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SAMUEL MAHELONA MEMORIAL HOSPITAL CONCEPTUAL MASTER PLAN

APPENDICES

NOVEMBER 2020



Appendix A

Service Line Forecast

Samuel Mahalona Memorial Hospital (SMMH) Service Forecasts

The SMMH Service Forecasts address currently provided services. The Master Plan assumes these key services will continue on the campus. The forecast takes into consideration:

- Existing and forecast Kauai residents of all ages
- Historical and existing services provided at SMMH, namely:
 - Acute care beds
 - Acute adult psychiatric beds
 - Long Term Care/Skilled Nursing Facility (LTC/SNF)¹ beds
 - Emergency Room visits
- An overview of SMMH's health care market
- Forecast of need as a basis of Master Plan space and functional requirements

This paper provides the methodology and assumptions used to forecast the need for the services currently provided at SMMH as summarized in the following table.

Forecast SMMH Service Needs

	Existing	2018	2020	2025	2035	2045
Acute Care Beds	5	.3	1.9	2.0	2.2	2.3
Adult Psych Beds	9	3.8	3.8	4.0	4.3	4.6
LTC/SNF Beds*	54	54	55	63	73	75
ER Stations	5	4.0	4.3	4.5	4.8	5.2

*License is for 66 beds, but set up is 54

Kauai Population by Age

Currently, there are approximately 74,000 people residing in Kauai County. By 2040, total population is expected to increase by some 16,000 people. Existing and projected number of Kauai residents by age is shown below.

Kauai Population by Age Group: Existing and Projected

	1990	2000	2010	2018	2019	2020	2025	2030	2035	2040	2045
0-14	12,167	12,520	12,642	13,788	13,878	13,968	14,387	14,716	15,312	15,937	16,620
15-19	3,334	4,068	4,106	3,991	4,044	4,099	4,398	4,662	4,617	4,817	4,992
20-44	20,159	18,779	19,926	21,651	21,867	22,088	22,839	23,638	24,860	25,729	26,753
45-64	9,354	14,986	20,457	19,317	19,050	18,787	18,194	18,242	18,496	19,342	19,822
65-84	6,077	7,160	8,452	12,519	13,090	13,703	15,911	16,889	16,568	15,779	15,559
85+	<u>585</u>	<u>1,055</u>	<u>1,643</u>	<u>2,021</u>	<u>2,061</u>	<u>2,101</u>	<u>2,317</u>	<u>3,073</u>	<u>4,450</u>	<u>5,631</u>	<u>6,298</u>
Total	51,676	58,568	67,226	73,287	73,990	74,746	78,046	81,220	84,303	87,235	90,044

Source: State of Hawaii DBEDT June 2018 Report

Analysis by age cohort is especially useful in determining healthcare needs since the elderly are major consumers, especially for inpatient resources. This forecast shows the population 65+ increasing significantly by 2045. The 85+ age group alone is

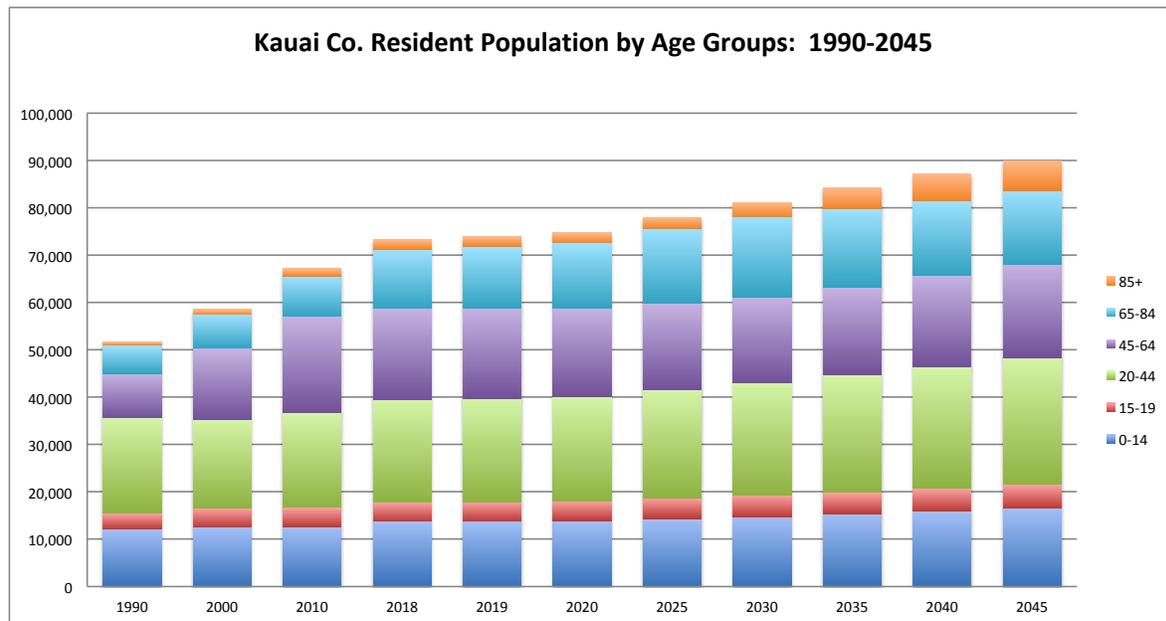
¹ Long Term Care/Skilled Nursing Facility (LTC/SNF) for SMMH Services refers to the Skilled Nursing beds provided on the campus. Long Term Care for elders can also refer to other types of residential based care such as Assisted Living.

expected to increase over 200%. Generally, the older age groups are higher consumers acute care hospital services.

At the same time, the younger age groups are growing also, but staying at the same proportion of the total population (see next table). This is important because the Emergency Room reports that many of their patient diagnoses are substance abuse issues arising from the adolescent age group.

% Kauai Population by Age Group: Existing and Projected

Age group (years)	1990	2000	2010	2018	2019	2020	2025	2030	2035	2040	2045
0-14	24%	21%	19%	19%	19%	19%	18%	18%	18%	18%	18%
15-19	6%	7%	6%	5%	5%	5%	6%	6%	5%	6%	6%
20-44	39%	32%	30%	30%	30%	30%	29%	29%	29%	29%	30%
45-64	18%	26%	30%	26%	26%	25%	23%	22%	22%	22%	22%
64-84	12%	12%	13%	17%	18%	18%	20%	21%	20%	18%	17%
85+	1%	2%	2%	3%	3%	3%	3%	4%	5%	6%	7%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%



The visitor population adds about 27,000 per day bringing the total Island population to over 100,000 today. But 2045 visitor population is expected to be about 36,000 per day bringing the total to 126,000. Percent growth in visitor population is more than resident population (6% every 5 years to 2035 and 5% to 2045 versus 4% and 5% respectively for Kauai residents).

For purposes of this study, it was assumed the resident population changes would be the primary factors influencing the change in SMMH workloads. Local residents are the primary users of the Acute, Long Term Care/Skilled Nursing Facility and Psych beds. While it is recognized some visitors may use the Emergency Department, the major driver of changes is assumed to be the resident population as well.

Acute Care Bed Utilization

Methodology

The method for determining the acute care bed utilization involved the following steps:

- Establish 2018 as the base year
 - Used 2018 since this was the most current data from the Laulima Data base for acute care discharges by major diagnostic category
- Forecast horizon to 2045 provides a 25 year forecast
- Apply Kauai County population changes to Kauai County resident admits
- Apply SMMH Market Share of Kauai County Admits to provide SMMH Admits
- Sherry Lauer, Regional Chief Quality Officer and Cheryl Tennberg, Regional Chief Nursing Executive both of the HHSC Kauai Region provided assumptions regarding two new services that will change patient admits: a CT Scanner and a Hospitalist.
 - Due to acquisition of a CT Scanner by 2020, additional 50 admits added due to having a CT Scanner
 - Due to Hospitalist coming on board at SMMH by 2020, an additional 40 patients are assumed for 2020.
- Use SMMH's 2018 Average Length of Stay (ALOS) to forecast Patient Days (PDs)
- Calculate Average Daily Census (ADC) and bed need based on a 65% occupancy rate

Assessment of the Kauai Market

Kauai medical/surgical acute care beds are provided at the following hospitals:

- 72 Beds at Wilcox Memorial Hospital
- 25 Beds at Kauai Veterans Memorial Hospital (10 are Acute/SNF Swing)
- 5 Beds at Samuel Mahalona Memorial Hospital (4 are Acute/SNF Swing)

Kauai residents who were historically hospitalized on Kauai or off-island along with the forecast of admits are shown in the following table. Future admits are increased by the rate of demographic increases forecast out to 2045.

Kauai Resident Med/Surg Acute Care Discharges: Historical and Projected

	2016	2017	2018	2020	2025	2035	2045
Total Kauai Residents	5,513	5,598	5,050	5,151	5,378	5,809	6,205

Discharges per 1000 population for Kauai residents, including those that are hospitalized off-island, is as follows:

	2016	2017	2018
Total Kauai Residents	5,513	5,598	5,050
Total Population	72,634	73,287	73,990
Discharge/1,000 Pop	75.9	76.4	68.3

Kauai rates are about 15 points below west coast rates, and 36 points below the national discharge rate. Kauai is also lower than the discharge rate of the State of Hawaii, which is about 78.

Medical/Surgical Acute Care Forecast Need

Assumptions for needs assessment:

SMMH Market Share

SMMH's market share of the total Kauai current and future discharges are shown below. In the future, with the addition of a CT scanner and Hospitalist, SMMH's market share is expected to increase.

SMMH Market Share

	2016	2017	2018	2020	2025	2035	2045
Mkt Share of IP Discharges	0.34%	0.39%	0.40%	2.15%	2.15%	2.15%	2.15%

SMMH Average Length of Stay (ALOS)

From 2016 to 2018 SMMH's ALOS has fluctuated quite a bit. With a small number of patients, abnormal stays of just a few patients can greatly influence ALOS. The spike in ALOS in 2017 was due primarily to a few patients whose diagnosis was substance abuse. In 2018, ALOS was down from 13.8 days to 4.15 days. The 2018 ALOS was used to forecast future need.

SMMH ALOS

	2016	2017	2018
Total	6.47	13.82	4.15

SMMH Med/Surg Bed Forecast:

The projected bed need for SMMH's Med/Surg Acute beds based on population growth and addition of CT Scan and a Hospitalist are shown here:

	Actual		Projected based on total Pop Growth & New Svcs-->				
	2016	2017	2018	2020	2025	2035	2045
Total Kauai Admits	5,513	5,598	5,050	5,151	5,378	5,809	6,205
SMMH Admits	19	22	20	111	115	125	133
SMMH Market Share	0.3%	0.4%	0.4%	2.1%	2.1%	2.1%	2.1%
SMMH ALOS	6.47	13.82	4.15	4.15	4.15	4.15	4.15
SMMH Pat Days	123	304	83	459	479	518	553
SMMH ADC	0.34	0.83	0.23	1.26	1.31	1.42	1.51
SMMH Occ Rate	65%	65%	65%	65%	65%	65%	65%
SMMH Bed Need	0.5	1.3	0.3	1.9	2.0	2.2	2.3

Conclusion:

Based on the assumptions used in this forecast, the existing 5 Med/Surg beds are ample for accommodating future needs. Increased inpatient utilization will likely increase revenues in the future.

Acute Adult Psychiatric Bed Utilization

Assessment of the Kauai Market

SMMH's 9-bed licensed unit is the only adult psychiatric facility on Kauai. Three rooms are semi-private which limits occupancy because genders cannot be mixed. Their approach is to admit, treat, stabilize and discharge. Therapy is not part of their charge.

If an adolescent or child needs acute psychiatric care, they are sent to Honolulu. As is the case for adults, once discharged very few venues exist with trained caregivers to continue care in the community.

Kauai residents with a psychiatric diagnosis who were or forecast to be hospitalized on Kauai or off-island are shown in the following table. Future admits are increased by the rate of demographic increases forecast out to 2045.

Kauai Resident Psychiatric Acute Care Discharges: Historical and Projected

	2016	2017	2018	2020	2025	2035	2045
Total Kauai Res Admits	176	185	191	195	203	220	235

As shown, discharges have not increased significantly over the last couple of years.

Acute Adult Psychiatric Bed Forecast Need

Assumptions for needs assessment:

SMMH Market Share

Because SMMH is the only inpatient Psych facility on the island, SMMH's market share is quite high. There are a few patients who are hospitalized off-island, but most stay on Kauai. Current and future discharges for Kauai residents are shown below. 2018 market share is assumed for the forecasts.

SMMH's Acute Adult Psychiatric Market Share

	2016	2017	2018	2020	2025	2035	2045
Total	97.2%	95.7%	96.3%	96.3%	96.3%	96.3%	96.3%

SMMH Average Length of Stay (ALOS)

From 2016 to 2018 SMMH's ALOS dropped from 6.0 to 4.9 days. The 2018 ALOS was used in the forecast to predict future days.

SMMH Psychiatric Unit ALOS

	2016	2017	2018
ALOS (use 2018)	6.00	6.06	4.86

The projected bed need for SMMH's Psych Acute beds is shown here:

SMMH Psychiatric Unit Forecast

	Actual		Projected based on total Pop Growth -->				
	2016	2017	2018	2020	2025	2035	2045
Total Kauai Admits	176	185	191	195	203	220	235
SMMH Admits	171	177	184	188	196	212	226
SMMH Market Share	97.2%	95.7%	96.3%	96.3%	96.3%	96.3%	96.3%
SMMH ALOS	6.00	6.06	4.86	4.86	4.86	4.86	4.86
SMMH Pat Days	1,026	1,072	894	912	952	1,028	1,098
SMMH ADC	2.81	2.94	2.45	2.50	2.61	2.82	3.01
SMMH Occ Rate	65%	65%	65%	65%	65%	65%	65%
SMMH Bed Need	4.3	4.5	3.8	3.8	4.0	4.3	4.6

Conclusion:

Based on the assumptions used in this forecast, the existing 9-bed psychiatric license is ample for accommodating future needs. There are current plans to upgrade the unit to address some safety issues for patients and staff. However, the unit has some space and functional issues beyond what can be addressed in the current upgrade.

SMMH Long Term Care/Skilled Nursing Facility Bed Utilization

Assessment of the Kauai Market

There are 333 licensed long-term care/skilled nursing facility beds on Kauai spread across 5 locations as follows:

- 110 beds at Garden Isle Rehab & Healthcare Center
- 84 beds at Hale Kupuna Heritage Home
- 53 Beds at Kauai Care Center
- 66 beds at SMMH
- 20 beds at West Kauai Medical Center/KVMH

Key statistics compiled by SHPDA is shown in the following table.

