scientific work in the tubes, my wife and I also own lots in Ainaloa and in Orchid Lane. We therefore have a "down to earth" taxpayer's interest in a sensible development of the area as well.

Again, let me thank you for your letter and your statement "that the County of Hawaii is not insensitive to the fact that this may be longest lava tube on earth".

Sincerely

Stephan Kempe

Please bring this letter to the attention of Mr. Ron Terry as well, thank you.

BENJAMIN L. CADET
Director



STATE OF HAWAII
OFFICE OF ENVIRONMENTAL QUALITY CONTROL
220 PEOPLES DRIVE
HONOLULU, HAWAII 96813
TELEPHONE: (808) 586-8118
FACSIMILE: (808) 586-7102

GARY GILL
Director

Mr. Norman Olesen
County of Hawaii Mayor's Office
25 Aupuni Street
Hilo, Hawaii 96720

January 3, 1996

Dear Mr. Olesen:

Subject: Environmental Assessment for Acquisition and Improvement of Roadways in Puna

My office has received a letter from a citizen outlining some environmental impacts likely to affect the lava tube ecosystems underlying your roadway project in Puna.

Per a telephone conversation between you and my staff (Jeyan Thirugnanam), we understand that an environmental assessment will be prepared for the above project.

We believe that any impact on the lava tube caves must be studied in the draft environmental assessment for this project. We suggest that a biological assessment of any affected cave be included in the draft environmental assessment. Mitigation measures to minimize any impact including relocating existing roadways should also be disclosed in the document.

Because the location of these caves can also have historic and cultural significance, particularly to Native Hawaiians, a protocol has been developed by the State Historic Preservation Division to withhold their location from the public. Please clarify in your environmental assessment how the locations of these caves will be verified and disclosed publicly.

If you have any questions, please call Jeyan Thirugnanam at 586-4185. Mahalo.

Sincerely,

Gary Gill
Director

c: Bonnie Goodell

Department of the Interior
U.S. Geological Survey

Hawaiian Volcano Observatory
P.O. Box 31
Hawaii National Park, HI 96718
(808) 967-8824 Voice
(808) 967-8896 FAX
jiruk@hvo.wr.usgs.gov email
January 2, 1996

To: Ron Terry, Geomorphologist (982-5831 FAX voice)
From: Jim Kauahikaua
Re: Geological implications of construction for an emergency road connecting Highway 130 to Highway 11

Thank you for inviting my comments regarding this future construction project. As you know, the emergency road will cross several known systems of lava tubes, including the Kazumura tube which specimens have now made the "world's longest lava tube". I have not personally been in any of the lava tubes benefit this construction project; most of what I know about these tubes is from verbal reports, written reports, and maps generously made available to me by members of the National Speleological Society and others. I understand that they are primarily concerned with the possibility that the construction of this emergency road may result in the collapsing of those portions of the tubes immediately under the road. Such collapse may then make certain sections of the tube inaccessible

The study of lava tubes, in general, is an important component of my study on how lava flows are emplaced. Documentation, measurement, and detailed mapping of the tubes as well as the features both within and at the surface, when compared with similar observations and mapping on currently active tubes, can reveal details about how lava is distributed within a flow, and how it behaves as it find now, and during the past. In addition, tube tracks are a primary clue to how lava flows have moved in a particular area in the past and, as such, are a crucial part of any future lava flow hazard assessment for that area. For example, the mapping of tubes recently between Amalooa subdivision and Palhoa suggest that lava flows from the middle East Rift Zone of Kilauea may have flowed into the area now occupied by the Hawaiian Bessies subdivision in the geologically recent past. Subsequent examinations of trends in terrain could confirm this possibility for future middle East Rift Zone eruptions.

Because of their importance in my work, I hope that these tubes can be preserved during the construction and subsequent use of this road. To that end, I offer to help locate these tubes precisely from the surface using techniques we have refined in the last several years. Perhaps detailed knowledge of exactly where the tubes lay beneath the path of the road would help preservation efforts. In addition, if a decision has to be made about whether these sections of tube that would be made inaccessible have unique geological features, I would volunteer that assessment. Although I hope that these unique features can be preserved, I also support the addition of a general route, out of Puna in the event of an emergency such as a lava flow. Although this is not the best route for hot during such an emergency, it is the only additional route planned at present.

Please do not hesitate to ask for clarification or further information.

Hawaii Speleological Survey

of the
National Speleological Society

WILLIAM R. HALLIDAY
Chairman
P.O. Box 1526
Hilo, HI 96721

Address until 16 January 1996:
6530 Cornvill Court
Nashville, TN 37205

3 January 1996

Ron Terry, PhD
Geo Metrician
HCR 9575
Keaau, HI 96749

Dear Dr. Terry:

Thank you for sending the form announcement of December 18, 1995, received here yesterday.

The lava tube caves, concerning which you have received information, are geological phenomena, and should be considered in the geology "area of investigation." Because they contain flora, fauna, and ecosystems, their flora, fauna, and ecosystems should also be considered as an area of investigation. Further, you have been informed about the apparent vehicular hazard from the cave shallowly underlying Ainaloa Boulevard. That should be considered in the "hazards" area of investigation.

The Honolulu office of the State Historic Preservation Division has been informed about cultural sites in several of the caves underlying the proposed Emergency Access Road. The Hawaii Speleological Survey will have no formal input on this subject.

Please note the correct name of this organization: your form announcement was directed to the "Hawaii Speleological Society". To the best of our knowledge, no such society has ever existed.

In response to the last paragraph of your letter, this organization does wish to be sent a copy of the Draft EA when completed.

Sincerely yours,

WR Halliday
William R. Halliday

cc: HSS ExCom
O. Fuks and W. McClellan
NSS President, Cons Chmn, Sec. on Cave Mgmt and Cons.
N. Olesen

Ron Terry, PhD
GEO Metrician
HCR 9575
Keaau, Hawaii 96749

Dear Dr. Terry.

Norman Olesen informs us that you have been contracted to develop an environmental assessment for the Puna Emergency Access Road project. A large number of lava tube caves exist in the area, including Kazumura Cave, the longest lava tube in the world, which passes beneath the proposed road alignment.

Caves in the area possess a number of known values, including evidence of prehistoric use, unique biological communities, unusual geologic features, and record setting length. Some study of these resources has been conducted by members of the Hawaii Speleological Survey, the preliminary results of which I understand you have been provided. While these resources are known to exist, it is likely other values may also be present which have not yet been identified, and probably more caves.

In developing cave management plans for caves in other areas, we have found a close relationship between surface management activities and impacts caused in caves. Removal of vegetation, diversion of runoff from roads, breaking through cave ceilings by construction equipment, new access provided to would-be explorers, disruption of nutrient cycling by vegetative removal, and natural percolation of rain water, are obvious impacts.

Our organization works primarily with governmental agencies to develop methodology for the management of cave and karst resources. Our interest is in providing the understanding and tools necessary to manage and conserve cave resources. We understand that surface development is inevitable in many cave areas, and seek ways of working with both government agencies and land owners to maintain our natural heritage.

The following are issues we feel need to be addressed in the EA. Included are mitigation measures acceptable for protection of cave resources. The suggested mitigation measures are similar to those in use elsewhere, and are considered "state of the art" for current cave resource management.

Impact to Caves by Road Construction. Lava tubes are usually found near the surface with roof thicknesses of one to fifteen feet. Lava tubes are susceptible to damage during construction activities, and may endanger construction workers, or cause subsequent subsidence of roads. Cave entrances could be filled, disrupting natural airflow, and subsequent access.

Mitigation: The construction area should be carefully surveyed by a speleologist and structural geologist prior to road design to identify the location of lava tubes, their roof thickness, and structural integrity. If adequate structural strength is available to support the road and construction activity, road construction may proceed. Avoid cut and fill construction over caves, or suspected cave locations. Road construction over caves should emphasize strengthening of cave roofs, and avoidance of rock excavation. Entrances should be avoided during road design, but if filling is necessary, alternated airflow and access should be provided through placement of access structures.

Impact to Cultural Resources. Many caves in the area were used as sites of habitation, refuge, or as burial sites by early Hawaiians. These archaeological sites are susceptible to damage during construction, or due to increased access caused by nearby road construction. These impacts can extend to caves outside the road alignment, and will be largely dependent upon density of vegetation, and the ease by which caves can be found by the public at large. Any cave entrances within 500 feet of the road would be affected.

Mitigation: An area 500 feet to either side of the proposed road needs to be surveyed by an archaeologist familiar with Hawaiian archaeology to identify both cave and other cultural sites. Adequate measures need to be developed to stabilize or safe-guard sites, or salvage archaeological materials if impacts are unavoidable. Some entrances may need to be closed with minimum airflow disruption cave gates. (These are specially designed gates which allow natural airflow and small animals to pass but keep humans out.) Conservation easements for gates should be developed with private land owners to allow gate placement and maintenance.

Diversion of Surface Runoff into caves. Surface runoff from roads can adversely impact cave ecosystems by introducing hydrocarbons, and other pollutants from road surfaces. These pollutants are toxic to cave invertebrates and other micro-organisms. Drainage can affect caves by direct diversion into cave entrances, or by percolation through cave ceilings.

Mitigation: During road design, develop drainage structures that divert runoff to sumps, surface drainages, or other environmentally acceptable remediation structures, away from cave entrances, and/or cave alignments.

Disruption of Cave Nutrient Cycling by Vegetative Removal. Unique cave ecosystems are dependent upon nutrients from the surface. Because lava tubes are nutrient-poor environments, minor changes in nutrient availability create large effects on cave invertebrates and micro-organisms. Nutrients are carried into Hawaiian caves by percolating water, but primarily by tree roots which enter through ceiling and wall cracks.

Mitigation: A careful cave survey by a biologist familiar with Hawaiian cave fauna will be needed to identify sites of potential impact. Road design measures should be taken to minimize vegetative removal over and adjacent to caves access. Removal of large trees with well developed root systems are of particular concern.

Human Impact to Cave Environments. Uncontrolled recreational use of caves creates heavy impact or destruction of cave resources. The impact caused by recreational use is well documented, and a concern to spelologists and cave managers. In fact, taken as a whole, recreational use of caves may be the single most damaging activity. Recreational use is enhanced by road access, and publicity concerning cave locations.

Mitigation: Place minimum airflow disruption gates on caves near roads, and avoid publicity concerning cave locations. Develop conservation easements with private cave owners for gate placement, and management of caves beneath their land. (Consider the granting of conservation easements a condition of road construction past private property. This would also reduce land owner liability by minimizing unauthorized recreational use of caves on private property.)

An obvious project need is a speleological survey by a firm specializing in cave resource management. I recommend contacting Tom Aley at the Ozark Underground Laboratory. This firm is uniquely qualified to provide the services needed for an initial assessment, and if needed, development of site-specific mitigation measures. The Ozark Underground Laboratory has provided excellent services to the National Park Service, US Forest Service, and various state, municipal and private cave owners. Tom Aley can be contacted at: Ozark Underground Laboratory, Route 1, Box 62, Protem, MO 65733. Phone: (417) 785-4289.

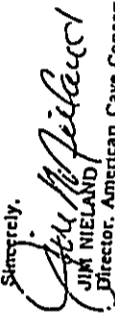
The County would greatly benefit from expert assistance in development of cave-compatible construction standards. While it is outside the scope of this EA, the County would also be well advised

Page 2

would be possible to avoid many future conflicts such as the one surrounding the Puna Emergency Road project

Please feel free to contact me if you have any further question, or feel I can be of some help.

Sincerely,


JIM NIELAND
Director, American Cave Conservation Association

Page 3

December 27, 1995

Hon. Stephen Yamashiro
Office of the Mayor
County Building
Hilo, HI 96720

Dear Mayor Yamashiro:

I am writing to urge you to advise members of your administration of the importance of Hawaii's volcanic caves (lava tubes) and the need to preserve them and the cultural, geological and biological resources contained within them. Hawaii Island has some of the most extensive lava tubes in the world. They include unique biological communities and irreplaceable Hawaiian cultural resources, including burials. Collapsing or otherwise destroying sections of lava tubes in the process of building can and should be prevented.

Building of roads presents a threat to Hawaii's lava tubes. Knowing the location of known lava tube systems can assist planners as the potential collapse of roads and structures obviously presents public safety problems. The Hawaii Speleological Survey can provide information about relevant cave locations. The technology exists to adequately support roads and structures while preserving any underlying cave resources.

Please direct Mr. Norman Oleson, who I understand is heading up the Puna Emergency Road project, to protect the remarkable Kazumura Cave as well as any others likely to be impacted by this project. I urge you to establish policies for any future road building or improvement projects with guidelines for the preservation of our unique lava tubes and their contents.

Sincerely,

Ruth Levin
Ruth Levin
P.O. Box 1118
Volcano, HI 96785

cc: Norman Oleson
William Halliday, Hawaii Speleological Society



County of Hawaii

25 Aupuni Street, Room 215 • Hilo, Hawaii 96720-4333 • (808) 941-4311 • Fax (808) 941-4333
KONA: 75-5704 Kula Road Highway, Suite 103 • Kula, Hawaii 96740 • Fax (808) 376-5663

December 26, 1995

Mr. David Luckins
National Speleological Society, Inc.
1683 Oakleaf Drive
West Bloomfield, MI 48324-2545

Dear Mr. Luckens:

Subject: Puna Emergency Road

This will acknowledge receipt of your letter of December 12, 1995. The County of Hawaii has placed a contract for a consultant to prepare an Environmental assessment. Dr. Ron Terry, our consultant, is quite familiar with caves and their impact on our Hawaiian cultural heritage.

The statement you quote, which was sent to Dr. Greeley, is correct in its entirety. There is always the possibility that when grading a road, or excavating for a swimming pool, or grading of parking requirements, that caves will be uncovered. Since the Island of Hawaii has thousands on thousands of caves it is a virtual impossibility to prevent it happening unless all construction stops.

We now have specific information regarding the Kazamura and Keala cave systems which has allowed us to specifically locate where these caves cross the proposed resurfacing. Only fill and 6 inches of asphalt are required in this area. This information was received from Dr. Kempe, Technische Hochschule, Darmstadt, Germany. Attached is a copy of my correspondence with Dr. Kempe which clarifies many points regarding the County of Hawaii's intentions regarding opening up this existing roadway for Emergency vehicular traffic.

The County of Hawaii has always taken a proactive stand regarding both public safety and preservation of our historical and archeological treasures.

If I can be of any further assistance please feel free to contact me at (808) 961-8565.

Sincerely,

Norman Olesen
Deputy Planning Director

Enclosure

William C. Davis
Mayor
Henry Cho
Deputy Mayor

Stephen K. Yamashiro
Mayor



William G. Davis
Managing Director
Henry Cho
Deputy Managing Director

County of Hawaii

23 Auapua Street, Room 215 • Hilo, Hawaii 96720-023 • (808) 941-4211 • Fax (808) 941-4553
KONA: 75-5706 Kaula Highway, Suite 103 • Kailua-Kona, Hawaii 96740
(808) 379-5226 • Fax (808) 324-5443

December 26, 1995

Prof. Dr. Stephan Kempe
Technische Hochschule Darmstadt
64287 Darmstadt, Schrittspahnstr. 9
GERMANY

Dear Dr. Kempe:

Re: Puna Emergency Access Road

Thank you for your very informative letter dated 3 November 1995. Please excuse the late response to your correspondence.

The Emergency Access Road already exists, except for a short .31 mile section. This road was installed by the developer over thirty years ago and has been traversed by 20 ton fire engines and large caterpillar tractors over the entire time frame. This is not to mention the many earthquakes of magnitudes up to 7.2 which has occurred over the same time span. I have attached a copy of your map which indicates the condition of the road at various areas:

Green - existing asphalt over compacted base coarse which will only require slight widening and a top coat of asphalt.

Blue - requires a full base coarse and asphalt roadbed. This area will require fill and I am also assured by local speleologists that this area is not in any cave area.

Red - this section of the road is new and requires a full asphalt surface since the compacted base coarse is already in place. From your map I have been able to locate the area where the existing road crosses the two major tubes. At these sections there will only be fill, as required, to even out the road surface.

Black - no roadwork is contemplated, other than slight widening of the road shoulders.

Prof. Dr. Stephan Kempe
December 26, 1995
Page 2

Currently all the roads and properties under which the tubes run are private property. There is no Federal, State, or County laws protecting lava tubes. The significance of the tubes is only reviewed from the standpoint of their archaeological importance, only when the County of Hawaii takes over the roads from private ownership. Mr. Halliday has quoted situations where caves have been uncovered by bulldozers. I am personally aware of a development in lower Puna that uncovered 2 major caverns and cave tubes this past year, that forced the developer to reduce the parcel size from 3 acres to 1 acre for the development. In all these cases the caves were on private property and outside the jurisdiction of Federal, State, or County requirements. There is also no Environmental Assessment required for property owners grading their property for home sites, and the resultant collapsing of cave structures, if they are present. All the cases Mr. Halliday quoted in his Internet statement are on private property.

Please be assured that the County of Hawaii has no intention of indiscriminately "collapsing" caves, however, the possibility always exists that this may possible happen. I personally think it is highly unlikely that we will encounter a situation where the minor road work contemplated breaches a cave structure. In the event this happens, the County procedure is to immediately notify the State Archeologist to survey the cave and provide recommendations.

Thanks to your mapping of the Kazumura cave we can take some precautions when surfacing this area. The County of Hawaii is not insensitive to the fact that this may be the "longest lava tube on earth".

Did your mapping efforts extend across Highway 130 in Hawaiian Paradise Park subdivision? If you did, it would be of value to both the State and County if we could obtain a copy.

Again, thank you for your very informative letter. If you have any further information you wish to share with the County of Hawaii please feel free to contact the Planning Department.

Sincerely,

Norman Olesen
Deputy Planning Director

cc: Dr. Ron Terry, Environmental Assessment consultant.

Stephen K. Yamashiro
Mayor



County of Hawaii

25 Auupuni Street, Room 215 • Hilo, Hawaii 96720-4323 • (808) 941-4211 • Fax (808) 941-4533
KONA: 75-5706 Kailua Highway, Suite 103 • Kailua-Kona, Hawaii 96740
(808) 325-5225 • Fax (808) 325-5643

William G. Davis
Managing Director

Henry Cho
Deputy Managing Director

December 26, 1995

Professor Ronald Greeley
Arizona State University
Department of Geology
Box 871404
Tempe, AZ 85287-1404

Dear Professor Greeley:

Thank you for your letter regarding the lava tube system that runs throughout the Big Island and the proposed paving of the Puna Access Road.

It is the intent of the County to respond to requests from area residents and make this road safe for travel.

The County is currently in the process of letting a contract for the preparation of an Environmental Assessment for the proposed project. Your comments will be made available to the consultant for review in preparation of the Environmental Assessment.

The Environmental Assessment will identify areas of concern and the community will be involved in the decision-making process regarding this project.

I hope I have been able to address your concerns.

Sincerely,

Stephen K. Yamashiro
MAYOR

John Hoeffel
208 Chestnut
Smyrna, TN 37167

December 21, 1995

Mr. Norman Olesen
Hawaii County Planning Department
25 Auupuni Street
Hilo, HI 96720

Dear Mr. Olesen:

Thank you for your letter of November 30, 1995 explaining how to provide input to the Environmental Assessment (EA) for the proposed Puna Emergency Road in the Hawaiian Acres subdivision. I understand that cut-and-fill techniques will not be used in the area of Kazumura and Keala caves; I believe this is a wise decision based on 10 years experience as a professional geologist addressing environmental issues in karstic (cave) areas, including road construction and design. More often than not, collapsing caves for foundation support leads to stability problems primarily due to continued washout by subsurface drainage. In addition, the intentional collapse of a cave destroys any cultural, aesthetic, or natural resource value offered by that cave.

There are three closely related issues remaining that should be addressed in the EA. First, Pole 46 Cave, which is located north of D Road, contains significant geologic features that should be protected from intentional collapse. Therefore, the cut-and-fill construction technique should not be used in this area. Instead, I recommend using bridging techniques over this and other caves with thin overburden. As you probably know, bridging techniques do not necessarily require standard bridges such as used over surface streams, but instead, these techniques involve adding adequate support (such as rebar) to the road bed. Proper drainage design, such as lined ditches, is also needed to help control subsurface washout. The bridging technique has been used with great success in similar situations, and I believe it is very appropriate for the lower Puna area due to the thin overburden and brittle nature of the lava rock.

The second issue involves Lower Ulani Cave, which is located beneath the Ainaloa Boulevard portion of the project. Again, because of the thin overburden in this area (and the brittle nature of the rock), I recommend bridging the cave area and providing appropriate drainage controls to reduce washout.

Finally, the geologic nature of the lower Puna area suggests a good potential for additional caves to exist that are as yet unknown and undiscovered. The presence of such undetected caves presents certain risks associated with construction, routine use, and development in these areas. To address this issue, I recommend first performing geophysical surveys (such as micro gravity) to detect subsurface anomalies. This should be followed by exploratory drilling to characterize and confirm any anomalies. The information collected should be evaluated by a trained individual specializing in environmental engineering and design in cave areas. Proper designs and adequate consideration can then be provided for a specific situation.

Mr. Norman Olesen
December 21, 1995
Page 2

The investigation, design, and construction techniques outlined above are standard practices in the environmental engineering and construction industries and are not difficult to implement. In a general sense, the specific concerns addressed above relate to ongoing regional issues regarding environmental planning. Proper planning up front can provide guidance for development while protecting environmental resources and actually saving money otherwise needed to fix problems caused by inadequate planning and design oversights. The costs associated with proper planning and design activities is nominal and justified compared to large expenditures needed later for remedial measures. Please feel free to contact me regarding any of the concerns listed above or for any other environmental planning and design needs that you may have. To meet any such needs, I offer the experience of PRC Environmental Management, Inc., an international environmental engineering firm specializing in management, design, and planning for environmental issues and with offices in Hilo and Honolulu. A PRC representative can meet with you at your convenience to discuss your environmental design, planning, and management needs. My address is listed at the top of this letter and my telephone number is (615) 256-1191.

Thank you again for your attention to this matter and for the opportunity to provide input to the EA. I hope the suggestions and information in this letter will be useful for your planning and designs in the lower Puna area and elsewhere in the County of Hawaii.

Sincerely,



John Hoffelt
Professional Geologist

Stephen K. Yamashiro
Mayor



William C. Davis
Managing Director

Henry Chio
Deputy Managing Director

County of Hawaii

25 Aupuni Street, Room 215 • Hilo, Hawaii 96720-0232 • (808) 941-0211 • Fax (808) 941-4553
KOA: 75-5706 Kaula Highway, Suite 103 • Kilauea, Hawaii 96740 • Fax (808) 328-5663

December 20, 1995

Mr. David G. Foster
American Cave Conservation Association, Inc.
P.O. Box 409
Horse Cave, Kentucky, 42749

Dear Mr. Foster:

Re: Puna Emergency Access Road

Thank you for your interest in the caves which are located along the Emergency Access Road in Puna. The roads in question, however, are not being developed.

The roads that are being planned are already in place and 75 % are already paved. The roads have been in place for over thirty years, consisting of compacted base course originally installed by the developer. It is the intention of the County of Hawaii to slightly widen the existing roads and provide asphalt paving over the unpaved portions.

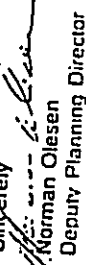
The work being performed by the County is to bring these existing roads up to Emergency County Standards to permit safe travel for fire, police, and emergency vehicles so that two major private subdivisions may be connected to main road arteries.

A short section of land (.31 miles) will require a new road. I have been assured by local speleologists that no caves exist in this section.

The County of Hawaii has currently contracted for a consultant to prepare the Draft Environmental Assessment which will be completed in January 1996, for submittal to the Office of Environmental Quality Control.

If you any further questions or concerns please feel free to contact me at (808) 961-8565.

Sincerely,



Norman Olesen
Deputy Planning Director

CORRECTION

THE PRECEDING DOCUMENT(S) HAS
BEEN REPHOTOGRAPHED TO ASSURE
LEGIBILITY
SEE FRAME(S)
IMMEDIATELY FOLLOWING

Mr. Norman Olesen
December 21, 1995
Page 2

The investigation, design, and construction techniques outlined above are standard practices in the environmental engineering and construction industries and are not difficult to implement. In a general sense, the specific concerns addressed above relate to ongoing regional issues regarding environmental planning. Proper planning up front can provide guidance for development while protecting environmental resources and actually saving money otherwise needed to fix problems caused by inadequate planning and design oversights. The costs associated with proper planning and design activities is nominal and justified compared to large expenditures needed later for remedial measures. Please feel free to contact me regarding any of the concerns listed above or for any other environmental planning and design needs that you may have. To meet any such needs, I offer the experience of PRC Environmental Management, Inc., an international environmental engineering firm specializing in management, design, and planning for environmental issues and with offices in Hilo and Honolulu. A PRC representative can meet with you at your convenience to discuss your environmental design, planning, and management needs. My address is listed at the top of this letter and my telephone number is (615) 256-1191.

Thank you again for your attention to this matter and for the opportunity to provide input to the EA. I hope the suggestions and information in this letter will be useful for your planning and designs in the lower Puna area and elsewhere in the County of Hawaii.

