November 15, 1995

GARY GILL, DIRECTOR
OFFICE OF ENVIRONMENTAL QUALITY CONTROL
220 SOUTH KING STREET, 4TH FLOOR
HONOLULU HI 96813

Dear Mr. Gill:

Attached are Final Environmental Assessment and OEQC Publication Form for the proposed Konawaena School Offsite Highway Improvement, Kealakekua, Hawaii.

The County of Hawaii has determined that no significant environmental impacts will result from the proposed project and has thus determined that a **Negative Declaration** is appropriate.

Please contact Mr. Galen Kubo of the County of Hawaii Department of Public Works at (808) 961-8327 or Masa Nishida, consultant for the project at (808) 961-5527 if you have any questions regarding the project or this submittal. Thank you for your attention to this matter.

Sincerely,

DONNA FAY K. KIYOSAKI
CHIEF ENGINEER

YKH:jn

CC: Okahara & Associates
ENVIRONMENTAL ASSESSMENT
FOR
KONAWAENA SCHOOL
OFFSITE HIGHWAY IMPROVEMENT

Kealakekua, South Kona, Hawaii County
TMK Plats 8-1-02, 8-1-04 and 8-1-05

PREPARED FOR:
Public Works Department
County of Hawaii
25 Aupuni
Hilo, Hawaii 96720

PREPARED BY:
Okahara and Associates
200 Kohola Street
Hilo, Hawaii 96720

November 9, 1995
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I. PROPOSING AGENCY

Public Works Department
County of Hawaii
25 Aupuni
Hilo, Hawaii 96720

II. AGENCIES CONSULTED

Department of Education, State of Hawaii
Planning Department, County of Hawaii
Department of Water Supply, County of Hawaii

III. DESCRIPTION AND OBJECTIVES OF PROPOSED ACTION

A. Location

The proposed action is at the intersection of Konawaena School Road and Mamalahoa Highway (also known as "Hawaii Belt Road, State Route 11"). This intersection, near Konawaena Elementary, Intermediate and High Schools is in Hawaii County, District of South Kona, approximately 0.6 miles south of Kealakekua and approximately 2 miles north of Captain Cook. (Figures 1 and 2).

The project site extends along Mamalahoa Highway approximately 660 feet south and 600 feet north of the center of the intersection, and 220 feet east of the intersection along Konawaena School Road.
B. Project Objectives

The objective of the proposed action is to alleviate traffic congestion at this intersection. Traffic moving to and away from the Elementary Schools enter and exit Mamalahoa Highway at this intersection. At this time there is no traffic signal light or left turn lane. Both Mamalahoa Highway and Konawaena School Road are two-lane roads with a single lane in each direction. Traffic making left turns onto Konawaena School Road causes traffic back-ups on Mamalahoa Highway; similarly, traffic on Konawaena School Road attempting to enter Mamalahoa Highway moves slowly. Currently, a police officer directs traffic during peak morning hours at this intersection.

A 1991 traffic study determined that the intersection would require a traffic signal and left-turn lanes by 1992 (Austin, Tsutsumi and Associates 1991). The proposed action would implement the recommendations of this study.

C. Proposed Action

The proposed action is to widen the pavement and designate turning lanes within Mamalahoa Highway and Konawaena School Road, and to install a traffic signal light at the intersection (Figure 3).

Approximately 1260 feet of Mamalahoa Highway and approximately 220 feet of Konawaena School Road would be widened and repaved. The new pavement would be painted with new stripes and arrows to designate turning lanes. Appurtenances to be constructed or reconstructed would include two traffic islands, curbs, gutters, sidewalks, storm drains, private driveway entrances and rock walls or rock retaining walls that border the State right-of-way.