Long-Term Care/Skilled Nursing Facilities Key Statistics

	Lic Beds	Inpatient Days			Admissions			ALOS		
		2015	2016	2017	2015	2016	2017	2015	2016	2017
Garden Isle Rehab & Healthcare Center	110	35,944	36,866	34,472	278	231	216	129	160	160
Hale Kupuna Heritage Home	84	25,321	25,025	25,808	77	61	49	329	410	527
Kauai Care Center	53	17,032	17,166	17,872	99	77	66	172	223	271
SMMH	66	19,864	19,890	16,828	30	24	50	662	829	337
West Kauai Med Cen/KVMH	20	7,263	7,243	7,219	21	15	13	346	483	555
Total	333	105,424	106,190	102,199	505	408	394	209	260	259

SMMH Long Term Care/Skilled Nursing Facility Bed Forecast Need

Assumptions for needs assessment:

- Increase long-term care/skilled nursing facility admits by growth in the population 65+ per SHPDA
- Increase market share in 2020 after renovation from 7.3% to 7.5% to achieve goal of reducing 2 – 3 waitlisted patients
- Average length of stay is assumed at 540 days, approximating the current ALOS
- At SMMH, after patient room renovations, there will be 54 set-up beds - 12 fewer beds than the license
- For future-year forecasts, assume 54 set-up beds is not a limiting factor. The goal is to determine future need based on accommodating growth in population and slightly increasing and maintaining market share
- Assume a 90% occupancy rate is achievable in the future

The projected need for SMMH's Long Term Care/Skilled Nursing Facility beds based on population growth is shown here:

SMMH Long Term Care/Skilled Nursing Facility Bed Forecast

	as reported to SHPDA		Projected based on pop growth of 65+ & 2.8% requiring skilled nursing					
	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2020</u>	<u>2025</u>	<u>2035</u>	<u>2045</u>
Total Market Admits	505	408	394	407	443	510	589	612
SMMH new admits	30	24	50	30	33	38	44	46
SMMH Mkt share	5.9%	5.9%	12.7%	7.4%	7.5%	7.5%	7.5%	7.5%
SMMH ALOS	662	829	337	558	540	540	540	540
SMMH Pat Days	19,864	19,890	16,828	16,743	17,921	20,670	23,834	24,785
SMMH Average Daily Census	54	54	46	46	49	57	65	68
SMMH Occ Rate based on 66 & 54 beds available until 2020	82%	83%	70%	85%	90%	90%	90%	90%
SMMH Bed Need	66	66	66	54	55	63	73	75

Conclusion:

The long term care/skilled nursing area at SMMH is currently being upgraded. The nursing station is being modernized, there are plans to upgrade the hallway flooring, lighting and finishes, and patient rooms are being modernized. The unit has been operating at a reduced bed number of 54 beds during renovation and upon completion will have 54 beds available. By 2025, the forecast shows a need for 9 additional beds (63 beds) – still well within the bed license. Assuming current admit rates and a steady market share, the need by 2045 is expected to be 75 beds.

It should be noted however, that because of the lack of safe and affordable discharge venues, some patients are held for longer than is medically necessary in long term care/skilled nursing facility beds. In the future, should care homes and transitional housing be available, ALOS may be reduced and therefore patient days and bed need would be reduced.

Emergency Room Visit Forecast

Assessment of the Kauai Market

There are 3 Emergency Rooms (ER) on Kauai provided at the following hospitals:

- Wilcox Memorial Hospital in Lihue
- Kauai Veterans Memorial Hospital in Waimea
- Samuel Mahalona Memorial Hospital in Kapaa

In addition, there are a number of Urgent Care Clinics available, or soon to be available on Kauai, including:

- Kauai Urgent Care in Lihue
- Urgent Care at The Clinic in Poipu
- Hale Le'a Family Medicine & Urgent Care in Kilauea
- Makana North Shore Urgent Care in Princeville
- Kapaa Clinic Urgent Care in Kapaa (soon to be open)

With the addition of a CT Scanner at SMMH, it is expected that more patients will be brought into SMMH ER to be treated and fewer patients will need to be transferred to get a CT Scan. Currently there are a number of patient that are transferred or simply sent home after being told to go get a CT Scan 'if it gets worse'.

Plus, the addition of a Hospitalist that can oversee inpatient care on a regular basis is also expected to increase ER visits for those patients that need to be admitted.

Emergency Room Forecast Need

Assumptions for needs assessment:

- Increase Kauai visits by overall growth in the population per SHPDA
- On top of population growth, increase ER visits by 5% in 2020 to account for increase in volumes due to CT Scanner and Hospitalist (assume EMR bring more ER patients to SMMH because of increased capabilities)
- By 2025, increase visits by another 5% for a total 'bump' in volumes of 10%. Beyond 2025 no additional increase due to CT Scan or Hospitalist.
- Assume visits from Kauai County account for about 85% of visits, as in 2018
- Assume visits from out of Kauai County remains in same proportion as 2018
- Stations required used a 'rule of thumb' of 1,500 visits/station

Emergency Room Forecast

The projected ER visit and station forecast is shown here:

SMMH ER Forecast							
Inc Kauai by State Demographic Forecast + CT scan + Hospitalist							
	Actual	same % distribution by pat origin as 2018					
	<u>2018</u>	<u>2020</u>	<u>2025</u>	<u>2030</u>	<u>2035</u>	<u>2040</u>	<u>2045</u>
Kauai County	5,134	5,498	5,741	5,974	6,201	6,417	6,623
Oahu County	36	39	40	42	43	45	46
Maui County	20	21	22	23	24	25	26
Hawaii County	9	10	10	10	11	11	12
Out of State	812	870	908	945	981	1,015	1,048
Total	6,011	6,437	6,721	6,995	7,260	7,513	7,755
# stations @ 1,500 visits/station	4.01	4.29	4.48	4.66	4.84	5.01	5.17
% Increase in ED visits							
- CT Scans		3%	3%	0%	0%	0%	0%
- Hospitalist		2%	2%	0%	0%	0%	0%
Total Increase		5%	5%	0%	0%	0%	0%

Conclusion:

Based on the assumptions used in this forecast, 5 stations will be required in the future. SMMH has 5 ER stations in three rooms. Two rooms have 2 stations each and one is private. In the semi-private rooms, it is difficult to have two patients occupying the room at the same time because the supply cabinets are on the back wall next to the far bed. This means staff needs to interrupt the patient in the far bed if supplies are needed for the patient nearest the front of the room. And, because of SMMH's focus on Psychiatry, many ER visits are for patients with either substance abuse or psychiatric issues where staff observation is important. While the semi-private rooms are directly in front of the nursing station, they are not designed for the safety of accommodating patients with behavioral health issues. Plans are underway for creating a safe station for behavioral health patients.

The forecast for 5 stations assumes all stations can be occupied at the same time. This is difficult given the existing layout. There are other departmental deficiencies, such as limited storage and staff break areas, which cannot be fixed within the physical limitation of the current facility and renovation plan.

Appendix B

Senior Housing Forecast

Senior Living Residential and Skilled Nursing Facility (SNF) Needs Analysis

The Needs Analysis for the Senior Living venues takes into consideration:

- Existing and forecast Kauai residents (65+)
- Industry benchmarks for utilization of various senior living situations
- Existing experience with caring for seniors
- An understanding of the differences in health status between the 'general population' and Kauai seniors

This paper provides the methodology and assumptions used to forecast the need for varying levels of supported care for seniors as shown in the following Table.

All Levels: Forecast Number of Residents

Total Kauai Forecast Summary						
	Existing Beds	2018	2020	2025	2035	2045
Independent Living	600+	290	320	428	619	678
Assisted Living	35	218	237	273	315	300
Memory Care AL	12	65	72	96	139	152
Skilled Nursing	383	407	443	510	589	612

Note: Attachment 1 shows an existing inventory of senior living venues. Existing Beds for Independent Living includes all units indicated for seniors and/or for affordable housing. Some units may be used by younger residents or may have only a certain number of affordable units.

Kauai Elders by Age

For Senior Living accommodations, the resident population (as opposed to De Facto population) is used as it is assumed tourists and visitors would not make use of Senior Living accommodations on Kauai. The existing and projected number of Kauai elders by age is shown below.

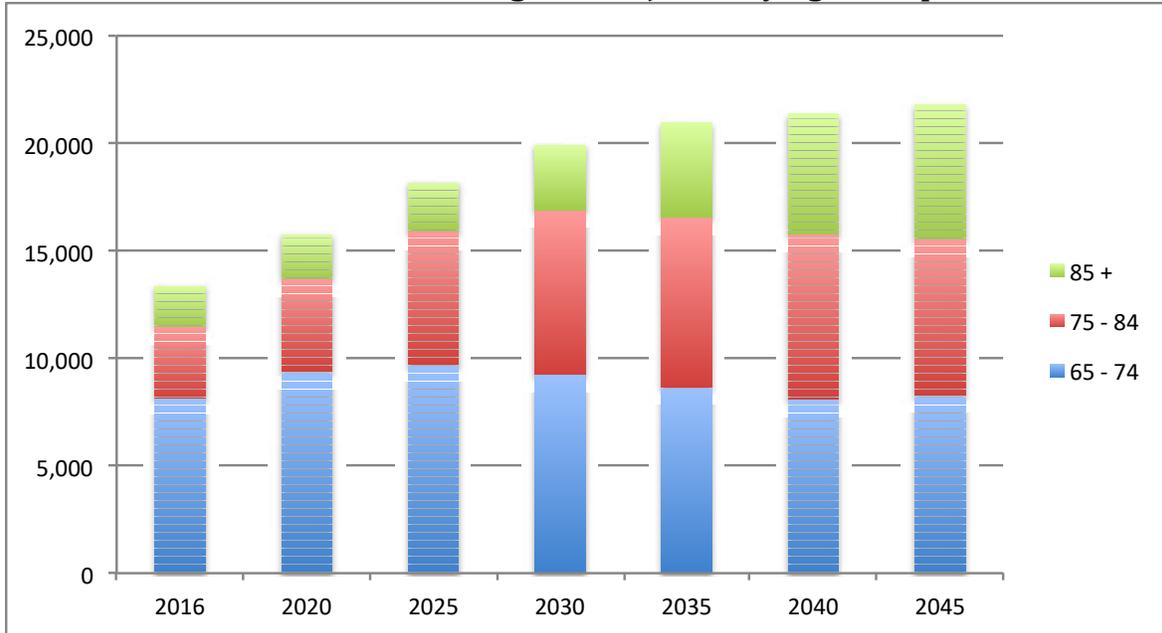
Kauai Elders 65+: Existing and Projected

Age group (years)	1990	2000	2010	2016	2020	2025	2030	2035	2040	2045
65 - 74	3,922	4,171	5,360	8,157	9,407	9,664	9,249	9,643	8,102	8,295
75 - 84	2,155	2,989	3,092	3,331	4,296	6,247	7,640	7,925	7,677	7,264
85 +	<u>585</u>	<u>1,055</u>	<u>1,643</u>	<u>1,945</u>	<u>2,101</u>	<u>2,317</u>	<u>3,073</u>	<u>4,450</u>	<u>5,631</u>	<u>6,298</u>
Tot 65+	6,662	8,215	10,095	13,433	15,804	18,227	19,961	21,017	21,411	21,857

Source: State of Hawaii DBEDT June 2018 Report

This forecast shows the population 65+ increasing by over 60% by 2045. The 85+ age group alone is expected to increase by nearly 225%. Generally, the older age groups are higher consumers of senior care residential services.

Kauai 65+: Existing and Projected by Age Group



Industry Benchmarks

Residential models for seniors, like medical care, are constantly changing. With changes in technology and medical practice, more and more elders are now able to stay safely in their homes rather than being cared for in nursing homes or assisted living communities. There are also differences in utilization based on location. For example, the western states experience lower numbers of hospital and nursing home beds/population as compared to other states.

Understanding the differences in health status of Kauai compared to the general population is important to consider as well. As in the general population, an individual's health status can vary significantly across age groups. In addition, there are cultural differences in how and where elders are cared for that impact senior living demand on Kauai.

The needs assessment tested ranges of industry benchmark rates and compared them to actual Kauai experience to assess the most appropriate assumptions for the forecasts.

Forecast Need

Independent Living

Independent Living is defined as follows:

- Typically apartments designed for a senior population that emphasizes safety and security – they may or may not be collated with Assisted Living (AL) units.
- Senior residents live independently but have the option to eat meals in an on-site dining area and hire help for housekeeping, laundry, personal assistance, transport to medical appointments, etc.
- Many independent living (IL) facilities are collocated with Assisted Living so residents can stay in their apartment to ‘age in place’. Such units are designed to accommodate either type of resident.

There appear to be over 600 Independent Living apartments that tout senior living opportunities on Kauai. It is unclear, however, how many apartments house residents that are not seniors or how many are affordable to those in lower income brackets or on a fixed income.

Regency at Puakea is the only facility that has both Independent and Assisted Living Apartments. They accept only private pay residents.

Many Kauai elders at this stage live with family, especially those whose families have lived on Kauai for generations and/or are of Asian decent.

Assumptions for needs assessment:

- 4% to 6% of population 75+ seek independent living situations (industry benchmark)
- 5% used

Independent Living Forecast Number of Residents

	<u>2018</u>	<u>2020</u>	<u>2025</u>	<u>2035</u>	<u>2045</u>
Kauai Pop 75+	5,799	6,397	8,564	12,375	13,562
4%	232	256	343	495	542
5%	290	320	428	619	678
6%	348	384	514	743	814

Conclusion:

It appears there are an ample number of apartments available for Independent Living by seniors but it is unclear how many would be considered ‘affordable’. Lack of affordable housing is often a major reason for homelessness. Several situations have been shared about elders who are kept in hospitals (a higher level of care) because they do not have a safe and affordable place to go upon discharge. The forecast indicates that demand for Independent Living for seniors will double by 2045. Market pressures for either increased supply or if supply remains stable, suggests increased costs would occur.

Assisted Living

Assisted Living is defined as follows:

- Patients typically need assistance with activities of daily living¹ (ADL) and some daily medication management but live in their own unit/apartment
- Services such as laundry, trash pick-up, housekeeping, group and individual social activities, transportation and excursions are typically available
- 24/7 trained staff available
- Access to licensed on-staff nurses visits
- Building and grounds maintenance provided

Regency at Puakea is the only Assisted Living facility on Kauai. They have 82 units total: 12 Memory Care AL units and 70 AL/IL units. The AL/IL units ‘swing’ between both levels of care as resident’s needs change. Units range from studio, to one bedroom to two bedrooms, so it is possible that each unit can house more than one AL resident. They only accept private pay residents so affordability² is a question for much of the Kauai demographic.

Assumptions for needs assessment:

- 2% of population 65+ in Assisted Living based on national average per National Institute of Health (industry benchmark)
- Currently over 50% of the Kauai population is Asian or mixed race.
- Prevalence rates by ethnic groups (Hawaiian/Pacific Islanders and Asian Americans) are lower for assisted living for Alzheimer’s/Dementia – 81% and 90% respectively. Assume similar reduced rates for AL residents without memory care needs.
- Use 80% of national average for Kauai.

Assisted Living Forecast Number of Kauai Residents

	% of pop needing AL	2018 Need	2020 Need	2025 Need	2035 Need	2045 Need
<65	0%	-	-	-	-	-
65-74	2%	175	188	193	173	166
75-84	2%	76	86	125	159	145
85+	2%	40	42	46	89	89
Total		291	316	365	420	400
Assume Kauai at 80% of Nat'l need		218	237	273	315	300

Conclusion:

Today, with Regency at Puakea’s 82 units, the current need is 136 units increasing in 2025 to 191 if no other AL units are present on Kauai.