Sincerely,



John Hoffelt
Professional Geologist

Stephen K. Yamashiro
Mayor



County of Hawaii

25 Auwahi Street, Room 315 • Hilo, Hawaii 96720-4333 • (808) 961-4711 • Fax (808) 961-4333
KONA: 75-5708 Kauhala Highway, Suite 120 • Kailua-Kona, Hawaii 96740
(808) 329-3226 • Fax (808) 326-5663

December 20, 1995

Mr. David G. Foster
American Cave Conservation Association, Inc.
P.O. Box 409
Horse Cave, Kentucky, 42749

Dear Mr. Foste.:

Re: Puna Emergency Access Road

Thank you for your interest in the caves which are located along the Emergency Access Road in Puna. The roads in question, however, are not being developed.

The roads that are being planned are already in place and 75 % are already paved. The roads have been in place for over thirty years, consisting of compacted base coarse originally installed by the developer. It is the intention of the County of Hawaii to slightly widen the existing roads and provide asphalt paving over the unpaved portions.

The work being performed by the County is to bring these existing roads up to Emergency County Standards to permit safe travel for fire, police, and emergency vehicles so that two major private subdivisions may be connected to main road arteries.

A short section of land (.31 miles) will require a new road. I have been assured by local speleologists that no caves exist in this section.

The County of Hawaii has currently contracted for a consultant to prepare the Draft Environmental Assessment which will be completed in January 1996, for submittal to the Office of Environmental Quality Control.

If you any further questions or concerns please feel free to contact me at (808) 961-8565.

Sincerely,



Norman Olesen
Deputy Planning Director

William C. Davis
Managing Director

Henry Cho
Deputy Managing Director

INTERNATIONAL UNION OF SPELEOLOGY



The President
Prof. Paolo Forti

Mayor Stephen Yamashiro
25 Aupuni Street
Hilo, HI 96720
USA

Bologna December 19, 1995

Object: Environmental Assessment in the Puna cave area

Dear Mr Yamashiro,

last days I received a newsletter from the Commission on Volcanic Caves of the IUS in which was clearly written that the draft EA will not include caves.

I am astonished for such decision that is absolutely wrong and against any scientific and environmental reasons.

The Puna area is perhaps the most famous and important area for volcanic caves in the world and by my opinion even important economic reasons cannot prevail.

I hope that the Local Government will reconsider all the matter taking into account the importance to preserve the Puna lava tubes.

I, as president of the IUS, remain at your disposal for any action which will improve the possibility to preserve this world patrimony.

The President of the IUS

Prof. Paolo Forti

cc to Bill Halliday

Address: Istituto Nazionale di Speleologia - Via Zamboni, 67 - 40127 Bologna, Italy

Hawai Speleological Survey
of the
National Speleological Society

WILLIAM R. HALLIDAY P. O. Box 1526
Chairman Hilo, HI 96721

19 December 1995

PROTECTION OF PUNA CAVES-A PROGRESS REPORT AND CALL TO ACTION
Dear Friend of Puna caves:

A turning point has been reached in the protection of Puna caves (from being "collapsed" by the proposed Puna Emergency Access Road, shown on the attached map. The Hawaii County Mayor's Office has determined that "cut-and-fill" techniques are NOT necessary over Kazumura and Keala caves. Therefore there appears to be no threat to these caves from the proposed road.

With only a little additional response from friends of Puna caves, it appears likely that the last three remaining spelean issues can be resolved without delaying or increasing the cost of the Emergency Road project, which nearly everyone agrees is highly desirable.

The three remaining issues are:

1. Detailed inclusion of Anahoa Boulevard in the road project without provision for mitigation of the vehicular hazard caused by Lower Ulaani Cave. (The H.S.S. made recommendations for re-sponsable mitigation of this problem in February, 1993.)
2. Protection of Pole 46 cave, just north of D Road, which has not been mapped nor inventoried but is known to be extensive and has wonderful rheogenic (flow-formed) geological features beneath the course of the Emergency Road.
3. Protection of any other significant cave encountered incidentally in the course of road construction or reconstruction.

From field studies, the H.S.S. concluded that there is no need for "cut-and-fill" over Pole 46 Cave and has asked the Mayor's Office to make a similar determination as at Kazumura and Keala caves.

In case of incidental opening of presently unknown caves (as happened on state Highway 130 in Puna in August 1995), the H.S.S. has asked the Mayor's Office to commit itself to compliance with the relevant section of the National Speleological Society policy on Cave Preservation:

- * No cave or cavernous area should be altered or modified without a full, balanced, and conservative study of the impact of such action, including input from knowledgeable persons specifically experienced in the exploration and scientific study of caves and cave resources.
- * Cave resources should be protected by keeping wild caves wild and free from human manipulations and alterations that hamper the free play of natural forces, endanger the cave and karst ecosystems, or diminish the pleasure of future visitors.
- * Special efforts should be made to preserve the integrity of ecological and hydrological systems within caves and cavernous terrans.

(A conceivable plastic pipe is probably all that would be needed.) We consider it only common sense to take a good look at a potentially valuable resource before deciding to destroy it. Unfortunately the Mayor's spokesman has stated that he obtains information on the significance of caves from archaeologists, not from speleologists, but we do not consider this insuperable.

Handwritten notes:
Junk
Cave
Puna
Puna

In the case of the threatened collapse of Alahala Boulevard into Lower Uluani Cave, the expense and the administrative hassle about mitigating the hazard while protecting the integrity of the caves appear to be too much to deal with within the context of the Emergency Road proposal. Lower Uluani Cave is the only cave in Hawaii which has been nominated for the state's natural Area Reserve System. The H.S.S. therefore has urged the Mayor's Office to temporarily exclude this short segment of Alahala Boulevard from the project while the vehicular hazard is being studied and mitigated.

Friends of the Mayor's Office are asserting that wherever D-9 "cabs" have passed successfully, there is no risk of future collapse. They have not seen the thin roof of this cave beneath this street, not the piles of rock beneath road overcrossings in other Puna caves, showing acceleration of the natural rate of collapse by vehicular traffic.

The Environmental Assessment (EA) process is underway NOW. This letter is being sent to a small number of friends of Puna caves urging them to send a letter NOW urging protection of

1. Pole 45 Cave (by determination that "cut-and-fill" is unnecessary over it).
2. Lower Uluani Cave (by temporary exclusion of the short segment of Alahala Boulevard over it).
3. any significant cave encountered incidentally (by compliance with the stated N.S.S. Policy).

Letters should be addressed to:
Mr. Norman Olesen
Office of the Mayor
25 August Street
Hilo, HI 96720

Such letters should include a "Thank you" for determined that Kazumura and Keala caves need not be "collapsed" by cut-and-fill construction.

Also they should specify that they should be brought to the attention of the person performing the EA:
Dr. Ron Terry
HCR 1, Box 9575
Keaau, HI 96749

Also they should specify that if Pole 45 Cave and Lower Uluani Cave are not excluded from the project, an Environmental Impact Study should be performed to include an inventory of the biological, geological, and other features and resources. Even if this would delay the road, the H.S.S. is prepared to provide field support for this, gratis. And to do reconnaissance surveys of any caves incidentally encountered, also gratis.

ONE MORE THING As part of the EA process, open meetings soon will be held in Hawaiian Acres and Alahala subdivisions. We expect these to packed with supporters of "Emergency road at any cost-the hell with the caves."

There is no need to try to pack these meetings with friends of the caves in return. But it is quite important for some friends of the caves to attend and to point out how easy it is to protect the caves while the project is proceeding on schedule and within budget. The theme should be that resolution of these last three issues now appears so easy that it would be silly to risk all the timing and financing of the project by not protecting them.

The dates of these meetings have not been announced. Contact Bill McCutchan (966-7524) and Ole Fuas (966-4074) and plan to attend one of them. PLEASE.

Aloha,

William H. Haddock

William C. Davis
Mayor

Henry Cho
Deputy Mayor/Deputy Director



County of Hawaii

25 August Street, Room 215 • Hilo, Hawaii 96720-5252 • (808) 961-8311 • Fax: (808) 961-4553
KONA: 75-5706 Kaula Highway, Suite 103 • Kailua-Kona, Hawaii 96740
(808) 325-5225 • Fax: (808) 325-5443

December 19, 1995

Mr. Jim Nieland
Director, ACCA
12178 Lewis River Road
Ariel, WA 98603

Dear Mr. Nieland:

Re: Puna Emergency Access Road

Thank you for your comments expressed in your letter of December 8, 1995. Your concerns will be addressed by the consultant, hired by the County of Hawaii for the preparation of the Environmental Impact Statement in accordance with the requirements of the Hawaii Revised Statutes, Chapter 343, "Environmental Impact Statements".

In accordance with County of Hawaii purchasing procedures a consultant contract for the preparation of the Environmental Assessment has been made with:

Dr. Ron Terry
GEO Metrician
HCR 9575
Keaau, Hawaii 96749

All correspondence regarding caves has been forwarded to Dr. Terry, including H.S.S. Report #93-01 and H.S.S. Report #95-01 for his review. Dr. Terry is familiar with the various issues involved regarding caves on the Big Island.

If you have any further input, other than what has been received by this office, this would be the time to express your concerns and any mitigating plans that you may deem appropriate regarding construction of the Emergency Road.

Sincerely,

Norman Olesen
Deputy Planning Director

cc: Dr. Ron Terry, with enclosure



NORTHWEST CHAPTER
OF THE
AMERICAN CAVE CONSERVATION ASSOCIATION

12178 Lewis River Road
Arlt, WA 98603
December 8, 1995

Mr. Norman Olesen
Deputy Director
Hawaii County Planning Department
25 Aupuni Street
Hilo, Hawaii 96720

Dear Mr. Olesen,

I am writing concerning a proposed project to widen roads to provide emergency access through the Puna lava cave area. This area contains Kazamura Cave, the longest lava tube in the world, and interestingly the deepest cave in the United States.

Any construction work that would threaten to break into and segment this cave is a significant conservation issue of international proportions. Prior to any work in the area a careful underground survey of the cave resources should be undertaken to determine the alignment of cave passages, so appropriate mitigation measures can be developed to prevent structural damage.

Hawaiian caves are recognized for their unique assemblages of cave adapted invertebrates, and Kazamura Cave is no exception. Changes in cave environments caused by diversion of surface drainage, deforestation, or blockage of normal water percolation caused by surface activities, is known to impact cave ecosystems. A component of your pre-construction survey should include an assessment by a competent biologist familiar with Hawaiian cave fauna.

Many caves in the area are also noted for their use by early Hawaiians as refuges, habitations, water collection sites, and for burials. Naturally any caves in the construction zone should be carefully examined by an archaeologist to determine if evidence of prehistoric use will be destroyed. Another concern is creating access to previously isolated caves which could promote looting of artifacts, or burials. If this is the case, some cave may need to be gated to prevent unauthorized entry. The responsibility for managing cave resources does not necessarily stop at the end of a project.

Please keep us informed of any developments in your plans, and allow us an opportunity to comment on your draft environmental assessment.

Sincerely,

Jim Nieland
JIM NIELAND
Director, ACCA



Ken K. Yamashiro
Mayor

William C. Davis
Managing Director
Henry Cho
Deputy Managing Director

County of Hawaii

25 Aupuni Street, Room 215 • Hilo, Hawaii 96720-2121 • (808) 941-4211 • Fax: (808) 941-4553
KONA: 75-5706 Kauhala Highway, Suite 103 • Kailua-Kona, Hawaii 96740
(808) 329-5226 • Fax: (808) 329-5463

December 19, 1995

Mr. William R. Halliday
6530 Cornwall Court
Nashville, TN 37205

Dear Mr. Halliday:

Re: Puna Emergency Access Road

This will acknowledge receipt of your letters dated December 10, 1995 and December 11, 1995 addressed to Mayor Stephen Yamashiro. Apparently you have not received my letter of December 11, 1995 which answers most of your questions. Attached is a copy of what appeared on the Internet with your society and name as the author.

Regarding the Environmental Assessment, the County of Hawaii follows all the requirements of the Hawaii Revised Statutes, Chapter 343, "Environmental Impact Statements". The Federal NEPA only applies if the County is using Federal funds or is on Federal property. It should also be clarified that the Environmental Assessment is a formality which is required when the County obtains property. This does not apply to private property, such as the Ainaloa and Hawaiian Acres subdivisions.

All the information you and your fellow speleologists have furnished to the County of Hawaii has been turned over to the consultant, Dr. Ron Terry, for his preparation of the Environmental Assessment. In addition, the County Deputy Chief Engineer has visited the sites to determine the safety of the proposed roadway regarding vehicular traffic, and to determine if any extra measures are necessary in the proposed route.

Sincerely,

Norman Olesen
Norman Olesen
Deputy Planning Director
Enclosure

cc: ✓ Dr. Ron Terry
Ainaloa Community Association
Hawaiian Acres Community Association

National Speleological Society

Cave Conservation and Management Section

Welcome to the Home Page for the Cave Conservation and Management Section of the National Speleological Society.

The Section provides this Home Page as a focal point for information about Cave Conservation and Management. Of course it is always under construction, and may be different the next time you visit. This version was updated October 17, 1995.

Visit the Home Page for the 1995 National Cave Management Symposium coming up this October in Indiana.

New Hot Issues

[Kazumura Cave \(world's longest lava tube\), threatened by a road building project.](#)

[New Mexico BLM Does it to us AGAIN!](#)

[Significant Cave Nominations Deadline extended to later this year. Now it has it's own page on the Web. Check it out for details on how to nominate significant caves.](#)

[Cave Formations for sale in Hong Kong](#)

[NSES Issues Proposal for Fees for Caving in the Guadalupe](#)

[New Mexico BLM Problems and Opportunities \(coming soon\)](#)

[Dave Jagnow named NSS Conservation Chairman \(coming soon, as soon as we get him on the Internet\).](#)

[He issues a hot request for letters to Congress about the Tongass National Forest Logging Bill. \(September 95\). Read about the issues in an article from the October 1 Juneau Empire.](#)

Old Hot Issues

[BLM Cave for Pay Issue: Petition that was submitted to the BLM Note: A new BLM issue has arisen \(Commercial Cave Guides\) and information updated in May 25 has been posted. Results of the June 15 meeting between cavers and the BLM. BLM Issues its \(predictable\) Findings \(August 21\)](#)

[Portuguese Coa Dam Issue and Web Page for it \(in Portuguese and English\)](#)

[Development threatened at Mexico's Cacahuamilpa Cave. If you know anything new, please email us with details.](#)

Action Resources on the Web

[The Section's Information Brochure](#)

[NSS Policy for Cave Conservation](#)

[The Cave Conservationist, our publication. Now includes several recent issues live on the Web](#)

[A copy of the Federal Cave Resource Protection Act of 1988](#)

[Section Membership Information](#)

[Calendar of upcoming Cave Conservation and Management Events](#)

[What's New - Last update November 9, 1995](#)

THE PUNA "EMERGENCY ROAD" PROPOSAL

[Link to a map and information on the Island of Hawaii](#)

In August 1995, Mr. Norman Olesen announced plans for a cut-rate "emergency road" to be built in 1996 through the heart of the Puna lava cave area, the world's greatest concentration of lava tube caves. Mr. Olesen is Deputy Director of the Hawaii County Planning Department, and a member of the staff of the office of the Mayor of Hawaii County.

Most of this "emergency road" would consist of upgrading present unpaved or partly paved subdivision roads, with a short length of new road to connect Ainaloa Boulevard to 9 Road in Hawaiian Acres subdivision. Parts of 9 Road, F Road, and 8 Road would be rebuilt. Ainaloa Boulevard may or may not be rebuilt.

It-and-fill techniques are planned to "smooth out" lava ridges containing Kazumura and other caves, according to Mr. Olesen. The caves themselves are to be "collapsed", unless declared "significant" by the archaeologists. Among those which would be crossed by this "emergency road" are Kazumura Cave, Keala Cave, the D Road Cave System, Pirates Cave and possibly Fern's Cave. Others are believed to be in its path also. Kazumura Cave is the longest lava tube cave in the world, with about 34 miles mapped and exploration continuing. With more than 5 miles of passages, Keala Cave also is a first-class, and exploration and mapping are incomplete in the D Road Cave System. Depending on plans for Ainaloa Boulevard, Lower Uliani Cave also may be harmed; it has been nominated for inclusion in the Hawaii State Natural Area Reserve System. The others also contain notable geologic, logic, cultural, and other resources and values.

An announcement was made at the monthly meeting of the Board of Directors of the Hawaiian Acres Community Association, a large subdivision containing much of the cave area and home to numerous cavers and speleologists. In answer to a question, Mr. Olesen said he would "try to save the caves" but "it" "know anything about speleologists," and relied on archaeologists for information on caves.

Olesen further stated that an Environmental Assessment must be done before the road is built. To obtain information on the Environmental Assessment and how to provide input, write to:
Norman Olesen, Deputy Director
Hawaii County Planning Department
Lupuni Street
Hilo, HI 96720

Printed 10/28/95 by William R. Halliday PO Box 1526 Hilo, HI 96721 or 6530 Cornwall Court
Hilo, HI 96720

Link to CCMS Main Menu

Hawaii Speleological Survey

of the
National Speleological Society

WILLIAM R. HALLIDAY
Chairman

P.O. Box 1526
Hilo, HI 96721

Address until 16 January 1996:
6530 Cornwell Court
Nashville, TN 37205

10 December 1995

Hon. Stephen Yamashiro
Office of the Mayor
25 Aupuni Street
Hilo, HI 96720

Dear Mayor Yamashiro: re: protection of Puna caves

Ever since our initial discussions with Mr. Olesen about protection of Puna caves from the Puna Emergency Access Road, he made a point -- quite forcefully -- of insisting that the County would proceed "by the book" in this project.

Enclosed is a copy of relevant excerpts from Federal Register, Vol. 46, no. 55, March 23, 1981, pages 18037-18038.

Mr. Olesen has repeatedly stated that the EA for this project is "a mere formality", and that the County is not bound by it.

It appears strongly that "going by the book" in this matter will include compliance with these requirements of CEQ.

Very sincerely yours,

W.R.H.

William R. Halliday

cc: HSS ExCom
selected cooperators

Please note that the section numbers in the attached should be rechecked. Some of the true print in the 2nd generation photocopy, from which the attached was extracted, was a bit blurred

1:74

207

EXTRACT FROM:

Council on Environmental Quality. Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations. Federal Register, Vol. 46, no. 55, Monday March 23, 1981/ Rules and Regulations. Memorandum for Federal NEPA Liaisons, Federal State, and Local Officials and Other Persons Involved in the NEPA Process. p 18028-18038. From pages 18037 and 18038:

36a. Q. How long and detailed must an environmental assessment (EA) be?

A. The environmental assessment is a concise public document which has three defined functions.

(1) It briefly provides sufficient evidence and analysis for determining whether to prepare an EIS;

(2) it aids an agency's compliance with NEPA when no EIS is necessary, i.e. it helps to identify better alternatives and mitigation measures; and

(3) it facilitates preparation of an EIS when one is necessary. Section 1508.9(a).

Since the EA is a concise document, it should not contain long descriptions or detailed data which the agency may have gathered. Rather, it should contain a brief discussion of the need for the proposal, the environmental impacts of the proposed action and alternatives, and a list of agencies and persons consulted. Section 1508.9(b).

While the regulations do not contain page limits for EA's, the Council has generally advised agencies to keep the length of EA's to not more than approximately 10-15 pages...To avoid undue length, the EA may incorporate by reference background data to support its concise discussion of the proposal and relevant issues.

36b. Q. Under what circumstances is an lengthy EA appropriate?

A. Agencies should avoid preparing lengthy EAs except in unusual cases, where a proposal is so complex that a concise document cannot meet the goals of Section 1508.9 and where it is extremely difficult to determine whether the proposal could have significant environmental effects. In most cases, however, a lengthy EA indicates that an EIS is needed.

37a. Q. What is the level of detail of information that must be included in a finding of no significant impact (FONSI)?

11/11/1995
GOVERNMENT OF HAWAII



DEPARTMENT OF LAND AND NATURAL RESOURCES
STATE HISTORIC PRESERVATION DIVISION
33 SOUTH KING STREET, 8TH FLOOR
HONOLULU, HAWAII 96813

MICHAEL D. WELDON, ENVIRONMENTAL
MANAGER
DIVISION OF LAND AND NATURAL RESOURCES

DEPUTY
SHERIFF COLLEGE
AGRICULTURE DEVELOPMENT
PROGRAM
ADULT EDUCATION
CONSULTATION AND
TECHNOLOGICAL AFFAIRS
RESEARCH AND
CONSERVATION DIVISION
CONSERVATION AND
RESTORATION DIVISION
PLANNING AND DESIGN
DIVISION
LAND AND WATER
MANAGEMENT
DIVISION
WATER AND LAND DEVELOPMENT

December 18, 1995

William R. Halliday
6530 Cornwall Court
Nashville, TN 37205

Dear Dr. Halliday:

Subject: Potential Impact of the Proposed Puna Emergency Road on Lava Resources.
Waikakeke Nui and Iki and Koaau, Puna, Hawaii Island
TMK: 1-6, various parcels

LOG NO: 16118
DOC NO: 9512hm03

Thank you for your letter of December 4, 1995, in which you express concern about the proposed construction of an emergency road in Puna by Hawaii County. We share your concerns and those expressed by others that this proposed project could, if not carefully planned, have an effect on lava tubes in the area and the significant historic resources these tubes often contain.

An explanation of our regulatory role in these kinds of projects may best answer most of your questions. Under Chapter 6E-8 (H.R.S.), our office must review any project undertaken by State and County agencies that may affect historic properties or burial sites. The project can not proceed without our written concurrence. As this project appears to be funded by Hawaii County, they are required to give us the opportunity to review the project and to supply us with sufficient information to evaluate the potential effects of road construction and use on historic properties. If we feel we do not have sufficient information to assess these effects, we will not concur that the project can proceed. Our ability to place conditions on projects in regard to historic sites is greater under Chapter 6E than under Chapter 343 which is the State law mandating public disclosure through the Environment Assessment (EA) or Impact Statement (EIS) process. We do, however, routinely review most Assessments and Impact Statements submitted under Chapter 343 and expect to review the EA being prepared in this case. When assessing this project through either process, we will want clear descriptions of what efforts have been made to locate lava tubes passing under the road; an assessment of historic properties found in or near any tube segments identified; and proposed measures to prevent or mitigate any adverse effects on these resources. The submitted documents should also describe what construction techniques (paving, widening or cut and fill grading) will be used to improve the emergency road and other project components so that we can assess any potential impacts on historic sites. Until we receive this kind of information, it is premature for us to comment specifically on the proposed emergency road.

A. Public review is necessary, for example, (a) if the proposal is a borderline case, i.e. when there is a reasonable argument for preparation of an EIS; (b) if it is an unusual case, a new kind of action, or a precedent setting case such as a first intrusion into a pristine area; (c) when there is either scientific or public controversy over the proposal; or (d) when it involves a proposal which normally requires preparation of an EIS. Sections 1501.4(e)(2), 1508.27. Agencies must also allow a period of public review of the FONSI if the proposed action would be located in a floodplain or wetland...

38. Q. Must [EAs] and FONSI be made public? If so, how should this be done?

A. Yes, they must be available to the public. Section 1508.6 requires agencies to involve the public in implementing their NEPA procedures, and this includes public involvement in the preparation of EAs and FONSI. These are public "environmental documents" under section 1508.6(b), and, therefore, agencies must give public notice of their availability. A combination of methods may be used to give notice, and the methods should be tailored to the needs of particular cases... Local newspaper notices may be more appropriate for regional or site-specific proposals.

The objective, however, is to notify all interested or affected parties. If this is not being achieved, then the methods should be reevaluated and changed. Repeated failure to reach the interested or affected public would be interpreted as a violation of the regulations.

39. Q. Can an EA and FONSI be used to impose enforceable mitigation measures, monitoring programs, or other requirements, even though there is no requirement in the regulations in such cases for a formal Record of Decision?

A. Yes. In cases where an environmental assessment is the appropriate environmental document, there still may be mitigation measures or alternatives that would be desirable to consider and adopt even though the impacts of the proposal will not be "significant." In such cases, the EA should include a discussion of these measures or alternatives to "assist agency planning and decisionmaking" and to "aid an agency's compliance with [NEPA] when no environmental impact statement is necessary." Section 1501.3(b), 1506.9(a) (2). The appropriate mitigation measures can be imposed as enforceable permit conditions, or adopted as part of the agency final decision in the same manner mitigation measures are adopted in the formal Record of Decision that is required in EIS cases.

William R. Halliday
Page 2

As for your specific questions about Federal and State Environmental Assessments and Impact Statements, we suggest that you contact the Office of Environmental Quality Control which administers the State's environmental review process. They can be reached at the following address:

Gary Gill, Director
Office of Environmental Quality Control
220 South King Street
Central Pacific Plaza, Suite 400
Honolulu, Hawaii 96813

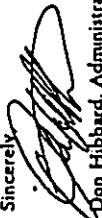
Tel: (808) 586-4185
Fax: (808) 586-2452

Our role in assessing the effects of Federal undertakings on historic sites in Hawaii is defined under the National Historic Preservation Act. This process essentially parallels that which we follow in reviewing State and County projects. This law only applies, however, when there is a direct Federal presence in a project. This presence includes Federal funding, permits or licenses. We do not know yet if Federal funds are being used for the Puna emergency road.

