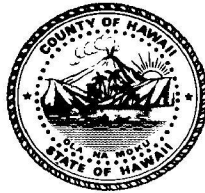


Mitchell D. Roth
Mayor



Tristie Licoan, Chair
William Sanborn
Ruth Smith
Vacant
Julia Alos
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Scott Nagata, Vice Chair
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County of Hawai'i

SOUTH KOHALA COMMUNITY DEVELOPMENT PLAN ACTION COMMITTEE

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November 6, 2024

Leeward Planning Commission
County of Hawai'i
101 Pauahi Street, Suite 3
Hilo, Hawai'i 96720

**Subject: South Kohala Community Development Plan Action Committee Testimony
Regarding Final Recommended Draft General Plan 2045**

Aloha Leeward Planning Commission:

The South Kohala Community Development Plan Action Committee (AC) met on Monday, October 28, 2024, at Kūhiō Hale in Waimea. Included on the agenda was a discussion regarding the Final Recommended Draft General Plan 2045. The AC voted unanimously to provide collective testimony to the Planning Commission, identified as Communication 2024-08 and 2019-10, attached.

Sincerely,

A handwritten signature in black ink, appearing to read "Tristie Licoan", written over a blue horizontal line.

Tristie Licoan (Nov 6, 2024 14:42 HST)

Tristie Licoan, Chair
South Kohala Community Development Plan Action Committee

JL

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Attachment: Communication No. 2024-08 and Communication No. 2019-10

The South Kohala Community Development Plan (CDP) Action Committee (AC) submits the following comments on the Draft General Plan 2045. The compiled comments correspond to the South Kohala CDP, Table 8.1 Implementation Matrix. The table is broken down into the four towns and villages of South Kohala (Waimea Town Plan, Waikoloa Village Plan, Kawaihae Community Plan, and Puakō Community Plan). The AC encourages the implementation of the following SKCDP strategies as they align with the General Plan.

Waimea Town Plan

Prioritize preserving Ag Lands and Open Spaces based on viewplanes, cultural sites, and historical sites. Preserve hillsides and grading for these areas, and change zoning to protect these lands. The AC also supports the development of more affordable housing and pedestrian access for the Waimea Community.

- 1.1 Acquire conservation easements for critical Pu‘u parcels
- 1.2 Require a Use permit for grading on Steep Land
- 2.1 Acquisition of Fee Interest or of Conservation Easements of Open Space Areas in East Waimea
- 2.2 Internal Transfer of Development Rights
- 3.1 Self-help housing
- 3.2 Non-profit housing corporation(s)
- 4.1 Walkways and Bikeways for Waimea

Waikoloa Village Plan

In addition to the following action items, the AC strongly recommends prioritizing the completion of the Daniel K. Inouye Highway between Mamalahoa Hwy and Queen K. Hwy, from mauka to makai.

- 1.1 Finance and construct a second access road to Queen Ka‘ahumanu
- ~~2.1 Finance and construct a community center and community park~~
- ~~3.1 New elementary school, middle school, and high school~~

Kawaihae Community Plan

- 1.1 Complete the development of the Ouli Well Field and transmit the water from Ouli to the Kawaihae area in order to provide additional sources of potable water for the area
 - Revise 1.1 to focus on the area from Kawaihae to Kailapa Hawaiian Homes
 - Adding infrastructure for housing in Hawaiian homes
 - New action plan for an evacuation route for Kailapa subdivision

Puakō Community Plan

- 1.1 Establish a fuel break along Queen Ka‘ahumanu Highway and the northeastern section of Puakō Road
- 1.2 Upgrade existing emergency warning sirens to have a battery electrical power backup in case of power outages
- 1.3 Construct the Paniau Evacuation Route
- 2.1 Construct a sanitary sewer system for the Puakō Beach Lots

Waikoloa Subcommittee Report

to the

South Kohala Community Development Plan Action Committee

June 18, 2019

REPORT OVERVIEW

At the April 2018 meeting of the South Kohala Community Development Action Committee (SCKCP-AC), issues with traffic at the Waikoloa Road/Paniolo Avenue Intersection were raised both in public testimony and as an AC agenda item.

In the public testimony, David Tarnas updated the Action Committee with information from the March 13, 2018 South Kohala Traffic Safety Committee meeting. Hawai'i State DOT officials had announced that new weight limits were pending on the Waiaka Bridge. In response to the restriction, the Kawaihae trucking community reported they would have to drive through Waikoloa as a bypass route to and from the Harbor, significantly increasing traffic congestion in Waikoloa and slowing down traffic flow. Councilman Richards was present and had a new update that DOT would be modifying those limits, avoid immediate increases in truck traffic through Waikoloa.

Although the imminent problem was averted, the AC's further discussion made it clear that the traffic flow in Waikoloa remained an issue that needed further investigation.