¹ Activities of Daily Living include personal hygiene and grooming, bathing, dressing, functional mobility/locomotion, continence managing and/or toileting, feeding oneself

² The Hawaii – State Median cost for Assisted Living in 2018 was \$5,500 according to Genworth Cost of Care Survey 2018

Memory Care Assisted Living

Memory Care Assisted Living is defined as follows:

- Services listed in Assisted Living available to memory care patients
- Specially trained staff to assist memory care patients
- Facilities designed for memory care patients

The only Memory Care Assisted Living on Kauai is Regency at Puakea’s 12-unit facility. Their wait list is currently at 8.

Assumptions for needs assessment:

- Incidence rates for Alzheimer’s and dementia differ by age and race
- Rates for care outside the home are difficult to predict as well
 - Many Kauai elders with memory care issues live with family, especially local islanders.

Option 1:

- National rates from the Alzheimer’s Association adjusted downward to 75% of national average for race and Kauai local islander tendency to care for elders in family homes

Option 1: Memory Care Assisted Living Forecast Number of Kauai Residents

	US % w/ Alz & other dementias	2018 pop w/ Alz	2020 pop w/ Alz	2025 pop w/ Alz	2035 pop w/ Alz	2045 pop w/ Alz
<65	3%	1,762	1,768	1,795	1,899	2,101
65-74	12%	1,049	1,129	1,160	1,037	995
75-84	33%	1,247	1,418	2,062	2,615	2,397
85+	28%	561	583	643	1,235	1,235
Total	75.8%	4,619	4,898	5,659	6,786	6,728

	% w/ Alz that need AL	2018 # in need of AL	2020 # in need of AL	2025 # in need of AL	2035 # in need of AL	2045 # in need of AL
<65	0%	-	-	-	-	-
65-74	0%	-	-	-	-	-
75-84	7%	87	99	144	183	168
85+	11%	63	65	72	138	138
# w Alz in AL		150	165	216	321	306

Note: Rate of those with Alzheimer’s that need Assisted Living reduced down from national benchmark to reflect greater numbers of elders on Kauai that are cared for in the home.

Option 2:

- National benchmarks for those with memory care issues adjusted downward for the Kauai population
- National benchmark of 14% of those with memory issues in Assisted Living applied.

Option 2: Memory Care Assisted Living Forecast Number of Residents

	2018	2020	2025	2035	2045
75+ benchmark	8%	8%	8%	8%	8%
# 75+ Kauai Pop	5,799	6,397	8,564	12,375	13,562
# w/ Alz on Kauai	464	512	685	990	1,085
% w Alz needing AL	14%	14%	14%	14%	14%
# w Alz in AL	65	72	96	139	152

Conclusion:

Predicting the need for Memory Care Assisted Living residents on Kauai presents a number of challenges for the following reasons:

- The Hawaii rates for medical services tends to be much lower than the Mainland
- Rates vary by Island and by race
- There anecdotally are a number of memory care residents that receive care off-island for a number of reasons, including:
 - lack of units on Kauai
 - cost of care on Kauai
 - the desire for family members to be closer to other family members
- Data is not kept in a centralized location for tracking the number of memory care residents originating from Kauai

Because of the difficulty in finding data and forecasting the need for Memory Care Assisted Living, Options 1 and 2 offer a range for the potential number of memory care residents seeking assisted living. Option 2, the more conservative estimate, is shown in the summary table. That range is as follows:

Range of Memory Care Assisted Living Units based on Options 1 & 2

	2018	2020	2025	2035	2045
Option 1	150	165	216	321	306
Option 2	65	72	96	139	152
Need minus current number of Memory Care AL Units (12)					
Option 1	138	153	204	309	294
Option 2	53	60	84	127	140

Skilled Nursing Care

Skilled Nursing Care (SNF) is defined as follows:

- Patients need nursing care, but not intensive medical care as provided in an acute hospital setting
- Some SNF’s provide therapy for recovery from acute medical episodes, such as hip or knee replacements as a transition prior to returning home
- Current Skilled Nursing Care at SMMH is more custodial than therapeutic in nature
- Most patients are elderly
- Venues for patients needing skilled nursing care include:
 - Skilled Nursing Facilities /Hospitals
 - Adult Residential Care Homes – up to 5 residents in neighborhood homes with care provided by a CNA (Certified Nursing Assistant)
 - Community Care Foster Family Homes (CCFFH) – up to 3 residents in neighborhood homes providing a nursing home alternative in a family-like environment

On Kauai there are 333 licensed SNF beds, 31 beds in seven Adult Residential Care Homes (ARCH) and 19 beds in eight Community Care Foster Family Homes (CCFFH) for a total of 383 licensed beds (see Attachment 2). However, not all beds may be staffed and available. For example, the current renovation at SMMH has reduced the staffed and available beds to 54, compared to 66 licensed. In addition, assigning beds according to gender may reduce the number of available beds.

Assumptions for needs assessment:

- Rates are applied to 65+ population
- Current rate on Kauai is 1.9% (85% occupancy rate applied to licensed beds)
- Rate in Washington State is 2.8%
- National Rate is 4.2%
- Adjust industry benchmarks so total use rate is same as Washington State

	Skilled Nursing Forecast Number of Residents				
	2018	2020	2025	2035	2045
Pop 65 - 74	8,741	9,407	9,664	8,643	8,295
Pop 75 - 84	3,777	4,296	6,247	7,925	7,264
Pop 85+	2,021	2,101	2,317	4,450	6,298
Tot 65+	14,540	15,804	18,228	21,018	21,857
Rate /65+ used	2.8%	2.8%	2.8%	2.8%	2.8%
SNF Residents	407	443	510	589	612

Other national use rates were tested resulting in numbers that are much higher than applying the Washington State rate. The use rates for the western states are always lower than the rest of the country so it makes sense to use a rate that is more in line with what Kauai currently experiences. There are currently 333 licensed skilled nursing beds in hospitals on Kauai. At an 85% occupancy rate, the average daily census would be 283 in 2018. The actual rate of SNF residents per 65+ population is

1.9% currently. Part of the difference between the 1.9% and 2.8% might be due to seniors in SNF off island or the use of ARCH and CCFFH beds in the community coupled with tendency to care for elders in their family homes.

Source: SHPDA Health Care Utility Report for licensed beds for Kauai.

Conclusion:

- Skilled Nursing Facilities on Kauai are primarily hospital based, but residential alternatives exist.
- Anecdotally, some SNF beds are occupied by patients who do not need SNF level of care, but because affordable discharge options are scarce, patients continue to occupy SNF beds. Transitional care homes might be a discharge option where residents can establish themselves in the community and get care they need prior to fully integrating into residential neighborhoods.
- Some senior care providers are moving away from providing skilled nursing because of high costs, lower reimbursement rates, and movement to shift such care into lower cost residential settings.
- While a SNF inventory exists on Kauai, there will continue to be needs for affordable care for Kauai's seniors.
- Comparing the forecasts to actual licensed beds suggests shortages in this level of care will occur in the future.

Attachment 1

Senior Living on Kaua'i

	Affordable	Independent	Assisted	Memory AL	SNF	Total Beds	
Total		603	35	12	383	1033	
Regency at Puakea		35	35	12			0
AL Makalapuu-C							82
Kekaha Plantation Elderly Housing	x	28					0
SHDC No. 7		?					28
Ho'okahua	x	?					0
Hale Hoonanea	x	40					0
Hale Nana Kai O Kea	x	38					40
Hale Holulu	x	12					38
Home Nami	x	14					12
Sun Village Kauai Independent Living		?					14
Kaniko'o Rice Camp Senior	x	36					0
Kaniko'o Affordable Sr Housing	x	90					36
Lihue Theater	x	20					90
Lihue Gardens Elderly	x	58					20
Shinagawa Apts	x	8					58
Paaneu Village	x	60					8
Courtyards at Waipouli - Luxury		80					60
Garden Isle Rehab & HC Cntr						110	80
Kauai Care Center - Rehab & LTC						53	110
Hale Kupuna Heritage Home		56				84	53
Hale Kupuna	x	28					84
SMMH						66	28
West Kauai Med Cen/KVMH						20	66
Adult Residential Care Comes						31	20
Community Care Foster Family Homes						19	31
							19

Attachment 2

Adult Residential Care Homes on Kauai (ARCH1)
 Source: Health.Hawaii.Gov

<u>Area</u>	<u>M</u>	<u>F</u>	<u>Licno</u>	<u>Name</u>	<u>Operator</u>	<u>Cap</u>	<u>Phone</u>
Kapaa		3	2 1392-C	All Hearts Arch, LLC	Rabaino, Lalaine	4	822-7907
Kapaa		0	1 1250-C	Rabaino's	Rabaino, Lalaine	5	822-9753
Kapaa		2	2 1569-C	Wailuy Ohana, Inc.	Apor-Bahnmler, Debra	4	823-8004
Koloa		0	0 984.C	Aguinaldo, Evangeline	Aguinaldo, Evangeline	3	742-2044
Lihue		2	2 1298-C	Castro's	Castro, Julie	5	245-4890
Lihue		2	2 724-C	Duran, Corazon	Duran, Corazon	5	245-4170
Lihue		0	1 1485-C	Negrillo ARCH & Learch	Negrillo, Shirley	5	241-1340
Total		9	10			31	
Total Both sexes			19				
Vacant Beds			12				
Occupancy			61%				

Community Care Foster Family Homes

First Name	Last Names	City	Island	home Phone	Homebed Size
Crystal	Alcantara, R	Kapaa	Kauai	808-634-6819	2
Maylene	Battulayan, C	Lihue	Kauai	808 212-9269	2
Leonarda	Batulayan, C	Kapaa	Kauai	808634-0330	2
Terisita	Cummings, C	Kapaa	Kauai	808 482-0288	3
Madelyn	Juliano, CAN	Lihue	Kauai	808632-0752	2
Emily	Mariano, CAI	Lihue	Kauai	808 320-7241	3
Amy	Melchor-Tan	Kapaa	Kauai	808 652-9049	2
Rosilia	Roman, CAN	Kapaa	Kauai	808 635-4794	3
					19

Source: <http://health.hawaii.gov/ohca/files/2019/01/Community-Care-Foster-Family-Homes-1-2019.pdf>

Appendix C

Behavioral Health Vision Group Meeting Notes

**SMMH Master Campus Plan Project
Behavioral Health Vision Group
4/30/19 Meeting Minutes**

Attendees: Medeleine Hiraga-Nuccio, Rei Cooper, Terri-Ann Moses, Toni Torres, Theresa Koki (via phone), Dr. Matthew Barrett, Barbara Nakamura, Lance Segawa (Chairperson)

Excused: Dr. Janet Berreman, Edward Mersereau, Dr. Gerald McKenna, Wayne Law, Katie McGinness

Agenda	Discussion	Followup Action
I. Introductions	Introductions were conducted and meeting was called to order at 9:05 a.m.	
II. Overview	L. Segawa provided an overview of the project including legislative intent. This project offers key stakeholders the opportunity to provide input in designing a comprehensive behavioral health (BH) service plan for Kauai.	FYI
III. Vision Group Purpose/Timeline	The BH vision group will be comprised of all public and private stakeholders across the BH continuum. For this reason, the group agreed to explore more members. Additional membership suggestions will be submitted to L. Segawa for discussion at the next meeting. Other members suggested included: Hoola, Makana Urgent Care, Primary Care (Dr. Esaki), Adolescent Treatment Facility, Keola Pona (Dr. Makena), Care Hawaii, Child and Family Services, and Dr. Rose Charles.	Committee members to make additional suggestions and submit to L. Segawa
IV. Vision Statement Development	Draft statement that was developed at the meeting: "Create a holistic and comprehensive behavioral health resource for our community that supports the well-being of our ohana. This resource will be state-wide, evidence-based, trauma-focused, informed care, transitional, across the continuum of care, nutrition-focused, mainstream, empowerment-based, system-wide".	Draft statement to be shared with all members and finalized at the next meeting
V. Next Steps	Discussion revolved around data collection and accessing past studies.	Members will identify potential data sources and studies for introduction and review at the next meeting.
VI. Next meeting	Proposed May 28, 2019. Group agreed to meet the fourth Tuesday of every month. All meetings to be held at SMMH	L. Segawa will coordinate future meetings
VII. Adjournment	Meeting was adjourned at 10:30	

SMMH Master Campus Plan Project
Behavioral Health Vision Group
May 28, 2019 Meeting Minutes

Attendees: Madeleine Hiraga-Nuccio, Rei Cooper, Toni Torres, Teresa Martin, Theresa Koki (via phone), Katie McNeil (via phone), Lance Segawa (Chairperson)

Excused: Terry-Ann Moses, Dr. Matthew Barrett, Barbara Nakamura, Dr. Janet Berreman, Edward Mersereau, Dr. Gerald McKenna, Wayne Law, Katie McGinness

Agenda	Discussion	Follow-up Action
I. Introductions	This meeting was called to order at 0907 hours by Lance Segawa, welcomed to the committee: Teresa Martin, G70 Health Analyst, to assist us with some data assessment. Karen Alapai, Administrative Secretary will be assisting with supporting the group with minutes.	Welcomed to the committee: Teresa Martin, G70 Health Analyst, and Karen Alapai, with meeting minutes.
II. Minutes (April 30, 2019 meeting)	Motion to approve the minutes of the April 30, 2019 meeting: approved by Toni Torres and seconded by Rei Cooper.	The April 30, 2019 meeting minutes were approved as written.
III. Vision Statement	The vision statement was proposed and approved as follow: "Create a holistic and comprehensive behavioral health resource for our community that supports the well-being of our ohana. This resource will be state-wide, evidence-based, trauma-focused, informed care, transitional across the continuum of care, nutrition-focused, mainstream, empowerment-based, system-wide".	Vision statement perused. Motion made and seconded to approve. Motion carried.
IV. Work Action Plan Development	See attached report made by Teresa Martin on the Behavioral Health perspective. Report is to understand the demographic forecasts that the state is putting out and these are the DBEBDT Long Range Projections by the county up to 2045 and how much growth will occur.	See attached Teresa's demographic forecast.
V. Age Groups Survey	Discussion accessing Age Groups Survey; 0 to 20 and 18 and above. Survey to be distributed to member and data collections and review at the next meeting.	Distribute survey to all Vision members. Send it back to Lance via email.
VI. Others	From the perspective of EMS of what they see and what they bring; will invite EMS to out next group meeting.	Invite EMS to our next group meeting.