As you are probably aware, our office only has jurisdiction over historic sites, most frequently man-made remnants of the past, burials or culturally significant and distinct landscape features. Thus it is generally beyond our jurisdiction to consider long lava tube segments in which no historic sites are present, particularly when these segments are not on State lands. As much as we may value the lava tubes themselves and their resources, it is also difficult for us to procedurally protect large tube systems as a whole when they run almost entirely beneath multiple, privately-held parcels.

In your letter of December 3, 1995 (Halliday to Yamashiro), you characterize the northern flank of Kilauea's east rift zone as "the world's greatest concentration of these caves" and note that scientific and other visitors to these caves contribute considerable sums to the economy of Hawaii Island. We note that our Division does not encourage viewing lava tubes as an economic resource because uncontrolled visitation could and has damaged historic properties within lava tubes. A number of Native Hawaiians have also expressed concern that such visits are disrespectful when so many lava tubes were used for burial.

Sincerely,


Don Hibbard, Administrator
Historic Preservation Division

HM:jk

cc: Virginia Goldstein, Planning Dept., County of Hawaii

Stephen K. Yamashiro
Mayor



County of Hawaii

DEPARTMENT OF PUBLIC WORKS
25 August Street, Room 202 • P.O. Box 94720-4232
(808) 941-4231 • Fax (808) 949-7138

December 18, 1995

MEMORANDUM

TO: William Davis, Managing Director
FROM: Jiro Sumada, Deputy Chief Engineer

SUBJECT: PUNA EMERGENCY ROAD AND CAVE ENTRUSTASYS

As per the request made in the attached letter, I met with Mr. Ole' Fulk's and other speleologists on December 12, 1995. We toured 8th Road in Hawaiian Acres to point out various cave sites and explained their concerns. As far as the emergency road through Hawaiian Acres, I feel there is no potential conflicts with the resurfacing work planned for the emergency road. However, during the tour, Mr. Fulk's did identify a possible concern regarding a cave beneath a road in the Aialoa Subdivision that has a very thin roof.

I'm planning to investigate the cave in January 1996 with one of our engineers. Until then I'll be writing to Corporation Council for their opinion on what responsibility we have for potential problems on a private road that the general public has access to.

In regards to Mr. Fulk's concerns, he and the other speleologists are satisfied that we will be addressing their concerns in the Environmental Assessment for the Puna Emergency Road project. At this point in time, I recommend we let the "system" work to bring up and solve any problems or concerns Mr. Fulk's or other speleologists may have about the subject project.

cc: Norman Olesen, Deputy Planning Director
ENC

14313

Hawaii Speleological Survey

of the
National Speleological Society

WILLIAM R. HALLIDAY
Chairman

P.O. Box 1526
Hilo, HI 96721

Address until 16 January 1996:
6530 Cornwall Court
Nashville, TN 37205

17 December 1995

Ron Terry, PhD
Geo Metrician
HCR 9575
Keaau, HI 96749

Dear Dr. Terry:

re: protection of Puna caves

The Hawaii Speleological Survey has been informed by the Office of the Mayor that if it has any further input into the EA process for the Puna Emergency Access Road, this would be the time to express concerns and mitigation plans. Consequently the H.S.S. proposes and requests that you consider the following:

1) Insignificant issues not requiring mitigation

Possible impact of road reconstruction on Kazumura and Keala caves.

By letter of November 28, 1995 by Mr. Norman Olesen (copy enclosed for your easy reference), the County has determined that no cut-and fill roadwork is necessary over these caves. Therefore it is unlikely that either of these caves or their features, resources, and values will be impacted by the road project.

This represents a change in the project as originally announced by Mr. Olesen, and we request that you clarify this in the EA.

2) Significant issues which can be mitigated

(a) Impact of road reconstruction on Pole 46 Cave

The overburden of this cave is less than those of Kazumura and Keala caves at the locations overcrossed by 8 Road. (The specific thickness is expected to be obtained later this month, by H.S.S. members/cooperators using state-of-the-art instruments.)

This cave has not been mapped and its features, resources, and values have not been inventoried. However, initial observations revealed that, in the section beneath 8 Road, geological rheogenic features are Class V (exceptional), on a scale of 1 to 5. Some of the types of flow patterns here are undescribed in the scientific literature and are unequalled in reports to the H.S.S.

Mitigation of the lack of inventory of biological and other non-geological resources and values of this cave can be accomplished in either of two ways:

- (1) detailed inventory of the biological features by Dr. Fred Stone of Hilo Community College or some other qualified bio-speleologist, plus
- (2) detailed inventories of other spelean features by members of the Hawaii Speleological Survey or other qualified general speleologist. (The Hawaii Speleological Survey is prepared to undertake this in early 1996, at no cost.)

or by exclusion of this short segment of 8 Road until such inventories can be accomplished.

Mitigation of the thinness of the overburden, if found necessary, can be accomplished in at least two ways:

- (1) strengthening the overburden by use of road construction techniques commonly employed in bridge approaches, or
- (2) determination by the Mayor's office that (like Kazumura and Keala caves), no cut-and-fill road construction techniques are necessary here.

Neither of these would provide 100% certainty of mitigation, and monitoring should be provided during the road reconstruction here. Alternative (1) would provide much greater assurance than Alternative (2). If the overburden is found to be alarmingly thin, Alternative (2) would not be appropriate.

Still another alternative would be possible, but this must be considered a last resort because of its severe impact on the cave:

- (2) emplacement of a length of human-diameter pipe in the part of the cave beneath the road, plus "collapsing" the cave.

This would maintain the structural integrity of the cave, permitting normal air flow and passage of biota (including humans).

- (b) Impact of road reconstruction on Lower Uilani Cave

Ainaloa Boulevard was not part of the Emergency Access Road proposal as originally announced by the Mayor's spokesman (Mr. Norman Olesen). It appears that it was added without due consideration of the probable vehicular hazard existing at the undercrossing of Lower Uilani Cave.

This is a large and important cave. It is the only one in Puna which has been nominated for inclusion in the Hawaii State Natural Area Reserve System. You previously have received information on its features and significance and recommendations for its management. When Ainaloa Boulevard was originally built, the main entrance was filled and the road constructed atop the fill. However the fill did not completely obliterate the cave passage, and an alarmingly thin, cracked section of overburden underlies a short section of the road.

The Hawaii Speleological Survey believes that several approaches to mitigation of this problem should be considered, and that this mitigation should be considered together with correction of the apparent vehicular hazard here. The cost of dealing constructively with the vehicular hazard here may be so great that it would divert an unacceptable percentage of the total funds from the remainder of the Emergency Road and therefore it should be excluded from the Emergency Road project.

Hawaii Speleological Survey Report #93-01 specifies various alternatives to constructive management of this problem. These should be considered also in the context of mitigation of this short section of Ainaloa Boulevard as to be part of the Emergency Road project. However two additional approaches to mitigation appear simpler at this time:

- (1) exclusion of this short segment of Ainaloa Boulevard from the Puna Emergency Access Road, or
- (2) if Ainaloa Boulevard has not yet been purchased by the County, elimination of this short section from purchase plans.

The Hawaii Speleological Survey recommends and urges that the project be modified in one of these latter ways.

Regarding a different matter, in August 1995 the spokesman for the Office of the Mayor in this matter, Mr. Norman Olesen, made a verbal agreement with three members/cooperators of the H.S.S. that the EA contractee would perform a "walk-through" of the potentially impacted sections of caves. The purpose of this was first-hand observation of potentially impacted cave resources and values.

In his letter of November 28, 1995 (attached), Mr. Olesen states that this was a misunderstanding, and no such "walk-through" will be done. The stated reasons are "liability" and the need for permission to enter private property. His understanding or not, the Hawaii Speleological Survey is about to suggest to the Office of the Mayor that it would be beneficial to all concerned if "walk-throughs" are, in fact, performed. The H.S.S. is prepared to provide field support for this, at almost any time of your choice, at no expense to you, your firm, or the County. We are hopeful that your EA will contain everything necessary to avoid the need for an EIA/EIS which would delay the construction of the Emergency Road.

It is our understanding that some of us will accompany staff of the Public Works Department of the County in Lower Uilani Cave, in mid-to late January. If the EA can wait that long, that would seem to be an ideal time for your walkthrough there.

For the other cave (Pole 46 Cave), this can be done quickly and easily, on almost any day you choose. A walk-through of Lower Uilani Cave before mid-January would require about 1/2 day, also on almost any day you choose. Arrangements for either or both of these can be made through Olé Fuks or Bill McClellan, both of whom I think you know.

Also I am enclosing a recent letter from the Northwest Chapter of the American Cave Conservation Association, which may have come too recently to have reached you through the Mayor's Office. In my opinion, it merits very serious consideration.

The Hawaii Speleological Survey is a non-profit public service organization which makes no charge for any service other than excessive photocopying. Please call on us whenever we can be of service in this or other matters related to caves of Hawaii.

Sincerely yours,

William R. Halliday
William R. Halliday
Chairman

cc: H.S.S. ExCom
N.S.S. Conservation Chairman
NW Chapter, ACCA
Olé Fuks and Bill McClellan
selected cooperators
Mr. Norman Olesen



DEPARTMENT OF GEOLOGY
BOX 87103
TEMPE, AZ 85287-1004

602265-7045

FAX 602265-8102

INTERNET: Greeley@asu.edu

December 14, 1995

The Honorable Stephen Yamashiro
Mayor of Hawaii County
25 Aupuni Street
Hilo, HI 96720

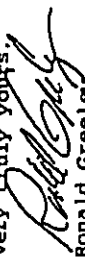
Dear Mayor Yamashiro:

This letter is written in regard to the Puna Emergency Road and the Environmental Assessment, which I understand is soon to be contracted.

The emergency road falls within the Puna lava tube cave area. This area contains an unprecedented wealth of geological features, many of which are extremely fragile and unique. I have been engaged in scientific research on lava tubes through NASA and other sponsors for more than a quarter century throughout the world. The features and relationships exhibited in the Puna caves are critically important for understanding the formation and evolution of lava tubes and their role in the emplacement of lava flows. Gaining this understanding is important not just for the sake of science, but ultimately will enable the development of predictive models of lava flow behavior for use in the mitigation of volcanic hazards. Because Kazumura and other caves are so important in this regard, I have brought students, post-graduates, and research groups to the Puna district to study these features since 1974.

Because of the importance of the area to geologic research, you can imagine my concern regarding road construction and possible damage to key features. I assume that an analysis of the potential impact on the caves will be included in the Environmental Assessment, and I would appreciate receiving a copy in sufficient time to comment on the contents. Would you please indicate how I can obtain a copy.

Very truly yours,


Ronald Greeley
Professor of Geology

cc: W. Halliday
RG/be

Hawaii Speleological Survey

of the
National Speleological Society

WILLIAM R. HALLIDAY
Chairman

P.O. Box 1526
Hilo, HI 96721

Address until 16 January 1996:
6530 Cornwall Court
Nashville, TN 37205

15 December 1995


Mr. Ron Terry
HCR 1 BDX 9575
Keaau, HI 96749

Dear Mr. Terry:

re: protection of Lower Uliani Cave

After mailing the material to you, it occurred to me that I should have included H.S.S. Report #93-03, entitled CONSIDERATIONS OF LOWER ULIANI CAVE FOR INCLUSION IN THE HAWAII NATURAL AREA RESERVE SYSTEM. Here it is.

Aloha,


William R. Halliday
Chairman

cc: HSS ExCom
selected cooperators

Hawaii Speleological Survey

of the
National Speleological Society

WILLIAM R. HALLIDAY
Chairman

P.O. Box 1526
Hilo, HI 96721

Address until 16 January 1996:
6530 Cornwall Court
Nashville, TN 37205

14 December 1995

Mr. Ron Terry
HCR 1 Box 9575
Keauhou, HI 96749

Dear Mr. Terry:

re: protection of Puna caves

It was pleasant talking briefly with you tonight and I look forward to the letter you said was coming.

Per our conversation, here is a copy of the H.S.S. report on resources, values, and hazards of Puna caves.

Also I am enclosing a larger map of Lower Uliani Cave than I think you would have received from Mr. Olesen.

Aloha,

WRH
William R. Halliday

cc: HSS ExCom
selected cooperators

Encl: HSS Report # 95-01
11x17 map, Lower Uliani Cave
11x17 map, Kazumura and Keala Caves

NATIONAL
SPELEOLOGICAL
SOCIETY, INC. **NSS**
DEDICATED TO THE EXPLORATION, STUDY AND CONSERVATION OF CAVES

December 12, 1995

Mr. Norman Olesen
Deputy Director
Hawaii County Planning Department
25 Aupuni Street
Hilo, HI 96720

Subject: Road Development in the Vicinity of Kazumura Cave

Dear Mr. Olesen,

In the past several months your office has received several letters from prominent researchers in the field of vulcanospeleology concerning potential road alterations in the vicinity of the Ainaloa and Hawaiian Acres subdivisions and the potential for deleterious impact on Kazumura Cave.

The extraordinary scientific and cultural value of Kazumura Cave has been out lined extensively by those researchers.

As president of the National Speleological Society, I am concerned about your response to Dr. Ronald Greeley of November 3, 1995. In your response you said:

I have informed Mr. (sic) Halliday of the Hawaii Speleological Society of the National Speleological Society that the County of Hawaii has no intention of deliberately destroying lava tubes. If during the resurfacing of the road any tubes are accidentally uncovered, then they must be reviewed on a case by case basis.

14193

REPLATED WITH THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE

Ken K. Yamashiro
Mayor



William C. Davis
Managing Director
Henry Cho
Deputy Managing Director

County of Hawaii

25 Aupuni Street, Room 215 • Hilo, Hawaii 96720-2121 • (808) 941-4211 • Fax (808) 941-4553
KONA: 75-5706 Kauhala Highway, Suite 103 • Kailua-Kona, Hawaii 96740
(808) 235-5226 • Fax (808) 232-5443

December 11, 1995

Mr. William R. Halliday
6530 Cornwell Court
Nashville, TN 37205

Dear Mr. Halliday:

Re: Puna Emergency Access Road

This will acknowledge receipt of your letters dated November 30, 1995, and December 4, 1995, addressed to Norman Olesen and your correspondence to Mayor Stephen Yamashiro dated December 3, 1995.

In accordance with County of Hawaii purchasing procedures, a consultant contract for the preparation of the Environmental Assessment has been made with:

Dr. Ron Terry
GEO Metrician
HCR 9575
Keaau, Hawaii 96749

As I have stated previously, all correspondence regarding caves has been forwarded to Dr. Terry, including H.S.S. Report #93-01 and H.S.S. Report #95-01 for his review. Dr. Terry is familiar with the various issues involved regarding caves on the Big Island.

Dr. Terry will be holding meetings with the membership of both the Ainaloa and Hawaiian Acres subdivisions in order to obtain their input. If you have any further input, other than what has been received by this office, this would be the time to express your concerns and any mitigating plans that you may deem appropriate regarding construction of the Emergency Road.

It is currently anticipated that the Draft Environmental Assessment will be ready for review and submittal to the Office of Environmental Quality Control (OEQC) by January 15, 1996.

(2)

Kazumura Cave mandates a totally different response. To merely plan to react to a situation that may develop is inexcusable. Your county contains an Hawaiian treasure in Kazumura. I strongly encourage you to not remain reactive but to become proactive in ensuring any development in the area considers protection of the cave and its scientific and cultural resources as a prime requirement. It is my opinion that the County can not permit any action that does not fully protect the cave and all steps should be taken to that end.

You are indeed blessed to have one of the world's foremost authorities on vulcanospeleology, Dr. William Halliday, available and willing to assist you in protecting a Hawaiian treasure. I urge you make full use of his skills, and those of the Hawaiian Speleological Survey, in developing your plans to protect Kazumura Cave.

Sincerely,

David Luckins, President
National Speleological Society, Inc.
3683 Oakleaf Drive
West Bloomfield, MI 48324-2545


CC: Dr. Ronald Greeley
Dr. William Halliday

Mr. William R. Halliday
December 11, 1995
Page 2

A courtesy copy of the Draft Environmental Assessment will be held in this office for you or your authorized representative, per your instructions in your December 4, 1995, correspondence.

If there has been any misunderstanding in the past, I am confident that all your concerns will be properly taken under consideration by the consultant. If I can be of any further assistance, please feel free to contact me at (808) 961-8565.

Sincerely,


Norman Olesen
Deputy Planning Director

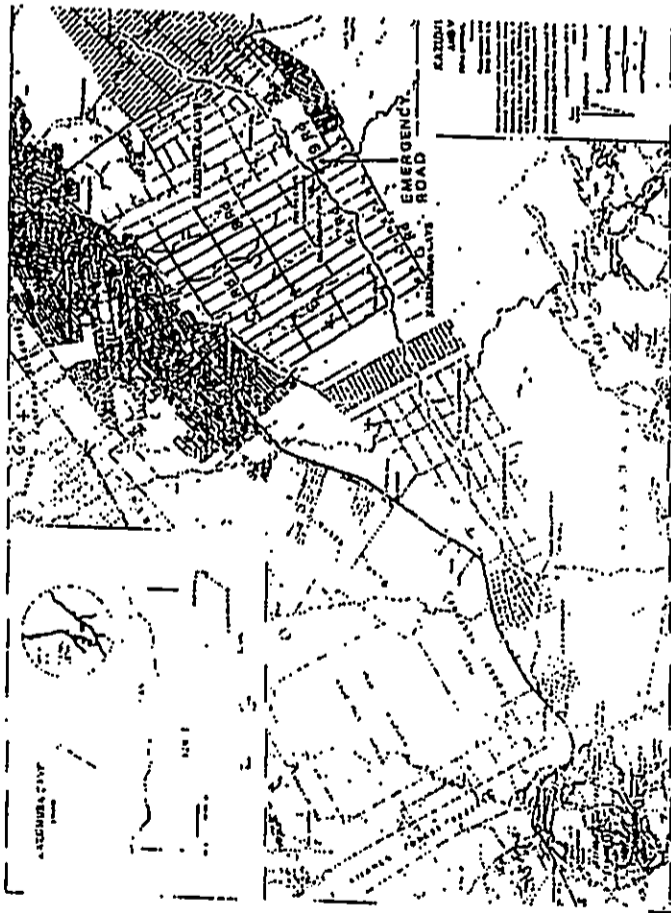
cc: Mayor Stephen K. Yamashiro
Dr. Ron Terry, GEO Metrician
Ainaloa Community Association
Hawaiian Acres Community Association

Current Status of the Emergency Road Emergency

William R. Halliday

Posted 12/11/95. Hot Current Information

Staff of the County of Hawaii have disseminated false and misleading information about the Puna Emergency Access Road, and also have added Ainaloa Boulevard to the project. Because of the vehicular hazard resulting from Lower Uilani Cave beneath the latter, the County will have to deal with that cave separately. In 1993 it was notified of that hazard and ways to deal with it while preserving the exceptional geological features of that cave. Subsequently Lower Uilani Cave was nominated for inclusion in the state's Natural-Area Preserve System. At that time, this was a private road. Now that it is about to become County property, I have notified Harry Kim, County chief of Civil Defense, about this hazard and the best ways to deal with it. The Mayor's position, however, seems to be that if bulldozers have passed over caves in the past, there is no danger of them falling into them in the future. He has been notified that this is not true. Already in 1995, two dozers have fallen in on the map. Ainaloa Boulevard is the street running NE to Highway 130 from the east end of the heavy line marking the remainder of the Emergency Road (a new street connecting Ainaloa Boulevard and 9 Road).



The Mayor's office is playing word games. Its spokesman insists that it will not collapse caves intentionally but is silent about collapsing them incidentally to insure completion of the project on schedule and within budget. Readers will recall that in August, Mr. Norman Olesen announced that caves encountered incidentally in upgrading present roads would be collapsed in this specific word. The County has never altered this position.

Further, Mr. Olesen stated that the roadbed would be leveled by "cut-and-fill" techniques before asphaltting, with specific reference to ridges thought to contain caves. This position also remains unchanged. Bill McClellan and Ole Fuulks have volunteered to show County engineers, with an error of no more than 25 feet, that there are no ridges over the caves, and thus no need for "cut-and-fill" in the cave areas. As of November 30, Mr. Olesen has refused to allow this.

The Environmental Assessment project was to have begun the week of December 5. It is scheduled to be completed in about 1 month, and Mr. Olesen told Bill McClellan that the caves would not be included. Previously he has spoken of the EA only being a formality. This raises the possibility that the Mayor's Office is planning a spurious FONSI (Finding of No Significant Impact). The Mayor's office received numerous protests from all over the world even before the EA was begun, with documentation of environmental resources at risk. This alone should have required a detailed Environmental Impact Assessment, not a mere EA. The Hawaii Speleological Survey has asked the Mayor to relieve Mr. Olesen of responsibility for this matter.

Beginning in mid-January there will be a 30-day period for input of comments on the EA report. Be prepared to write quickly and effectively.

Hawaii Speleological Survey

of the
National Speleological Society

WILLIAM R. HALLIDAY
Chairman
P.O. Box 4526
Hilo, HI 96721

Address until 16 January 1996:
6530 Cornwell Court
Nashville, TN 37205

11 December 1995

Hon. Stephen Yamashiro
Office of the Mayor
25 Aupuni Street
Hilo, HI 96720

Dear Mr. Yamashiro: re: protection of Puna caves

Enclosed is a photocopy of a strange letter from your spokesman, Mr. Norman Olesen, dated November 29, 1995.

In this letter, Mr. Olesen makes reference to "all the letters and comments you (meaning me) have solicited via the Internet."

I am computer illiterate, do not use the Internet, and do not know how to solicit anything on the Internet.

I heard from Bill McClellan that Mr. Olesen had received some input evidently arising from something on the Internet, and that it had my name on it. I would like to know what this is, and who responded to it. Please send me anything you can which will clarify this curious matter.

Regarding the other matters in this letter of November 29, we await your response to my letter of December 3, 1995 to you.

Meanwhile I am going to look into the Internet. It seems to be something that might be useful in our dissemination of the content and text of the EA or EIS.

In any event, this letter of November 29 reinforces our impression that Mr. Olesen should be replaced as your spokesman in this delicate matter.

Very sincerely yours,

William R. Halliday

William R. Halliday

cc: HSS ExCom
Selected cooperators

P.S. Please also send me a copy of the full text of the proposal for which the EA or EIS will be done.

PPS. Regarding the paragraph on page 2 of the letter of November 29, vember, does that mean beginning November 29?

Hawaii Speleological Survey

of the
National Speleological Society

WILLIAM R. HALLIDAY
Chairman

P.O. Box 1526
Hilo, HI 96721

Address until 16 January 1996:

6530 Cornwall Court
Nashville, TN 37205

10 December 1995

Hon. Stephen Yamashiro
Office of the Mayor
25 Aupuni Street
Hilo, HI 96720

Dear Mayor Yamashiro: re: protection of Puna caves

Ever since our initial discussions with Mr. Olesen about protection of Puna caves from the Puna Emergency Access Road, he made a point -- quite forcefully -- of insisting that the County would proceed "by the book" in this project.

Enclosed is a copy of relevant excerpts from Federal Register, Vol. 46, no. 55, March 23, 1981, pages 18037-18038.

Mr. Olesen has repeatedly stated that the EA for this project is "a mere formality", and that the County is not bound by it.

It appears strongly that "going by the book" in this matter will include compliance with these requirements of CEQ.

Very sincerely yours,

WRH
William R. Halliday

cc: HSS ExCom
selected cooperators

Please note that the section numbers in the attached should be rechecked. Some of the true print in the 2nd generation photcopy, from which the attached was extracted, was a bit blurred.

EXTRACT FROM:

Council on Environmental Quality. Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations. Federal Register, Vol. 46, no. 55, Monday March 23, 1981/ Rules and Regulations. Memorandum for Federal NEPA Liaisons, Federal State, and Local Officials and Other Persons Involved in the NEPA Process. p 18028-18038. From pages 18037 and 18038:

36a. Q. How long and detailed must an environmental assessment [EA] be?
A. The environmental assessment is a concise public document which has three defined functions.

(1) It briefly provides sufficient evidence and analysis for determining whether to prepare an EIS;

(2) It aids an agency's compliance with NEPA when no EIS is necessary, i.e. it helps to identify better alternatives and mitigation measures; and

(3) It facilitates preparation of an EIS when one is necessary. Section 1508.9(a).

Since the EA is a concise document, it should not contain long descriptions or detailed data which the agency may have gathered. Rather, it should contain a brief discussion of the need for the proposal, the environmental impacts of the action and alternatives, and a list of agencies and persons consulted. Section 1508.9(b).

While the regulations do not contain page limits for EA's, the Council has generally advised agencies to keep the length of EA's to not more than approximately 10-15 pages. To avoid undue length, the EA may incorporate by reference background data to support its concise discussion of the proposal and relevant issues.

36b. Q. Under what circumstances is an lengthy EA appropriate?

A. Agencies should avoid preparing lengthy EAs except in unusual cases, where a proposal is so complex that a concise document cannot meet the goals of Section 1508.9 and where it is extremely difficult to determine whether the proposal could have significant environmental effects. In most cases, however, a lengthy EA indicates that an EIS is needed.