Most of the proposed widened pavement would be within the currently existing State right-of-way. This would be accomplished by a more efficient use of the existing road shoulders and condemnation of some private land. Condemnation of a strip of private land 3 to 12 feet wide along the east (mauka) side of Mamalahoa Highway and on both sides of Konawaena School Road would enlarge the public right-of-way to contain the rock walls that now sit within private property bordering the streets. The rock walls would be rebuilt following regrading and repaving of the streets.
IV. GENERAL DESCRIPTION OF THE ACTION'S TECHNICAL, ECONOMIC, SOCIAL, AND ENVIRONMENTAL CHARACTERISTICS

A. Technical Description

1. RIGHT-OF-WAY

The existing right of way for Mamalahoa Highway is 60 feet wide. Proposed condemnations would variably increase the right-of-way by approximately 3 to 12 feet along most parts of Mamalahoa Highway and Konawaena School Road. The right of way at the corner of the intersection would be increased by approximately 20 feet to allow a sweeping curve.

Condemnations would occur on the mauka (east) side only of Mamalahoa Highway and both sides of Konawaena School Road.

2. STREET CONSTRUCTION

Mamalahoa Highway and Konawaena School Road would both be regraded, widened and reconstructed, and repaved throughout the project site. The existing paved travelway is approximately 22 feet wide. The travelway would be widened to up to 40 feet to permit the designation of turning lanes. The new pavement would be asphalt concrete, the same as the existing pavement.

Gutters, curbs and sidewalks would be constructed or reconstructed.

3. TRAFFIC CONTROL FEATURES

The proposed traffic control features include a traffic signal light ('stop light'), two traffic islands at the intersection, and re-stripping to designate turning lanes (Figure 3). Northbound Mamalahoa Highway would be marked with one through lane and a right turn lane onto Konawaena School Road. Southbound Mamalahoa Highway would be marked with one through lane and a left turn lane. Makai-bound (westbound) Konawaena School Road would be marked with one right turn and one left turn lane. Mauka-bound (eastbound) Konawaena School Road would be marked with a single lane.
4. UTILITIES

Existing utility lines through the project site would be reconnected to utility customers after realignment, reconstruction or other modification required by contract specifications. Utilities include County water supply, electrical transmission and distribution, telephone service, and storm drains.

All service laterals to the County water system would be reconnected to the water mains. New 12-inch diameter water mains would be installed within the State right-of-way of Mamalahoa Highway and Konawaena School Road. All work related to the water system, including mains, service laterals and meters, would conform to the Department of Water Supply "Water System Standards," Volumes I and II, dated 1985, as amended.

Utility poles for electrical transmission and distribution and for telephone service would be relocated near the edge of the proposed State-right-of-way.

The storm drain system would be reconstructed adequate to manage runoff water from the streets. This would include, gutters, dry-wells, catch basins, drains, and a reconstructed box culvert.

B. Social Characteristics

Regional elementary, intermediate and high schools are located east of the intersection on Konawaena School Road. The 1995 combined enrollment of these three public schools was 2,630 students. Approximately 200 teachers and staff work at the three schools.

The Konawaena School Road intersection is approximately 20 miles south of Kailua-Kona, the population and commercial center of West Hawaii. At morning and afternoon hours, traffic carrying students and other school-related traffic, conflict with both local traffic and traffic bound to and from Kailua-Kona. Congestion at this intersection creates long traffic delays. A traffic officer is often required to direct traffic through the intersection.
The proposed action would regulate traffic through the intersection, reducing delays and improving safety.

A strip of privately owned land on the mauka (east) side of Mamalahoa Highway and on both sides of Konawaena School Road would be condemned and added to the right-of-way. Property owners would be compensated fair market value for their land. This strip would vary between 3 and 12 feet in width. This strip would be wide enough to include the existing rock walls, which would be rebuilt on or near their existing locations. Loss of usable area to neighboring private owners would be none or little.

The proposed action, including condemnations, would have insignificant adverse impact on most of the surrounding private property. The general appearance of property fronts would be maintained by reconstruction of the rock walls that characterize the area. All private driveways would be reconnected to the street and paved twenty feet into private property. Other appurtenances, such as sidewalks and curbs, would be constructed or reconstructed.