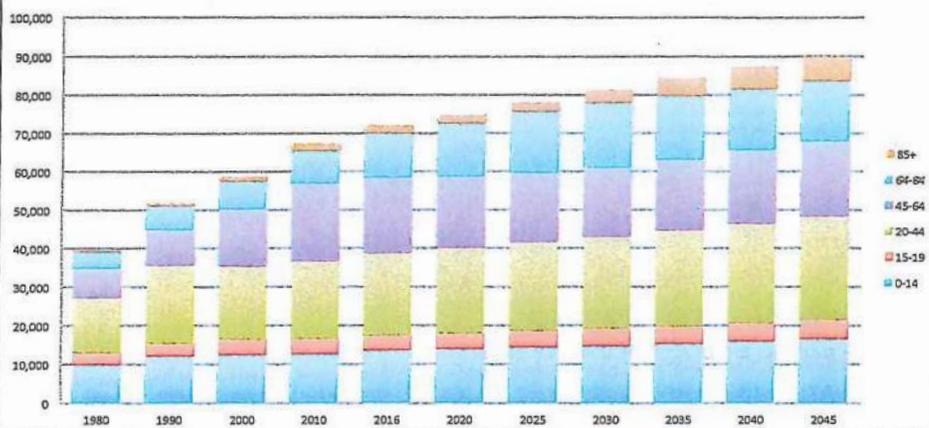
Agenda	Discussion	Follow-up Action
VII. Next Meeting	<p>Next meeting is June 25, 2019 at 9:00 AM in the SMMH-VTC Conference Room</p> <p>Tentative date to meet with all state holders and committees is August 5th. Suggested place is here at SMMH in the auditorium. Purpose of this meeting; outcome of the survey, would be the gaps of services for the opportunities for this campus and see what might be possible in this campus. More update on this at the next meeting.</p>	<p>Next meeting date is June 25th to start at 9:00 AM.</p> <p>August 5th is the tentative date to meet with all state holders and committees in the auditorium.</p>
VIII. Adjournment	Meeting was adjourned at 11:00 AM	

Samuel Mahelona Memorial Hospital Master Plan

Background Materials
May 2018

Demographic Forecasts

Kauai Co. Resident Population by Age Groups: 1980-2045



Source: DBEDT Long Range Projections 2045 Series

Kauai County Total Resident Population by Age Groups: 1980 - 2045

	1980	1990	2000	2010	2016	2020	2025	2030	2035	2040	2045
0-14	9,853	12,167	12,520	12,642	13,612	13,968	14,387	14,716	15,312	15,937	16,620
15-19	3,199	3,334	4,068	4,106	3,885	4,099	4,398	4,662	4,617	4,817	4,992
20-44	14,181	20,159	18,779	19,926	21,236	22,088	22,839	23,638	24,860	25,729	26,753
45-64	7,767	9,354	14,986	20,457	19,863	18,737	18,194	18,242	18,496	19,342	19,822
65-84	4,100	6,077	7,160	8,452	11,488	13,703	15,911	16,889	16,568	15,779	15,559
85+	299	585	1,055	1,643	1,945	2,101	2,317	3,073	4,450	5,631	6,298
Total	39,399	51,676	58,568	67,226	72,029	74,746	78,046	81,220	84,303	87,235	90,044

- 85+ largest % change @ 46% 2020-30, 83% 2030-40
- 15 - 19 ages show +13.7% 2020-30 and 3.3% 2030-40
- 20 - 44 ages show +7% 2020-30 and 8.8% 2030-40

Source: DBEDT Long Range Projections 2045 Series

Acute Care Bed Forecast

	Actual		Projected based on total Pop Growth -->						
	2016	2017	2018	2020	2025	2030	2035	2040	2045
Total Kauai Admits	5,860	5,960	5,425	5,533	5,643	5,756	5,870	5,987	6,107
SMMH Admits	171	177	184	188	191	195	199	203	207
SMMH Market Share	2.9%	3.0%	3.4%	3.4%	3.4%	3.4%	3.4%	3.4%	3.4%
SMMH ALOS	6.00	6.06	4.86	4.86	4.86	4.86	4.86	4.86	4.86
SMMH Pat Days	1,026	1,072	894	912	930	949	967	987	1,006
SMMH ADC	2.81	2.94	2.45	2.50	2.55	2.60	2.65	2.70	2.76
SMMH Occ Rate	65%	65%	65%	65%	65%	65%	65%	65%	65%
SMMH Bed Need	4.3	4.5	3.8	3.8	3.9	4.0	4.1	4.2	4.2

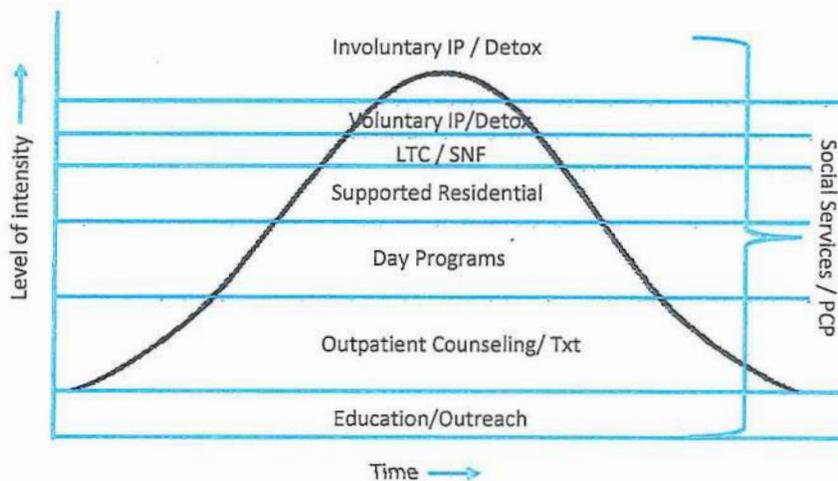
95%+ patients are psych or substance abuse

Emergency Room Forecast Visits

	Actual		Inc Kauai by State Forecast same % distribution by pat origin as 2018						
	2016	2017	2018	2020	2025	2030	2035	2040	2045
Kauai County	5,093	4,973	5,134	5,236	5,467	5,690	5,906	6,111	6,308
Oahu County	52	39	36	37	38	40	41	43	44
Maui County	48	33	20	20	21	22	23	24	25
Hawaii County	16	19	9	9	10	10	10	11	11
Out of State	878	867	812	828	865	900	934	967	998
Total	6,087	5,931	6,011	6,131	6,401	6,661	6,915	7,155	7,385

SMMH % ER Visits by Location			
	2016	2017	2018
Kauai County	83.7%	83.8%	85.4%
Oahu County	0.9%	0.7%	0.6%
Maui County	0.8%	0.6%	0.3%
Hawaii County	0.3%	0.3%	0.1%
Out of State	14.4%	14.6%	13.5%
Total	100.0%	100.0%	100.0%

Behavioral Health Continuum of Care



SMMH Master Campus Plan Project
Behavioral Health Vision Group - 3
June 25, 2019 Meeting Minutes

Attendees: Madeleine Hiraga-Nuccio, Rei Cooper, Terry-Ann Moses, Barbara Johnson, Tito Villanueva, Teresa Martin (via phone), Bill Arakaki (via phone), Barbara Nakamura, Lance Segawa (Chairperson)

Excused: Dr. Matthew Barrett, Dr. Janet Berreman, Edward Mersereau, Dr. Gerald McKenna, Wayne Law, Katie McGinness, Toni Torres, Theresa Koki, Katie McNeil, Paige Javier, Chesne Cabral Kitamura, Ah-Lan Coloma, Novelyn Hinazumi, Angela Lim, Melinda Montgomery, Jennifer Palisbo, Vonnell Ramos

Agenda	Discussion	Follow-up Action
I. Introductions	Introductions were conducted and meeting was called to order at 0904 hours by Lance Segawa.	Meeting was called to order at 0904 hours.
II. Minutes (May 28, 2019 meeting)	Minutes of the May 28, 2019 meeting perused. Motion made and seconded to approve. Motion carried. Because we have a large group, we're sending the meeting packet to everyone on the list. This way if you're not attending you still would know what is going on. Our desire is to create a group that would together craft in vision for Kauai Behavioral Health and the outcome would be shared by all stakeholders.	The May 28, 2019 meeting minutes were approved as written. Meeting packet will be sent to everyone.
III. Review Survey Results (See attached)	Survey results on 1) Assessment of Current Services for age 0 to 20 years, and 2) Assessment of Current Services for age 18 and older was reviewed and discussed. After many discussions and lots of people did not respond, will be sending this survey to committee members and data collections will be reviewed at the next meeting.	Will be sending survey again to committee members and data collection will be reviewed at the next meeting.
IV. Begin Service Plan Discussion	This will be a separate building on this campus and is not going to be part of this main structure and will call it our BH facility. Thinking of a two story building is definitely durable. Within that building we need to start to envision some of the other continuum services; like an outpatient area, adolescent and adults. Other possibility is, inviting other agencies to be part of it, whether you want to locate a service.	Need to start envision some of the other continuum services and other agencies to be part of this.
V. Develop (Obtain) Data to Support Service Plan	Everyone to begin assembling data which is respect to service continuum areas within your departments. Break it down by age groups and what's your projection for the next 5 to 10 years.	Next meeting, organizing data within your department.

Agenda	Discussion	Follow-up Action
V. Develop (Obtain) Data to Support Service Plan (continued)	Assemble what you have and at the next meeting we can start organizing the data.	
VI. Next Steps	There's so many services that we don't have on island right now. Members will jot some of their stories about people that falls thru, where something was missing, there was a gap. Stories should be a paragraph or two. Lance will send this request out to everybody on the group list. And will have a meeting with G70 architects and they'll start identifying this building as a BH facility.	Members will write their stories about people that falls thru, where something was missing; there was a gap. Stories to be a paragraph or two.
VII. Others	➤Tito stated that one of the things that they struggle with is switching places to meet and often don't have those places. So if we're looking at a building, think about a place where all the organizations can have a place to have their meetings or trainings. Lance said that is a great idea and we're actually getting the auditorium here renovated.	With the auditorium that will be renovating; organizations may want their meetings or trainings here.
VIII. Next Meeting	Madeline shared her thoughts of Janet; she's a valuable thinker and cannot attend the 4 th Tuesday meetings at all and wonder if meetings could be changed to a different day. Proposed July 16, 2019. Group agreed to meet the third Tuesday of every month. All meeting to be held at SMMH. Meeting time will be 9:00 AM to 10:30 AM. Lance will notify Janet directly.	BH Vision Group meetings is now changed to the 3 rd Tuesday. Next meeting date is July 16 th to start at 9:00 AM.
IX. Adjournment	Meeting was adjourned at 1042 hours.	

SMMH Master Campus Plan Project
Behavioral Health Vision Group - 4
July 16, 2019 Meeting Minutes

Attendees: Madeleine Hiraga-Nuccio, Rei Cooper (via phone), Terry-Ann Moses (via phone), Barbara Johnson, Terri Martin (via phone), Dr. Janet Berreman, Wayne Law, Barbara Nakamura, Lance Segawa (Chairperson)

Excused: Dr. Matthew Barrett, Dr. Janet Berreman, Edward Mersereau, Dr. Gerald McKenna, Katie McGinness, Toni Torres, Theresa Koki, Katie McNeil, Paige Javier, Chesne Cabral Kitamura, Ah-Lan Coloma, Novelyn Hinazumi, Angela Lim, Melinda Montgomery, Jennifer Palisbo, Vonnell Ramos, Tito Villanueva, Bill Arakaki

Agenda	Discussion	Follow-up Action
I. Introductions	Introductions were conducted and meeting was called to order at 0904 hours by Lance Segawa.	Meeting was called to order at 0904 hours.
II. Service Gap Survey	The survey monkey tool was re-distributed to committee members to improve the overall response. To date, nine members have completed the survey.	
III. Review “Gap” Stories	A suggestion was made as part of building a narrative, we would identify actual stories of situations where patients are falling through existing gaps. Lance will request all vision group members to share in writing their stories. Stories to be emailed to lasegawa@hhsc.org and kalapai@hhsc.org Stories will be compiled by Lance.	Vision group to begin sharing and writing stories of service gap situations. Email to lasegawa@hhsc.org and kalapai@hhsc.org
IV. August 20, 2019 Community Event	August 20 th will be our first community meeting and will take place at the Kapaa Elementary School Cafeteria from 5pm to 8pm. 5pm to 6pm is a facility tour for the community. Dinner will be provided. We anticipate about 50 people from the community, the vision groups and the advisory committee. There will be several community meetings over the next 5 months. Future meetings will be with more information about the architectural layout of the campus. Wayne shared his thoughts about where we should be focusing and will send Lance a brief description of the residential treatment facility concepts.	First community meeting on August 20 th at Kapaa Elementary School Cafeteria from 5pm to 8pm. Both vision groups encouraged to attend this meeting. Wayne to send Lance a brief description of the residential treatment facility concepts.
V. Miscellaneous Discussion	➤Wayne stated that residential substance abuse treatment program will be a high priority. Being on the waitlist can be for months because you’re on neighbor island.	High priority on the residential substance abuse treatment program.

Agenda	Discussion	Follow-up Action
V. Miscellaneous Discussion (continued)	<ul style="list-style-type: none"> ➤ Wayne also suggested assessment form be created and send it over to Mike Tamashiro's office and that center can send someone here and transition the patient out. ➤ Dr. Berreman suggested training opportunities; a residency program, or practicums, or internships, or clinical. If you have those, you're building a workforce. ➤ Dr. Berreman also suggested building a conference room with capacity for training that could link into KCC or UH. Consider dorm rooms, studios for short term training. 	<p>Assessment form to be created.</p> <p>Suggested training opportunities; building a workforce.</p> <p>Suggested conference room for training.</p>
VIII. Next Meeting	Next B.H. Vision Group meeting is August 20 th from 9:00 AM to 10:30 AM in the SMMH Conference Room.	Next meeting date is August 20 th to start at 9:00 AM.
IX. Adjournment	Meeting was adjourned at 1020 hours.	

#1

COMPLETE

Collector: Email Invitation 2 (Email)
Started: Tuesday, June 11, 2019 9:00:59 AM
Last Modified: Tuesday, June 11, 2019 9:02:33 AM
Time Spent: 00:01:34
Email: mbarrett@hhsc.org
IP Address: 216.54.236.202

Page 1

Q1 Acute hospital psychiatric services are adequate for the population of Kauai: **Disagree**

Q2 Hospital based residential treatment services are adequate for the population of Kauai **Disagree**

Q3 Community based residential treatment services are adequate for the population of Kauai: **Disagree**

Q4 Transitional residential treatment services are adequate for the population of Kauai **Disagree**

Q5 Day programs are adequate for the population of Kauai **Neither agree nor disagree**

Q6 Outpatient services are adequate for the population of Kauai **Strongly disagree**

Q7 Education and Outreach programs are adequate for the population of Kauai **Disagree,**

Please provide comments to support your assessment::

None of these services are adequate. They are all failing in many ways.

#2

COMPLETE

Collector: Email Invitation 2 (Email)
Started: Wednesday, June 12, 2019 1:42:43 PM
Last Modified: Wednesday, June 12, 2019 1:44:55 PM
Time Spent: 00:02:12
Email: janet.berreman@doh.hawaii.gov
IP Address: 132.160.235.13

Page 1

Q1 Acute hospital psychiatric services are adequate for the population of Kauai: **Strongly disagree**

Q2 Hospital based residential treatment services are adequate for the population of Kauai **Strongly disagree**

Q3 Community based residential treatment services are adequate for the population of Kauai: **Strongly disagree**

Please provide comments to support your assessment::

Although the Youth Healing and Treatment Center has been built, it is not clear whether an appropriate service provider will agree to providing services at the facility. This highlights the importance of workforce development in addition to building facilities.