37a. Q. What is the level of detail of information that must be included in a finding of no significant impact (FONSI)?



NORTHWEST CHAPTER
OF THE

AMERICAN CAVE CONSERVATION ASSOCIATION

12178 Lewis River Road
Ariel, WA 98603
December 8, 1995

Mr. Norman Olesen
Deputy Director
Hawaii County Planning Department
25 Aupuni Street
Hilo, Hawaii 96720

Dear Mr. Olesen,

I am writing concerning a proposed project to widen roads to provide emergency access through the Puna lava cave area. This area contains Kazumura Cave, the longest lava tube in the world, and interestingly the deepest cave in the United States.

Any construction work that would threaten to break into and segment this cave is a significant conservation issue of international proportions. Prior to any work in the area a careful underground survey of the cave resources should be undertaken to determine the alignment of cave passages, so appropriate mitigation measures can be developed to prevent structural damage.

Hawaiian caves are recognized for their unique assemblages of cave adapted invertebrates and Kazumura Cave is no exception. Changes in cave environments caused by diversion of surface drainage, deforestation, or blockage of normal water percolation caused by surface activities, is known to impact cave ecosystems. A component of your pre-construction survey should include an assessment by a competent biologist familiar with Hawaiian cave fauna.

Many caves in the area are also noted for their use by early Hawaiians as refuges. Habitations, water collection sites, and for burials. Naturally any caves in the construction zone should be carefully examined by an archaeologist to determine if evidence of prehistoric use will be destroyed. Another concern is creating access to previously isolated caves which could promote looting of artifacts, or burials. If this is the case, some cave may need to be gated to prevent unauthorized entry. The responsibility for managing cave resources does not necessarily stop at the end of a project.

Please keep us informed of any developments in your plans, and allow us an opportunity to comment on your draft environmental assessment.

Sincerely,

Jim Nieland
JIM NIELAND
Director, ACCA

A. Public review is necessary, for example, (a) if the proposal is a borderline case, i.e. when there is a reasonable argument for preparation of an EIS; (b) if it is an unusual case, a new kind of action, or a precedent setting case such as a first intrusion into a pristine area; (c) when there is either scientific or public controversy over the proposal; or (d) when it involves a proposal which normally requires preparation of an EIS. Sections 1501.4(e)(2), 1508.27. Agencies must also allow a period of public review of the FONSI if the proposed action would be located in a floodplain or wetland...

38. Q. Must [EAs] and FONSI be made public? If so, how should this be done?


A. Yes, they must be available to the public. Section 1508.6 requires agencies to involve the public in implementing their NEPA procedures, and this includes public involvement in the preparation of EAs and FONSI. These are public "environmental documents" under section 1508.6(b), and, therefore, agencies must give public notice of their availability. A combination of methods may be used to give notice, and the methods should be tailored to the needs of particular cases... Local newspaper notices may be more appropriate for regional or site-specific proposals.

The objective, however, is to notify all interested or affected parties. If this is not being achieved, then the methods should be reevaluated and changed. Repeated failure to reach the interested or affected public would be interpreted as a violation of the regulations.

39. Q. Can an EA and FONSI be used to impose enforceable mitigation measures, monitoring programs, or other requirements, even though there is no requirement in the regulations in such cases for a formal Record of Decision?

A. Yes. In cases where an environmental assessment is the appropriate environmental document, there still may be mitigation measures or alternatives that would be desirable to consider and adopt even though the impacts of the proposal will not be "significant." In such cases, the EA should include a discussion of these measures or alternatives to "assist agency planning and decisionmaking" and to "aid an agency's compliance with [NEPA] when no environmental impact statement is necessary." Section 1501.3(b), 1508.9(a) (2). The appropriate mitigation measures can be imposed as enforceable permit conditions, or adopted as part of the agency final decision in the same manner mitigation measures are adopted in the formal Record of Decision that is required in EIS cases.

12/16/95 12:48:14 PM 18081967-8295


Community Management Associates
Box 6 • Waikeolu, Hawaii 96785
Bonnie Goodell (808) 967-7775
Gary Gill (808) 965-9269
Phone, Fax, Message: (808) 967-8295

DATE: 12-6-95
TO: Gary Gill, Director, Office of Environmental Quality Control
FROM: Bonnie Goodell
SUBJECT: Environmental Assessment Requirements Regarding Public Roadway Improvements Which May Affect Lava Tube Caves.

To follow up on our phone conversation, this is a request for information about what is required in an Environmental Assessment regarding lava tube caves that are located under a proposed public roadway project.

This is the situation:

The County of Hawaii, in a project of the Mayor's Office is proposing to adopt and improve the first of what will probably be a number of now-private roadways located in substandard subdivisions in Puna District on the Big Island. The Hawaii Speleological Survey and other speleologists have been involved for some time in exploring and mapping the system of lava tube caves in this area (the most extensive known worldwide). These tubes cross under existing roadways repeatedly. When these roads were originally built, the caves were ignored occasionally with disastrous consequences for bulldozer operators.

Now the situation has changed. Much more is known about the caves, including their unique biological systems and their use as burial sites by Hawaiians. In addition, they are involved with issues of flooding and non-point source pollution of ground water. To complicate matters, their cultural significance to native Hawaiians has led to an existing protocol in which their locations are not released publicly. (Holly McEldowney at the DLNR Historic Preservation Division is the source on this protocol.)

Some members of the community have asked my help to find out how this issue should be handled in an EA. This first public adoption of a private road project to provide the most basic public emergency services to a large area that is now isolated; this is a critical health and safety issue. At the same time, the community is concerned that this precedent-setting EA handle the lava tube issue up front, so that lava tube issues and considerations become SOP in future EAs.

CMA, Inc. re: EA issues for Lava Tube Caves

12-6-95

p. 2

So: Would a biological assessment be required of the part of the cave that would be affected by the roadway improvements?

Should mitigation include construction to preserve structural, biological and cultural integrity of the cave under the road?

Who is responsible to confirm cave locations in relation to public roadway projects?

Mahalo nui loa.

**Hawaiian
Acres**

Chartered 1961

Norman Oleson

COMMUNITY ASSOCIATION

POST OFFICE BOX 368

KURTISTOWN, HAWAII 96760

PHONE: (808) 966-9892

Honorable Mayor Steven Yamashiro
County of Hawaii
25 Aupuni St. Room 215
Hilo, Hawaii 96720

December 6, 1995

Dear Mayor Yamashiro:

It was recently brought to our attention by your Deputy Planning Director, Mr. Norman Oleson, that your office had received letters from speleologists concerned about the emergency access road project that we've all been working on for almost four years.

After a thorough review of their correspondences it is obvious that their concerns are unfounded and their information is inaccurate. Mr. Halliday and his supporters seem to be unaware that this project traverses private property and only proposes to strengthen roads, by paving them, which have been in use for thirty years. These are roads which have had the weight of D-9 caterpillars traveling on them for years without any damage to the privately owned lava tubes beneath them.

More importantly, however, it is the hope, desire and mandate of the residents of Hawaiian Acres that this Emergency Access Road project come to fruition by this time next year. I can not express too strongly our community's overwhelming support for this project and their gratitude to you for making it happen. Not only are we ecstatic over the return of some of our tax dollars in this community over the but we are thankful that our children and our residents in general can enjoy a safer life with the access of basic emergency response.

Please do not allow the adverse comments of a handful of non-residents and non-citizens to negatively impact a project that we have all worked so long to achieve.

We thank you wholeheartedly for your diligence in completing this emergency road project. If I can be of any further assistance please call me at any time at 982-7737.

Kindest regards,

David C. Taylor
David C. Taylor, President.

CC: Norman Oleson Keiko Bonk-Abramson
Al Smith Harry Kim

Hawaii Speleological Survey

of the
National Speleological Society

WILLIAM R. HALLIDAY
Chairman

P.O. Box 1526
Hilo, HI 96721

Address until 16 January 1996:
6530 Cornwall Court
Nashville, TN 37205

4 December 1995

Mr. Norman Oleson
Office of the Mayor
25 Aupuni Street
Hilo, HI 96720

Dear Mr. Oleson:

re: Protection of Puna Caves
We are aware that different dates have been mentioned for likely availability and distribution of the draft EA report for the Puna Emergency Road. Therefore it is necessary to alter my previous request to you.

I am leaving Nashville to fly to Honolulu on the morning of January 16. If the report can be mailed by the close of business hours on Friday January 12, I request that it be sent to the above Tennessee address by Express Mail.

An Express Mail stamp is enclosed for this purpose. If a single Express Mail stamp is insufficient to pay the postage, I will reimburse the County for the balance on arrival in Hilo on the evening of January 18.

If the report cannot be sent Express Mail on or before January 12, please hold it in your office for me or some other authorized person to pick up as soon as it becomes available. In that event, I will expect to also retrieve the Express Mail stamp.

Sincerely yours,

William R. Halliday
William R. Halliday

CC: HSS ExCom
selected cooperators
Hon. S. Yamashiro



Hawaii Speleological Survey

of the
National Speleological Society

WILLIAM R. HALLUDAY
Chairman

P.O. Box 1525
Hilo, HI 96721

Address until 16 January 1995:
6530 Cornwell Court
Nashville, TN 37205

3 December 1995

re: Protection of Puna caves

Hon. Stephen Yamashiro
Office of the Mayor
25 Aupuni Street
Hilo, HI 96720

Dear Mr. Mayor:

Thank you for your letter of 28 November 1995. We appreciate your making available to your contract consultant my letter of November 12 for review in the preparation of the Environmental Assessment Draft for the Puna Emergency Road. We look forward to receiving a copy of the notice of the bid process and of the notice of the awarding of the contract. Please forward these to my temporary TW address.

We have a serious problem with the last paragraph of your letter, however, namely: further contacts with Mr. Norman Olesen as your spokesman in this matter. We are doubtful that Mr. Olesen is representing you as you would like.

We request that, in this matter, you replace Mr. Olesen with someone experienced in resource management. Or, better yet, that you take on the personal direction of this matter.

The reason for this is simple. By his words and actions, Mr. Olesen has escalated what should have been a matter of quick, easy negotiation of a delicate matter into an international furor. It is the responsibility of every field science to protect the resource from which it draws its data, and we have lost all confidence in his ability to bring this needless controversy to a quick, mutually agreeable end.

Consider the facts:

1) Before the August 1995 meeting in Hawaiian Acres, several of us cordially introduced ourselves to Mr. Olesen, as speleologists.

During the meeting itself, Mr. Olesen stated -- in a clearly beligerent tone -- that he knew nothing about speleologists and relied on state archaeologists to determine if a cave is significant.

2) During the same meeting, Mr. Olesen firmly stated that caves encountered incidentally during road reconstruction would be "collapsed" -- his specific word.

3) Also during that meeting, Mr. Olesen specifically stated that road reconstruction would make use of "cut and fill" techniques

to level ridges believed to contain caves and thus to cut into the caves themselves.

4) The combined impression of these three points was a specific understanding that Mr. Olesen would not allow incidental damage to caves to stand in the way of completing the Puna Emergency Road on schedule and for the planned \$1 million.

5) This understanding was strengthened by his later statements that:
(a) the Environmental Assessment is only a "formality" (again his word), and

(b) the County is not bound by the Environmental Assessment nor by many other environmental regulations, and

(c) the Environmental Assessment is not going to include caves anyway (a statement made to Mr. Wm. McClellan Nov. 30),

(d) repeated references to the County "going exactly by the book", and not doing anything it doesn't have to do.

6) The environment does not end at ground level.

7) This matter could have been and still can be concluded quickly and amicably, if the County merely:

(a) agrees that there is no need for cut and fill techniques over any cave except perhaps Pirates Cave beneath F Road (which is of only minor importance), and

(b) agrees to comply with National Speleological Society policies, as follows:

No cave or cavernous area should be altered or modified without a full, balanced, and conservative study of the impact of such action, including input from knowledgeable persons specifically experienced in the exploration and scientific study of caves and cave resources.

Cave resources should be protected by keeping wild caves wild and free of human manipulations and alterations that hamper the free play of natural forces, endanger the cave and karst ecosystems, or diminish the pleasure of future visitors.

Special efforts should be made to preserve the integrity of ecological and hydrologic systems within caves and cavernous terrains.

Mr. Olesen's Planning Department had a copy of these policies long before the Emergency Road proposal was made.

To comply with these policies would merely mean maintaining the structural integrity of the major caves beneath the roads, by

any of a variety of usable techniques. Some of these are very inexpensive and pose no threat to the schedule or cost of the road.

With a membership of more than 12,000, the National Speleological Society is the world's largest speleological organization. It has an influential place in the leadership of the International Union of Speleology. The two organizations are interlocked in many ways. I happen to be Chairman of the IUS Commission on Volcanic Caves as well as Chairman of the Hawaii Speleological Survey of the National Speleological Society, honorary member for 1965 of that Society and a past member of its Board of Governors.

8) With an accuracy of about 25 feet (to be improved upon very soon), Mr. McClellan and Mr. Ole Fuks are ready, willing, and able to show your County engineers that there are no ridges over the major caves. Thus, "cut and fill" would be a non-issue except for Mr. Olesen's refusal to let County engineers go see this for themselves and report back to you. This refusal was expressed by Mr. Olesen to Mr. McClellan by telephone on 30 November 1995.

9) Mr. Olesen has violated an agreement with us that the contractor would perform a "walk-through" of each threatened cave with one or more of us who would point out, on-site, resources and values that should be considered in the Draft EA. In the telephone conversation of November 30, Mr. Olesen stated that this now will not occur.

10) Mr. Olesen has distributed false and misleading information about the road reconstruction and his discussions with us. Attached you will find, as examples, letters to him by Dr. Ronald Greeley and Mrs. Thomas Gojan, and his replies.

In his reply to Mrs. Gojan, you will note that he stated:

I have informed Mr. Halliday of the Hawaii Speleological Survey of the National Speleological Society that the County of Hawaii has no intention of deliberately destroying lava tubes.

This is the exact opposite of the truth. Mr. Olesen has never discussed "deliberately destroying lava tubes" with me. All the discussions have dealt with incidental "collapsing" of the caves, and at all times, the substance of his remarks has been that prevention of "collapsing" caves cannot be allowed to interfere with completing the road on schedule and for \$1 million.

11) In his reply to Mrs. Gojan, you will further note that he continued:

If during the surfacing of the road, any tubes are accidentally uncovered, then they must be reviewed on a case by case basis.

While this is a notably vague statement, it clearly does not repudiate the idea of "collapsing" "accidentally uncovered" caves.

12) In his replies to both Mrs. Gojan and Dr. Ronald Greeley, you will note that Mr. Olesen stated, in form letter paragraphs, that except for Alinaloa Boulevard (which is a special case discussed in my recent letter to Harry Kim of Hawaii County Civil Defense) the project would consist only of surfacing existing roads with asphalt and widening the shoulders.

Obviously this is untrue. An entire new connector road must be built from Alinaloa Boulevard to 9 Road, and extensive culvert construction has been announced as an essential part of the project. However, we acknowledge the possibility that this misstatement may be a forward step in disguise. This is because of the omission of mention of the alarming "cut and fill" technique in the statement. If this means that "cut and fill" has been dropped from the project, at least in the cave areas, we may be moving toward quick resolution of the problem.

I have already written to Mr. Olesen, asking him to confirm or deny that "cut and fill" indeed has been abandoned. I have received no response from him, and I ask that you clarify this immediately, in unequivocal language. As mentioned above, we would like to see this become a non-issue.

13) While we have consulted no attorney at this point, it is our understanding that any project which is likely to impact the habitat of animals nominated for the Federal or State endangered or threatened species list must have an Environmental Impact Study rather than a mere Environmental Assessment. Biospeleologist Dr. Fred Stone of Hilo Community College has told Mr. McClellan that he is preparing a list of such species in Kazumura Caves; the biota of the other caves has not yet been studied.

The EIS for the recent HELCO Pohoiki-Kaau transmission line dealt extensively with the need to protect these cave-adapted animals. This list should be incorporated into the Draft EA.

14) It is our similar understanding that an EIS is required (rather than a mere EA) if a project is likely to impact an archaeological or cultural site. Dr. Stephan Kempe has notified Mr. Olesen that Keala Cave contains such sites. So do Kazumura Cave, Pole 46 Cave and Lower Uilani Cave. Some data on this has been supplied to the Honolulu office of the State Historic Preservation Division, and more new data will be supplied to it soon.

15) It is our understanding that the County budget includes some Federal and state funds. Therefore Federal and state statutes on environmental protection should apply to this project.

Rather than perhaps needlessly raise an issue as to whether an EIS is needed instead of an EA, we simply ask that you insure that these considerations are fully included in the Draft EA. It is our belief that, in potentially impacting resources of

such major value, the County should voluntarily lean over backwards to protect them rather than to evade its moral responsibility by over-strictly "going by the book."

Especially as this can be accomplished so easily and inexpensively if someone other than Mr. Olesen is handling the problem.

16) As has been pointed out previously, this is the world's leading area for the scientific study of lava tube caves, their features and their contents. Famous geologists, biologists, and other scientists come here to study these caves, from all over the world. It is the world's greatest concentration of these caves, with a multitude of scientific and practical resources and values outlined in a report provided to the County Planning Department early this year. Scientific and other visitors to these caves spend considerable sums on the Big Island each year. The Big Island thus has a significant financial stake in protecting them as well as the less tangible stakes.

17) Mr. Olesen further has incited needless litigation. In his 30 November telephone conversation, he told Mr. McClellan that if we didn't like what he and/or the County was doing, we should go to court.

From his first contacts with us, Mr. Olesen has strongly maintained that the County will go strictly "by the book", and clearly he is the one who is interpreting "the book" in this matter.

Feedback from around the world has told us that Mr. Olesen's actions and words have concerned and outraged innumerable cavers and speleologists. This would have been needless if Mr. Olesen had proceeded in accord with the intent of environmental protection statutes. This has led to an immense drain on the administrative time of this and other speleological organizations throughout the world, and perhaps County of Hawaii personnel have been similarly affected.

We see no end of this in sight unless you intervene. We look forward hopefully to a quick, easy resolution of all this through your intervention. As I have written previously, the Hawaii Speleological Survey would like to be able to support the proposal for the Puna Emergency Road.

After a single further letter to Mr. Olesen about delivery of the courtesy copy of the Draft EA report which he has promised us, I shall address all further communications to you unless you notify us of some other person for this purpose. I continue to look forward to meeting with you during the second half of January.

Very sincerely yours,

William R. Halliday
William R. Halliday

cc: HSS ExCom
selected cooperators
attachments as stated

5

Ken K. Yamashiro
Mayor



William C. Davis
Managing Director
Henry Cho
Deputy Managing Director

County of Hawaii

23 Aupunani Street, Room 215 • Hilo, Hawaii 96720-4332 • (808) 941-8311 • Fax (808) 941-4333
KONA: 75-5704 Kulauna Highway, Suite 103 • Kailua-Kona, Hawaii 96742
(808) 325-5226 • Fax (808) 326-5643

November 30, 1995

Dr. Marlin Spike Werner
400 Hualani, Waialea Villas, Suite 191A
Hilo, HI 96720-4378

Dear Dr. Werner:

Thank you for your letter expressing concern regarding the caves existing in the lower Puna area.

You may supply input to the Environmental Assessment to this office specifying what specific considerations you wish to have reviewed. If you wish a draft copy of the Environmental Assessment sent to you, there will be a charge of \$1.00 for the first page and 10 cents for each and every page thereafter, including postage, payable in advance to the County of Hawaii by certified check or money order. At the time of submittal of the draft Environmental Assessment to the OEQC (Office of Environmental Quality Control) you will be notified of the total cost.

It is currently anticipated that the Draft Environmental Assessment will be ready for submittal on or before January 10, 1996.

Sincerely,

Norman Olesen
Norman Olesen
Deputy Planning Director

Stephen K. Yamashiro
Mayor



County of Hawaii

28 Aupuni Street, Room 215 • Hilo, Hawaii 96720-0212 • (808) 941-4711 • Fax (808) 941-4533
KONA: 75-5708 Kaula Highway, Suite 103 • Kailua-Kona, Hawaii 96740
(808) 328-3226 • Fax (808) 328-3643

William C. Davis
Managing Director
Henry Cho
Deputy Managing Director

November 30, 1995

Mr. John Hoffelt
208 Cheatham
Smyrna, TN 37167

Dear Mr. Hoffelt:

Thank you for your letter expressing concern regarding the caves existing in the lower Puna area.

You may supply input to the Environmental Assessment to this office specifying what specific considerations you wish to have reviewed. If you wish a draft copy of the Environmental Assessment sent to you, there will be a charge of \$1.00 for the first page and 10 cents for each and every page thereafter, including postage, payable in advance to the County of Hawaii by certified check or money order. At the time of submittal of the draft Environmental Assessment to the OEQC (Office of Environmental Quality Control) you will be notified of the total cost.

It is currently anticipated that the Draft Environmental Assessment will be ready for submittal on or before January 10, 1996.

Sincerely,

Norman Olesen
Deputy Planning Director

Hawaii Speleological Survey

of the
National Speleological Society

WILLIAM R. HALLIDAY
Chairman

P.O. Box 1526
Hilo, HI 96721

Address until 16 January 1996:
6530 Cornvall Court
Nashville, TN 37205

30 November 1995

Mr. Norman Olesen
Office of the Mayor
25 Aupuni Street
Hilo, HI 96720

Dear Mr. Olesen: re: protection of Puna caves
Bill McClellan telephoned me tonight after talking with you and informed me of the substance of your conversation with him.

Inasmuch as you informed him that whoever is doing the EA will be furnished the input to your office on this matter, I am enclosing copies, for this purpose, of:

H.S.S. Report #93-01: Lower Uilani Cave, Ainaloa Subdivision, Hawaii County: Basic Speleological Considerations and Recommended Management Plan. March 1993.

H.S.S. Report #95-01: Resources, Values, and Management of Puna Caves. February 1995.

Please inform us immediately about the name and address of the person or firm performing the EA, so that we can supply him or it with other relevant information that should be considered in preparation of the Draft EA.

Sincerely yours,

William R. Halliday

cc: HSS EXCOM
National Speleological Society
International Union of Speleology
Selected Puna cooperators and members
Hon.S. Yamashiro

Stephen K. Yamashiro
Mayor



William G. Davis
Managing Director
Henry Cho
Deputy Managing Director

County of Hawaii

25 Aupuni Street, Room 215 • Hilo, Hawaii 96720-4232 • (808) 941-4211 • Fax (808) 941-4553
PCNNA: 75-5706 Kaula Highway, Suite 103 • Kula, Hawaii 96703
(808) 335-5224 • Fax (808) 335-5643

November 29, 1995

William R. Halliday
Chairman, Hawaii Speleological Survey
6530 Cornwall Court
Nashville, TN 37205

Dear Mr. Halliday:

This is in reply to your correspondence of November 18, 1995.

Please be assured that all the letters and comments you have solicited via the Internet will be forwarded to the Environmental Assessment consultant when chosen.

Regarding road construction, the County of Hawaii follows the requirements and standards of the State Department of Transportation. You should contact this agency for more detailed information regarding standards, as they apply to caves.

State Of Hawaii
Department of Transportation
Highways Division
50 Makaala Street
P.O. Box 4277
Hilo, Hawaii 96720.

Please note that all the incidences you have mentioned in various pieces of correspondence, and in your H.S.S. March 1993 Report # 93-01, regarding destruction of caves, has occurred on private property. Lacking any Federal, State, or County Laws to the contrary, how each situation was handled was up to the property owners discretion.

If you need any information on the State of Hawaii historical sites criteria then please feel free to contact:

Department of Land and Natural Resources
State Historical Preservation Division
33 South King Street, 6th floor
Honolulu, Hawaii 96813



American Cave Conservation Association, Inc.

Post Office Box 409
Horse Cave, Kentucky 42749
(502) 786-1466

• American Cave & Karst Center
• American Cave Museum
& Hidden River Cave

November 29, 1995

Mr. Norman Olesen
Deputy Director
Hawaii County Planning Department
25 Aupuni Street
Hilo, HI 96720

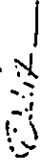
Dear Mr. Olesen:

It has come to my attention that Hawaii County is planning to develop an emergency road through the Puna lava cave area. I am writing to express our concern about the potential impact of this construction on the world class lava caves that underlie this area.

The Puna cave area contains the largest lava cave system in the world. The caves harbor rare and unique animal life, as well as irreplaceable archaeological materials. Additionally the caves have sacred significance to native Hawaiians.

There are many options available to you for mitigation of this problem while you are still in the planning phase for this project. On the other hand, the damage done to fragile cave systems by ill-conceived construction is usually permanent and irreversible. I urge you to work with local cave experts and conservationists to ensure that the area's irreplaceable cave resources are not damaged by road construction.

Sincerely,


David G. Fuster
Executive Director

cc. William R. Halliday, M.D.

Dedicated to protecting America's caves, karstlands, and groundwater resources.

November 29, 1995

William R. Halliday
Chairman, Hawaii Speleological Survey
6530 Cornwall Court
Nashville, TN 37205

Dear Mr. Halliday:

This is in reply to your correspondence of November 18, 1995.

Please be assured that all the letters and comments you have solicited via the Internet will be forwarded to the Environmental Assessment consultant when chosen.