AC members agreed to establish a Waikoloa Subcommittee. The Subcommittee was tasked to investigate and report back to the Action Committee on the reported issues with the intersection at Waikoloa Road and Paniolo Drive as well as the on-going concern with a single access road into and out of Waikoloa Village with ever-increasing traffic and especially in emergency situations. AC members Kevin McLaughlin, Julia Alos, and Ruth Smith volunteered to serve on the Waikoloa Subcommittee. These volunteers have been working regularly on this issue for over a year.

The report is structured so that information on either issue is a free-standing document. Thus, information on population, growth, housing, and developments is found in both subsections so each document is comprehensive and can be read independently.

Thank you for your interest in these issues and for your willingness to become informed. We welcome your help for the benefit of residents, visitors, and local commerce to remedy the infrastructure deficits affecting Waikoloa Village and South Kohala.

South Kohala Community Development Plan (SKCDP) Action Committee
Waikoloa Subcommittee Report:
Paniolo Avenue-Waikoloa Road Intersection



Waikoloa Road - Paniolo Avenue intersection as it is in 2019. Image from Apple Maps. Labels added.

Preface: June 2019 Update

As this report was being prepared by the Waikoloa Subcommittee, Council Member Tim Richards moved ahead with a CIP proposal at a special meeting of the County Council on June 5, 2019. The amendment was Communication 118.11 for Bill 31, the 2019-2020 budget bill, and specified, "... to add the Waikoloa Road/Paniolo Avenue/Pua Melia Street Intersection Improvement project in the amount of 4.5 million to the Department of Public Works." The amendment was passed unanimously by the Council and Bill 31 was "AMENDED TO DRAFT 4 AND PASSED 2ND AND FINAL READING."

As of this report date (June 18), the County budget process is not yet complete and the final budget has not been approved by the Mayor, but the addition of this CIP is an important and meaningful step forward towards addressing issues with this intersection.

The subcommittee recommends supporting the CIP with communications to the Department of Public Works, the Traffic and Engineering Divisions within the Department of Public Works, and the Mayor. If the SKCDP Action Committee can assist with public input or other activities with the scope of the Action Committee, the subcommittee recommends providing that assistance.

1. Executive Summary

Based on community feedback and observations, the intersection of Waikoloa Road, Paniolo Avenue, and Pua Melia Street at Waikoloa Village in South Kohala has become increasingly dangerous and is in need of safety improvements. The intersection is also steadily becoming busier and certain routes, such as left turns from Paniolo Avenue onto Waikoloa Road during morning commute hours, appear to be below the acceptable level of service for this type of intersection. Furthermore, the Waikoloa Village area is growing quickly, including new affordable housing development and new shopping center development, and any problems with the intersection are likely to become worse in the near future.

Options for developing improvements to the intersection have been considered in the past and developer obligations were added on some rezoning and subdivision approvals decades ago, but these have not resulted in producing the needed safety and capacity improvements. In fact, it appears that this path will not succeed, as there are no signs of progress from any of the developers, and it is time for the County to take action regarding the intersection.

The South Kohala Community Development Plan (SKCDP) includes multiple Policies and Strategies relating to improving safety and circulation of the South Kohala and Waikoloa Village roadways, and also references the 2005 Hawaii County General Plan which specifically lists *providing traffic signals to the Waikoloa Road-Paniolo Avenue intersection* as one of the “Courses of Action” for South Kohala.

The intersection could be improved in various ways, but this subcommittee suggests having the intersection studied by traffic professionals to recommend the necessary and best improvements and then proceeding on those recommendations.

The improvements could be funded by the County through a project initiated with the CIP process or through a project initiated at the Department of Public Works. In either case, the subcommittee recommends requesting the Traffic Division at DPW to perform a traffic count and analysis to begin the process.

2. Introduction

The large majority of Waikoloa Village (“Village”) is connected to the rest of Hawaii island by a single road, Paniolo Avenue. Paniolo Avenue intersects with Waikoloa Road about 6 miles mauka of the Queen Ka’ahumanu Highway and about 7 miles makai of the Mamalahoa Highway. Paniolo Avenue also continues across Waikoloa Road as Pua Melia Street. Commuters, students, tourists, and others travel in and out of the Village on Paniolo Avenue every day, passing through the intersection with commuters, tourists, trucks, military convoys, and other traffic traveling up and down Waikoloa Road.

The Paniolo Avenue-Waikoloa Road intersection has become a busy intersection in the last 15 years. There are stop signs on Paniolo Avenue and Pua Melia Street, and left turn lanes on Waikoloa Road in both directions. There are crosswalks across all roads. However, there are no other traffic control devices installed at the intersection.

For several years now, Village residents have raised concerns about vehicle and pedestrian safety at this intersection and various factors, such as increased trucking, have changed the composition of the traffic. Multiple landowners near the intersection were obligated by the County to making capacity and safety improvements to the intersection, but none of these improvements have started.