Q4 Transitional residential treatment services are adequate for the population of Kauai **Strongly disagree**

Q5 Day programs are adequate for the population of Kauai **Disagree**

Q6 Outpatient services are adequate for the population of Kauai **Neither agree nor disagree**

Q7 Education and Outreach programs are adequate for the population of Kauai **Agree**

#3

COMPLETE

Collector: Email Invitation 2 (Email)
Started: Thursday, June 13, 2019 1:56:17 PM
Last Modified: Thursday, June 13, 2019 3:17:03 PM
Time Spent: 01:20:46
Email: Rei.Cooper@doh.hawaii.gov
IP Address: 132.160.235.13

Page 1

Q1 Acute hospital psychiatric services are adequate for the population of Kauai:

Disagree,

Provide comments to support your assessment::

There is no acute psychiatric hospital available for minors on Kauai.

Q2 Hospital based residential treatment services are adequate for the population of Kauai

Neither agree nor disagree ,

Please provide comments to support your assessment::

I do not have enough knowledge.

Q3 Community based residential treatment services are adequate for the population of Kauai:

Neither agree nor disagree ,

Please provide comments to support your assessment::

I do not have enough knowledge of this.

Q4 Transitional residential treatment services are adequate for the population of Kauai

Neither agree nor disagree ,

Please provide comments that support your assessment::

I do not have enough knowledge about this.

Q5 Day programs are adequate for the population of Kauai

Disagree,

Please provide comments to support your assessment::

I do not have knowledge regarding services for minors. For adults, there is no IOP.

SAMUEL MAHELONA MEMORIAL HOSPITAL MASTER CAMPUS PLAN PROJECT Behavioral Health
Assessment Of Current Services (Age 0 to 20 years)

Q6 Outpatient services are adequate for the population of Kauai

Strongly disagree

Please provide comments to support your assessment::

There are not sufficient psychiatric providers (psychiatrists or APRN-Rx) on the island either adults or minors.

Q7 Education and Outreach programs are adequate for the population of Kauai

Disagree,

Please provide comments to support your assessment::

There is no adult education or outreach program on behavioral health.

#1

INCOMPLETE

Collector: Email Invitation 1 (Email)
Started: Monday, June 10, 2019 5:26:14 PM
Last Modified: Monday, June 10, 2019 5:27:07 PM
Time Spent: 00:00:53
Email: vramos@haleopio.org
IP Address: 72.130.150.122

Page 1

Q1 Acute hospital psychiatric services are adequate for the population of Kauai: Respondent skipped this question

Q2 Long Term residential treatment services are adequate for the population of Kauai: Respondent skipped this question

Q3 Crisis residential treatment services are adequate for the population of Kauai: Respondent skipped this question

Q4 Group Home treatment services are adequate for the population of Kauai: Respondent skipped this question

Q5 Day programs are adequate for the population of Kauai: Respondent skipped this question

Q6 Outpatient services are adequate for the population of Kauai: Respondent skipped this question

Q7 Education and Outreach programs are adequate for the population: Respondent skipped this question

#2

COMPLETE

Collector: Email Invitation 1 (Email)
Started: Monday, June 10, 2019 10:21:39 PM
Last Modified: Monday, June 10, 2019 10:49:51 PM
Time Spent: 00:28:12
Email: waynelaw5@icloud.com
IP Address: 204.210.121.101

Page 1

Q1 Acute hospital psychiatric services are adequate for the population of Kauai:

Agree,

Provide comments to support your assessment::

I have been working for the past 30 years as an on-call psychiatric emergency service provider at Wilcox hospital. It has been extremely rare that the mahelona beds are full . We have been able to get those admitted who meet psychiatric acuity for inpatient care. Perhaps capacity to grow a couple more beds would be helpful for future need.

Q2 Long Term residential treatment services are adequate for the population of Kauai:

Disagree,

Please provide comments to support your assessment::

Most often there are wait lists for beds in long term care. We also have an aging population here on the island, many of whom will need this level of care

Q3 Crisis residential treatment services are adequate for the population of Kauai:

Strongly disagree

Please provide comments to support your assessment::

The DOH Adult Mental Healrh Division (AMHD) has been unsuccessful in successfully contracting for crisis residential beds. While every othe island has such facilities, Kauai does not. It never has. Currently, Care Hawaii has the contract with AMHD for "respite beds" but even that has not been developed to this date.

SAMUEL MAHELONA MEMORIAL HOSPITAL MASTER CAMPUS PLAN PROJECT Behavioral Health
Assessment Of Current Services (Age 18 and Older)

Q4 Group Home treatment services are adequate for the population of Kauai:

Strongly disagree

Please provide comments that support your assessment::

There are no residential treatment group homes on Kauai. Again there has been little foresight on the part of AMHD to develop beds for this level of service here on island.

Q5 Day programs are adequate for the population of Kauai:

Disagree,

Please provide comments to support your assessment::

The only "Day Program" I am aware of for behavioral health consumers is that of "Friendship House" which technically is not a day program. It is, however based on a reliable model of psychiatric rehabilitation. In my opinion, however, this program has become somewhat "stagnant " and less exciting for new members. The average daily census has dropped considerably over the years.

Q6 Outpatient services are adequate for the population of Kauai:

Disagree,

Please provide comments to support your assessment::

The Kauai Community Mental Health Center, the largest single adult behavioral health outpatient center has dramatically reduced its "static capacity" over the past several years. Access as a new patient is cumbersome and the eligibility criteria has significantly been diminished. There is very little community leadership coming from the Center. There is a lack of case managers and save the "forensic team", little outreach occurs. The Center has not been successful in recruiting a number of positions, some of which would bolster the levels of therapy offered to consumers. Poor morale is obvious, again a reflection of poor leadership. It seems that the administration is more concerned about how to get people discharged than treating; particularly for a rural island where resources are minimal. Most other practitioners in private practice are not focused on serious and persistent mental illnesses; rather on less severe cases.

SAMUEL MAHELONA MEMORIAL HOSPITAL MASTER CAMPUS PLAN PROJECT Behavioral Health
Assessment Of Current Services (Age 18 and Older)

Q7 Education and Outreach programs are adequate for the population:

Disagree,

Please provide comments to support your assessment::

While there are a couple of nationally supported chapters like NAMI and Mental Health America that are focused on helping educate families and loved ones of individuals with serious mental illness, there is still a void.

#3

COMPLETE

Collector: Email Invitation 1 (Email)
Started: Wednesday, June 12, 2019 8:23:29 AM
Last Modified: Wednesday, June 12, 2019 8:37:36 AM
Time Spent: 00:14:07
Email: bjnakamura@hhsc.org
IP Address: 216.54.236.202

Page 1

Q1 Acute hospital psychiatric services are adequate for the population of Kauai:

Disagree,

Provide comments to support your assessment::

There are no fulltime Social Service, Recreational Therapist, OT or Registered Dietitian services. A full time Social Service is required for acute psych--that does assessments, groups and other duties. Current Rec therapist only comes in to do a "quick assessment" but no rec activity is done with the pt. OT and RD come into psych only when a consult is requested.

Q2 Long Term residential treatment services are adequate for the population of Kauai:

Strongly disagree ,

Please provide comments to support your assessment::

there is no in patient rehab treatment on Kauai and this is a must. More psychiatrists are also needed.

Q3 Crisis residential treatment services are adequate for the population of Kauai:

Strongly disagree

Q4 Group Home treatment services are adequate for the population of Kauai:

Strongly disagree ,

Please provide comments that support your assessment::

not enough group homes, long waiting list

SAMUEL MAHELONA MEMORIAL HOSPITAL MASTER CAMPUS PLAN PROJECT Behavioral Health
Assessment Of Current Services (Age 18 and Older)

Q5 Day programs are adequate for the population of
Kauai:

Strongly ,
disagree

Please provide comments to support your
assessment::

there is only 1 out patient intensive program on kauai

Q6 Outpatient services are adequate for the population
of Kauai:

Strongly
disagree

Q7 Education and Outreach programs are adequate for
the population:

Strongly
disagree

#4

COMPLETE

Collector: Email Invitation 1 (Email)
Started: Wednesday, June 12, 2019 1:40:02 PM
Last Modified: Wednesday, June 12, 2019 1:42:30 PM
Time Spent: 00:02:28
Email: janet.berreman@doh.hawaii.gov
IP Address: 132.160.235.13

Page 1

Q1 Acute hospital psychiatric services are adequate for the population of Kauai: **Disagree**

Q2 Long Term residential treatment services are adequate for the population of Kauai: **Strongly disagree**

Q3 Crisis residential treatment services are adequate for the population of Kauai: **Strongly disagree**

Q4 Group Home treatment services are adequate for the population of Kauai: **Strongly disagree**

Q5 Day programs are adequate for the population of Kauai: **Disagree**

Q6 Outpatient services are adequate for the population of Kauai: **Neither agree nor disagree**

Please provide comments to support your assessment::

Some of the perceived lack of inadequate outpatient services may reflect a mis-match between client needs (in terms of insurance/Medicaid/medi-Cal) vs. provider availability within insurance networks.

Q7 Education and Outreach programs are adequate for the population: **Agree**

#5

COMPLETE

Collector: Email Invitation 1 (Email)
Started: Wednesday, June 12, 2019 5:37:49 PM
Last Modified: Wednesday, June 12, 2019 6:13:10 PM
Time Spent: 00:35:21
Email: Madeleine.Hiraga-Nuccio@doh.hawaii.gov
IP Address: 132.160.235.13

Page 1

Q1 Acute hospital psychiatric services are adequate for the population of Kauai:

Strongly disagree ,

Provide comments to support your assessment::

There are not acute psychiatric hospital facilities for children and adolescents. There are occasions when the 9 beds at SMMH are insufficient because of number or patient mix. The treatment milieu for adults is limited in terms of modalities and interventions. Case management is not sufficient to address prevention of readmission.

Q2 Long Term residential treatment services are adequate for the population of Kauai:

Strongly disagree ,

Please provide comments to support your assessment::

There are no medium- or long-term residential treatment resources for adults or children on the island.

Q3 Crisis residential treatment services are adequate for the population of Kauai:

Strongly disagree ,

Please provide comments to support your assessment::

There are no crisis residential treatment services for adults. Children and adolescents have access to one DOH crisis bed in a family home setting. This one bed also serves the Child Welfare and Juvenile Justice systems and regularly is not available when needed.

SAMUEL MAHELONA MEMORIAL HOSPITAL MASTER CAMPUS PLAN PROJECT Behavioral Health
Assessment Of Current Services (Age 18 and Older)

Q4 Group Home treatment services are adequate for the population of Kauai:

Strongly disagree ,

Please provide comments that support your assessment::

There is a limited number of beds available for adults in need of mental health or substance use treatment combined with housing and clinical and case management support. This is a desirable treatment modality for adults. There are not mental health or substance use group homes for children and adolescents. However this is not a preferred modality for youth so the absence of this resource is strategic.

Q5 Day programs are adequate for the population of Kauai:

Strongly disagree ,

Please provide comments to support your assessment::

Day treatment programs for youth, both partial hospitalization and school-based day treatment programs, do not exist on this island. There is some day treatment programming for adults.

Q6 Outpatient services are adequate for the population of Kauai:

Strongly disagree

Please provide comments to support your assessment::

There is one psychiatrist serving adults who are not service veterans or active duty military and are not forensically encumbered. There is one psychiatrist affiliated with the Veterans Administration serving veterans. There are two psychiatrists at the DOH Community Mental Health Clinic who serve adults with serious, severe, and persistent mental illnesses and/or who are criminally encumbered. There are two half-time psychiatrists who serve children and youth. There are two half-time psychiatrists (the same persons described in the previous sentence) at the DOH Family Guidance Center who serve youth with serious emotional and behavioral disorders. There is one psychiatrist who serves children and youth as well some adults. There are waiting lists for evidence-based programs of Multisystemic Therapy and Functional Family Therapy offered by PACT (Parents and Children Together) and waiting lists for Intensive In-Home Therapy offered by HBH (Hawai'i Behavioral Health), Hale Kipa, and Hale `Opio Hawai'i. These programs are contracted through DOH Family Guidance Center. There is a significant number of community therapists of all types and levels of training. Many of those therapists have waiting lists.

Q7 Education and Outreach programs are adequate for the population:

Disagree,

Please provide comments to support your assessment::

Educational programs such as those offered by National Alliance for Mental Illness (NAMI) for adults and children and Hina Mauka for youth at risk for substance use are beginning to get a foothold in the community. There is also a growing interest and involvement in educational and prevention programs teaching about recognizing and acting on signs and symptoms of suicidal thinking and behavior. These programs are optimistically reaching about 2% to 3% of the Kaula'i population.

#6

COMPLETE

Collector: Email Invitation 1 (Email)
Started: Thursday, June 13, 2019 12:30:04 AM
Last Modified: Thursday, June 13, 2019 12:39:51 AM
Time Spent: 00:09:47
Email: drgmck@mckennarecoverycenter.com
IP Address: 204.210.110.29

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Q1 Acute hospital psychiatric services are adequate for the population of Kauai:

Neither agree nor disagree

Q2 Long Term residential treatment services are adequate for the population of Kauai:

Disagree,

Please provide comments to support your assessment::

Resources for Long Term psychoatric services are limited and facilities are out dated

Q3 Crisis residential treatment services are adequate for the population of Kauai:

Strongly disagree

Please provide comments to support your assessment::

Kauai is sorely lacking in substance use disorder detoxification services , a high crisis residential treatment need for coordinated continuum of care not able to be provided in outpatient treatment

Q4 Group Home treatment services are adequate for the population of Kauai:

Strongly disagree

Please provide comments that support your assessment::

Group Home services are often full and not available for many who require supervised care ... existing homes only accomodate cases with a ADMHD client with an established case manager. Our patients with co-occurring disorders are highest need patient

SAMUEL MAHELONA MEMORIAL HOSPITAL MASTER CAMPUS PLAN PROJECT Behavioral Health
Assessment Of Current Services (Age 18 and Older)

Q5 Day programs are adequate for the population of Kauai:

Disagree,

Please provide comments to support your assessment::

I am not familiar with any Day programs other than Friendship House and individual therapy programming.

Q6 Outpatient services are adequate for the population of Kauai:

Disagree

Q7 Education and Outreach programs are adequate for the population:

Disagree,

Please provide comments to support your assessment::

Unknown

#7

COMPLETE

Collector: Email Invitation 1 (Email)
Started: Thursday, June 13, 2019 3:18:50 PM
Last Modified: Thursday, June 13, 2019 3:22:47 PM
Time Spent: 00:03:57
Email: Rei.Cooper@doh.hawaii.gov
IP Address: 132.160.235.13

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Q1 Acute hospital psychiatric services are adequate for the population of Kauai:

Agree,

Please provide comments to support your assessment::

There are 9 beds at SMMH, which are not fully occupied on any given day, I believe.

Q2 Long Term residential treatment services are adequate for the population of Kauai:

Strongly disagree

Please provide comments to support your assessment::

There is no such service on the island.

Q3 Crisis residential treatment services are adequate for the population of Kauai:

Strongly disagree

Please provide comments to support your assessment::

There is no such service on the island.

Q4 Group Home treatment services are adequate for the population of Kauai:

Disagree,

Please provide comments that support your assessment::

There has been a need of higher level of housing programs than 24-hour supervised.