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State Of Hawaii
Department of Transportation
Highways Division
50 Makaala Street
P.O.Box 4277
Hilo, Hawaii 96720

Please note that all the incidences you have mentioned in various pieces of correspondence, and in your H.S.S. March 1993 Report # 93-01, regarding destruction of caves, has occurred on private property. Lacking any Federal, State, or County Laws to the contrary, how each situation was handled was up to the property owners discretion.

William R. Halliday
November 29, 1995
Page 2

If you need any information on the State of Hawaii historical sites criteria then please feel free to contact:

Department of Land and Natural Resources
State Historical Preservation Division
33 South King Street, 6th floor
Honolulu, Hawaii 96813

The Environmental Assessment will be available for review at the County of Hawaii, 25 Aupuni Street, Room 217, between the hours of 7:45 am and 4:30 pm.

If I can be of any further assistance please feel free to contact me at 961-8565.

Sincerely,

Norman Olesen
Deputy Planning Director

cc: Mayor Stephen K. Yamashiro
Dr. Ron Greeley



Ephen K. Yamashiro
Mayor

County of Hawaii

23 Aupunu Street, Room 215 • Hilo, Hawaii 96720-4322 • (808) 961-4211 • Fax (808) 961-4333
KONA: 75-5704 Kaula Highway, Suite 103 • Kailua-Kona, Hawaii 96740
(808) 329-5224 • Fax (808) 324-5443

November 28, 1995

Mr. William R. Halliday
6530 Cornwall Court
Nashville, TN 37205

Dear Mr. Halliday:

Thank you for your letter of November 28, 1995 regarding your concerns on the Environmental Assessment consultant. The Mayor has written you a letter on November 28, 1995 which is self explanatory and states as follows:

"The County of Hawaii is currently in the process of letting a contract for the preparation of an Environmental Assessment for the proposed Emergency Road project. Your comments will be made available to the consultant for review in the preparation of the Environmental Assessment."

The contract is placed with a consultant based on a price proposals, from an approved County of Hawaii consultant list. This contract will be made December 4, 1995.

There must be a misunderstanding regarding our consultant going down into any caves. This would involve liability concerns, and rights of entry, from all the property owners from the point of entry to the road.

From recent data received from Prof. Dr. Stephen Kempe, the location of the Kazumura and Keala caves are pinpointed with regard to the 8 road. These areas will not require any cut and fill type of roadwork.

Sincerely,
Norman Olesen
Norman Olesen
Deputy Planning Director

Hawaii Speleological Survey

of the
National Speleological Society

WILLIAM R. HALLIDAY
Chairman

P.O. Box 1525
Hilo, HI 96721

Personal address until 16 January 1996:
6530 Cornwall Court
Nashville, TN 37205

26 November 1995

Norman Olesen, Deputy Planning Director
County of Hawaii
25 Aupuni Street, #215
Hilo, HI 96720-4252

Dear Mr. Olesen: re: protection of Puna caves

Thank you for your letter of November 21, 1995, informing us that we will receive one copy of the Draft Environmental Assessment for the Puna Emergency Access Road by January 15, 1996. We appreciate this courtesy. Please DO NOT mail this courtesy copy. Instead, please hold it for pickup the week of January 15 by myself or some authorized person, at your office or that of the Planning Department.

Please note, however, that in my letter of 12 November (to which your letter of November 21 supposedly was responsive), I again asked that the Hawaii Speleological Survey be on the mailing list for this EA. We have received no notice of the contracting list the EA, nor the name and address of the contractor, nor other relevant details of this type. Please immediately inform us of the status of the contracting process, and if the contract has been awarded without the requested notice to us, please immediately inform us of the name and address of the contractor. We believe that for the EA process to be meaningful, the contractor should be aware of, and thoroughly consider all the resources and values present in the caves beneath the proposed road, and we propose to bring these to the attention of the contractor at a meaningful time.

By far, the most important environmental impacts of the proposed road would be on the underground environment of any cave which it impacts. I am sure you will remember that in our face-to-face meeting, you proposed and we agreed to "a walk-through" of the potentially impacted caves by the contractor and ourselves, as part of the EA process. Clearly, the agreed-upon results of those walk-throughs are an essential part of the Draft EA process and we look forward to working with the contractor at the contractor's earliest convenience.

I look forward to hearing from you by return mail.

Sincerely yours,

William R. Halliday

William R. Halliday

cc: HSS ExecCom, S. Yamashiro, selected cooperators

THE PUNA "EMERGENCY ROAD" PROPOSAL

Jump to a map and information on the Island of Hawaii

In August 1995, Mr. Norman Olesen announced plans for a cut-rate "emergency road" to be built in 1996 through the heart of the Puna lava cave area, the world's greatest concentration of lava tube caves. Mr. Olesen is Deputy Director of the Hawaii County Planning Department, and a member of the staff of the office of the Mayor of Hawaii County.

Most of this "emergency road" would consist of upgrading present unpaved or partly paved subdivision roads, with a short length of new road to connect Ainaloa Boulevard to 9 Road in Hawaiian Acres Subdivision. Parts of 9 Road, F Road, and 8 Road would be rebuilt. Ainaloa Boulevard may or may not be rebuilt.

Cut-and-fill techniques are planned to "smooth out" lava ridges containing Kazumura and other caves, according to Mr. Olesen. The caves themselves are to be "collapsed", unless declared "significant" by state archaeologists. Among those which would be crossed by this "emergency road" are Kazumura Cave, Keala Cave, the D Road Cave System, Pirates Cave and possibly Fern's Cave. Others are believed to be in its path also. Kazumura Cave is the longest lava tube cave in the world, with about 34 miles mapped and exploration continuing. With more than 5 miles of passages, Keala Cave also is world-class, and exploration and mapping are incomplete in the D Road Cave System. Depending on plans for Ainaloa Boulevard, Lower Uliani Cave also may be harmed; it has been nominated for inclusion in the Hawaii State Natural Area Reserve System. The others also contain notable geologic, biologic, cultural, and other resources and values.

The announcement was made at the monthly meeting of the Board of Directors of the Hawaiian Acres Community Association, a large subdivision containing much of the cave area and home to numerous cavers and speleologists. In answer to a question, Mr. Olesen said he would "try to save the caves" but didn't "know anything about speleologists", and relied on archaeologists for information on caves.

Mr. Olesen further stated that an Environmental Assessment must be done before the road is built. To obtain information on the Environmental Assessment and how to provide input, write to:
**Mr. Norman Olesen, Deputy Director
Hawaii County Planning Department
25 Aupuni Street
Hilo, HI 96720**

Submitted 10/28/95 by William R. Halliday PO Box 1526 Hilo, HI 96721 or 6530 Cornwell Court Nashville, TN 37205

Return to CCMS Main Menu

National Speleological Society

Cave Conservation and Management Section

Welcome to the Home Page for the Cave Conservation and Management Section of the National Speleological Society.

The Section provides this Home Page as a focal point for information about Cave Conservation and Management. Of course it is always under construction, and may be different the next time you visit. This version was updated October 17, 1995.

Visit the Home Page for the 1995 National Cave Management Symposium coming up this October in Indiana.

New Hot Issues

[Kazumura Cave](#) (world's longest lava tube) threatened by a road building project.

[New Mexico BLM Does it to us AGAIN!](#)

[Significant Cave Nominations](#) Deadline extended to later this year. Now it has its own page on the Web. Check it out for details on how to nominate significant caves.

[Cave Formations for sale in Honu-Kone](#)

[USFS Issues Proposal for Fees for Caving in the Guadalupe](#)

[New Mexico BLM Problems and Opportunities](#) (coming soon)

[Dave Jagnow](#) named NSS Conservation Chairman (coming soon, as soon as we get him on the Internet) He issues a hot request for letters to Congress about the [Tennessee National Forest Logging Bill](#) (September 95). Read about the issues in an article from the October 1 [Juncau Empire](#).

Old Hot Issues

[BLM Cave for Pay Issue](#): Petition that was submitted to the BLM Note: A new BLM issue has arisen (Commercial Cave Guides) and information updated to May 25 has been posted. Results of the June 15 meeting between cavers and the BLM. BLM Issues its [Predictable Findings](#) (August 23)

[Portuguese Con Dam Issue](#) and [Web Page](#) for it (in Portuguese and English).
[Development threatened at Mexico's Cacahuamilpa Cave](#). If you know anything new, please email us with details.

Section Resources on the Web

- [The Section's Information Brochure](#)
- [NSS Policy for Cave Conservation](#)
- [The Cave Conservationist](#), our publication. Now includes several recent issues live on the Web
- [A copy of the Federal Cave Resource Protection Act of 1988](#)
- [Section Membership Information](#)
- [Calendar of upcoming Cave Conservation and Management Events](#)
- [What's New](#) - Last update November 9, 1995

Other Related Resources on the Web

- Home page for the 1995 National Cave Management Symposium that was held in October in Indiana
- Caves Servers on the Web
- Federal Government Cave Management Entity Home Pages, including the National Park Service, the US Fish and Wildlife Service, the US Forest Service
- The NSS Human Sciences Section Home Page
- Other Conservation Organizations
- Australasian Cave and Karst Management Association
- ISHA Home Page (International Speleological Society)
- Southeastern Cave Conservancy Home Page
- Never too early to start thinking about the 1997 National Cave Management Symposium, to be held in Bellingham, WA and Canada's Vancouver Island.

This page has been accessed 0 0 0 7 0 times since May 23, 1995.

To provide some feedback on this assemblage of information, mailto:robit@kayon.com.

Or check out Rob's Home Page: [Rob Stitt](http://www.kayon.com)

November 21, 1995

Mr. William R. Halliday
6530 Cornwell Court
Nashville, TN 37205

Dear Mr. Halliday

Re: Puna Emergency Access Road

This will acknowledge receipt of your letter dated November 12, 1995.

It is currently anticipated that the Draft Environmental Assessment will be ready for review and submittal to the Office of Environmental Quality Control (OEQC) by January 15, 1996.

I will forward a courtesy copy of the Draft Environmental Assessment to the Hawaii Speleological Survey of the National Speleological Society, to your attention, when the document is available.

If you wish further draft copies of the Environmental Assessment sent to you, there will be a charge of \$1.00 for the first page and 10 cents for each and every page thereafter, including postage, payable in advance to the County of Hawaii by certified check or money order. At the time of submittal of the draft Environmental Assessment to the OEQC (Office of Environmental Quality Control) you will be notified of the total cost.

If I can be of any further assistance please feel free to contact me at (808) 961-8565.

Sincerely,

Norman Olesen
Deputy Planning Director

John Hoffelt
208 Chaubam
Smyrna, TN 37167

November 21, 1995

Mr. Norman Olesen
Hawaii County Planning Department
25 Aupuni Street
Hilo, HI 96720

Dear Mr. Olesen:

I am writing to express concern over the proposed Puna Emergency Road in the Hawaiian Acres subdivision area. Of specific concern to me, are potential impacts to several world-class caves in the area, including Kazumura Cave. Kazumura Cave is the longest lava tube cave in the world, and it is the deepest cave (in terms of vertical extent) in the United States. I understand that an Environmental Assessment (EA) will be prepared for this project; I request to be placed on the mailing list for the EA. I also request information on how to provide input during the planning process for this project. My address is listed at the top of this letter, and my telephone number is (615) 256-1191.

Thank you in advance for the information and for your attention to this matter.

Sincerely,


John Hoffelt

T. K. Yamashiro
Mayor



County of Hawaii

25 Aupuni Street, Room 213 • Hilo, Hawaii 96720-4333 • (808) 941-4311 • Fax (808) 941-4333
KONA • 7550th Kaula Highway, Suite 103 • Kailua-Kona, Hawaii 96740
(808) 325-5221 • Fax (808) 324-5443

November 21, 1995

Ms. Marcia L. Gojan
15191 Wetherburn Drive
Centreville, VA 22020

Dear Ms. Gojan:

Re: Puna Emergency Access Road

I am in receipt of your letter of November 14, 1995 and appreciate your concern with regard to the preservation of significant lava tube formations.

There is, however, a misconception of the County of Hawaii's plans for the Emergency Access Road. All of the work which will be performed are on existing compacted gravel roads which have had heavy equipment on them for years. The County of Hawaii only intends to surface these existing roads with asphalt and slightly widen the shoulders, which have become overgrown, to permit safe passage of vehicles traveling in opposite directions.

The Emergency Access Road will be connecting two privately owned subdivisions, Ainaloa and Hawaiian Acres. Ainaloa Blvd. is currently fully surfaced and no work is anticipated on this road other than slight widening of the shoulders. Hawaiian Acres has one road section which crosses over the Kazumura Cave. However there is no survey data available to determine exactly where this point is, or whether construction work on surfacing the existing road bed, would damage the cave structure.

I have informed Mr. Halliday of the Hawaii Speleological Survey of the National Speleological Society that the County of Hawaii has no intention of deliberately destroying lava tubes. If during the resurfacing of the road any tubes are accidentally uncovered, then they must be reviewed on a case by case basis.

William C. Davis
Managing Director

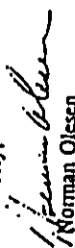
Henry Cho
Deputy Managing Director

Ms. Marcia L. Gojan
November 21, 1995
Page 2

You may supply input to the Environmental Assessment to this office specifying what specific considerations you wish to have reviewed. If you wish a draft copy of the Environmental Assessment sent to you, there will be a charge of \$1.00 for the first page and 10 cents for each and every page thereafter, including postage, payable in advance to the County of Hawaii by certified check or money order. At the time of submittal of the draft Environmental Assessment to the OEQC (Office of Environmental Quality Control) you will be notified of the total cost.

It is currently anticipated that the Draft Environmental Assessment will be ready for submittal on or before January 10, 1996.

Sincerely,


Norman Olesen
Deputy Planning Director

K. Yamashiro
Mayor



County of Hawaii

25 August Street, Room 215 • Hilo, Hawaii 96720-3225 • (808) 941-8211 • Fax (808) 941-4553
KONA: 75-5906 Kaula Highway, Suite 103 • Kailua-Kona, Hawaii 96740
(808) 329-3226 • Fax (808) 326-6643

November 20, 1995

Mr. Dale L. Paie
30 Permian Drive
Carlsbad, New Mexico 88220

Dear Mr. Paie:

Re: Puna Emergency Access Road

I am in receipt of your letter of November 20, 1995 and appreciate your concern with regard to the preservation of significant lava tube formations.

There is, however, a misconception of the County of Hawaii's plans for the Emergency Access Road. All of the work which will be performed are on existing compacted gravel roads which have had heavy equipment on them for years. The County of Hawaii only intends to surface these existing roads with asphalt and slightly widen the shoulders, which have become overgrown, to permit safe passage of vehicles traveling in opposite directions.

The Emergency Access Road will be connecting two privately owned subdivisions, Ainaloa and Hawaiian Acres. Ainaloa Blvd. is currently fully surfaced and no work is anticipated on this road other than slight widening of the shoulders. Hawaiian Acres has one road section which crosses over the Kazumura Cave. However there is no survey data available to determine exactly where this point is, or whether construction work on surfacing the existing road bed, would damage the cave structure.

I have informed Mr. Halliday of the Hawaii Speleological Survey of the National Speleological Society that the County of Hawaii has no intention of deliberately destroying lava tubes. If during the resurfacing of the road any tubes are accidentally uncovered, then they must be reviewed on a case by case basis.

Enclosed is a map of the area furnished by Mr. Halliday showing the proposed resurfacing.

William C. Davis
Managing Director

Henry Cho
Deputy Managing Director

Mr. Dale L. Pate
November 20, 1995
Page 2

You may supply input to the Environmental Assessment to this office specifying what specific considerations you wish to have reviewed. If you wish a draft copy of the Environmental Assessment sent to you, there will be a charge of \$1.00 for the first page and 10 cents for each and every page thereafter, including postage, payable in advance to the County of Hawaii by certified check or money order. At the time of submittal of the draft Environmental Assessment to the OEQC (Office of Environmental Quality Control) you will be notified of the total cost.

I regret to inform you that additional response time is not possible since this is strictly governed by the requirements of the Hawaii Revised Statutes, Chapter 343.

Sincerely,

Norman Olesen
Deputy Planning Director

Enclosure

William C. Davis
Managing Director
Henry Cho
Deputy Managing Director



County of Hawaii

23 Aupuni Street, Room 215 - Hilo, Hawaii 96720-1252 • (808) 941-8211 • Fax (808) 941-4333
KONA, 75-5706 Kailua Highway, Suite 103 • Kailua-Kona, Hawaii 96740
(808) 329-3226 • Fax (808) 326-5643

November 20, 1995

Mr. Douglas H. Barre
206 South Blanche Street
Ojai, California 93023

Dear Mr. Barre:

Re: Puna Emergency Access Road

I am in receipt of your letter of November 20, 1995 and appreciate your concern with regard to the preservation of significant lava tube formations.

There is, however, a misconception of the County of Hawaii's plans for the Emergency Access Road. All of the work which will be performed are on existing compacted gravel roads which have had heavy equipment on them for years. The County of Hawaii only intends to surface these existing roads with asphalt and slightly widen the shoulders, which have become overgrown, to permit safe passage of vehicles traveling in opposite directions.

The Emergency Access Road will be connecting two privately owned subdivisions, Ainaloa and Hawaiian Acres. Ainaloa Blvd. is currently fully surfaced and no work is anticipated on this road other than slight widening of the shoulders. Hawaiian Acres has one road section which crosses over the Kazumura Cave. However there is no survey data available to determine exactly where this point is, or whether construction work on surfacing the existing road bed, would damage the cave structure.

I have informed Mr. Halliday of the Hawaii Speleological Survey of the National Speleological Society that the County of Hawaii has no intention of deliberately destroying lava tubes. If during the resurfacing of the road any tubes are accidentally uncovered, then they must be reviewed on a case by case basis.

Enclosed is a map of the area furnished by Mr. Halliday showing the proposed resurfacing.

Mr. Douglas H. Barre
November 20, 1995
Page 2

You may supply input to the Environmental Assessment to this office specifying what considerations you wish to have reviewed. Please feel free to contact me if I can be of any further assistance in this matter (808)961-8565.

Sincerely,

Norman Olesen
Deputy Planning Director

Enclosure

in K. Yamashiro
Mayor



William C. Davis
Mayor

Henry Cho
Deputy Mayor

County of Hawaii

25 Aupunahoa Street, Room 215 • Hilo, Hawaii 96720-4332 • (808) 941-4211 • Fax (808) 961-4533
KONA: 75-5704 Kailua Highway, Suite 103 • Kailua-Kona, Hawaii 96740
(808) 329-3226 • Fax (808) 326-5643

November 20, 1995

Mr. Jan Paul Van Der Pas
Vauwerthofweg 3
6333 CB Schimmert
Neerhollandse

Dear Mr. Van Der Pas:

Re: Puna Emergency Access Road

I am in receipt of your letter of November 20, 1995 and appreciate your concern with regard to the preservation of significant lava tube formations.

There is, however, a misconception of the County of Hawaii's plans for the Emergency Access Road. All of the work which will be performed are on existing compacted gravel roads which have had heavy equipment on them for years. The County of Hawaii only intends to surface these existing roads with asphalt and slightly widen the shoulders, which have become overgrown, to permit safe passage of vehicles traveling in opposite directions.

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Enclosed is a map of the area furnished by Mr. Halliday showing the proposed resurfacing.

Mr. Jan Paul Van Der Pas
November 20, 1995
Page 2

You may supply input to the Environmental Assessment to this office specifying what specific considerations you wish to have reviewed.

Sincerely,

Norman Olesen
Deputy Planning Director

Enclosure

Hawaii Speleological Survey

of the
National Speleological Society

WILLIAM R. HALLIDAY
Chairman

P.O. Box 1526
Hilo, HI 96721

Address until 16 January 1996:
6530 Cornwall Court
Nashville, TN 37205

18 November 1995

Mr. Norman Olesen
Office of the Mayor
County of Hawaii
25 Aupuni Street
Hilo, HI 96720

Dear Mr. Olesen:

Dr. Ronald Greeley has sent me a copy of your letter to him of 3 November.

In your letter you state that Ainaloa Boulevard will receive only "slight widening of the shoulders." Just makai the intersection of the boulevard with King Kamehameha Road, on the north side of Ainaloa Boulevard, widening the shoulder is likely to intersect the trash fill currently narrowing the skylight of Lower Uilani Cave, which is at the edge of the shoulder. Some of this fill may consist of hazardous waste. The Hawaii County Planning Department has been sent a copy of H.S.S.' March 1993 Report # 93-01, LOWER UILANI CAVE, AINALOA SURDIVISION, HAWAII COUNTY: BASIC SPELEOLOGICAL CONSIDERATIONS AND RECOMMENDED MANAGEMENT PLAN. As pointed out in that report, the ceiling of this cave makes this skylight so thin and so fractured that passage of heavy equipment over it is dangerous. If you need another copy of this report, please inform me and we will be pleased to supply it. This cave has been nominated for the state Natural Area Reserve program, and every effort should be made to protect it -- all of it.

At least two bulldozers have fallen into other Puna caves already this year, and in several locations where existing subdivision roads cross over caves, piles of rockfall exist in sub-caves. It is an obvious conclusion that heavy equipment adjacent to the natural rate of collapse of lava tube caves. We expect to be working with the county planning department and others to pinpoint areas at high risk from this phenomenon. Meanwhile, we urge you to abandon the dangerous misconception that the mere passage of heavy equipment over caves is sufficient assurance that their passage is safe forever.

In your controversial presentation in August in Hawaiian Acres, you specifically spoke about collapsing caves and about use of cut and fill techniques in resurfacing the roadbed. This is particularly alarming on 8 Road between C Road and F Road, and critical between E Road and F Road. I note from your letter that you continue to recommend...

INTERNATIONAL UNION OF SPELEOLOGY



The President
Prof. Paolo Forti

Handwritten signature of Paolo Forti

Hon Stephen Yamashiro
Office of the Mayor
County Building, Apuni Street
Hilo, HI 96720

P.C.
W.R. Halliday
6530 Cornwell Court
Nashville, TN 37205

Bologna November 15 1995

Object: preservation of Kazumura Cave

Dear Mr. Mayor:

The notice that the longest lava tube of the world is endangered reached me few days ago and I, on behalf of the International Union of Speleology, am writing you in order to search a solution to preserve this world treasure.

I understand the social importance of the "Emergency road" in project, but I am rather sure that it should be found a way to fulfill your need and the necessity to preserve Kazumura cave.

The International Union of Speleology it is ready to co-operate with you and your administration in searching the best way to save Kazumura cave and the Chairman of our Commission on Volcanic caves (Dr. Halliday) will contact you with this purpose.

I really hope that all the possible efforts will be done to preserve Kazumura Cave and the other lava tubes.

Sincerely yours,

The President of the UIS

Prof. Paolo Forti

Handwritten signature of Paolo Forti

Address: Italian Institute of Speleology, Via Zamboni, 67 - 40127 Bologna, Italy

Kevin Allred
Box 376
Haines, AK 99827
November 18, 1995

Mr. Norman Olesen, Deputy Director
Hawaii County Planning Department
25 Apuni Street
Hilo, HI 96720

Dear Mr. Olesen,

I understand that there are plans to widen some roads in the Hawaiian Acres area. During the last several years, my wife and I have directed the exploration and compass and tape survey of Kazumura Cave, the longest lava tube in the world. Kazumura is also the longest linear (straight-line distance) cave in the entire world, extending all the way from Volcano Village to Paradise Park.

We were dismayed that this world treasure and other major caves in the area may be "collapsed" by road construction cutting through the ridges which contain some of the caves. Furthermore, many of these caves contain irreplaceable cultural resources. If these road plans happen, every means should be taken to avoid cutting the ridges which overlie the caves. The low areas should be filled and culverts installed in order to avoid the flooding and asphalt wash-outs which already plague this area.

As land owners in Hawaiian Acres, my wife and I are also concerned, along with many others, that such road improvements will infringe on the local peoples' rural, agriculture life-style and escalate property taxes.

Incidentally, while leading this Fall's cave expedition, we investigated a cave passage said to have been destroyed recently by a bulldozer. This site is located under 34th street just off Orchardland Drive. Last year, apparently the County collapsed this portion of the cave which is part of the passageways of a highly significant cultural site. Access to a site containing further archaeological evidence was sealed off from access by this collapse. Noted in the fill debris within the cave was part of a pickup truck. This, in our opinion, is highly irresponsible and probably illegal for the county to allow.

We plead with you to respect the cultural past and world class geologic wonders of the Puna area.

Sincerely,

Kevin and Carlene Allred

Handwritten signature of Kevin and Carlene Allred

cc: Bob and Julie Jacobson, Hawaiian Acres
William R. Halliday, Hawaii Speleological Survey

Handwritten signature of Julie Jacobson



Hawaii Speleological Survey

of the
National Speleological Society

P.O. Box 1526
Hilo, HI 96721

WILLIAM R. HALLIDAY
Chairman

Address until 16 January 1996:
6530 Cornvall Court
Nashville, TN 37205

12 November 1995

Mr. Norman Olesen
Office of the Mayor
County Building
25 Aupuni Street
Hilo, HI 96720

Dear Mr. Olesen:

As promised, I have been investigating the availability of underground radio for pinpointing the precise location of Kazumura Cave, Keala Cave and other caves beneath the proposed Puna Emergency Road.