The proposed action may have an adverse impact for the souvenir store (The Grass Shack) located on TMK 8-1-4:05. Currently, this business has one or more advertising signs that extend into the State’s right-of-way. Additionally, the parking area used by customers includes part of the paved shoulder and right-of-way. The proposed action would move the edge of the pavement closer to the store and the use of the right-of-way for parking would be prohibited. As a result, the store may have difficulty providing parking for customers. Furthermore, the proposed traffic pattern would prevent left turns and limit right turns in and out of the store.

C. Economic Characteristics

A short-term positive economic impact for the county is expected from construction activities. The total construction costs for the project are estimated to be $2 million. In addition, there will be an as yet undetermined payment to compensate private owners for condemned land.
Using the multiplier analysis (DBEDT 1988), it is estimated that approximately 24.5 labor-year jobs are generated for every $1 million construction expenditure. This means that the initial spending of $2 million will generate about 50 man-year of construction industry employment and total income of about $1.7 million will be earned by these workers.

The long-term beneficial impacts are those associated with improved efficiency of traffic flow, such as savings in travel time, reduction of potential traffic accidents and the resulting economic losses.

D. Environmental Characteristics

The proposed action would have negligible impact on the natural environment. The project site has already been developed as a roadway and infrastructure corridor. Parcels bordering the project site are farms and pastures or landscaped residences, cemeteries and businesses. Human activity completely dominates the environment. Little plant or vertebrate animal life occur within the project site. All plant species present are common, alien roadside weeds or common, alien ornamental trees. No rare species or other valuable biological resources occur within the project site.

The proposed action would remove the sparse vegetation within the project area. This may include a few large trees within the expanded right-of-way.

The project area, being a graded roadway, has been heavily disturbed in the past. Any surface archaeological features would have long since been obliterated.
V. SUMMARY DESCRIPTION OF THE AFFECTED ENVIRONMENT

A. Project Site

The project site is south of Kealakekua in the District of South Kona, Hawaii County. The site to be affected is at the intersection of Mamalahoa Highway and Konawaena School Road, extending approximately 660 feet south and 600 feet north of the center of the intersection along Mamalahoa Highway, and approximately 220 feet east of the intersection along Konawaena School Road.

The reconstructed streets and all their appurtenances would be within the current right-of-way, roughly defined by existing rock walls, with the addition of 3 to 12 feet along the mauka side of Mamalahoa Highway and both sides of Konawaena School Road. The right of way at the corner of the intersection would be increased by approximately 20 feet to allow a sweeping curve.

B. Existing Facilities

The project site is, and will continue to be, a roadway and infrastructure corridor.

The site contains segments of Mamalahoa Highway and Konawaena School Road. These roads are on graded roadways and have asphalt concrete pavements over base course, with shoulders and sidewalks, in places. Both roads are two-lane, with one lane to carry traffic in each direction. A number of private driveways connect to the public roads. Runoff water from the streets is controlled by a system of gutters, dry-wells, catch basins and a box culvert.

"Hawaii Belt Road" is the designation of a State highway encircling the island. "Mamalahoa Highway" is the name of an older highway. In many places, the two highways coincide, i.e. there is only one roadway. Segments of Mamalahoa highway that do not coincide with Hawaii Belt Road are maintained by the County of Hawaii. The segments that do coincide with Hawaii Belt Road, such as the project site, are under the joint jurisdiction of State and County.
County Department of Water Supply mains are buried within the right-of-ways of both roads. There are also numerous Service Laterals and meters connecting the mains to users.

Utility poles used for electrical transmission and distribution, and for telephone and other cable services occur within the right-of-ways of both roads.

Most of the roadway within the project area is bordered by rubble walls of native lava or retaining walls below the elevation of the roadway. At the present time, some or most of these walls are within private property.