The Waikoloa Subcommittee was asked to investigate and report back to the Action Committee on the reported issues with the intersection, the status of various plans and commitments to improve the intersection, and recommendations on next steps or other actions that can be taken to move forward improvements for the intersection.

For brevity, the intersection will be referred to below as the Waikoloa-Paniolo intersection, or just “[the] intersection”.

3. Population/Housing/Growth

To understand the change in use of the intersection and the future trends, the subcommittee is providing the following analysis of Waikoloa Village population growth and various developments around the Waikoloa Village area.

There has been steady growth in population, housing, and commerce in Waikoloa, as anticipated in the SKCDP Pages 89. [*Appendix CDP 2.*]

3.1. Population Growth in Waikoloa & South Kohala

The 2020 US Census is less than one year away, so accurate data on Waikoloa Village’s population is not available; however, prior Census data shows that the Village’s population grew substantially over the past twenty years, and that the trend continues. July 2017 US Census estimates indicate an 8% increase in Hawaii County’s population to 200,381, up from 185,079 in the official 2010 Census. Conservative estimates are that the Village has grown into a town of over 7,000 people.

Year	Big Island Population	Waikoloa Population	% of Waikoloa Growth (actual or estimated)
1990		2,248	N/A
2000	148,677	4,806	113%
2010	185,079	6,362	32%
2020 estimated	200,381	7,000+	8%-10% or more

Source: July 2017 US Census estimates

Information from the State Data Book (updated November 2018, *Appendix D-1*) provides data on the Resident Population growth by State and Counties (*Appendix D-2, Populations by State & Counties, raw numbers*) shows that the Big Island's increases are consistently higher vs. the State as a whole and any other county.

ANNUAL GROWTH RATE by STATE & COUNTIES

Date	STATE total	City/Co. Oahu	Hawaii Co.	Kauai Co.	Maui Co.
2005-2010	1.1	0.8	2.0	1.3	1.6
2010-2017	0.7	0.5	1.1	1.0	1.0

Source: State Data Book 2018. Resident Population growth by State and Counties, Table 1.07. [Appendix D-3]

Additional information from the State Data Book (2018) data breaks down the **Resident Population of Hawaii County by District by decades from 1990-2010 and from to 2012-2016.** (See modified table below.)

CHANGE RATE BY Hawaii County DISTRICTS

	1990	2000	2010	2012-16	% Increase 1990-2016	% Change 2010-2016
Hawaii County	120,317	148,677	185,079	193,680	61%	5%
Puna	20,781	31,335	45,326	45,517	119%	0%
South Hilo	44,639	47,386	50,927	52,487	18%	3%
North Hilo	1,541	1,720	2,041	1,676	9%	-18%
Hamakua	5,545	6,108	6,513	7,463	35%	15%
North Kohala	4,291	6,038	6,322	6,441	50%	2%
South Kohala	9,140	13,131	17,627	18,751	105%	6%
North Kona	22,284	28,543	37,875	41,662	87%	10%
South Kona	7,658	8,589	9,997	11,277	47%	13%
Kau	4,438	5,827	8,451	8,406	89%	-1%

Source of information in WHITE columns: State Data Book 2018. on Percentage Change of Resident Populations by County: 2000-2017 (Table 1.12)

*Columns in **YELLOW** were added for this analysis. [Appendix D-4]

Between 1990-2016, every Hawaii County District grew, especially Puna and South Kohala; however, between 2010-2016, some Districts leveled off (i.e, Puna), others Districts declined (N. Hilo, Kau), and the remaining Districts continued to grow, especially in Kona and Hamakua. South Kohala also grew by 6% during that period.

“Population” in a locale that is popular world-wide with tourists must include the impact of those visitors on matters related to infrastructure. Valuable data on de facto population comes from *The 2017 State of Hawaii DATA BOOK, A Statistical Abstract*, updated in November 2018. **De facto population** is defined as the number of persons physically present in an area, of military status or usual place of residence. It includes visitor present but excludes residents temporarily absent, both calculated on an Avenuedaily census. *Table 1.04—Resident and De Facto Population, by Residence Status: 2000 to 2017 [Appendix D-5]*.

The significant take-away from this data is that in *every* year, the de facto population *exceeds* the resident population.

The *Waikoloa Plaza* developer Meridian Pacific presents related data in their prospectus regarding visitors/tourists, as follows:

- There are 1,191,470 tourists that visit the west side of Hawaii (Kohala Coast) each year.
- Average stay in Kohala/Kona resorts is 7 days.
- By dividing the number of tourists by the Average stay, the outcome should be the number of static tourists that are in the Kona/Kohala Coast per week on Avenuerage: 22,912 people/week.
- Number of tourists on an Average/week at 100% occupancy:
 - Mauna Lani or North: 7,102
 - Waikoloa Village or South: 8,248

Conclusion: Population growth has occurred as predicted and continues in Waikoloa. All indications are that growth will continue and exceed that of other parts of the State and Hawaii Island.