At last month's National Cave Management Symposium, I talked with Dr. Frank Reid, who gave a paper on this precise subject. He gave me considerable information which I have forwarded to Dr. Marlin Spike Werner in Hilo, Chairman of the Hawaii Grotto of the National Speleological Society and a real expert in electronics.

Dr. Reid has taken a special interest in our problem, and it appears likely that in January he will be able to lend us the necessary equipment, at minimal cost. I will keep you informed.

To date, I have received no information on the forthcoming Environmental Assessment. Please keep in mind that the Hawaii Speleological Survey should be on the mailing list for this EA, using the addresses specified above at the relevant times.

Sincerely yours,

William R. Halliday

William R. Halliday

cc: H.S.S. ExCom
Frank Reid
Puna members and cooperators
Hon. Stephen Yamashiro

November 14, 1995

15191 Wetherburn Drive
Centreville, V A. 22020

Mr. Norman Olesen, Deputy Director
Hawaii County Planning Department
25 Aupuni Street
Hilo, Hawaii 96720

Dear Mr. Olesen,

I own one entrance to Kazumura Cave and am very fond of the cave. I have been informed that there is a proposal to collapse part of Kazumura Cave. I am very concerned about this and wish to be placed on the mailing list for the Environmental Assessment. Please send that and all other available information.

Sincerely

Marcia L. Gojan

Marcia L. Gojan

cc. Hon. Stephen Yamashiro

2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

November 10, 1995

Mr. Norman Olesen, Deputy Director
Hawaii County Planning Department
25 Aupuni Street
Hilo, Hawaii 96720

Dear Mr. Olesen,


It has come to my attention that there are plans being developed to build an emergency road through the heart of the Puna lava cave area. I am sure that consideration of such a project in the presence of financial shortfall is born out of a sense of responsibility to the people who live in the area. An emergency road system would certainly add accessibility to emergency vehicles as well as improve the overall usefulness of the adjacent and nearby properties. I would wholeheartedly support an upgraded road system, however, there are existing elements in the proposed area unlike anywhere else in the world.

The Puna area contains the largest lava cave system in the world. This is no small natural resource. There exists, inside lava caves, life forms found nowhere else. Many parts of the cave system are holy places to the native Hawaiians as they are final resting places of many of their ancestors. The experience of being in a lava cave, many of which on the island of Hawaii have not yet been surveyed, is among the most profound in nature. It is an attraction that brings caving enthusiasts from around the world.

Most people are not acquainted with speleology for the simple fact that the resource is so easily destroyed through ignorance and those that are of the incline, are not eager to gain notoriety through sharing the resource with unproved interests.

The value of these lava caves can not be over estimated. Please take this into consideration when you plan any improvement in the vicinity of a lava cave: I am certain that mitigation measures can be implemented or realignment of the designated road system would be called for. Please do not even consider the collapsing of the caves especially in the area of the Kazumura cave system.

I would like to be on the mailing list of any and all actions concerning these matters.

Most sincerely,

206 SOUTH BUREAU STREET, OJAI, CALIFORNIA 91323
PH: (805) 241-7123 E-mail: jvanpas@kassnet.net

JAN PAUL VAN DER PAS
Vauwerthofweg 3
6333 CB Schimmert
Nederland

SCHIMMERT, 9 November 1995

Speleo Stamp Collector
ajlp

Mr. Norman Olesen
Deputy Director
Hawaii County Planning Department
25 Aupuni Street
Hilo, HI 96721

Dear Mr. Oleson,

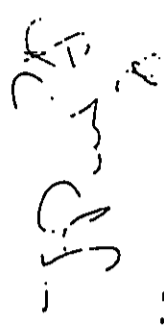
Via the Hawaii Speleological Survey we were informed about the planning of the construction of a road through the area where Kazumura Cave and others are located.

During the 6th International Symposium on Vulcanospeleology (Hilo - August 1991) we visited this area and were easily convinced of it's unique geological and ecological importance.

We hope responsible scientific (e.g. speleological) institutions will be consulted before this construction starts, so your emergency road doesn't turn out to be a dead-end for this area.

We understand an Environmental Assessment must be done, and our Dutch Speleological Association is highly interested on this and would like to obtain information on this, and how to provide input.

Sincerely yours,



J.P. van der PAS
deputy representative of the
Netherlands Speleological Association
Vauwerthofweg 3
6333 CB Schimmert
NETHERLANDS



Stephen K. Yamashiro
Mayor



County of Hawaii

25 August Street, Room 212 • Hahaione, HI 96720-4232 • (808) 941-4211 • Fax (808) 941-4553
KONA: 75-5708 Kaula Highway, Suite 103 • Kailua-Kona, Hawaii 96740
(808) 328-5224 • Fax (808) 328-5043

William G. Davis
Mayor
Henry Cho
Deputy Mayor

November 2, 1995

Mr. Jim Malachowski
1441-A Kalena Street
Maheala, HI 96786

Dear Mr. Malachowski:

Re: Puna Emergency Access Road

I am in receipt of your letter of October 25, 1995 and appreciate your concern with regard to the preservation of significant lava tube formations.

There is, however, a misconception of the County of Hawaii's plans for the Emergency Access Road. All of the work which will be performed are on existing compacted gravel roads which have had heavy equipment on them for years. The County of Hawaii only intends to surface these existing roads with asphalt and slightly widen the shoulders, which have become overgrown, to permit safe passage of vehicles traveling in opposite directions.

The Emergency Access Road will be connecting two privately owned subdivisions, Hinakoa and Hawaiian Acres. Hinakoa Blvd. is currently fully surfaced and no work is anticipated on this road other than slight widening of the shoulders. Hawaiian Acres has one road section which crosses over the Nazumura Cave. However there is no survey data available to determine exactly where this point is, or whether construction work on surfacing the existing road bed would damage the cave structure.

I have informed Mr. Huldaday of the Hawaii Speleological Survey of the National Speleological Society that the County of Hawaii has no intention of deliberately destroying lava tubes. If during the resurfacing of the road any tubes are accidentally uncovered, then they must be reviewed on a case by case basis.

Enclosed is a map of the area furnished by Mr. Huldaday showing the proposed resurfacing.

Mr. Jim Malachowski
November 2, 1995
Page 2

You may supply input to the Environmental Assessment to this office specifying what considerations you wish to have reviewed. Please feel free to contact me if I can be of any further assistance in this matter (808)961-8553.

Sincerely,

Norman Olesen
Deputy Planning Director

Enclosure

Stephen K. Yamashiro
Mayor
Think if you might like
to see the
pictures to see
if you like



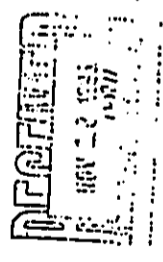
County of Hawaii

25 Aupou Street, Room 215 • Hahaione, Hawaii 96720-4321 • Fax (808) 941-4333
KONA: 25-5706 Kaula Highway, Suite 103 • Kailua-Kona, Hawaii 96740
(808) 327-5226 • Fax (808) 326-5643

William C. Davis
Managing Director
Henry Cho
Deputy Managing Director

November 3, 1995

Mr. Ronald Greeley
Regents' Professor of Geology
Arizona State University
Department of Geology
Box 871404
Tempe, AZ 85287-1404



Dear Mr. Greeley:

Re: Puna Emergency Access Road

I am receipt of your letter of October 25, 1995 and appreciate your concern with regard to the preservation of significant lava tube formations.

There is, however, a misconception of the County of Hawaii's plans for the Emergency Access Road. All of the work which will be performed are on existing compacted gravel roads which have had heavy equipment on them for years. The County of Hawaii only intends to surface these existing roads with asphalt and slightly widen the shoulders, which have become overgrown, to permit safe passage of vehicles traveling in opposite directions.

The Emergency Access Road will be connecting two privately owned subdivisions, Ainaloa and Hawaiian Acres. Ainaloa Blvd. is currently fully surfaced and no work is anticipated on this road other than slight widening of the shoulders. Hawaiian Acres has one road section which crosses over the Kazumura Cave however there is no survey data available to determine exactly where this point is, or whether construction work on surfacing the existing road bed would damage the cave structure.

I have informed Mr. Halliday of the Hawaiian Speleological Society of the National Speleological Society that the County of Hawaii has no intention of deliberately destroying lava tubes. If during the resurfacing of the road any tubes are accidentally uncovered, then they must be reviewed on a case by case basis.

Mr. Ronald Greeley
November 3, 1995
Page 2

Enclosed is a map of the area furnished by Mr. Halliday showing the proposed resurfacing. Please feel free to contact me if I can be of any further assistance in this matter (808)951-8565.

Sincerely,

Norman Olesen
Deputy Planning Director

Enclosure

11/3/95

Geologisch-paläontologisches Institut
 64237 Darmstadt, Schmittspahnstr. 9
 Telefon (06151) 18 21 71
 Telefax (06151) 18 53 39

Technische Hochschule
 Darmstadt

Prof. Dr. Stephan Kempe

Tel.: 06151/ 16 2471

email: skempe@biol.bioh-und-darmstadt.de
 3. November 1995

Mr. Norman Olesen, Deputy Director
 Hawaii County Planning Department
 25 Aupuni Street
 Hilo, HI 96720

Dear Mr. Olesen,

with great concern we took notice of the plans of your department to build an emergency road through Puna. Dr. W. Halliday, the Chairman of the Hawaii Speleological Survey (HSS), informed us about these plans.

I am a professor for physical geology at the University of Darmstadt and a founding member of the HSS and involved in geological lava tube research since 1978. In 1994, we obtained a grant from the German Research Council to study lava tubes on Hawaii, specifically in the Puna district. From the fact that a German research organization allows money to studying these geological features, you can conclude that they are scientifically highly interesting, worthwhile to be studied and unique world-wide.

Therefore, let me brief you about the geological significance of the tubes in the Puna district. In the past few years, the members of the HSS have discovered that in Puna several parallel tubes of great extension and large cross-section exist. These tubes form a bundle of lava conduits through which the pahoehoe lava of the last extensive shield phase of the Kilauea summit caldera (the Ai-la'au phase ending ca. 300 years before present) was piped toward the E-coast of Hawaii. The lava flowed for more than 40 km underground through these tubes. At present (Sept. 95) the HSS has mapped three substantial tubes (Kazumura 56 km in total length, Keala 8.7 km and John Martin's with ca. 6 km in length) and several other, smaller caves. Kazumura is now the by far longest lava tube we know of on Earth. This fact itself would make it a National Monument. Keala is the second longest on Hawaii and the sixth longest world-wide. Interrupting these tubes by "collapsing" them at road crossings would make them partially inaccessible and would be similar to considering cutting down "General Grant" in California.

In studying these tubes, we try to reconstruct how lava flows over great distances on very low-gradient slopes (the area has an average slope of 1.7° only). It turns out that relatively low lava volumes can flow across great distances because of the thermal insulation of the tubes. We further found that the relatively small lava flows can secondarily excavate very large (up to 10 x 10 m in cross-section) caves. Therefore, the tubes are not simple pipes, rather they show a substantial variation in the size and shape

of their cross-section. Two processes account for this variability: (i) downcutting by receding lava falls and (ii) breakdown.

Why and how lava falls develop is still unclear but observations show that their morphological behavior is very much like that of waterfalls. They cut backward thereby leaving deep canyons below. Sometimes a series of falls is found, each having added depth to the resulting canyon cut into the older lava below the active flow. Individual lava falls can be over 10 m high and are spectacular sights in the caves. In Keala at least 30 % of the altitude difference is accounted for by lava falls. Below falls, large plunge rooms can develop, up to 20 m wide. The eroded lava blocks are apparently carried down tube by the flowing lava, often as rafts on its surface and sometimes welded onto the roof at shallower sections of the tube. Secondary erosion by lava falls therefore cause the original tube to deepen and to widen. The entire tube appears as if segmented with narrow sections opening up into larger passages below lava falls.

The second process, by which the tube widens, is breakdown. When the flow subsides or is flowing openly in a canyon below a lava fall, the primary roof of the ceiling can cool and shrink. Then large portions of it may collapse and fall into the active flow, being removed as well. Therefore, isolated halls are sometimes encountered in the tubes, reaching high up into the roof, making it thin and vulnerable to further collapse. Often these break-outs reach the surface of the flow when it is still active (this is true, for example, for all the natural entrance pukas to Keala and for most of the Kazumura entrance pukas). Then surface air can enter the gas-filled voids in the canyon sections, cooling the lava and causing the consolidation of secondary ceilings in the bottom sections of the canyons. These secondary roofs are very thin at first but can be very extensive (in Keala the longest secondary ceiling extends for more than 1 km). Spills occurring on top of these secondary roofs can then thicken these internal roofs further, causing the cave to develop two (or more) passages above each other.

These are just some of the processes we have studied in the Puna caves. They are, however, important to acknowledge when considering construction above these tubes. According to what I have explained above it may be completely uncrucial to cross a tube in certain places because the roof is very thick (up to 8 m in places) and the tube below is small (1.5 x 1.5 m, for example), while it may be extremely dangerous in others because the tube is wide and high (10x10 m, for example) and the roof is thin.

Therefore, the tubes can be protected and much of the hazard of bulldozing across a tube can be diminished easily by planning the road accordingly. Even if no safe place for a road crossing can be found, it would be obligatory to preserve the tubes because of their geological importance and their national and international uniqueness. The precautionary principle applies here as well as with all other alterations we inflict on nature. If damage can be avoided to our natural resources at affordable costs and effort, it has to be done. Crossing a tube with a relatively thin roof can be achieved by placing steel beams across the tube and constructing the road bed on top of this internal bridge. Bulldozing should be kept at a minimum anyway, simply because of the possibility of running into unexplored tubes thereby endangering the driver and his machine. Rather, gravel should be used to fill in depressions, thereby leaving the natural natural

structure of tube roofs intact which withstood many heavy earthquakes in the past few hundred years without collapse.

We therefore urge you either to reconsider the road plan altogether, or to use all available information to keep the damage to this "National Monument" at a minimum.

In order to facilitate your planning I enclose the geological map of the area as it was produced by my students under the study grant. It shows the location of Kazumura and Keala in the area in question. From this map you will see that 9th Road crosses both tubes within a short distance. If you would "collapse" Keala at this point, the upper two kilometers of the tube would become inaccessible because the only entrance is situated makai of this intersection. The map does not show John Marin's Cave to the West of Kazumura, which would also be crossed. Thus 9th road east of the presumed connection to Ainaloa Boulevard is the most critical area for your road plan. As yet, 9th road (or any of the other roads running across Kazumura and Keala), has not shown adverse effects on the tube, simply because the road has not been bulldozed substantially.

I also enclose a graph, sketching some of the processes explained. It may come handy when discussing the matter in a larger group.

It is almost needless to say that the tubes also contain significant archaeological remains, inter alia fortifications, water collection structures, remains of fires, food residues and charcoal from torches showing that the tubes have been traveled for kilometers underground by ancient Hawaiian explorers. None of this is published as yet, because we just finished mapping these tubes. It is therefore doubtful that state archaeologists can judge the importance of these tube systems. Again, "collapsing" the tubes in places would destroy also the possibility to study the archaeological remains found in the tubes.

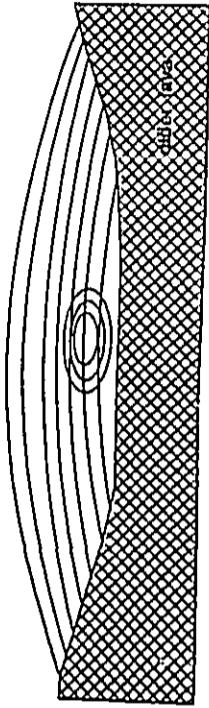
We urge you to enter a careful planning stage before deciding on the final procedure for building the planned "emergency Road" through Puua.

Sincerely yours

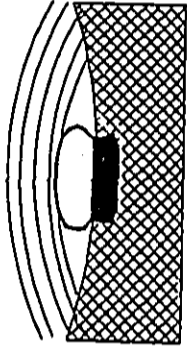
S. Kempe
(Prof. Dr. Stephan Kempe)

A. Gierz *Jan Straßenburg*
(Matthias Oberwinder) (Jens Hartmann) (Jan Straßenburg)

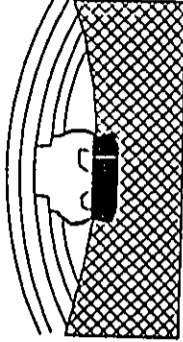
massive lava flow, consisting of multiple laminae, develops internal tube in central part as the flow front advances



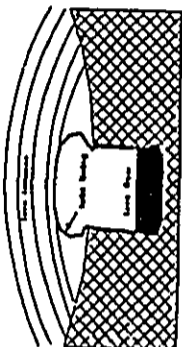
cave enlarges by erosive downcutting



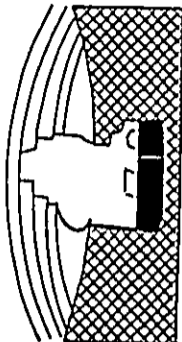
cave enlarges by breakdown partly carried away by flow



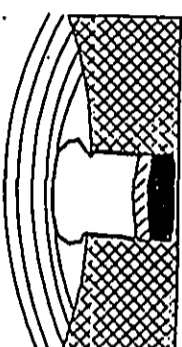
a canyon is formed



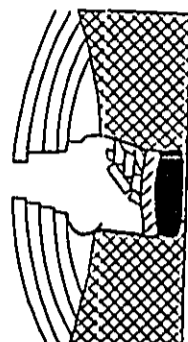
a breakout hall develops



Internal roof formed by cooling



breakdown opens a puka



© S. Kempe, 1993

DR. HANS-JOACHIM SCHUMACHER
DIPLOM-GEOMETER

LOHKOPPELWEG 7
D-22529 HAMBURG
TEL 040 / 56 35 65
FAX 040 / 560 34 58

Hamburg, October 29, 1995

Mr. Norman Olesen, Deputy Director
Hawaii County Planning Department
25 Aupuni Street
Hilo, HI 96720
USA

Ref: The Puna "Emergency Road" Proposal

Dear Mr. Olesen,

I am speleologist and member of the "Verband der deutschen Höhlen- und Karstforscher e.V., München" (German Association of speleologists and karst researchers, Munich).

In August 1995 you announced plans for a cut-rate "emergency road" to be built in 1996 through the heart of the Puna lava cave area, the world greatest concentration of lava tubes.

Obviously "cut-and fill"-techniques are planned to "smooth out" lava ridges containing Kazumura and other caves. The caves themselves are to be "collapsed" unless declared "significant" by state archaeologists. A lot of caves will be crossed by this "emergency road" including the Kazumura cave, the longest lava tube in the world.

It is absolutely necessary to save the caves. These caves must be declared "significant" as is it already done for archaeological discoveries!

Drop the proposal or develop acceptable mitigation proposals for the road construction!

I want to obtain further informations on the Environmental Assessment for the "emergency road". Please put me on your mailing list. My address:

Dr. H.J. Schumacher
Lohkoppelweg 7
D-22529 Hamburg
Germany
Fax: +40/560 34 58

Thank you for your effort in advance.

Sincerely Yours



Dr. Schumacher

ASU ARIZONA STATE
UNIVERSITY

DEPARTMENT OF GEOLOGY
BOX 87104
TEMPE, AZ 85287-1404

FAX: 602/965-8102

INTERNET: C.owley@asu.edu

October 25, 1995

Mr. Norman Olesen
Deputy Director
Hawaii County Planning Department
25 Aupuni Street
Hilo, HI 96720

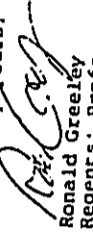
Dear Mr. Olesen:

I understand that Hawaii County is planning to make an emergency road through the Puna lava cave area, and that construction could involve collapsing and/or filling some of the cave passages.

The lava tubes in this area are considered a critical resource for scientific research. Many of these are unique and afford the opportunity to study aspects of volcanic features and lava flows not seen elsewhere in the world.

While I understand the need for emergency access into the area, I urge that any development plan take into account the scientific value of the lava tubes and provide the means for their preservation.

Very truly yours,



Ronald Greeley
Regents' Professor of Geology

RG/rl

MARLIN SPIKE WERNER, Ph.D.
Hialeah Villas, 400 Hualani, Suite 191-A
Audiology, Speech/Language Pathology
Hilo, HI 96720-4378
808 / 935-1299

October 15, 1995

Norman Olesen, Deputy Director
Hawaii County Planning Department
25 Aupuni Street
Hilo, HI 96720

Dear Mr. Olesen:

Please send me information on the Environmental Assessment for the Proposed EMERGENCY ROAD in Puna. Also, I would like to know how I may provide input to that assessment.

Sincerely yours!

Marlin Spike Werner
Marlin Spike Werner, Ph.D.

October 21, 1995

Mr. Norman Olesen
Deputy Director
Hawaii County Planning Department
25 Aupuni Street
Hilo, HI 96720

Dear Mr. Olesen,

I am writing with regard to a Puna emergency road plan presently being considered by your office. It is my understanding that the construction of this road would involve "collapsing" some of the caves where the new road crosses over them. There are several reasons why I believe such a plan of cave destruction (however limited it may seem) should be reconsidered. Firstly, I hope that all caves involved will be thoroughly investigated for cultural remains before work begins. I am not aware that this has been done for Kazumura or Keala Caves, two major systems to be crossed by the planned road. However, it is not sufficient merely to consider archaeologically "significant" caves worthy of preservation.

The caves in this area of Puna are among the longest and best-preserved lava tubes in the world, and will most certainly be used as geological and ecological study resources in the future. Recent research efforts at Arizona State University have targeted lava tube caves in the Puna and Kau areas, and will likely involve one or more of the cave systems to be threatened by road construction.

Numerous fauna and flora call the lava tube caves home, and some are found, and can survive, nowhere else. Some of these organisms are adapted to the nearly constant temperature and humidity conditions found in long unbroken stretches of lava tube cave. Collapsing portions of these cave systems will remove portions of their habitat for hundreds of meters on either side of the collapses.

Kazumura Cave is, by far, the longest and most impressive lava tube cave so far discovered in the world, and should be protected, just as Mammoth Cave, Kentucky, is protected as the world's most extensive cave in limestone. It is a natural resource that Puna and Hawaii should be proud of and unwilling to needlessly damage.

Please make every effort to prevent destruction and/or segmentation of Kazumura and the other caves in this region of Puna when the emergency road is constructed. Thanks very much for your time and consideration.

Sincerely,

Steve Kaddel

Steve Kaddel
Mesa, Arizona

Hi Norman, I hope you'll let me know how I can help.

12/1/95

D.I.E

Mr. Norman Olesen
Deputy Director
Hawaii County Planning Department
25 Aupuni Street
Hilo, Hawaii 96720

Dear Mr. Olesen,

I have recently heard of an "emergency road" to be built in Hawaii County. This road would be built in an area known to have "World-class" lava tubes and I want to express my concern that these cave systems be considered as significant natural features worth saving. Please include my name to receive a copy of the Draft Environmental Assessment. I also request that you give me time to receive the document, read over and time to respond, with the mail being slow, I request that a longer period of time be given me to respond than the normal 30 days.

Cordially,

Dale Fabe
30 Fernian Dr.
Carlsbad, New Mexico 88220

Jim Malachowski
1441-A Kalena St.
Wahiawa, HI 96786

Mr. Norman Olesen
Deputy Director
Hawaii County Planning Department
25 Aupuni St.
Hilo, HI 96720

Dear Mr. Olesen,

I understand that in August you announced plans to build an emergency road next year over the Kazumura Cave system with plans to collapse caves in the area. I'm sure you know the Kazumura Cave is the longest lava tube system in the world.

I am quite concerned about this proposal. I feel that it is not received the study and consideration that it deserves. Destruction of the system would be a tragedy felt the world over.

Please send me information on the pending Environmental Assessment and how I can provide input or otherwise assist your office or the Mayor of Hawaii's office.

Sincerely,
J. Malachowski
Jim Malachowski

LOWER UILANI CAVE, AINALOA SUBDIVISION, HAWAII COUNTY:
BASIC SPELEOLOGICAL CONSIDERATIONS AND RECOMMENDED MANAGEMENT PLAN

Report # 93-01
Hawaii Speleological Survey
of the
National Speleological Society

March 1993

William R. Halliday

Hawaii Speleological Survey
P.O. Box 1526
Hilo, HI 96721

Introduction

Lower Uilani Cave is one of the largest, most complex, and most important lava tube caves of Hawaii. It is one of the world's extremely few major lava tube caves which is near Prine the only one known in Hawaii which is available for volcanological study. It contains many other important resources and values discussed below. On the other hand, part of the cave appears to present a serious hazard to heavy construction equipment passing over Alinaloa Boulevard, and it is in an area of complex land ownership. Thus its management needs especially careful attention by planners, land managers and owners, developers, scientists, and conservationists. Because it presents an unparalleled opportunity for volcanologists to study the pattern and features of distributory channels of a terminal lobe of pahoehoe basalt from inside the lobe, preservation of access for study of these features should be considered an essential element in its future management. Most of the cave was mapped and a reconnaissance inventory of its resources and values was performed in January and February 1993. Findings and recommendations are presented below.