Q5 Day programs are adequate for the population of Kauai:

Disagree,

Please provide comments to support your assessment::

There is no IOP. There is no day program that are designed for persons without serious mental illness.

SAMUEL MAHELONA MEMORIAL HOSPITAL MASTER CAMPUS PLAN PROJECT Behavioral Health
Assessment Of Current Services (Age 18 and Older)

Q6 Outpatient services are adequate for the population of Kauai:

Strongly disagree

Please provide comments to support your assessment::

There are not sufficient psychiatric providers on the island.

Q7 Education and Outreach programs are adequate for the population:

Strongly disagree

Please provide comments to support your assessment::

There is no such program.

**SMMH Master Campus Plan Project
Behavioral Health Vision Group - 5
August 20, 2019 Meeting Minutes**

Attendees: Madeleine Hiraga-Nuccio, Rei Cooper, Terry-Ann Moses (via phone), Barbara Johnson, Dr. Janet Berreman, Wayne Law, Toni Torres (via phone), Theresa Koki (via phone), Katie MacNeil (via phone), Dr. Gerald McKenna, Edward Mersereau, Lani Nagao, Janelle Sancedo, Amy Curtis, Dr. Matthew Barrett, Lance Segawa (Chairperson)

Excused: Katie McGinness, Paige Javier, Chesne Cabral Kitamura, Ah-Lan Coloma, Novelyn Hinazumi, Angela Lim, Melinda Montgomery, Jennifer Palisbo, Vonnell Ramos, Tito Villanueva, Bill Arakaki, Terri Martin, Barbara Nakamura

Agenda	Discussion	Follow-up Action
I. Introductions	Introductions were conducted and meeting was called to order at 0908 hours by Lance Segawa.	None
II. Minutes July 16, 2019	Minutes of the July 16, 2019 meeting perused.	Meeting approved.
III. Handouts	Lance shared handouts produced by Terri Martin; SMMH Service Forecasts. In this document, population forecast presented. Provides the methodology and assumptions used to forecast the need for the services currently provided at SMMH as summarized. Kauai Senior Living Forecasts; provides the methodology and assumptions used to forecast the need for varying levels of supported care for seniors. And 3 drafted land use concept.	See attached; SMMH Service Forecasts, and Kauai Senior Living Forecasts.
IV. Review "Gap" Stories	A request went out a few weeks ago to all of the division members to begin assembling 3 to 5 stories that you were intimately aware of and we could begin building our book of stories. Lani shared her story of a single mom who was an alcoholic who was looking for help to get sober and so on. Lance shared his story of receiving a letter from a mother and daughter who recently assisted a loved one with severe depression on Kauai. In doing so, they researched some common issues and made suggestions, and ask that this task force work on and so on.	All of the division members to begin assembling stories that you were intimately aware of. Lani and Lance both shared their story.

Agenda	Discussion	Follow-up Action
<p>IV. Review "Gap" Stories (continued)</p>	<p>Rei identified the "purple lady" that everybody on this island knows about.</p> <p>Wayne identified another gap - new patient that's not enrolled into this system. The assessment should be done to get them in the system without having to wait to be discharged.</p> <p>Wayne also said that since access no longer makes the appointments for evaluations. Apparently there's no actual resource to do that. It complicates when a homeless individual and the UN specialist wants to talk to that person and may not have a phone and you don't have them in your office, when they call back later. There should be some way to coordinate that and be able to get them an appointment to be evaluated.</p> <p>Dr. McKenna agreed that is a huge gap.</p> <p>Amy said initial date is October 1st with the UH team to talk about a workforce development perspective of it. We're still in stages on location, meeting some of the different providers in the neighbor islands and getting their feedback on how they think this might work. Better data quality, how do we do this, there's a huge part of it that UH is being tasked on. We'd like to say is that it really is there for people who need, when they need it and where they need it.</p> <p>Edward stated the example of Kauai not having a residential program. We need a residential program here. When someone needs to transition from one level of care, one organization to another level of care from another organization, if it's on the same island or different island that transition should happen because it's within the network. Providers are not islands into yourselves, you're part of the network. It's just a transfer from one organization to the other, the record transfers with them. The new organization doesn't have to redo another assessment because the assessment has been already done. They might want to update the assessment. So the idea is, to again use that centralize coordinating body which would be the social worker.</p>	<p>Rei mentioned about the purple lady.</p> <p>New patient assessment should be done to get them in the system.</p> <p>Some way to coordinate and be able to get them an appointment to be evaluated.</p> <p>UH is being tasked on better data quality and how do we do this.</p> <p>Need to get a residential program on Kauai.</p>
<p>V. Conceptual Plan Development</p>	<p>The 3 drafted land use concept; the first draft on this campus potentially can be developed. G70 mapped out the entire campus and what can be developed. Where do we think Behavioral Health building should be? Architect will be designing concepts, what we</p>	<p>See attached 3 drafted land use concept.</p>

Agenda	Discussion	Follow-up Action
V. Conceptual Plan Development (continued)	want in the building, what's the growth of the building from a purpose perspective.	G70 will be designing the Behavioral Health building.
VI. Miscellaneous	Lance announced that tonight is the first community meeting to be held at the Elementary School Cafeteria. If you are interested in a tour around this facility, we will start at 5pm. Meeting will begin at 6pm, it will be interactive with the community and share with them the early ideas that we've come up with.	Tonight is the first community meeting at the Elementary School Cafeteria at 6:00 PM.
VII. Next Meeting	Next B.H. Vision Group meeting is September 17 th from 9:00 AM to 10:30 AM. Lance reminded all the division members is getting those stories to him. If you have any questions between now and our next meeting, please don't hesitate to call.	Next meeting date is September 17 th to start at 9:00 AM.
VIII. Adjournment	Meeting was adjourned at 1030 hours.	

Samuel Mahalona Memorial Hospital (SMMH) Service Forecasts

The SMMH Service Forecasts address currently provided services. The Master Plan assumes these key services will continue on the campus. The forecast takes into consideration:

- Existing and forecast Kauai residents of all ages
- Historical and existing services provided at SMMH, namely:
 - Acute care beds
 - Acute adult psychiatric beds
 - Long Term Care/Skilled Nursing Facility (LTC/SNF)¹ beds
 - Emergency Room visits
- An overview of SMMH's health care market
- Forecast of need as a basis of Master Plan space and functional requirements

This paper provides the methodology and assumptions used to forecast the need for the services currently provided at SMMH as summarized in the following table.

Forecast SMMH Service Needs

	Existing	2018	2020	2025	2035	2045
Acute Care Beds	5	.3	1.9	2.0	2.2	2.3
Adult Psych Beds	9	3.8	3.8	4.0	4.3	4.6
LTC/SNF Beds*	54	54	55	63	73	75
ER Stations	5	4.0	4.3	4.5	4.8	5.2

*License is for 66 beds, but set up is 54

Kauai Population by Age

Currently, there are approximately 74,000 people residing in Kauai County. By 2040, total population is expected to increase by some 16,000 people. Existing and projected number of Kauai residents by age is shown below.

Kauai Population by Age Group: Existing and Projected

	1990	2000	2010	2018	2019	2020	2025	2030	2035	2040	2045
0-14	12,167	12,520	12,642	13,788	13,878	13,968	14,387	14,716	15,312	15,937	16,620
15-19	3,334	4,068	4,106	3,991	4,044	4,099	4,398	4,662	4,617	4,817	4,992
20-44	20,159	18,779	19,926	21,651	21,867	22,088	22,839	23,638	24,860	25,729	26,753
45-64	9,354	14,986	20,457	19,317	19,050	18,787	18,194	18,242	18,496	19,342	19,822
65-84	6,077	7,160	8,452	12,519	13,090	13,703	15,911	16,889	16,568	15,779	15,559
85+	<u>585</u>	<u>1,055</u>	<u>1,643</u>	<u>2,021</u>	<u>2,061</u>	<u>2,101</u>	<u>2,317</u>	<u>3,073</u>	<u>4,450</u>	<u>5,631</u>	<u>6,298</u>
Total	51,676	58,568	67,226	73,287	73,990	74,746	78,046	81,220	84,303	87,235	90,044

Source: State of Hawaii DBEDT June 2018 Report

Analysis by age cohort is especially useful in determining healthcare needs since the elderly are major consumers, especially for inpatient resources. This forecast shows the population 65+ increasing significantly by 2045. The 85+ age group alone is

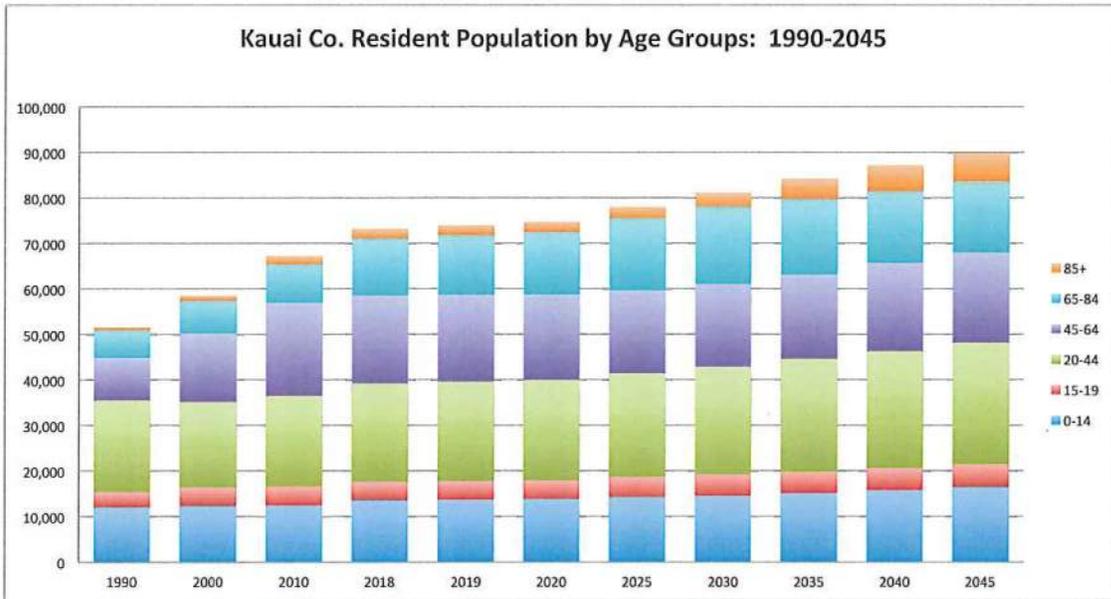
¹ Long Term Care/Skilled Nursing Facility (LTC/SNF) for SMMH Services refers to the Skilled Nursing beds provided on the campus. Long Term Care for elders can also refer to other types of residential based care such as Assisted Living.

expected to increase over 200%. Generally, the older age groups are higher consumers acute care hospital services.

At the same time, the younger age groups are growing also, but staying at the same proportion of the total population (see next table). This is important because the Emergency Room reports that many of their patient diagnoses are substance abuse issues arising from the adolescent age group.

% Kauai Population by Age Group: Existing and Projected

Age group (years)	1990	2000	2010	2018	2019	2020	2025	2030	2035	2040	2045
0-14	24%	21%	19%	19%	19%	19%	18%	18%	18%	18%	18%
15-19	6%	7%	6%	5%	5%	5%	6%	6%	5%	6%	6%
20-44	39%	32%	30%	30%	30%	30%	29%	29%	29%	29%	30%
45-64	18%	26%	30%	26%	26%	25%	23%	22%	22%	22%	22%
64-84	12%	12%	13%	17%	18%	18%	20%	21%	20%	18%	17%
85+	1%	2%	2%	3%	3%	3%	3%	4%	5%	6%	7%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%



The visitor population adds about 27,000 per day bringing the total Island population to over 100,000 today. But 2045 visitor population is expected to be about 36,000 per day bringing the total to 126,000. Percent growth in visitor population is more than resident population (6% every 5 years to 2035 and 5% to 2045 versus 4% and 5% respectively for Kauai residents).

For purposes of this study, it was assumed the resident population changes would be the primary factors influencing the change in SMMH workloads. Local residents are the primary users of the Acute, Long Term Care/Skilled Nursing Facility and Psych beds. While it is recognized some visitors may use the Emergency Department, the major driver of changes is assumed to be the resident population as well.

Acute Care Bed Utilization

Methodology

The method for determining the acute care bed utilization involved the following steps:

- Establish 2018 as the base year
 - Used 2018 since this was the most current data from the Lailima Data base for acute care discharges by major diagnostic category
- Forecast horizon to 2045 provides a 25 year forecast
- Apply Kauai County population changes to Kauai County resident admits
- Apply SMMH Market Share of Kauai County Admits to provide SMMH Admits
- Sherry Lauer, Regional Chief Quality Officer and Cheryl Tennberg, Regional Chief Nursing Executive both of the HHSC Kauai Region provided assumptions regarding two new services that will change patient admits: a CT Scanner and a Hospitalist.
 - Due to acquisition of a CT Scanner by 2020, additional 50 admits added due to having a CT Scanner
 - Due to Hospitalist coming on board at SMMH by 2020, an additional 40 patients are assumed for 2020.
- Use SMMH's 2018 Average Length of Stay (ALOS) to forecast Patient Days (PDs)
- Calculate Average Daily Census (ADC) and bed need based on a 65% occupancy rate

Assessment of the Kauai Market

Kauai medical/surgical acute care beds are provided at the following hospitals:

- 72 Beds at Wilcox Memorial Hospital
- 25 Beds at Kauai Veterans Memorial Hospital (10 are Acute/SNF Swing)
- 5 Beds at Samuel Mahalona Memorial Hospital (4 are Acute/SNF Swing)

Kauai residents who were historically hospitalized on Kauai or off-island along with the forecast of admits are shown in the following table. Future admits are increased by the rate of demographic increases forecast out to 2045.

Kauai Resident Med/Surg Acute Care Discharges: Historical and Projected

	2016	2017	2018	2020	2025	2035	2045
Total Kauai Residents	5,513	5,598	5,050	5,151	5,378	5,809	6,205

Discharges per 1000 population for Kauai residents, including those that are hospitalized off-island, is as follows:

	2016	2017	2018
Total Kauai Residents	5,513	5,598	5,050
Total Population	72,634	73,287	73,990
Discharge/1,000 Pop	75.9	76.4	68.3

Kauai rates are about 15 points below west coast rates, and 36 points below the national discharge rate. Kauai is also lower than the discharge rate of the State of Hawaii, which is about 78.

Medical/Surgical Acute Care Forecast Need

Assumptions for needs assessment:

SMMH Market Share

SMMH's market share of the total Kauai current and future discharges are shown below. In the future, with the addition of a CT scanner and Hospitalist, SMMH's market share is expected to increase.

SMMH Market Share

	2016	2017	2018	2020	2025	2035	2045
Mkt Share of IP Discharges	0.34%	0.39%	0.40%	2.15%	2.15%	2.15%	2.15%

SMMH Average Length of Stay (ALOS)

From 2016 to 2018 SMMH's ALOS has fluctuated quite a bit. With a small number of patients, abnormal stays of just a few patients can greatly influence ALOS. The spike in ALOS in 2017 was due primarily to a few patients whose diagnosis was substance abuse. In 2018, ALOS was down from 13.8 days to 4.15 days. The 2018 ALOS was used to forecast future need.