3.2. Housing growth and developments in Waikoloa

The number of Waikoloa housing units also increased, as did population density per square mile.

Year	Density/Sq. Mile	Density/House	Housing Units
2000	251	107	2057
2010	356	170	3042

Source, U.S. Census

A list of housing developments includes:

SUBDIVISION NAME	UNITS
Kaiaulu 'O Waikoloa (affordable)	63
Kamakoa Nui (HI Co. Workforce Housing)	1,200
Kilohana Kei Phase I	127
Kilohana Kei Phase II	50
Pua Malia (affordable, formerly Waikoloa Highlands land)	60
Sunset Ridge (Makai)	120
Sunset Ridge (Makai Vistas)	31
Waikoloa Mauka (Waikoloa Road/Mamalahoa Hwy.)	96
Wehilani (Castle & Cooke)	756
Subtotal of Active Housing Projects	2,503
<i>Aina Lea</i> See notes *A & *B	2,406
<i>Waikoloa Heights</i> See note *A	2,400
<i>Waikoloa Mauka (RA-1)</i> See note *A	398
Subtotal of Planned Build-out (from CDP)	5,204
TOTAL of Planned Build-out See note *1	7,707

*Note*1 This correlates with but is LARGER than SKCDP projections of- → [7160]*

*Note A. These TMK parcels have received the necessary entitlements to develop, but have not progressed.

*Note B. These TMK parcels are designated by the County LUPAG for Urban Expansion, but have not progressed.

3.3. Commercial developments in Waikoloa

BioEnergy Hawaii LLC, a Kailua-Kona-based developer of waste-treatment and alternative-energy systems, plans to start construction on its \$50 million resource-recovery and energy-conversion facility on the Big Island. BioEnergy Hawaii plans to lease about 15 acres of land on a portion of the property now known as the Waikoloa West Hawaii Concrete Quarry and operate an integrated resource-recovery facility to divert municipal solid waste from the West Hawaii Sanitary Landfill and elsewhere.

It will be processing about 200 tons of incoming municipal solid waste per day, which is collected by local waste haulers, along with a variety of other waste materials. The facility could

expand to allow for a capacity of 400 tons per day of waste. Of this volume, about 70 percent would be suitable for energy-conversion operations and the remaining 30 percent would consist of waste material that would be disposed at West Hawaii Sanitary Landfill, which registers at more than 500 tons per day. In March, 2017, Hawaii County Planning Department gave its stamp of approval to the developer.



Conclusion: This project is likely to increase the amount of traffic on Waikoloa Road, and it will likely decrease the speed of traffic flowing through Waikoloa from the Mamalahoa Highway to near the Queen Ka'ahumana Highway.

WAIKOLOA PLAZA is being developed by Meridian Pacific, Ltd. in Waikoloa located in the southwest corner of the main Village intersection. Its promotional materials state that “Waikoloa Plaza will have a distinctive blend of tenants to provide [residents and] visitors needed daily services, speciality shopping, entertainment and eateries in the continuously growing Waikoloa Village community.”

Access by motor vehicles to the Plaza will include two major entrances, one on Waikoloa Road and another on Pua Melia, about 1,000 feet makai of the post office. A third entrance would be across from the lower entrance to Waikoloa Highlands Shopping Center on Waikoloa Road.

The 130,000-square-foot \$40 million shopping center will encompass 19 square acres, with 35 retail stores filling spaces ranging from 800 to 35,000 square feet.

Eighty-five percent of Waikoloa Plaza has been leased with tenants including Aloha Petroleum, Ace Hardware, Foodland, Fitness Forever, Family Health and Wellness, CrossFit AllStar, and dining outlets such as Balimo's Pizza, Chef TK, L&L Hawaiian BBQ, Strato's New York

Pizzeria, SushHi and Bodhi Tree Juicery. The developer is also in talks with Nail Salon, Island Holistic Healing, Verizon, Longs Drugs, Maui Taco's, Dunkin' Donuts, Denny's, The UPS Store and McDonald's, among others.



The RED circle on the map above is at the intersection of Waikoloa Road and Paniolo Avenue. The VPO (Vehicle Per Day) is 16,600, according to the Plaza's Prospectus.