The entrance of Lower Uilani Cave is located in Waikahakahe Ahupuaa, Puna District, Hawaii County, at an elevation of about 710 feet, in the back yard of a home which recently has been sold. The identity of the new owners is not known to me. They should be fully informed about the contents of this report at the earliest possible moment.

The cave is within the Paho North Quadrangle but is not shown on it. On the 1980 geological map of Kilauea Volcano by Robin T. Holcomb of the U.S. Geological Survey, its general course is shown by a single arrow; its complexity was not depicted until January 1993 studies by the Hawaii Speleological Survey of the National Speleological Society. It is in a terminal lobe of a flow of pahoehoe basalt which originated either from Ailaau Shield adjacent to Kilauea Iki Crater or from an unidentified East Rift vent. Holcomb mapped it as the former. In January and February 1993 more than 9,000 feet of passage was mapped and a reconnaissance inventory of features of the cave was conducted. Some very small side passages and some very low passages at the extreme makai end of its Right and Left Branches have not yet been penetrated. Attached is a map of the cave at a scale of about 1" to 250 feet; a 1" to 100 feet map will be prepared later in 1993. Much of the cave is much more sinuous than can be depicted even on the latter.

Entrance Section

For convenience in description, the cave may be considered to have four sections. The maka or entrance section extends slightly west of north from the entrance for a distance of about 1,250 feet measured as a straight line on the map. After a low, narrow entrance crawl this part of the cave has a classical braided pattern, with several loops and loops upon loops. In general, however, one "throughway" corridor is much more spacious than the others. In this part of the cave, this dominant corridor is mostly "walking passage" except where past rockfall from the cave's ceiling requires clambering over rockpiles. The smaller looping passages are much lower.

The entrance section contains numerous noteworthy geological features including squeezeups, lava dripstone, longitudinal grooves on the ceiling, rippled pahoehoe tongues, prominent ledges, pipestem stalactites, cemented lavaballs, and some small lava cascades. Numerous roots and a small amount of surface wash support a habitat for small cave-adapted life forms. Considerable white and a little copper-colored "lava tube slime" are present. Two small areas of ground charcoal, evidently from the snuffing-out of simple torches, are present in the main passage about 800 feet from the entrance, as measured on the map.

Because of the complex braiding in the entrance section, it is easy to become turned around at junctions and thus to become lost. For experienced vulcanospeleologists, this is no problem and some even consider it fun. However, inexperienced cavers easily panic in this type of looping maze and should be discouraged from entering it.

Vehicular hazard in the entrance section

About 850 feet (straight-line) from the entrance, the main corridor is partially obstructed by breakdown and a truncated cone of construction fill. The latter evidently was dumped into the cave during the construction of Ainaloa Boulevard. A large void exists between the construction fill and the wall of the cave, and the ceiling of the cave appears dangerously thin and cracked beneath the present roadbed.

A small skylight is present alongside Ainaloa Boulevard in this area. In the past, it has served as a receptacle for large quantities of garbage and trash. The cave is so voluminous at this point, however, that the damage is sharply localized. Presumably the skylight is owned by the Ainaloa Community Association, along with Ainaloa Boulevard. It is too small for human passage, but could be enlarged easily for study of this engineering problem and possible remedial work.

To a lesser degree, a thin, fractured ceiling also appears to be a hazard to vehicular traffic passing over a passage nearby, also overlain by Ainaloa Boulevard. The roadbed of Ainaloa Boulevard appears in need of reinforcement before further heavy construction equipment passes over the cave.

Part of the front yard of a house at the northeast corner of the intersection of Ainaloa Boulevard and King Kamehameha Drive, near the skylight, appears to be at lesser risk.

Potential commercial value of the entrance section

Makai the old construction fill and skylight, a length of about 350 feet (straight line), with a loop totalling about 300 feet, is especially easy, pleasant walking and has numerous attractive geological features. Thus it potentially is of commercial value to the owner of the lot just mentioned, as a show cave or commercial cave.

Terminal branches

Together with its braided loops, the throughway conduit ends by dividing into two passages called the Left Branch and the Right Branch. Both are only mildly braided. Neither has been completely explored. Although they become progressively lower and narrower makai, they are of high scenic and other recreational value to cavers. The marks of man are few and isolated, consisting of a few candy or gum wrappers, candle stubs, and chalk arrows on the walls. Thus this part of the cave is a notably valuable wilderness resource as well as a geological resource. Both the left and right branches also contain more botanical and zoological values than does the entrance section, including pale Hawaiian cave crickets and other cave-adapted life. Here and elsewhere in the cave, most of the roots are those of ohia trees, but far down the Left Branch are some unusual red roots which appear to be those of a different tree.

Geologically, squeezeups are especially noteworthy because they are so varied. Some are hollow, other vesicular. Lava dripstone is well-developed. It is so fragile that special precautions must be taken to avoid it. In a few areas, congealed smooth grey lava can be observed entering the passages from horizontal cracks at ceiling level. Rheogenic shelves locally are very prominent. Many lavaballs and breakdown blocks are seen to have been "welded" in place by pahoehoe lava. A few such lavaballs and breakdown blocks have small lava dripstone deposits accreted atop them.

The Left Branch has been mapped to a distance of about 1300 feet (straight line) from its beginning. It extends

slightly west of north. The Right Branch has been mapped to a straight-line distance of about 1500 feet. The latter has the greater possibility of significant additional passage; heights of 3 to 4 feet. Exploration in a small loop with ceiling where the passage was 1 to 2 feet high.

The Central Branch differs significantly from the other two makai branches. It begins as a low, wide upper level office high on the wall of the cave's Left Branch about 150 feet of 680 feet, it is the shortest of the three major forks of the cave. Only a little of it is walking passage. Most of it is about 4 feet high and considerable breakdown is present. Some of this breakdown was "welded" by lava which originally was unusually fluid. This passage ends in a wide, low room with a lava seal.

Geologically, the Central Passage is an extraordinary, perhaps unique structure. Its upper end largely consists of a remarkable drained lava pond. This pond was about 6 feet deep and about 25 feet in diameter. Before it drained spontaneously, its surface was in the center of a low room about twice as wide as the pond. Few if any similar geological structures exist in other lava tube caves of Hawaii and the world. The reason for this ponding and for its spontaneous drainage are not immediately obvious and need study. Some features in the nearby part of the Right Branch may have been affected by the presence of this body of molten lava, and also should be studied in detail. Every effort should be made to preserve the features of this area and access to them.

Cultural Considerations

One small group of deteriorated bones (presumably human) is present in a very obscure location in the cave which will not be specified here. To preserve its mana, it was not closely observed, but no bone appeared intact and all had been affected by the cave's moisture. No cultural material was observed near the site. The specific location is being reported separately to the Hawaii State Historic Preservation Division and through that agency to the Big Island Burial Council. A formal decision on the future of the bones should be made by the latter, and its decision must be followed. It appears very unlikely that such a decision will seriously conflict with the cave management plan proposed below.

Cave resources and values and their management

Hydrologically, the cave is unimportant. Water collects in small depressions on unbroken surfaces of solid lava, and a few small flood channels are present on gentle slopes. No calabash rings or calabash or gourd fragments are present. Therefore it appears that the cave never was a water source for Native Hawaiians.

Mineralogically, small, thin crusts of an unidentified green mineral are present in one location in the Right Fork. Minerals with this color are very uncommon in Hawaiian caves. A specimen was taken for analysis. It was noted to be quite crumbly and is of no commercial value. Elsewhere, small patches of common secondary mineral crusts are scattered in the cave. They also are crumbly, and are of no commercial value.

Regarding paleontological resources, no paleontological material was noted. The lava flow containing the cave is about 300 years old, so none would be expected.

The biological and wilderness values of much of the cave are high, and some are quite fragile. There is an obvious conflict between preservation of these values and the recreational value of the cave. Many other Big Island caves have approximately the same recreational values as this cave. Therefore preservation of these fragile biological and wilderness values should rank before the recreational values and should be preserved by minimizing human use of these parts of the cave.

On the other hand, the biological and wilderness values appear to be present in some other caves of Puna District, and thus they cannot be considered as important as the geological values specified above. These are of exceptional importance, and some may be unique to this cave. Protection of the geological resource, therefore, must be considered the most important single factor in management of this cave.

Regarding commercial values, as already mentioned the part of the cave between Ainaloa Boulevard and the bifurcation of the cave into Left and Right Branch has considerable potential for a show cave. Using modern standards of show cave development and management, such a project would pose little or no threat to the other major values of the cave, and might even enhance their protection. Because of complex land ownership in this area, the owners of several parcels of land would have to cooperate for this to be feasible. Zoning restrictions also must be considered.

Hazard Mitigation

It is virtually certain that appropriate roadbed engineering studies inside the cave will demonstrate a need for reinforcement of the roadbed of Ainaloa Boulevard, at least before further heavy construction equipment passes over the cave. These studies should be undertaken immediately. Commercial possibilities of the section makai the skylight could be investigated at the same time.

These studies would be simplified by enlarging the skylight, permitting direct access to the sections under consideration. The alternative would be access through the en-

trance. This would require crawling down a rocky, muddy entrance slope in a passage which locally is as little as two feet high. Beyond the entrance, stooping is necessary for a considerable distance, and this is a part of the cave where the geological and biological features are especially fragile. A short distance beyond is a section of complex loops and loops on loops. Those entering through the present entrance must traverse several hundred feet of these features before the construction area is reached. Use of the present entrance for these studies, therefore, is highly undesirable, and the new owner of the entrance may not wish construction crews to use his/her lawn and garden as a thoroughfare.

On the other hand, the needs, wishes, and desires of the owner of the home adjacent to the skylight must be integrated into the plan for these studies. The owner of that property should be provided a copy of this report at the earliest possible moment and be appointed a member of the planning team.

One obvious option for protecting vehicular traffic on Ainaloa Boulevard is emplacement of additional constructional fill in the cave. If this is done, it is likely that this would complete the filling of the cave passage at this point. In my opinion, this would do no significant harm to the cave, provided that it is done in a manner consistent with the principal resources and values of the cave and access to them for those with a need for that access. This is because additional clean fill in this short segment of the cave can do no further harm to it; past damage there already is maximal. In fact, it old garbage and trash is removed, the cave environment actually would be improved.

Access past a new fill, however, is a critical matter and must be assured for individuals and organizations with legitimate scientific and administrative purposes in the cave. This can be accomplished in at least two ways:

- 1) an access gate or manhole could be installed at the corner of Ainaloa Boulevard and King Kamehameha Drive, with another at the entrance of the cave. These should be constructed according to cave gate specifications published by the National Speleological Society. If this is done, access to the portions of the cave mauka and makai the new fill would be through separate openings and there would be no need for a tunnel or crawlway pipe through the fill.
- 2) construction of a gate only at the present cave entrance plus an access crawlway tunnel through the new fill. This would require the cooperation of the new owners of the home where the entrance is located, and perhaps an access easement. Their identity is not known to me. Alternative 2) also would require similar cooperation but as the section of cave makai the fill is much more important scientifically, their cooperation would not be as critical as in the case of alternative 1) and comparatively little would be lost if they indicated their

A conservation grant of up to \$500.00 may be available from the National Speleological Society to help defray the cost of gate(s) and tunnel. However this would be competitive with other projects requesting similar grants.

The need to limit the number and type of persons entering portions of the cave mauka Ainaloa Boulevard and makai the junction of the Right and Left Branches already has been mentioned. This should be applied especially during underground engineering studies and construction when a wide opening to the surface exists. 100% compliance cannot be expected, but the fragile sections of the cave should be "flagged" and posted against entry by others, and the opening should be controlled against entry standard techniques.

When the gate or gates are complete, one key should be deposited at a recognized scientific institution such as the Lyman Museum or Hawaiian Volcano Observatory of the U.S. Geological Survey for use by appropriate scientists. The other should be deposited at the Hawaii County Civil Defense Agency for use of the very few administrators with a need for access.

In the event that no organization or individual is willing to assume the leadership role in administration of a cave management plan for Lower Ulani Cave, all concerned parties should monitor the actions of others to insure that the resources and values of the cave are preserved while meeting the engineering needs of the community. In case problems meeting the engineering organizations of the National Speleological Society, Hawaii Internal national administration arise, Hawaii Internal national administration should be called upon for assistance. The telephone number of the National Speleological Society is (205) 852-1300.

* * *

The field assistance of Ole Fuks, Denver Leaman, and Dr. Marlin Spike Werner is gratefully acknowledged, and the kind permission to enter the cave graciously given by the anonymous present tenant of the property on which the cave entrance is located. Without their generous assistance, these studies and report would not have been possible.

APPENDIX 3

**SIGN-IN LISTS AND
SUMMARY OF ISSUES**

10 AND 11 JANUARY 1996 MEETINGS

FOR IMMEDIATE RELEASE

FROM: RON TERRY, PH.D., ENVIRONMENTAL CONSULTANT,
FAX 982-5831
TO: NEWS MEDIA
HAWAII TRIBUNE-HERALD, FAX 961-3680
SUBJECT: PUBLIC MEETINGS ON PUNA EMERGENCY ROAD
DATES: JANUARY 10 AND 11, 1996
DETAILS: SEE BELOW.

DATE: January 10, 1996 (Wed.)
TIME: 6:30 PM
PLACE: Ainaloa Longhouse

DATE: January 11, 1996 (Thu.)
TIME: 7:00 PM
PLACE: Hawaiian Acres Community Center

SPONSORS: Hawaii County
Ron Terry, Ph.D.
Ainaloa Comm. Assoc.

The County of Hawaii proposes to fund construction improvements and assume maintenance and liability for an emergency access road that would connect State Highway 130 to State Highway 11 via Ainaloa Blvd., southwest along parcel 1-6-45:073 (which must be purchased) to Road 9 in Hawaiian Acres; northwest along Road 9 to F Road; southwest along F Road to 8 Road; and northwest along 8 Road to the connector road to Highway 11 near Kurtistown.

The primary purpose of the project is to provide a connection between Highway 130 and Highway 11 in order to improve Police Department, Fire Department, and ambulance services. It would also provide a bypass in case of Civil Defense emergencies.

The purpose of the meetings is to allow the County to furnish information and answer questions about the project and to gather public input for an environmental assessment being prepared for the project.

PUNA EMERGENCY ROAD MEETING
 JANUARY 11, 1995 - HAWAIIAN ACRES
 SIGN-UP SHEET

NAME: HARVEY HAYMOORE, MARILYN HAYMOORE, KENT HANDES, CAROLYN HANDES, DANNY & BRYAN D'ARLE, ALICE SUNCHOLD, Julia Hedgecock Jackson, PAUL SUZUKI, Bob Kern, Dennis Miller, Buck & Sigen Esposito, Mike Lowrey, JAKE DEREBY, ROGER BATH, Stephanie & Katrina Oath, SHELLEY BETHSEL, ELLA S. FEBRUER, GLEN STUBBS, Gary FISCHETT, Shaquon L. LUMIN, Tammye Clair, PAPER PIE TA, NADINE CLARKE, JUNE SHUFER, LEE RICKETTS, J. B. BRADLEY - J. BRAD, Bill McLellan, KENNETH GARDNER

ADDRESS: P.O. Box 437 Kurtistown, HI 96760, P.O. Box 437 KURTISTOWN, HI 96760, P.O. Box 1369 KURTISTOWN, HI 96760, P.O. Box 1368 KURTISTOWN, HI 96760, P.O. Box 1395, KEAUAU, HI 96749-1395, P.O. Box 7, Kurtistown, HI 96760, P.O. Box 900, Kurtistown, HI 96760, Box 956, Keaunui, HI 96740, P.O. Box 1750, Keaunui, HI 96749, P.O. Box 1438 Kurtistown, HI 96760, P.O. Box 214 Kurtistown, HI 96760, P.O. Box 1002 Kurtistown, P.O. Box 447, Keaunui, HI 96749, P.O. Box 557, Keaunui, HI 96749, Box 513 Kurtistown, 96760, P.O. Box 212, Keaunui, HI 96740, P.O. Box 99, Kurtistown, HI 96760, P.O. Box 486, Keaunui, HI 96749, P.O. Box 105, Keaunui, HI 96749, P.O. Box 763 Kurtistown, HI 96760, P.O. Box 1294, Keaunui, HI 96749, P.O. Box 411 Kurtistown, HI 96760, P.O. Box 1463, Kurtistown, HI 96760, Box 752, Kurtistown 96760, P.O. Box 777, Keaunui, HI 96740, P.O. Box 1500 Kurtistown, HI 96760, Box 574 Kurtistown, HI 96760

PUNA EMERGENCY ROAD MEETING
 JANUARY 11, 1995 - HAWAIIAN ACRES
 SIGN-UP SHEET

NAME: Bruce Anderson, Gaymin Coleby, Luke Steve, KAKUBU, BRUNER, David P. Harris, Dominic P. Harris, Jacob Russell Brumber, Olo' FIELDS, GRAY KIM, DAW WOOLFECTION, ADA MORGAN, Amanda Russell, JERRY PERCE

ADDRESS: P.O. Box 473 Kurtistown, P.O. Box 303 Kurtistown, P.O. Box 1238 Kurtistown, 25 August St., HI 96760, Box 102B Kurtistown, 252 Hiniau St., P.O. Box 1065, Mt. View, S.R. 56644, Keaunui, P.O. Box 276 Kurtistown, P.O. Box 1052 Keaunui, GERALD DALLUMY, M.T.V., Ltd., Mt. View, P.O. Box 5293, Hilo, HI 96720

**SUMMARY OF ISSUES AND QUESTIONS
MEETING OF 10 JANUARY 1996 AT AINALOA ESTATES
AND MEETING OF 11 JANUARY 1996 AT HAWAIIAN ACRES
PUNA EMERGENCY ROAD**

**PRESENT: PUBLIC; REPRESENTATIVES OF HAWAII COUNTY OFFICE OF THE
MAYOR, FIRE DEPARTMENT, POLICE DEPARTMENT AND CIVIL DEFENSE
AGENCY; ENVIRONMENTAL ASSESSMENT CONSULTANT.**

PRIMARY ISSUES IDENTIFIED BY PUBLIC:

POSSIBLE ADVERSE IMPACTS:

1. INCREASE IN SPEEDING AND ACCIDENTS
2. INCREASE IN CRIME
3. MAY CHANGE COUNTRY ATMOSPHERE
4. LOSS OF NATURAL FOREST HABITAT IN EXISTING RIGHT OF WAY AND
DEGRADATION OF ADJACENT LAND (HAWAIIAN ACRES)

POSSIBLE BENEFITS

1. FINANCIAL BENEFIT AS COUNTY ASSUMES MAINTENANCE AND
LIABILITY COSTS
2. PROBABILITY OF CONTINUAL UPGRADE OF ROAD BY COUNTY
3. PROVISION OF SCHOOL BUS SERVICE ON 8-ROAD BEYOND E-ROAD
4. EXPANDED FIRE BREAK AND BETTER BRUSH FIRE RESPONSE TIME.
5. REDUCTION OF WEAR-AND-TEAR ON RESIDENTS' VEHICLES.

QUESTIONS AND ANSWERS:

GATING ACCESS

Will County put a gate on the road so that we can prevent ordinary travel over the road and restrict access to true emergency use?

RESPONSE FROM MAYOR'S OFFICE:

Once the road belongs to the County, it would be illegal to block access.

POLICE PRESENCE

Will police presence increase now that road will be public? How will police deal with increased speeding? Can the County install speed bumps on the road? Can we expect burglaries to increase, and how will the police handle this?

RESPONSE FROM POLICE:

We will probably not have a regular patrol on the road, but officers will patrol area as needed. Speed limit enforcement will now be possible. The posted speed limit will be 25 MPH. Speed bumps are not allowable on County roads. Crime may increase, but increase in

accessibility and police presence will help counteract this. It is up to individuals and communities in cooperation with the police to help deter crime.

USE BY FIRE DEPARTMENT

Are there really that many fires that require the Fire Department to access Ainaloa from Hawaiian Acres or vice versa?

RESPONSE FROM FIRE DEPARTMENT

Not a large number. But 80 percent of our calls are medical emergencies, and we respond to many every week in Puna. Once the road passes into County hands it will be gradually improved. This would also free up Ainaloa and Hawaiian Acres road maintenance funds for improving other roads. The general improvement in roads will allow us to better serve the public.

OTHER ROUTES

Can the jog in the road be routed down E-Road instead of F-Road in order to avoid the forested areas? How about avoiding a jog altogether by purchasing the two lots in Hawaiian Acres that would connect 8-Road with 9-Road, midway between F-Road and G-Road?

RESPONSE FROM MAYOR'S OFFICE:

Initial investigation of the former route revealed that E-Road would require far greater preparation costs prior to paving and would exceed the budget allotted for the project. This will be reexamined. The County will investigate the owners and their willingness to sell for the two lots in question. Because alternate routes are feasible, condemnation is not an option. Again, however, road preparation costs and/or environmental concerns may dictate against selection of this route.

FLOODING CONCERNS

Flooding during heavy rains is a problem in many areas of Hawaiian Acres, including the proposed route. Will the road include drainage structures, and will it make the flooding better or worse?

RESPONSE FROM MAYOR'S OFFICE

Two culverts that would pass water under the road at two particularly bad spots will be included in the project. Full handling of the flood problem affecting the road would cost far more than the budget for the entire project. Washouts cannot be prevented at this time, although future drainage improvements may be possible. Because of the fact that the pavement would go over existing pavement or compacted roadway surfaces, the increase in non-permeable surface (and therefore runoff) will be negligible.

ROAD SAFETY

Will blind hills be graded out? Can't the County make a 20-foot road for better safety?

RESPONSE FROM MAYOR'S OFFICE:

A very limited amount of cutting and a more significant amount of fill will take place in order to enable sight distances appropriate to a 25 MPH speed limit. This would vastly improve the current situation. Increasing the road width to 30 feet is far beyond the budget available. Future widening is possible.

**SUMMARY OF ISSUES AND QUESTIONS
MEETING OF 10 JANUARY 1996 AT AINALOA ESTATES
AND MEETING OF 11 JANUARY 1996 AT HAWAIIAN ACRES
PUNA EMERGENCY ROAD**

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RESPONSE FROM MAYOR'S OFFICE:

A very limited amount of cutting and a more significant amount of fill will take place in order to enable sight distances appropriate to a 25 MPH speed limit. This would vastly improve the current situation. Increasing the road width to 20 feet is far beyond the budget available. Future widening is possible.

SCHOOL DISTRICTS

Will the connection necessitate a redistricting of elementary, intermediate, or high schools?
RESPONSE FROM CONSULTANT

We will ask the State Department of Education and report the findings to your community associations and in the Environmental Assessment.

EXISTING STRUCTURES IN RIGHT OF WAY

Will walls or landscaping within the 40 foot right of way (but not the portion designated for road and shoulders) be removed as part of the project? Will new construction be allowed there? What about natural vegetation. Will the roads have herbicide applied?

RESPONSE FROM MAYOR'S OFFICE

Only those structures that interfere with safety or maintenance will be removed at this time. No new construction will be allowed within this right-of-way. Only vegetation that impinges on the travel lanes or shoulders will be removed. The County will discuss roadside vegetation maintenance techniques with the Community Associations.

APPENDIX 4

**LETTERS OF SUPPORT
FOR PUNA EMERGENCY ROAD
FROM HAWAIIAN ACRES COMM. ASSOC.
AND INDIVIDUALS**


Letter of Support
for
The Proposed County of Hawaii Puna Emergency Access Road

Date 11/11/1996

Ron Terry, Ph.D.
Geo. Medician
HCR 9575
Keauhou, Hawaii 96749

Dear Mr. Terry,

Please acknowledge my support for the proposed County of Hawaii Puna
Emergency Access Road Project. The benefits this road will provide for the community
and the government agencies, which service this community, are appropriate.

Sincerely, 

Name (print) KENNETH CUTTING
Address POB 574
KUHUISOON, HAWAII 96760-0574
Phone Number 975-2985 Page 8
Resident Lot Owner

Letter of Support
for

The Proposed County of Hawaii Puna Emergency Access Road

Date 1-12-96

Ron Terry, Ph.D.
Geo. Medician
HCR 9575
Keau, Hawaii 96749

Dear Mr. Terry,

Please acknowledge my support for the proposed County of Hawaii Puna
Emergency Access Road Project. The benefits this road will provide for the community
and the government agencies, which service this community, are appropriate.

Sincerely,

R. P. W. L. T.

Name (print) DAN T. WRIGHT
Address POB 1052
KUHUNA, HI. 96760
Phone Number 808-7524
Resident X Lot Owner X

Letter of Support
for

The Proposed County of Hawaii Puna Emergency Access Road

Date 1-11-96

Ron Terry, Ph.D.
Geo. Medician
HCR 9575
Keau, Hawaii 96749

Dear Mr. Terry,

Please acknowledge my support for the proposed County of Hawaii Puna
Emergency Access Road Project. The benefits this road will provide for the community
and the government agencies, which service this community, are appropriate.