SMMH ALOS

	2016	2017	2018
Total	6.47	13.82	4.15

SMMH Med/Surg Bed Forecast:

The projected bed need for SMMH's Med/Surg Acute beds based on population growth and addition of CT Scan and a Hospitalist are shown here:

	Actual		Projected based on total Pop Growth & New Svcs-->				
	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2020</u>	<u>2025</u>	<u>2035</u>	<u>2045</u>
Total Kauai Admits	5,513	5,598	5,050	5,151	5,378	5,809	6,205
SMMH Admits	19	22	20	111	115	125	133
SMMH Market Share	0.3%	0.4%	0.4%	2.1%	2.1%	2.1%	2.1%
SMMH ALOS	6.47	13.82	4.15	4.15	4.15	4.15	4.15
SMMH Pat Days	123	304	83	459	479	518	553
SMMH ADC	0.34	0.83	0.23	1.26	1.31	1.42	1.51
SMMH Occ Rate	65%	65%	65%	65%	65%	65%	65%
SMMH Bed Need	0.5	1.3	0.3	1.9	2.0	2.2	2.3

Conclusion:

Based on the assumptions used in this forecast, the existing 5 Med/Surg beds are ample for accommodating future needs. Increased inpatient utilization will likely increase revenues in the future.

Acute Adult Psychiatric Bed Utilization

Assessment of the Kauai Market

SMMH's 9-bed licensed unit is the only adult psychiatric facility on Kauai. Three rooms are semi-private which limits occupancy because genders cannot be mixed. Their approach is to admit, treat, stabilize and discharge. Therapy is not part of their charge.

If an adolescent or child needs acute psychiatric care, they are sent to Honolulu. As is the case for adults, once discharged very few venues exist with trained caregivers to continue care in the community.

Kauai residents with a psychiatric diagnosis who were or forecast to be hospitalized on Kauai or off-island are shown in the following table. Future admits are increased by the rate of demographic increases forecast out to 2045.

Kauai Resident Psychiatric Acute Care Discharges: Historical and Projected

	2016	2017	2018	2020	2025	2035	2045
Total Kauai Res Admits	176	185	191	195	203	220	235

As shown, discharges have not increased significantly over the last couple of years.

Acute Adult Psychiatric Bed Forecast Need

Assumptions for needs assessment:

SMMH Market Share

Because SMMH is the only inpatient Psych facility on the island, SMMH's market share is quite high. There are a few patients who are hospitalized off-island, but most stay on Kauai. Current and future discharges for Kauai residents are shown below. 2018 market share is assumed for the forecasts.

SMMH's Acute Adult Psychiatric Market Share							
	2016	2017	2018	2020	2025	2035	2045
Total	97.2%	95.7%	96.3%	96.3%	96.3%	96.3%	96.3%

SMMH Average Length of Stay (ALOS)

From 2016 to 2018 SMMH's ALOS dropped from 6.0 to 4.9 days. The 2018 ALOS was used in the forecast to predict future days.

SMMH Psychiatric Unit ALOS			
	2016	2017	2018
ALOS (use 2018)	6.00	6.06	4.86

The projected bed need for SMMH's Psych Acute beds is shown here:

SMMH Psychiatric Unit Forecast

	Actual		Projected based on total Pop Growth -->				
	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2020</u>	<u>2025</u>	<u>2035</u>	<u>2045</u>
Total Kauai Admits	176	185	191	195	203	220	235
SMMH Admits	171	177	184	188	196	212	226
SMMH Market Share	97.2%	95.7%	96.3%	96.3%	96.3%	96.3%	96.3%
SMMH ALOS	6.00	6.06	4.86	4.86	4.86	4.86	4.86
SMMH Pat Days	1,026	1,072	894	912	952	1,028	1,098
SMMH ADC	2.81	2.94	2.45	2.50	2.61	2.82	3.01
SMMH Occ Rate	65%	65%	65%	65%	65%	65%	65%
SMMH Bed Need	4.3	4.5	3.8	3.8	4.0	4.3	4.6

Conclusion:

Based on the assumptions used in this forecast, the existing 9-bed psychiatric license is ample for accommodating future needs. There are current plans to upgrade the unit to address some safety issues for patients and staff. However, the unit has some space and functional issues beyond what can be addressed in the current upgrade.

SMMH Long Term Care/Skilled Nursing Facility Bed Utilization

Assessment of the Kauai Market

There are 333 licensed long-term care/skilled nursing facility beds on Kauai spread across 5 locations as follows:

- 110 beds at Garden Isle Rehab & Healthcare Center
- 84 beds at Hale Kupuna Heritage Home
- 53 Beds at Kauai Care Center
- 66 beds at SMMH
- 20 beds at West Kauai Medical Center/KVMH

Key statistics compiled by SHPDA is shown in the following table.

Long-Term Care/Skilled Nursing Facilities Key Statistics

	Lic Beds	Inpatient Days			Admissions			ALOS		
		2015	2016	2017	2015	2016	2017	2015	2016	2017
Garden Isle Rehab & Healthcare Center	110	35,944	36,866	34,472	278	231	216	129	160	160
Hale Kupuna Heritage Home	84	25,321	25,025	25,808	77	61	49	329	410	527
Kauai Care Center	53	17,032	17,166	17,872	99	77	66	172	223	271
SMMH	66	19,864	19,890	16,828	30	24	50	662	829	337
West Kauai Med Cen/KVMH	20	7,263	7,243	7,219	21	15	13	346	483	555
Total	333	105,424	106,190	102,199	505	408	394	209	260	259

SMMH Long Term Care/Skilled Nursing Facility Bed Forecast Need

Assumptions for needs assessment:

- Increase long-term care/skilled nursing facility admits by growth in the population 65+ per SHPDA
- Increase market share in 2020 after renovation from 7.3% to 7.5% to achieve goal of reducing 2 – 3 waitlisted patients
- Average length of stay is assumed at 540 days, approximating the current ALOS
- At SMMH, after patient room renovations, there will be 54 set-up beds - 12 fewer beds than the license
- For future-year forecasts, assume 54 set-up beds is not a limiting factor. The goal is to determine future need based on accommodating growth in population and slightly increasing and maintaining market share
- Assume a 90% occupancy rate is achievable in the future

The projected need for SMMH's Long Term Care/Skilled Nursing Facility beds based on population growth is shown here:

SMMH Long Term Care/Skilled Nursing Facility Bed Forecast

	as reported to SHPDA			Projected based on pop growth of 65+ & 2.8% requiring skilled nursing				
	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2020</u>	<u>2025</u>	<u>2035</u>	<u>2045</u>
Total Market Admits	505	408	394	407	443	510	589	612
SMMH new admits	30	24	50	30	33	38	44	46
SMMH Mkt share	5.9%	5.9%	12.7%	7.4%	7.5%	7.5%	7.5%	7.5%
SMMH ALOS	662	829	337	558	540	540	540	540
SMMH Pat Days	19,864	19,890	16,828	16,743	17,921	20,670	23,834	24,785
SMMH Average Daily Census	54	54	46	46	49	57	65	68
SMMH Occ Rate based on 66 & 54 beds available until 2020	82%	83%	70%	85%	90%	90%	90%	90%
SMMH Bed Need	66	66	66	54	55	63	73	75

Conclusion:

The long term care/skilled nursing area at SMMH is currently being upgraded. The nursing station is being modernized, there are plans to upgrade the hallway flooring, lighting and finishes, and patient rooms are being modernized. The unit has been operating at a reduced bed number of 54 beds during renovation and upon completion will have 54 beds available. By 2025, the forecast shows a need for 9 additional beds (63 beds) – still well within the bed license. Assuming current admit rates and a steady market share, the need by 2045 is expected to be 75 beds.

It should be noted however, that because of the lack of safe and affordable discharge venues, some patients are held for longer than is medically necessary in long term care/skilled nursing facility beds. In the future, should care homes and transitional housing be available, ALOS may be reduced and therefore patient days and bed need would be reduced.

Emergency Room Visit Forecast

Assessment of the Kauai Market

There are 3 Emergency Rooms (ER) on Kauai provided at the following hospitals:

- Wilcox Memorial Hospital in Lihue
- Kauai Veterans Memorial Hospital in Waimea
- Samuel Mahalona Memorial Hospital in Kapaa

In addition, there are a number of Urgent Care Clinics available, or soon to be available on Kauai, including:

- Kauai Urgent Care in Lihue
- Urgent Care at The Clinic in Poipu
- Hale Le'a Family Medicine & Urgent Care in Kilauea
- Makana North Shore Urgent Care in Princeville
- Kapaa Clinic Urgent Care in Kapaa (soon to be open)

With the addition of a CT Scanner at SMMH, it is expected that more patients will be brought into SMMH ER to be treated and fewer patients will need to be transferred to get a CT Scan. Currently there are a number of patient that are transferred or simply sent home after being told to go get a CT Scan 'if it gets worse'.

Plus, the addition of a Hospitalist that can oversee inpatient care on a regular basis is also expected to increase ER visits for those patients that need to be admitted.

Emergency Room Forecast Need

Assumptions for needs assessment:

- Increase Kauai visits by overall growth in the population per SHPDA
- On top of population growth, increase ER visits by 5% in 2020 to account for increase in volumes due to CT Scanner and Hospitalist (assume EMR bring more ER patients to SMMH because of increased capabilities)
- By 2025, increase visits by another 5% for a total 'bump' in volumes of 10%. Beyond 2025 no additional increase due to CT Scan or Hospitalist.
- Assume visits from Kauai County account for about 85% of visits, as in 2018
- Assume visits from out of Kauai County remains in same proportion as 2018
- Stations required used a 'rule of thumb' of 1,500 visits/station

Emergency Room Forecast

The projected ER visit and station forecast is shown here:

SMMH ER Forecast							
Inc Kauai by State Demographic Forecast + CT scan + Hospitalist same % distribution by pat origin as 2018							
	<u>2018</u>	<u>2020</u>	<u>2025</u>	<u>2030</u>	<u>2035</u>	<u>2040</u>	<u>2045</u>
Kauai County	5,134	5,498	5,741	5,974	6,201	6,417	6,623
Oahu County	36	39	40	42	43	45	46
Maui County	20	21	22	23	24	25	26
Hawaii County	9	10	10	10	11	11	12
Out of State	<u>812</u>	<u>870</u>	<u>908</u>	<u>945</u>	<u>981</u>	<u>1,015</u>	<u>1,048</u>
Total	6,011	6,437	6,721	6,995	7,260	7,513	7,755
# stations @ 1,500 visits/station	4.01	4.29	4.48	4.66	4.84	5.01	5.17
% Increase in ED visits							
- CT Scans		3%	3%	0%	0%	0%	0%
- Hospitalist		2%	2%	0%	0%	0%	0%
Total Increase		5%	5%	0%	0%	0%	0%

Conclusion:

Based on the assumptions used in this forecast, 5 stations will be required in the future. SMMH has 5 ER stations in three rooms. Two rooms have 2 stations each and one is private. In the semi-private rooms, it is difficult to have two patients occupying the room at the same time because the supply cabinets are on the back wall next to the far bed. This means staff needs to interrupt the patient in the far bed if supplies are needed for the patient nearest the front of the room. And, because of SMMH's focus on Psychiatry, many ER visits are for patients with either substance abuse or psychiatric issues where staff observation is important. While the semi-private rooms are directly in front of the nursing station, they are not designed for the safety of accommodating patients with behavioral health issues. Plans are underway for creating a safe station for behavioral health patients.

The forecast for 5 stations assumes all stations can be occupied at the same time. This is difficult given the existing layout. There are other departmental deficiencies, such as limited storage and staff break areas, which cannot be fixed within the physical limitation of the current facility and renovation plan.

Senior Living Residential and Skilled Nursing Facility (SNF) Needs Analysis

The Needs Analysis for the Senior Living venues takes into consideration:

- Existing and forecast Kauai residents (65+)
- Industry benchmarks for utilization of various senior living situations
- Existing experience with caring for seniors
- An understanding of the differences in health status between the ‘general population’ and Kauai seniors

This paper provides the methodology and assumptions used to forecast the need for varying levels of supported care for seniors as shown in the following Table.

All Levels: Forecast Number of Residents

Total Kauai Forecast Summary						
	Existing Beds	2018	2020	2025	2035	2045
Independent Living	600+	290	320	428	619	678
Assisted Living	35	218	237	273	315	300
Memory Care AL	12	65	72	96	139	152
Skilled Nursing	383	407	443	510	589	612

Note: Existing Beds for Independent Living includes all units indicated for seniors and/or for affordable housing. Some units may be used by younger residents or may have only a certain number of affordable units.

Kauai Elders by Age

For Senior Living accommodations, the resident population (as opposed to De Facto population) is used as it is assumed tourists and visitors would not make use of Senior Living accommodations on Kauai. The existing and projected number of Kauai elders by age is shown below.

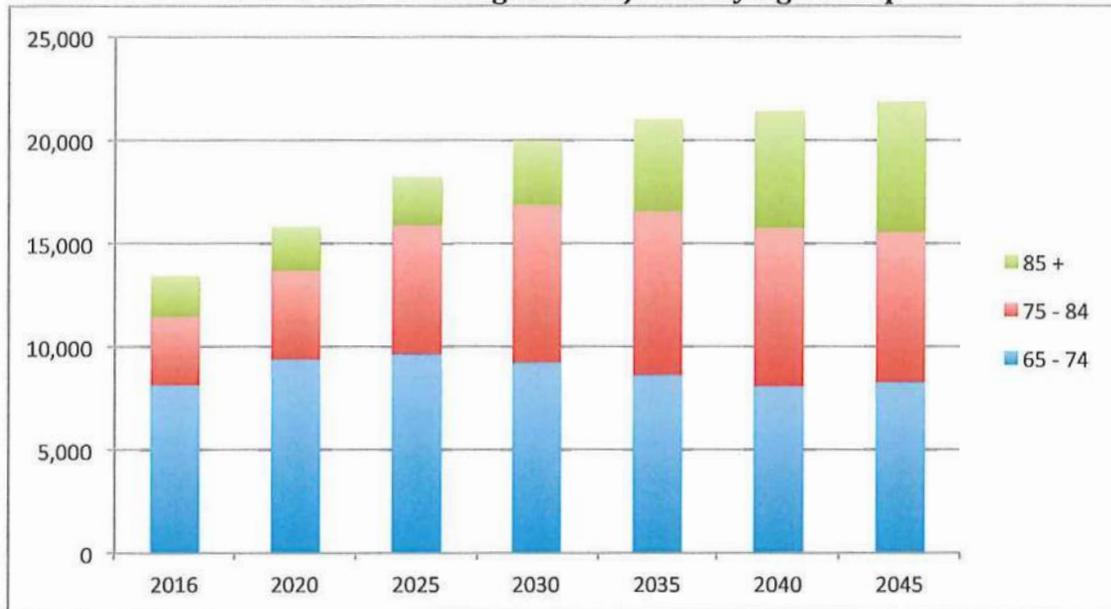
Kauai Elders 65+: Existing and Projected

Age group (years)	1990	2000	2010	2016	2020	2025	2030	2035	2040	2045
65 - 74	3,922	4,171	5,360	8,157	9,407	9,664	9,249	9,643	8,102	8,295
75 - 84	2,155	2,989	3,092	3,331	4,296	6,247	7,640	7,925	7,677	7,264
85 +	<u>585</u>	<u>1,055</u>	<u>1,643</u>	<u>1,945</u>	<u>2,101</u>	<u>2,317</u>	<u>3,073</u>	<u>4,450</u>	<u>5,631</u>	<u>6,298</u>
Tot 65+	6,662	8,215	10,095	13,433	15,804	18,227	19,961	21,017	21,411	21,857

Source: State of Hawaii DBEDT June 2018 Report

This forecast shows the population 65+ increasing by over 60% by 2045. The 85+ age group alone is expected to increase by nearly 225%. Generally, the older age groups are higher consumers of senior care residential services.