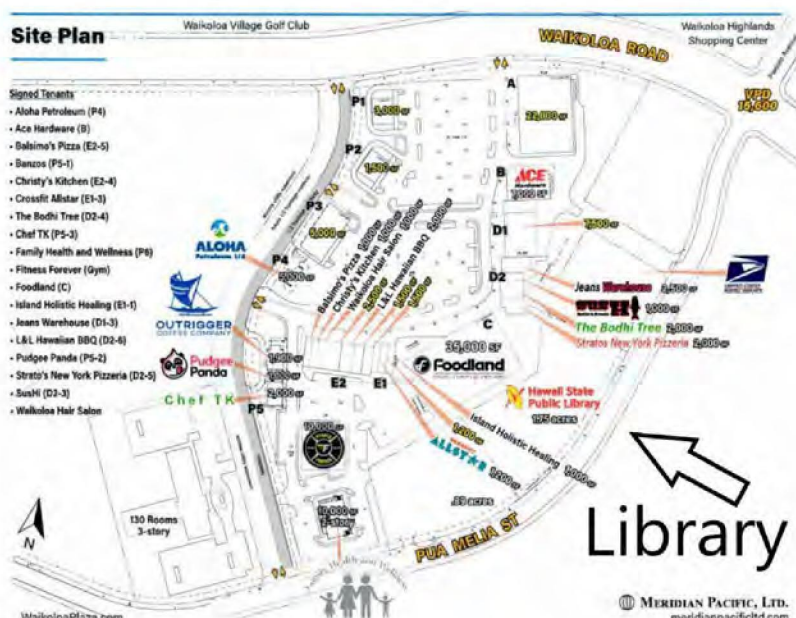
A proposed 150-room hotel is another unique aspect that Meridian Pacific Owner Gary Pinkston hopes to add to the shopping center. The decision for a hotel was also based on the seat count into the Big Island being up from 600,000 five years ago to 1.3 million in 2018. At the same time, the Hilton and others have taken 700 guestrooms out of service for condos.

April 30, 2019, Meridian Pacific broke ground at the site. This site, zoned for commercial development has been a long-awaited improvement to the area, and is welcomed by most. This heightens the infrastructure needs in Waikoloa. Community members express concerns that the shopping center will exacerbate traffic issues on the only road and at the major intersection.

"This shopping center is what we were looking for in our county, and with economic development will come prosperity for the community," District 9 Councilman Tim RichaRoads said. RichaRoads is working to address the congestion at the intersection with a traffic signal or a round-about, depending on the findings of experts in the field.

Conclusion: This project will certainly increase the amount of traffic on Waikoloa Road and congestion at the intersection at Paniolo Drive. It heightens the urgency to address safety issues at the intersection via a traffic light or a round-about, and provide another access road to the Village.

Friends of the Library of Waikoloa Region (FLWR) has worked diligently for over a decade to procure a Public Library for the Waikoloa Region residents and visitors. They are hopeful that the library will be completed and accessible in 2022.



4. Traffic, Pedestrians, and Bicycles in the Intersection

The subcommittee investigated traffic, pedestrian, and bicycle usage of the intersection, as well as industry best practices for evaluating and addressing safety and capacity concerns with intersection.



The image above shows the Waikoloa Road - Paniolo Avenue intersection with traffic markings visible as it is in 2019. The image is from Apple Maps and includes vehicles lined up in the left-turn lane on Waikoloa Road, turning onto Paniolo Avenue, and a truck in the process of making a left turn. Labels have been added.

4.1. Traffic Review

Vehicular traffic at the Waikoloa-Paniolo intersection has the following traffic patterns, as indicated by past traffic surveys and observation (Highlands 2005, various traffic counts, casual observations).

The peak times are morning and afternoon, as is typical. In the morning, traffic leaves Waikoloa Village via Paniolo Avenue and turns right or left onto Waikoloa Road, e.g. for commuting to work or school in Waimea, Kona, Hilo, or down to the resorts, or tourists heading out for activities for the day. There is also traffic up and down Waikoloa Road passing through the intersection but not turning, e.g. trucking, commuters from Waimea or Hilo down to the resort areas, tourists coming up from the resort areas heading to other parts of the island.

In the afternoon, the flow is reversed as people return home. The through-traffic on Waikoloa Road also continues.

During the day, there is a moderate flow of trucks and other traffic traveling up and down Waikoloa Road and a lesser flow of traffic in and out of Waikoloa Village. There is an increase in traffic in and out of Waikoloa Village around lunchtime.

The traffic onto Pua Melia Street is significantly less than onto Paniolo Avenue, primarily driven by the U.S. Post Office located on Pua Melia Street.

Pedestrians using the intersection are primarily residents from Waikoloa Village walking to and from the Post Office, but also include people exercising along Waikoloa Road and Pua Melia Street. Cyclists are often observed riding up and down Waikoloa Road.

These patterns are likely to change significantly in the future, especially vehicular and pedestrian use of Pua Melia Street, due to the new shopping center and affordable housing that are being developed there. Vehicle traffic through the Waikoloa-Paniolo intersection is also going to change due to increased trucking activity, such as for trucking waste from the windward side of the island to the leeward landfill, but will likely be reduced if the DKI extension is constructed from the Mamalahoa Highway down to the Queen Ka'ahumanu Highway.