Sincerely, *Robert C. Kern*

Name (print) Robert C. Kern
Address PO Box 1750
Keau, HI. 96749
Phone Number 808-982-9052
Resident Lot Owner

*Safety! Safety! Safety. Please build this road -
maintain it, lots of side-benefits: healthily wif, wif's
education, auto maintenance school, school bus access.*

Letter of Support
for

The Proposed County of Hawaii Puna Emergency Access Road

Date 1/11/96

Ron Terry, Ph.D.
Geo Metician
HCR 9575
Keau, Hawaii 96749

Dear Mr. Terry,

Please acknowledge my support for the proposed County of Hawaii Puna
Emergency Access Road Project. The benefits this road will provide for the community
and the government agencies, which service this community, are appropriate.

Sincerely,



Name (print) Sheldon Lehman
Address P.O. Box 105
Kurt's town H. 96760
Phone Number (808) 968-8391
Resident Lot Owner

Letter of Support
for

The Proposed County of Hawaii Puna Emergency Access Road


Date 01/11/96

Ron Terry, Ph.D.
Geo Metician
HCR 9575
Keau, Hawaii 96749

Dear Mr. Terry,

Please acknowledge my support for the proposed County of Hawaii Puna
Emergency Access Road Project. The benefits this road will provide for the community
and the government agencies, which service this community, are appropriate.

Sincerely,



Name (print) Dick Fuiks
Address SR 5664
Keolu 96749
Phone Number 968-2374
Resident Lot Owner

Letter of Support
for

The Proposed County of Hawaii Puna Emergency Access Road

Date 1/11/96

Ron Terry, Ph.D.
Geo. Medician
HCR 9575
Keau, Hawaii 96749

Dear Mr. Terry,

Please acknowledge my support for the proposed County of Hawaii Puna
Emergency Access Road Project. The benefits this road will provide for the community
and the government agencies, which service this community, are appropriate.

Sincerely, *Carolyn J. Hindes*

Name (print) CAROLYN HINDES
Address P.O. Box 1369
KUATISTOWN, HI 96760
Phone Number 968-8824
Resident Lot Owner

Letter of Support
for

The Proposed County of Hawaii Puna Emergency Access Road

Date 01/11/96

Ron Terry, Ph.D.
Geo. Medician
HCR 9575
Keau, Hawaii 96749

Dear Mr. Terry,

Please acknowledge my support for the proposed County of Hawaii Puna
Emergency Access Road Project. The benefits this road will provide for the community
and the government agencies, which service this community, are appropriate.

Sincerely, *Carolyn J. Hindes*

Name (print) D. KENT HINDES
Address P.O. Box 1369
KUATISTOWN, HI 96760
Phone Number 968-8824
Resident Lot Owner

Letter of Support
for

The Proposed County of Hawaii Puna Emergency Access Road

Date 1-11-96

Ron Terry, Ph.D.
Geo. Mechanician
HCR 9575
Kaaui, Hawaii 96749

Dear Mr. Terry,

Please acknowledge my support for the proposed County of Hawaii Puna
Emergency Access Road Project. The benefits this road will provide for the community
and the government agencies, which service this community, are appropriate.

Sincerely,

Name (print) Terrence T. Carr
Address P.O. Box 113
Kurtistown HI 96760
Phone Number 966-6382
Resident ALB Lot Owner ALB

Letter of Support
for

The Proposed County of Hawaii Puna Emergency Access Road

Date Jan 11, 1996

Ron Terry, Ph.D.
Geo. Mechanician
HCR 9575
Kaaui, Hawaii 96749

Dear Mr. Terry,

Please acknowledge my support for the proposed County of Hawaii Puna
Emergency Access Road Project. The benefits this road will provide for the community
and the government agencies, which service this community, are appropriate.

Sincerely,

William Esposito 1/14/96

Name (print) William Esposito
Address P.O. Box 764
Kurtistown HI 96760
Phone Number 966-6354
Resident yes Lot Owner yes

Letter of Support
for
The Proposed County of Hawaii Puna Emergency Access Road

Date Jan. 11 1996

Ron Terry, Ph.D.
Geo. Mechanic
HCR 9575
Keaau, Hawaii 96749

Dear Mr. Terry,

Please acknowledge my support for the proposed County of Hawaii Puna
Emergency Access Road Project. The benefits this road will provide for the community
and the government agencies, which service this community, are appropriate.

Sincerely,

D. Eileen Espasich

Name (print) Dorena Eileen Espasich

Address P.O. Box 714

Kaunohiwi HI 96740

Phone Number 966-6354

Resident yes Lot Owner yes

1. I live on 8 between E & F roads.
2. I would like it built the way its planned now. We
thought on 8 road because we thought that 8 road
would be paved first. To go through the 3 lot.
to 8 road would be fine. But to go down 9 to
E road is the same amount of turns as it is
planned for now. The birds will be okay.

Letter of Support
for
The Proposed County of Hawaii Puna Emergency Access Road

Date 1-11-96

Ron Terry, Ph.D.
Geo. Mechanic
HCR 9575
Keaau, Hawaii 96749

Dear Mr. Terry,

Please acknowledge my support for the proposed County of Hawaii Puna
Emergency Access Road Project. The benefits this road will provide for the community
and the government agencies, which service this community, are appropriate.

Sincerely,

Name (print) Wray Kim

Address P.O. Box 376

Kaunohiwi HI 96760

Phone Number 982-4152

Resident X Lot Owner X

Letter of Support
for
The Proposed County of Hawaii Puna Emergency Access Road

Date 1/11/96

Ron Terry, Ph.D.
Geo. Medician
HCR 9575
Keaua, Hawaii 96749

Dear Mr. Terry,

Please acknowledge my support for the proposed County of Hawaii Puna
Emergency Access Road Project. The benefits this road will provide for the community
and the government agencies, which service this community, are appropriate.

Sincerely,

John W. Dickey

Name (print) JOHN W. DICKEY

Address P.O. Box 1009

KURTISTOWN, HI 96760

Phone Number: 966-6957

Resident X Lot Owner LOTS ON 8 RD.

Letter of Support
for
The Proposed County of Hawaii Puna Emergency Access Road

Date _____

Ron Terry, Ph.D.
Geo Medician
HCR 9575
Keaua, Hawaii 96749

Dear Mr. Terry,

Please acknowledge my support for the proposed County of Hawaii Puna
Emergency Access Road Project. The benefits this road will provide for the community
and the government agencies, which service this community, are appropriate.

Sincerely,

Name (print) _____

Address _____

Phone Number _____

Resident _____ Lot Owner _____

Letter of Support
for

The Proposed County of Hawaii Puna Emergency Access Road

Date 1/11/96

Ron Terry, Ph.D.
Geo Mechanic
HCR 9575
Keanu, Hawaii 96749

Dear Mr. Terry,

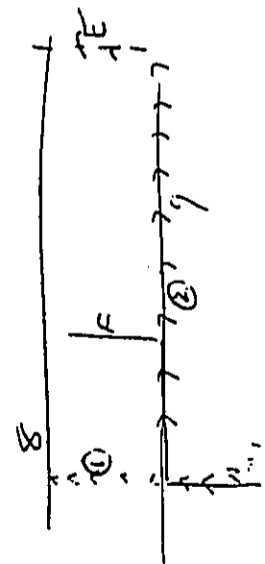
Please acknowledge my support for the proposed County of Hawaii Puna Emergency Access Road Project. The benefits this road will provide for the community and the government agencies, which service this community, are appropriate.

Sincerely,

Stephanie Bath

Name (print) Stephanie Bath
Address P.O. Box 457
Keanu HI 96749
Phone Number 808 966-8705
Resident Lot Owner

The route doesn't seem logical
Please explore other options
① going straight to 8 on
② 9 to E



#1 seems the most logical to me.
This area is not heavily wooded. Value would be 2-3x more.

Letter of Support
for

The Proposed County of Hawaii Puna Emergency Access Road

Date Jan 11 96

Ron Terry, Ph.D.
Geo Mechanic
HCR 9575
Keanu, Hawaii 96749

Dear Mr. Terry,

Please acknowledge my support for the proposed County of Hawaii Puna Emergency Access Road Project. The benefits this road will provide for the community and the government agencies, which service this community, are appropriate.

Sincerely,

Name (print) ROGER BATH
Address P.O. Box 447
Kaunakakai HI
Phone Number 9667008
Resident Lot Owner

Letter of Support
for

The Proposed County of Hawaii Puna Emergency Access Road

Date 1/11/96

Ron Terry, Ph.D.
Geo Mechanic
HCR 9575
Kasau, Hawaii 96749

Dear Mr. Terry,

Please acknowledge my support for the proposed County of Hawaii Puna
Emergency Access Road Project. The benefits this road will provide for the community
and the government agencies, which service this community, are appropriate.

Sincerely,
Shirley L. Swedel

Name (print) PHILIP W & SHIRLEY L SWEDDEL

Address P.O. Box 833

KURISTILOO, HI 96760

Phone Number 966-8428

Resident Lot Owner

*We would prefer that no spraying be
done on sides of road.*

Letter of Support
for

The Proposed County of Hawaii Puna Emergency Access Road

Date 1/10/96

Ron Terry, Ph.D.
Geo Mechanic
HCR 9575
Kasau, Hawaii 96749

Dear Mr. Terry,

Please acknowledge my support for the proposed County of Hawaii Puna
Emergency Access Road Project. The benefits this road will provide for the community
and the government agencies, which service this community, are appropriate.

Sincerely,

Name (print) Barbara P STEBENROCK

Address PO Box 990

KURISTILOO HI 96760

Phone Number (808) 968-8196

Resident Lot Owner

Letter of Support
for
The Proposed County of Hawaii Puna Emergency Access Road

Date 1-11-96

Ron Terry, Ph.D.
Geo Medician
HCR 9575
Keaua, Hawaii 96749

Dear Mr. Terry,

Please acknowledge my support for the proposed County of Hawaii Puna
Emergency Access Road Project. The benefits this road will provide for the community
and the government agencies, which service this community, are appropriate.

Sincerely,

Name (print) N. Lina Pearl A

Address P.O. Box 11, Keolu, Hawaii 96760

Phone Number 987-9674

Resident Lot Owner

Letter of Support
for
The Proposed County of Hawaii Puna Emergency Access Road

Date 1-1-96

Ron Terry, Ph.D.
Geo Medician
HCR 9575
Keaua, Hawaii 96749

Dear Mr. Terry,

Please acknowledge my support for the proposed County of Hawaii Puna
Emergency Access Road Project. The benefits this road will provide for the community
and the government agencies, which service this community, are appropriate.

Sincerely,

Name (print) Star Path

Address 612 14th St #33

Phone Number 408-97065

Resident Lot Owner

01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

Letter of Support
for
The Proposed County of Hawaii Puna Emergency Access Road

Date 1-11-92

Ron Terry, Ph.D.
Geo Medician
HCR 9575
Keau, Hawaii 96749

Dear Mr. Terry,

Please acknowledge my support for the proposed County of Hawaii Puna
Emergency Access Road Project. The benefits this road will provide for the community
and the government agencies, which service this community, are appropriate.

Sincerely,

Harold Haymore

Name (print) Harold Haymore
Address P.O. Box 437

Kurtistown, HI 96760

Phone Number 966-5565

Resident Lot Owner

Letter of Support
for
The Proposed County of Hawaii Puna Emergency Access Road

Date 1-11-92

Ron Terry, Ph.D.
Geo Medician
HCR 9575
Keau, Hawaii 96749

Dear Mr. Terry,

Please acknowledge my support for the proposed County of Hawaii Puna
Emergency Access Road Project. The benefits this road will provide for the community
and the government agencies, which service this community, are appropriate.

Sincerely,

Marilyn Haymore

Name (print) MARILYN HAYMORE
Address P.O. Box 437

KURTISTOWN, HI 96760

Phone Number 966-5565

Resident Lot Owner

Letter of Support
for

The Proposed County of Hawaii Puna Emergency Access Road

Date 1/1/96

Ron Terry, Ph.D.
Geo. Medician
HCR 9575
Keaua, Hawaii 96749

Dear Mr. Terry,

Please acknowledge my support for the proposed County of Hawaii Puna
Emergency Access Road Project. The benefits this road will provide for the community
and the government agencies, which service this community, are appropriate.

Sincerely,

Greg J. Fisher

Name (print) Greg M. Fisher

Address P.O. Box 486

Kilauea HI 96744

Phone Number 808-8803

Resident 1 Lot Owner 1

Letter of Support
for

The Proposed County of Hawaii Puna Emergency Access Road

Date 1-11-96

Ron Terry, Ph.D.
Geo Medician
HCR 9575
Keaua, Hawaii 96749

Dear Mr. Terry,

Please acknowledge my support for the proposed County of Hawaii Puna
Emergency Access Road Project. The benefits this road will provide for the community
and the government agencies, which service this community, are appropriate.

Sincerely,

Jack Russell

Name (print) JACK RUSSELL

Address P.O. BOX 1065

MT. VIEW, HI 96771

Phone Number 968-5976

Resident YES Lot Owner YES

Letter of Support
for

The Proposed County of Hawaii Puna Emergency Access Road

Date 1-11-96

Ron Terry, Ph.D.
Geo. Mechanician
HCR 9575
Keauau, Hawaii 96749

Dear Mr. Terry,

Please acknowledge my support for the proposed County of Hawaii Puna
Emergency Access Road Project. The benefits this road will provide for the community
and the government agencies, which service this community, are appropriate.

Sincerely,

Bill McClellan

Name (print) Bill McClellan HAERC

Address P.O. B. 1500

Kurtistown, HI. 96760

Phone Number 966-7524

Resident Lot Owner 2 Lots

Letter of Support
for

The Proposed County of Hawaii Puna Emergency Access Road

Date 1-11-96

Ron Terry, Ph.D.
Geo. Mechanician
HCR 9575
Keauau, Hawaii 96749

Dear Mr. Terry,

Please acknowledge my support for the proposed County of Hawaii Puna
Emergency Access Road Project. The benefits this road will provide for the community
and the government agencies, which service this community, are appropriate.

Sincerely,

Theodore J. "TED" Stubbbs

Name (print) Theodore J. "TED" Stubbbs

Address PO Box 99

Kurtistown HI. 96760

Phone Number 966-8964#mor 969-9400 WK

Resident Lot Owner N

Letter of Support
for

The Proposed County of Hawaii Puna Emergency Access Road

Date _____

Ron Terry, Ph.D.
Geo Medician
HCR 9575
Keau, Hawaii 96749

Dear Mr. Terry,

Please acknowledge my support for the proposed County of Hawaii Puna
Emergency Access Road Project. The benefits this road will provide for the community
and the government agencies, which service this community, are appropriate.

Sincerely,

Name (print) Paul Simbley

Address Box 956

Kilauea HI 96750

Phone Number NI 96750

Resident YES Lot Owner YES

AFTER ATTENDING HAWAIIAN INACRS MEETING
MY FEELINGS FOR THIS PROJECT ARE NOW FOR
MY MAIN CONCERN IS WHEN FEDERAL \$ DRY UP
WILL POLICE PROTECTION DRY UP.
CAN THE COUNTY PUT IN VIDEO SURVEILLANCE
BETWEEN BUNLOA & H.A.

Letter of Support
for

The Proposed County of Hawaii Puna Emergency Access Road

Date 1-19-96

Ron Terry, Ph.D.
Geo Medician
HCR 9575
Keau, Hawaii 96749

Dear Mr. Terry,

Please acknowledge my support for the proposed County of Hawaii Puna
Emergency Access Road Project. The benefits this road will provide for the community
and the government agencies, which service this community, are appropriate.

Sincerely,

Edward J. Herten
Name (print) 1332 Aupapohoi St.
Address Kaunohiwi, Hawaii

Phone Number (808) 263-8912

Resident Lot Owner H-42-21 Pmk

Marilyn Haymore

PO Box 437

Kurtistown, Hawaii 96760

January 14, 1996

Ron Terry, Ph.D.
Geo. Metcician
HCR 9575
Keaau, Hawaii 96749

Dear Dr. Terry,

The Puna Emergency Access Road is an essential step towards relieving some of Puna's transportation deficiencies.

I am a member of the Citizen's Advisory Committee (CAC) which is one of three subcommittees of the Countywide Transportation Planning Process (CTPP) sponsored by the State of Hawaii Department of Transportation. The role of the CAC is to be an adviser for community-based transportation needs and priorities within the different counties. The CAC is to identify transportation needs and deficiencies, assist in determining transportation priorities and make recommendations that aid the CTPP in its goal of completing a COUNTY OF HAWAII LONG RANGE LAND TRANSPORTATION MASTERPLAN FOR 2020.

The present draft (August 1995) of the Masterplan for 2020 does not include a study to evaluate alternative controlled access transportation corridors to supplement Highway 130 in Puna. Highway 130 is presently over capacity, is the only connection route into and out of lower Puna and is a "dead-end" highway as well. The reasoning behind this decision to scrap even a study of alternatives on the Masterplan for 2020 may have a variety of sources. Some might be:

- Lack of economic return to the state offered by the Puna region.
- Subjective population projections.
- Grass roots political pressure resulting from attempts at the difficult task of selecting new alignments.
- Priority.

For whatever reason, the Masterplan fails to address the need for alternative, interconnective transportation links that would carry the present and projected traffic volumes safely and efficiently in the lower Puna region. The state's lack of solutions for the lower Puna region on the Masterplan for 2020 places more weight on the county's immediate solution which is the Puna Emergency Access Road.

Since a great deal of study has been on the Puna region, I thought it might be of some value to relate some of the features and contributing variables that play roles in the overall regional transportation "picture" in Puna.

- It is similar in size to Oahu
- There are approximately 57,000 approved lots, laid out in 40+ subdivisions of which adequate transportation infrastructure was never planned.
- The transportation infrastructure (for Puna) being included on the Masterplan will best service the planned to be approved (additional and approximately) 2,000 residential lots around Keaau. While this is excellent and demonstrates excellent planning it also highlights and validates (by the Masterplan's own criteria) the need for such planning. Meanwhile realistic consideration for the enormous number of already approved lots in Lower Puna is being obviously left out of the Masterplan.
- There are approximately 500 miles of unpaved roads through the region, which make pretty nice lines on a map but are totally inadequate to serve the present and projected population in a realistic manner. Most government officials and transportation professionals from Oahu as well as many of those working in the County of Hawaii have not "experienced" these "lines on the map" or might I say ridden, driven, much less depended on these substandard roads.
- In the State of Hawaii, DMR BOOK 1990, published by DMRD, Table 511 indicates a total of 318 miles of unpaved roads in the state of which 79.72 are in the County of Hawaii. These numbers "excludes private thoroughfares and military roads not regularly open to public use." How did the approximate 500 miles of unpaved, private but "regularly open to public use" roads in Puna get left out of this important statistic which may be influencing transportation planners in Oahu?
- There is a "health and safety concern" that is building as the population of this area is rapidly increasing, in large, due to the inspersive nature of home sites here. It would be safe to assume that in these economic hard times the growing population trend will continue in this area.
- Mayor Yamashiro, the Hawaii Police Department, the Hawaii Fire Department and the Department of Civil Defense have all officially recognized the "health and safety concern" posed by the very deficient transportation infrastructure in Puna. Mayor Yamashiro has initiated an immediate process to facilitate an "emergency access" road in Puna. This is only an emergency access road which will have a 25 MPH speed limit, 8 foot wide lanes and cannot be expected to be a significant reliever for Highway 130. Its basic design is defined as Emergency Access.
- There is one highway (Keaau /Pahoa or Highway 130) which serves as the only route in and out of Lower Puna. Highway 130 is considered

to be one of the most dangerous highways in the state. The Chain of Crates highway which served as a loop or "backdoor entrance and exit" for Highway 130 and the transportation system within Puna has been indefinitely cut off by the ongoing lava flow. Highway 130, being the only highway in and out of lower Puna is a dead-end highway.

The present Masterplan for Hawaii County supports expanding Highway 130 to a 4 lane divided highway as a solution. From a practical standpoint, this idea has problems since this is an uncontrolled access highway which will lose its capacity as the development around it increases. It is still the ONLY access in and out of Lower Puna.

One "user-solution (?) to the hindered flow of traffic (as the volume increases) is to use the right-hand shoulder to illegally pass on the right. This is dangerous because it is in conflict with the intended uses of the shoulder. Unfortunately this solution (?) has gained some acceptability by the community, the police department, the prosecutor's office, and perhaps DOT and Public Works. This issue was discussed at the October 1995 Puna Traffic Safety meeting. Puna Traffic Safety is now trying to change this "acceptability," as a result of that meeting, but many community members still feel it is "safer" to pass on the right shoulder than wait to be rear ended. Passing illegally on the right also hides the true magnitude of the traffic flow problems because it keeps traffic flowing but in a dangerous and illegal fashion.

Expansion of Highway 130 seems to be the limit of DOT's effort to identify and implement a solution. This expansion, although deemed necessary and desirable by DOT leaves deficiencies in the region while being extraordinarily expensive both socially and economically. Although it expands the number of lanes it does not provide an alternative route in an emergency. All the while, other suggested solutions which are less expensive socially and economically and that solve more transportation deficiencies than the present Masterplan alternatives are being ignored in the State Highway Masterplan.

The Kapoho Beach Road which is briefly noted in the Masterplan is a difficult option. The present right-of-way is 10 feet. The land is expensive and in a precarious position for such a road. The necessary alignment would be difficult and has been considered not viable by DOT Highways, Hawaii District.

It is unfortunate that State Highways has not been willing to look at all the options available. Currently the ADT on the Keau/Pahoa Highway runs between 19,000 and 22,000 (August 1995 figures). Table 5 (projections for the year 2020 from the Masterplan August 1995 draft) shows 28,290 or a 40% increase. The least this area has grown per year is 5% with 10% more typical. This would translate into a 125% to a 250% increase in ADT. The projections in Table 5 have to be suspect and much larger traffic corridors for this area will be required than is shown on the Land Transportation Masterplan. The

magnitude of these numbers would indicate a higher priority should be given to the East Puna to Hilo corridors than is given in this draft.

In conclusion, an evaluation of Puna's present and projected transportation needs demonstrate some glaring deficiencies that are recognized but are not being addressed in the Masterplan for 2020. This is not a safe situation. On the other hand, the Puna Emergency Access Road/Route does address transportation circulation problems, is an emergency access and, very importantly, can be accomplished immediately. Considering the transportation needs of the Puna region, with all of the official and unofficial suggestions, plans and recommendations, the county's proposed Puna Emergency Access Road is the only plan with a promise.

Sincerely,

Marilyn Baymore

Marilyn Baymore

10020
10020

TABLE 5
COUNTY OF HAWAII
LAND TRANSPORTATION MASTERPLAN
FORECAST YEAR TRANSIT FEASIBILITY ANALYSIS

Area	From	To	Daily Work Trips	Mode Split Ranges Transit Modes (2%)	High (10%)
Hamakua Coast	Honakaa	Hilo	684	14	65
	Ookala/Papaalo	Hilo	2,254	45	225
	Repetico	Hilo	11,090	222	1,108
Puna	East Puna	Hilo	28,290	566	2,829
	West Puna/Keahu	Hilo	42,324	846	4,232
	Volcano/Glenwood	Hilo	8,822	176	882
	Mountainview	Hilo	12,846	257	1,285
	Kuristown Keahu	Hilo	18,626	373	1,863
Mauna Kona	Captain Cook	Kailua	9,362	187	936
	Honanalu	Kailua	2,096	42	210
	Hawaiian Ocean	Kailua	2,382	48	238
Kawahae/Kailua	Mauna Lani/Waikoloa	Kailua	606	12	61
	Kuio/Kaupulehu	Kailua	2,880	58	288
	Kalaoa	Kailua	9,932	199	993
	Kaioho	Kailua	11,394	228	1,139
	Kealakaha	Kailua	17,584	352	1,758
	Hawi/Keahole Airport	Mauna Lani/Waikoloa	5,164	103	516
Honokaa/Keahole Airport	Kailua	Mauna Lani/Waikoloa	618	12	62
	Honokaa	Mauna Lani/Waikoloa	234	5	23
	Waimea	Kawahae	11,102	222	1,110

Source: Fredene R. Harns, Inc.

Table 511.-- LENGTH OF STREETS AND HIGHWAYS, PAVED AND UNPAVED, 1923 TO 1989

[Excludes private thoroughfares and military roads not regularly open to public use]

Category	1923	1938	1958	1973	1989
Total mileage ...	1,479	2,040	2,967	3,666	4,087
Paved	565	1,367	2,393	3,172	3,869
Unpaved	914	673	575	494	218

Source: Robert C. Schmitt, Historical Statistics of Hawaii (University Press of Hawaii, 1977), p. 429; present report, table 512.

Table 512.-- LENGTH OF STREETS AND HIGHWAYS, PAVED AND UNPAVED, BY ISLANDS: DECEMBER 31, 1989

[Excludes private thoroughfares and military roads not regularly open to public use]

Island	Total mileage	Paved		
		Freeways	Other	Unpaved
State total	4,087.48	96.55	3,772.58	218.35
Hawaii 1/	1,449.95	7.04	1,363.79	79.72
Hau	589.23	3.21	529.32	56.70
Lanai	45.83	-	31.85	14.00
Molokai	179.22	-	117.22	12.00
Oahu	1,477.89	86.30	1,358.15	33.44
Kauai	395.36	-	372.87	22.49
Niihau	-	-	-	-

1/ Data exclude Chain of Craters Road, closed due to volcanic eruption.

Source: Hawaii State Department of Transportation, Highways Division, records.