C. Adjacent Areas and Regional Setting

The project site is in Hawaii County, District of South Kona, very near the district boundary with North Kona. Kailua-Kona, the population and commercial center of West Hawaii, is approximately 20 miles to the north. A narrow, discontinuous urban strip follows Mamalahoa Highway from Kailua-Kona to the small town of Captain Cook, 2 miles south of the project site. (Figures 1 and 2). This urban strip is generally surrounded by small residential or agricultural parcels used for coffee and other small crops. These small farms are surrounded by large parcels of grazing lands. (Armstrong 1983).

D. Climate and Geology

The project site is on the leeward side of Mauna Loa, and thus protected from the strong influence of the northeast trade winds that dominate the climate of much of the island. The winds are generally light and variable with a daily pattern of off-shore and on-shore breezes. Mornings are typically clear and afternoons cloudy. Rain is more likely in the afternoon. Winter "Kona" storms may bring heavy rainfall. (Armstrong 1983). Median annual rainfall is between 1500 and 2000 millimeters (DLNR 1986).

The project site is at 1480' elevation on the western slope of Mauna Loa (Figure 2; USGS 1982). This physiographic region is designated the Mauna Loa Undissected Uplands because of the poor development of surface drainageways (lacks streams) (Armstrong 1983). The parent material is tholeitic basalt erupted from Mauna Loa.
The general soil map (USDA 1971) places the soils of the project area in the Kukaiau-Ainakea-Paauhau association. These soils are described as "deep and moderately deep, gently sloping to steep, well-drained soils that have a moderately fine textured subsoil; on uplands." The specific soil series found within or near the project site are the Honuaulu very stony silty clay loam 6-20 per cent slope and the Honuaunu extremely rocky silty clay loam, 6-20 per cent slope. These two soils are in the Hydric Dystrandept subgroup and the Typic Hydrandept subgroup, respectively. Both soils are formed from volcanic ash and are moderately well-drained to well drained (Sato et al 1973).

E. Land Use

Adjacent land uses include:
- commercial (dba 'The Grass Shack' TMK 8-1-4:5);
- residential (TMK 8-1-2:39, 40 and 58);
- combined residential and agriculture
  (TMK 8-1-4:01,05; 8-1-5:08 lot 3);
- Episcopal church and churchyard (TMK 8-1-5:08 lot 1&2);
- and cemetery (TMK 8-1-4:04).
The State Land Use Classification (LUC) and County zoning (ZONE) for each parcel adjacent to the project site are given below. These LUCs and zoning designations refer to the portion of each parcel actually adjacent to the right-of-way, not necessarily to the entire parcel.

<table>
<thead>
<tr>
<th>Parcel</th>
<th>LUC</th>
<th>ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>TMK 8-1-2:05</td>
<td>U</td>
<td>RS15</td>
</tr>
<tr>
<td>TMK 8-1-2:38</td>
<td>U</td>
<td>RS15</td>
</tr>
<tr>
<td>TMK 8-1-2:39</td>
<td>U</td>
<td>RS15</td>
</tr>
<tr>
<td>TMK 8-1-2:40</td>
<td>U</td>
<td>RS15</td>
</tr>
<tr>
<td>TMK 8-1-2:58</td>
<td>U</td>
<td>RS15</td>
</tr>
<tr>
<td>TMK 8-1-4:01</td>
<td>U</td>
<td>RS15</td>
</tr>
<tr>
<td>TMK 8-1-4:04</td>
<td>U</td>
<td>RS15</td>
</tr>
<tr>
<td>TMK 8-1-4:05</td>
<td>U</td>
<td>RS15</td>
</tr>
<tr>
<td>TMK 8-1-4:05</td>
<td>U</td>
<td>CV10 (Portion with &quot;Grass Shack&quot;)</td>
</tr>
<tr>
<td>TMK 8-1-5:08 Lot 1</td>
<td>U</td>
<td>RS15</td>
</tr>
<tr>
<td>TMK 8-1-5:08 Lot 2</td>
<td>A</td>
<td>A1a</td>
</tr>
<tr>
<td>TMK 8-1-5:08 Lot 3</td>
<td>A</td>
<td>A1a</td>
</tr>
<tr>
<td>TMK 8-1-5:22</td>
<td>U</td>
<td>A1a (Fronting Konawaena School Road)</td>
</tr>
<tr>
<td>TMK 8-1-5:22</td>
<td>A</td>
<td>A1a (Fronting Mamalahoa Highway)</td>
</tr>
</tbody>
</table>
F. Flora and Fauna

A walk-through flora and fauna survey was conducted on June 30, 1995, by biologist Grant Gerrish, Ph.D (Botanical Science).