4.2. Intersection Safety

The primary risks at the Waikoloa-Paniolo intersection are vehicular accidents, particularly involving traffic turning into or out of Paniolo Avenue and Pua Melia Street, and vehicles hitting pedestrians crossing Waikoloa Road. These risks are likely exacerbated due to the lack of any traffic control at the intersection and the frequency of people misunderstanding the traffic rules at the intersection, especially non-residents, which results in unexpected behavior, such as stopping as if there were stop signs on Waikoloa Road.

4.3. Intersection Traffic Load and Capacity

Various U.S. state departments of transportation and highway design experts have developed guidelines for how to determine if an intersection needs to have signalization or other traffic controls added. This takes out the subjectivity that is common when soliciting feedback on whether an intersection needs traffic controls, e.g. due to safety concerns or long traffic delays at peak travel times.

In many states, the state department of transportation will conduct intersection traffic surveys when appropriate requests are made by individuals or organizations. These surveys will include traffic flow counts, pedestrian and bicycle counts, analysis of at least three years of accident or traffic violation data, sight lines and distances at the intersection, and other case-by-case data. The data is assembled into a traffic analysis report which compares the intersection data vs industry-standard metrics, to advise if traffic controls, such as traffic signals or stop signs, are justified. One of the more common metrics that is evaluated is the "Level of Service" of the intersection, defined in the *Highway Capacity Manual*, which evaluates the number of seconds a vehicle is delayed when traveling through or turning at the intersection.

A study of this nature was conducted for the Waikoloa-Paniolo intersection back in 2005 as part of an EIS for a nearby subdivision, the Waikoloa Highlands. This report includes projections for future traffic at the intersection, but it makes some assumptions about future developments at the time, such as the Auwaiakeakua Gulch in Waikoloa Village having a bridge and road to

Waikoloa Road built by 2010, which has not happened as of 2019. Nevertheless, the report recommended adding a traffic signal to the intersection based on the 2005 analysis and 2010 projections, primarily to address “Level of Service” issues with left turns from Paniolo Avenue onto Waikoloa Road. (*WHTIA*, p. 25)

Traffic on Paniolo Avenue and Waikoloa Road were counted in separate activities in 2016 and 2018, although the data was collected in different locations and not incorporated into a formal traffic analysis report. Traffic at the intersection has also been estimated currently at 16,600 vehicles per day by the Waikoloa Plaza development team, Meridian Pacific (per leasing brochure, 2018).

4.4. Near-term Pedestrian Usage Increases

Pedestrian and bicycle usage is very likely to increase in the future, within the next two years, due to the construction of a large shopping center on the south side of Waikoloa Road. This will drive pedestrian and bicycle traffic from Waikoloa Village (on the north side of Waikoloa Road) across the intersection to and from the shopping center.

There is also an affordable housing development planned on Pua Melia Street that will have around 60 units which will also increase pedestrian traffic at the Waikoloa-Paniolo intersection, as people from that development walk across the intersection to the existing shopping center on the northwest corner of Waikoloa Road and Paniolo Road, and possibly children walking or cycling to school at Waikoloa Elementary & Middle School.

4.5. Near-term Traffic Increases

Waikoloa Road is currently used as the main thoroughfare between the Mamalahoa Highway and the Queek Ka’ahumanu Highway. This results in many trucks traveling through the Waikoloa-Paniolo intersection. Military convoys also use this route and occasionally slow down traffic, but this is not typically a daily occurrence.

Industrial use and construction projects along Waikoloa Road, such as the West Hawaii Concrete quarry, the BioEnergy Hawaii plant, West Hawaii Concrete’s planned asphalt plant, AES Distributed Energy’s planned solar power plant, the planned trucking of waste from East Hawaii to the West Hawaii Sanitary Landfill in Puuanahulu, and others, add (or will soon add) to the daily heavy vehicle traffic.

4.6. Intersection Recommendation

After reviewing the available data, it seems to the members of the subcommittee preparing this report that the Waikoloa-Paniolo intersection needs to have traffic controls added, such as a traffic signal or a roundabout. However, it is difficult to draw a firm conclusion without having professionals review current traffic data for the intersection.

Fortunately, intersection traffic control is an extremely well-studied area with established standards and procedures for determining how to address intersection traffic and safety. This would typically consist of a traffic study (or traffic count) performed by the Hawaii County Traffic Division for the Waikoloa-Paniolo intersection.

The subcommittee therefore recommends requesting that the Traffic Division perform a traffic count at the intersection and then evaluate the results using their tools and expertise to determine what improvements, if any, are warranted at this time. The subcommittee also recommends requesting that the traffic count be repeated every three years to identify further improvements or changes necessary in the future as the Waikoloa Village area continues to grow.