Most of the project site consists of asphalt concrete pavement and shoulders where no plants grow. These areas are also unsuitable habitat for any vertebrate and most invertebrate animals. A few plants grow sparsely within the gravel shoulders at the edge of the pavement. All of these plants are alien roadside weeds, such as Spanish needle (Bidens pilosa), guinea grass (Panicum maximum), or Indian dropseed (Sporobolus indicus). The trees that line the existing right-of-way, some of which would be removed, are also alien. Most common among these are African tulip tree (Spathodea) and jacaranda (Jacaranda acutifolia).

No native plants were found within or near the project site (with the exception of hapu (Cibotium) cultivated in a yard). The project site, being a road, is not valuable plant habitat.

No native birds or mammals were seen within or near the project site. Alien birds, such as the Common Indian Myna, and alien mammals, such as the Small Indian Mongoose, may forage within the project site. However, the project site does not appear to contain important habitat for any vertebrate species.

G. Historical and Cultural Sites

No known historical or cultural sites occur within the project site. Most of the project site is already a graded roadway. Surface features would have long ago been obliterated.

H. Drainage and Hydrology

The project area is located on the gentle to moderately steep western slope of Mauna Loa. Because the land surface is young, streams or other drainage ways are poorly developed. Therefore, water runs off over the surface or in small rills, or percolates through the well-drained to moderately well-drained soils. The project site is underlain by basal water floating on salt water (Armstrong 1983).
VI. IDENTIFICATION AND SUMMARY OF MAJOR IMPACTS AND PROPOSED MITIGATION MEASURES

A. Primary Short-Term Impacts

The major short-term impact identified would be increased congestion during construction.

Construction-related production of noise, dust and emissions would be a minor adverse short-term impact.

Personal income and economic activity generated by the construction expenditure of approximately $2 million of public money would be a beneficial impact.

B. Primary Long-Term Impacts

No adverse long-term impacts are anticipated.

The long-term beneficial impacts are those associated with improved efficiency of traffic flow, such as savings in travel time, reduction of potential traffic accidents and the resulting economic losses.

C. Irretrievable and Irreversible Commitment of Resources

Irreversible commitment of resources is limited to the funds and materials used in construction. Almost all of the land to be utilized is currently within the right-of-way and is either paved or graveled. A small amount of private land, currently used mostly for landscaping, would be added to the roadway. The proposed action would have a negligible impact on any possible future use of resources on or near the site.
D. Mitigation Measures

It is recommended that construction-related traffic congestion be minimized by appropriate scheduling of construction, such as during school vacation times when classes are not in session.

An alternate parking site will be constructed to compensate the loss of existing parking areas fronting the Grass Shack. The County will work with the owners of the Grass Shack to develop a mutually agreeable improvement plan. The new parking site will be developed adjacent to the store and there are no anticipated impacts associated with its construction.

The short-term, construction-related impacts associated with the generation of dust, emissions and noise would be mitigated by compliance with relevant state and county regulations. The contractor would be required to comply with Department of Health regulations governing noise (Chapter 43 B Public Health Regulations) and fugitive dust (Chapter 60, Air Pollution Control). No work shall be done on Saturdays, Sundays, legal state holidays, and/or in excess of eight hours each day without written consent of the Engineer.