In support of this recommendation, it is worth noting that the County of Hawaii has also recognized the need for improvements to the intersection by adding obligations for developers to improve the intersection if they proceed with developments on three lots near the intersection, however, as explained in *Section 7* below, this has not resulted in any improvements and does not appear to be a viable plan for improvements to the intersection in the timeframe they will be needed.

5. Community Input/Feedback

The members of the subcommittee live in Waikoloa Village and regularly speak with other residents of the Village. It is hard to produce statistics from these discussions, but it is notable that in every discussion about the Waikoloa-Paniolo intersection, residents always agree that the intersection is dangerous and needs improvement. Village residents have varying opinions about what kind of improvement should be made, generally preferring either a traffic signal or a roundabout, but none of the subcommittee members have experienced a Village resident arguing that safety improvements are not needed.

One informal survey was conducted on the website “Nextdoor” on their Waikoloa Village community page. This survey received 76 replies from about 25 Waikoloa Village residents. There were various opinions about how to improve the safety of the intersection, ranging from more informative signage and adding stop signs to traffic signals and roundabouts, but everyone agreed that the intersection needs safety improvements.

Safety of the intersection is also a frequent topic raised at Waikoloa Village Association (WVA) meetings. The WVA membership consists of over 3000 homes in Waikoloa Village, which the subcommittee estimates to include at least 2/3 of the Village population. The WVA is asked regularly, many times each year, if the WVA can improve the safety of the intersection. The WVA has provided feedback to the County in the past regarding safety improvements being needed at the intersection.

6. CDP support for Intersection Improvements

In the South Kohala Community Development Plan (SKCDP), a Second Access Road for ingress and egress for Waikoloa was the top priority, along with overall infrastructure improvements. In 2008 when the SKCDP was submitted, the Waikoloa-Paniolo intersection itself was not a “hot topic”. Since then, the population of Waikoloa Village has grown from 4,800 to 7,000 people, a 46% increase.

Below are the relevant sections of the SKCDP that relate to the intersection.

General Policy 2 of the SKCDP relates to transportation, with sub-policy 2.3 specifically being “Build safe roads.” Kawaihae Road and Waikoloa Road are identified as being considered dangerous, with the example of not having truck runaway ramps.

In the Waikoloa Policies and Strategies in the SKCDP,

- Policy 3 addresses Transportation & Circulation (*Appendix CDP-5*)
- Strategy 3.5 recommends the Development of a Master Circulation Plan for Waikoloa Village. (*Appendix CDP-8*)
Had a Master Circulation Plan been developed, it would undoubtedly have addressed the Intersection issues with traffic congestion.
- Strategy 3.6 recommends implementing traffic safety improvements along Waikoloa Road. (*Appendix CDP-8*)
Improvements to the Waikoloa Road-Paniolo Avenue intersection are not specifically mentioned, but this Strategy was intended to address any safety issues related to travel on Waikoloa Road.

The SKCDP also established a Monitoring Plan for South Kohala:

- The Monitoring Plan is a way to track and assess the progress of Policies. (*Appendix CDP-10*)
- The specific Monitoring Plan for Waikoloa regarding infrastructure is 9.3.3 “Provide Transportation and Circulation Improvements in a Timely Manner” by looking at County and State CIP allocations for infrastructure and the number of public/private partnerships formed to provide for roadways. (*Appendix CDP-11*)
No Master Circulation Plan has been developed

The SKCDP also referenced the 2005 Hawaii County General Plan and County Codes:

- SKCDP Appendix D is from the County’s General Plan (2005) “Courses of Action” for the District of South Kohala. (*Appendix CDP-12*).
Under the Transportation: Roadways section, item “j” is: (*Appendix CDP-13*):
 - **Provide traffic signals at the Waikoloa Road-Paniolo Drive intersection.**
 - In SKCDP Appendix E, Referenced County Codes were listed.
 - Concurrency Requirements: This section creates standards for road and water supply in change of zoning actions. Definitions are provided, including:
 - Acceptable levels of service
 - Approved development
 - Critical road area
 - Immediate vicinity of a project
 - Level of Service (LOS)
 - Local mitigation
 - Area mitigation
- (*Appendix CDP-14*)

7. Developer Obligations

The County recognized decades ago that the Waikoloa-Paniolo intersection would need safety and capacity improvements. To support this, the County and the LUC added requirements to three lots near the intersection when the respective owners of those lots, Waikoloa Highlands, Waikoloa Mauka, and Hawaiian Riverbend, applied for rezoning or subdivision, as early as 1990 (in Ordinance 1990-160, requiring signalization of the intersection, based on a Traffic Impact Analysis Report (TIAR) from 1989).

Unfortunately, none of the owners have engaged in any substantial development of those properties and their various requirements to build intersection improvements remain unfulfilled. In fact, one of the owners, Waikoloa Highlands, has recently had their rezoning revoked due to inactivity. The owners of the other lots do not show any signs of engaging in development of their respective properties, resulting in the intersection being unimproved for far longer than the County envisioned when the requirements were added. For example, Ordinance 1995-051 amended the earlier 1990-160 to require the signalization of the intersection by June 30, 1996. This deadline was among many missed by the respective developers.

In 2005, the County passed Ordinance 2005-157 which amended the requirement further to specify a roundabout, and the developer did contract with an engineering firm to create plans for this improvement, which was noted in a 2016 annual report from Waikoloa Highlands as “construction plans for the roundabout at the Waikoloa Road/Paniolo Avenue intersection have been completed.” However, the plans were apparently not paid for by the developer and were never approved or acted upon.

As Waikoloa Highlands was the only developer that had even taken any steps, and they are the developer that has lost their rezoning due to inactivity, it appears that the reliance on developers to make the needed safety and capacity improvements to the intersection has failed, and the improvements are now overdue. It is time for the County to create a new plan that does not rely on developers, or to find a way to get contributions from developers regardless of their development progress so that the community involved is not harmed simply because developers decided not to develop their properties.

8. Improvement/solution Options

As part of researching the Waikoloa Road - Paniolo Avenue intersection, the subcommittee received some feedback from the community and reviewed some documentation that suggested adding a traffic signal or a roundabout to the intersection as a solution to the apparent safety and capacity problems. The subcommittee spent some time to evaluate if one or the other solution, or even a different solution, would be better for the intersection.

Ultimately, however, it is the responsibility of professionals in traffic design to determine the correct type(s) of improvement(s) for the intersection, so the subcommittee is providing this very brief synopsis for information only.

Research into the topic of traffic signals vs. roundabouts revealed that roundabouts are generally considered safer than traffic signals, as any accidents that occur in a roundabout are typically at a lower speed than at a traffic signal (or unsignalized intersection), resulting in fewer and less

severe injuries to any people involved. Roundabouts sometimes result in fewer total accidents of all types, but occasionally result in a slight increase in total accidents, though with fewer and less serious personal injuries. The main drawback of roundabouts is that it is more difficult for pedestrians with vision disabilities to cross the road at a roundabout.

Other options, such as adding stop signs on Waikoloa Road or adding a pedestrian crossing signal, could be considered, but the subcommittee advises again that the determination of what improvements should be made should be the responsibility of professionals in the field.

9. Funding/Development Options

There are various funding options for making the needed Waikoloa-Paniolo intersection improvements. The main options are, in no particular order:

1. County CIP process
2. Department of Public Works, Traffic Division
3. Developer obligations related to rezoning, subdivision, or building plan approvals

The option with the least cost to the County is the developer obligation option, but this has not worked in this case. The property owners that were given a requirement to make improvements have not developed their properties, and do not appear that they will do so any time soon, so this option cannot be pursued unless a new developer enters the picture. See section 7 above for more details on the current (unsuccessful) developer obligations.

The option that appears to have the shortest path to development is to work with the Department of Public Works (DPW), specifically starting with the Traffic Division. The Traffic Division could perform a traffic count at the intersection and then evaluate the data collected using their expertise and tools. This would result in specific recommendations for improvements that would address the issues revealed by the Traffic Division's evaluation. The recommendations would then be passed to the Engineering Division at DPW for further analysis and planning. The Engineering Division would be able to create a specific plan and request funding via CIP or via a direct request to the County Council to appropriate funds for the needed improvements. The improvement project could then proceed as planned by the Engineering Division.

The County CIP process is well-known and follows an annual review and approval process as part of the County budget. This method of proposing a Waikoloa-Paniolo intersection improvement project is suggested if the DPW is unable to move forward on the project directly, or if an opportunity arises to submit a CIP with support from Council Members in the current budget approval cycle.

10. Conclusion/Recommendations

After considering all of the information in this report and numerous source materials (see References), the members of the Waikoloa Subcommittee believe the Waikoloa-Paniolo intersection needs to have traffic controls added, such as a traffic signal or a roundabout.

Reiterating the recommendation from Section 4, the subcommittee recommends requesting that the Traffic Division perform a traffic count at the intersection and then evaluate the results using their tools and expertise to determine what improvements, if any, are warranted for the intersection at this time. The subcommittee also recommends requesting that the traffic count be repeated every three years to identify further improvements or changes necessary in the future as the Waikoloa Village area continues to grow.

After the Traffic Division completes the traffic count and analysis, and based on the recommendations the Traffic Division produces, the subcommittee recommends following up with the Engineering Division, the Department of Public Works, and the County Council to support the intersection improvements. If needed, the subcommittee also then recommends submitting a CIP for the intersection improvements.

11. References

Apple Maps copyright information: <https://gspe21-ssl.ls.apple.com/html/attribution-136.html>
Other sources, citations, and references to be updated in additional document.