Should any unanticipated archaeological or historical sites be discovered during construction, work would be halted and the State Historic Preservation Office notified.
VII. ALTERNATIVES CONSIDERED

The proposed action addresses a traffic problem at a specific intersection. This problem is most readily solved by the proposed action. Furthermore, the proposed action would utilize the existing roadbed and the existing utilities. Any alternative proposal to construct a bypass or any new roadways would be more expensive and have greater adverse environmental and social impacts.

According to a 1991 traffic study, the State has preliminary plans to reroute Hawaii Belt Road around the Konawaena School Road intersection (Austin, Tsutsumi and Associates). Arterial traffic would follow Hawaii Belt Road, alleviating congestion within the project site. This plan would require constructing an all new roadway, requiring extensive condemnations and the commitment of land now in agricultural or residential use. Furthermore, these plans have not been scheduled nor has funding been made available. At this time, and for the foreseeable future, rerouting Hawaii Belt Road is not a viable alternative.

The No Action alternative would permit severe traffic congestion at this intersection to persist and worsen.

VIII. PRELIMINARY DETERMINATION

This environmental assessment finds that the proposed action would have no significant adverse impact on the human environment.

Based on these findings, an Environmental Impact Statement is not required. Following public comment, it is anticipated that this Environmental Assessment will be filed as a Negative Declaration.
IX. FINDINGS AND REASONS SUPPORTING DETERMINATION

A. The Natural Environment

The proposed action would have no or negligible adverse impact on the natural environment for two reasons: no significant biological resources such as endangered species, native communities or wetlands occur within the project site; and the proposed construction of roadways and appurtenances are within the approximate boundaries of the existing roadways.

B. The Social Environment

The proposed action would have no, or insignificant, adverse social impact in the three areas of private land condemnation, cultural sites and population growth.

The proposed condemnations apply to a very narrow strip at the front of private lots bordering the two roads. Land owners would be paid for condemned land. All private driveways would be rebuilt and repaved at public expense. Rock walls would be rebuilt.

No known historical sites occur within the project site. The entire project site was previously graded to construct the existing roads or is within private lawns. Very little new land surface would be disturbed by the proposed action.

The proposed action is expected to make traffic flow more quickly and safely through the intersection. However, this action by itself would not substantially increase the capacity of Mamalahoa Highway. It is not reasonable to expect the proposed action to increase the population growth rate of West Hawaii, which might adversely impact the environment.
REFERENCES


FIGURE 1: LOCATION MAP
FIGURE 2: AREA MAP. Portion of USGS 1:24000 Topographic Map, Kealakekua Quadrangle.
FIGURE 3: PROPOSED SITE PLAN
EXIST = Existing; NEW = Proposed;
PL = Property Line; CL = Center Line;
E.O.P. = Edge of Pavement
APPENDIX

Konawaena Environmental Assessment - PAGE 20

To: Ms. Donna Fay K. Kiyosaki
   Chief Engineer
   Department of Public Works
   25 Aupuni Street, Room 202
   Hilo, Hawaii 96720-4252

Subject: Draft Environmental Assessment for the Konawaena School Offsite Highway Improvement

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

1. Please consult with businesses and landowners who may be affected by this project.

If you have any questions, please call Joyan Thirupavanam at 586-4189. Mahalo.

Sincerely,

Gary Gill
Director

CC: Masahiro Hishida, Okahara and Associates

OCTOBER 30, 1995

STATE OF HAWAII
OFFICE OF ENVIRONMENTAL QUALITY CONTROL
220 SOUTH KING STREET
FOURTH FLOOR
HONOLULU HI 96813

ATTN: MR. GARY GILL

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT FOR THE KONAWAENA SCHOOL OFFSITE HIGHWAY IMPROVEMENT

Dear Mr. Gill:

We are currently corresponding with property owners and businesses regarding the subject project. All issues will be resolved with affected businesses and landowners.

If you have any questions, please call Gailen Kubo at (808) 961-4327.

Sincerely,

DONNA FAY K. KIYOSAKI
CHIEF ENGINEER

MR: 100

bees, Okahara & Associates, Inc.