Kauai 65+: Existing and Projected by Age Group



Industry Benchmarks

Residential models for seniors, like medical care, are constantly changing. With changes in technology and medical practice, more and more elders are now able to stay safely in their homes rather than being cared for in nursing homes or assisted living communities. There are also differences in utilization based on location. For example, the western states experience lower numbers of hospital and nursing home beds/population as compared to other states.

Understanding the differences in health status of Kauai compared to the general population is important to consider as well. As in the general population, an individual's health status can vary significantly across age groups. In addition, there are cultural differences in how and where elders are cared for that impact senior living demand on Kauai.

The needs assessment tested ranges of industry benchmark rates and compared them to actual Kauai experience to assess the most appropriate assumptions for the forecasts.

Forecast Need

Independent Living

Independent Living is defined as follows:

- Typically apartments designed for a senior population that emphasizes safety and security – they may or may not be collated with Assisted Living (AL) units.
- Senior residents live independently but have the option to eat meals in an on-site dining area and hire help for housekeeping, laundry, personal assistance, transport to medical appointments, etc.
- Many independent living (IL) facilities are collocated with Assisted Living so residents can stay in their apartment to ‘age in place’. Such units are designed to accommodate either type of resident.

There appear to be over 600 Independent Living apartments that tout senior living opportunities on Kauai. It is unclear, however, how many apartments house residents that are not seniors or how many are affordable to those in lower income brackets or on a fixed income.

Regency at Puakea is the only facility that has both Independent and Assisted Living Apartments. They accept only private pay residents.

Many Kauai elders at this stage live with family, especially those whose families have lived on Kauai for generations and/or are of Asian decent.

Assumptions for needs assessment:

- 4% to 6% of population 75+ seek independent living situations (industry benchmark)
- 5% used

Independent Living Forecast Number of Residents

		<u>2018</u>	<u>2020</u>	<u>2025</u>	<u>2035</u>	<u>2045</u>
Kauai Pop 75+		5,799	6,397	8,564	12,375	13,562
	4%	232	256	343	495	542
	5%	290	320	428	619	678
	6%	348	384	514	743	814

Conclusion:

It appears there are an ample number of apartments available for Independent Living by seniors but it is unclear how many would be considered ‘affordable’. Lack of affordable housing is often a major reason for homelessness. Several situations have been shared about elders who are kept in hospitals (a higher level of care) because they do not have a safe and affordable place to go upon discharge. The forecast indicates that demand for this type of senior housing will double by 2045 increasing competition. Market pressures for either increased supply or if supply remains stable, increased costs would occur.

Assisted Living

Assisted Living is defined as follows:

- Patients typically need assistance with activities of daily living¹ (ADL) and some daily medication management but live in their own unit/apartment
- Services such as laundry, trash pick-up, housekeeping, group and individual social activities, transportation and excursions are typically available
- 24/7 trained staff available
- Access to licensed on-staff nurses visits
- Building and grounds maintenance provided

Regency at Puakea is the only Assisted Living facility on Kauai. They have 82 units total: 12 Memory Care AL units and 70 AL/IL units. The AL/IL units ‘swing’ between both levels of care as resident’s needs change. Units range from studio, to one bedroom to two bedrooms, so it is possible that each unit can house more than one AL resident. They only accept private pay residents so affordability is a question for much of the Kauai demographic.

Assumptions for needs assessment:

- 2% of population 65+ in Assisted Living based on national average per National Institute of Health (industry benchmark)
- Currently over 50% of the Kauai population is Asian or mixed race.
- Prevalence rates by ethnic groups (Hawaiian/Pacific Islanders and Asian Americans) are lower for assisted living for Alzheimer’s/Dementia – 81% and 90% respectively. Assume similar reduced rates for AL residents without memory care needs.
- Use 80% of national average for Kauai.

Assisted Living Forecast Number of Kauai Residents

	% of pop needing AL	2018 Need	2020 Need	2025 Need	2035 Need	2045 Need
<65	0%	-	-	-	-	-
65-74	2%	175	188	193	173	166
75-84	2%	76	86	125	159	145
85+	2%	40	42	46	89	89
Total		291	316	365	420	400
Assume Kauai at 80% of Nat'l need		218	237	273	315	300

Conclusion:

Today, with Regency at Puakea’s 82 units, the current need is 136 units increasing in 2025 to 191 if no other AL units are present on Kauai.

¹ Activities of Daily Living include personal hygiene and grooming, bathing, dressing, functional mobility/locomotion, continence managing and/or toileting, feeding oneself

Memory Care Assisted Living

Memory Care Assisted Living is defined as follows:

- Services listed in Assisted Living available to memory care patients
- Specially trained staff to assist memory care patients
- Facilities designed for memory care patients

The only Memory Care Assisted Living on Kauai is Regency at Puakea’s 12-unit facility. Their wait list is currently at 8.

Assumptions for needs assessment:

- Incidence rates for Alzheimer’s and dementia differ by age and race
- Rates for care outside the home are difficult to predict as well
 - Many Kauai elders with memory care issues live with family, especially local islanders.

Option 1:

- National rates from the Alzheimer’s Association adjusted downward to 75% of national average for race and Kauai local islander tendency to care for elders in family homes

Option 1: Memory Care Assisted Living Forecast Number of Kauai Residents

	US % w/ Alz & other dementias	2018 pop w/ Alz	2020 pop w/ Alz	2025 pop w/ Alz	2035 pop w/ Alz	2045 pop w/ Alz
<65	3%	1,762	1,768	1,795	1,899	2,101
65-74	12%	1,049	1,129	1,160	1,037	995
75-84	33%	1,247	1,418	2,062	2,615	2,397
85+	28%	561	583	643	1,235	1,235
Total	75.8%	4,619	4,898	5,659	6,786	6,728

	% w/ Alz that need AL	2018 # in need of AL	2020 # in need of AL	2025 # in need of AL	2035 # in need of AL	2045 # in need of AL
<65	0%	-	-	-	-	-
65-74	0%	-	-	-	-	-
75-84	7%	87	99	144	183	168
85+	11%	63	65	72	138	138
# w Alz in AL		150	165	216	321	306

Note: Rate of those with Alzheimer’s that need Assisted Living reduced down from national benchmark to reflect greater numbers of elders on Kauai that are cared for in the home.

Option 2:

- National benchmarks for those with memory care issues adjusted downward for the Kauai population
- National benchmark of 14% of those with memory issues in Assisted Living applied.

Option 2: Memory Care Assisted Living Forecast Number of Residents

	2018	2020	2025	2035	2045
75+ benchmark	8%	8%	8%	8%	8%
# 75+ Kauai Pop	5,799	6,397	8,564	12,375	13,562
# w/ Alz on Kauai	464	512	685	990	1,085
% w Alz needing AL	14%	14%	14%	14%	14%
# w Alz in AL	65	72	96	139	152

Conclusion:

Predicting the need for Memory Care Assisted Living residents on Kauai presents a number of challenges for the following reasons:

- The Hawaii rates for medical services tends to be much lower than the Mainland
- Rates vary by Island and by race
- There anecdotally are a number of memory care residents that receive care off-island for a number of reasons, including:
 - lack of units on Kauai
 - cost of care on Kauai
 - the desire for family members to be closer to other family members
- Data is not kept in a centralized location for tracking the number of memory care residents originating from Kauai

Because of the difficulty in finding data and forecasting the need for Memory Care Assisted Living, Options 1 and 2 offer a range for the potential number of memory care residents seeking assisted living. Option 2, the more conservative estimate, is shown in the summary table. That range is as follows:

Range of Memory Care Assisted Living Units based on Options 1 & 2

	2018	2020	2025	2035	2045
Option 1	150	165	216	321	306
Option 2	65	72	96	139	152
Need minus current number of Memory Care AL Units (12)					
Option 1	138	153	204	309	294
Option 2	53	60	84	127	140

Skilled Nursing Care

Skilled Nursing Care (SNF) is defined as follows:

- Patients need nursing care, but not intensive medical care as provided in an acute hospital setting
- Some SNF's provide therapy for recovery from acute medical episodes, such as hip or knee replacements as a transition prior to returning home
- Current Skilled Nursing Care at SMMH is more custodial than therapeutic in nature
- Most patients are elderly
- Venues for patients needing skilled nursing care include:
 - Skilled Nursing Facilities /Hospitals
 - Adult Residential Care Homes – up to 5 residents in neighborhood homes with care provided by a CNA (Certified Nursing Assistant)
 - Community Care Foster Family Homes (CCFFH) – up to 3 residents in neighborhood homes providing a nursing home alternative in a family-like environment

On Kauai there are 333 licensed SNF beds, 31 beds in seven Adult Residential Care Homes (ARCH) and 19 beds in eight Community Care Foster Family Homes (CCFFH) for a total of 383 licensed beds. However, not all beds may be staffed and available. For example, the current renovation at SMMH has reduced the staffed and available beds to 54, compared to 66 licensed. In addition, assigning beds according to gender may reduce the number of available beds.

Assumptions for needs assessment:

- Rates are applied to 65+ population
- Current rate on Kauai is 1.9% (85% occupancy rate applied to licensed beds)
- Rate in Washington State is 2.8%
- National Rate is 4.2%
- Adjust industry benchmarks so total use rate is same as Washington State

Skilled Nursing Forecast Number of Residents

	2018	2020	2025	2035	2045
Pop 65 - 74	8,741	9,407	9,664	8,643	8,295
Pop 75 - 84	3,777	4,296	6,247	7,925	7,264
Pop 85+	2,021	2,101	2,317	4,450	6,298
Tot 65+	14,540	15,804	18,228	21,018	21,857
Rate /65+ used	2.8%	2.8%	2.8%	2.8%	2.8%
SNF Residents	407	443	510	589	612

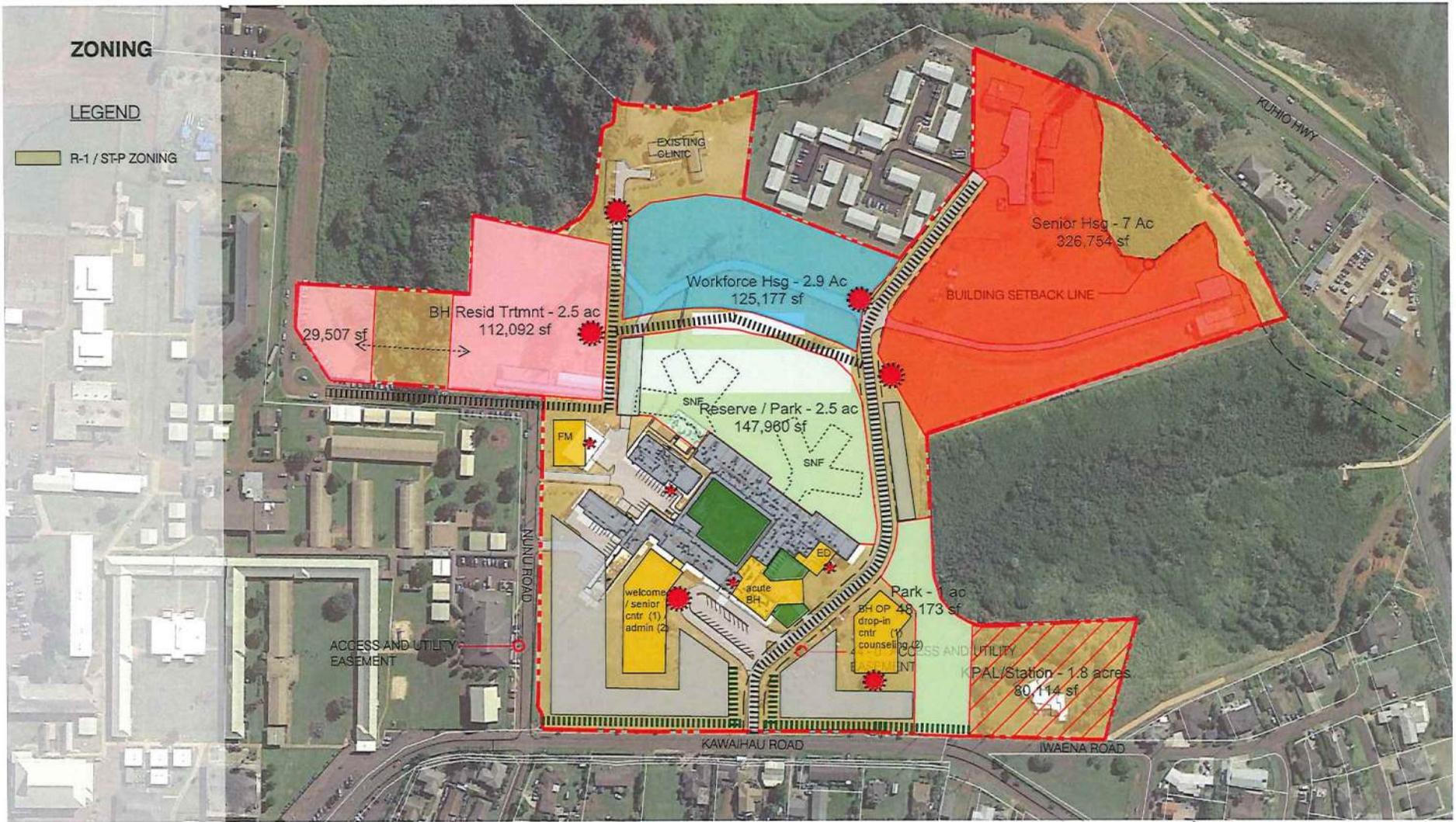
Other national use rates were tested resulting in numbers that are much higher than applying the Washington State rate. The use rates for the western states are always lower than the rest of the country so it makes sense to use a rate that is more in line with what Kauai currently experiences. There are currently 333 licensed skilled nursing beds in hospitals on Kauai. At an 85% occupancy rate, the average daily census would be 283 in 2018. The actual rate of SNF residents per 65+ population is

1.9% currently. Part of the difference between the 1.9% and 2.8% might be due to seniors in SNF off island or the use of ARCH and CCFFH beds in the community coupled with tendency to care for elders in their family homes.

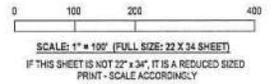
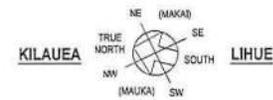
Source: SHPDA Health Care Utility Report for licensed beds for Kauai.

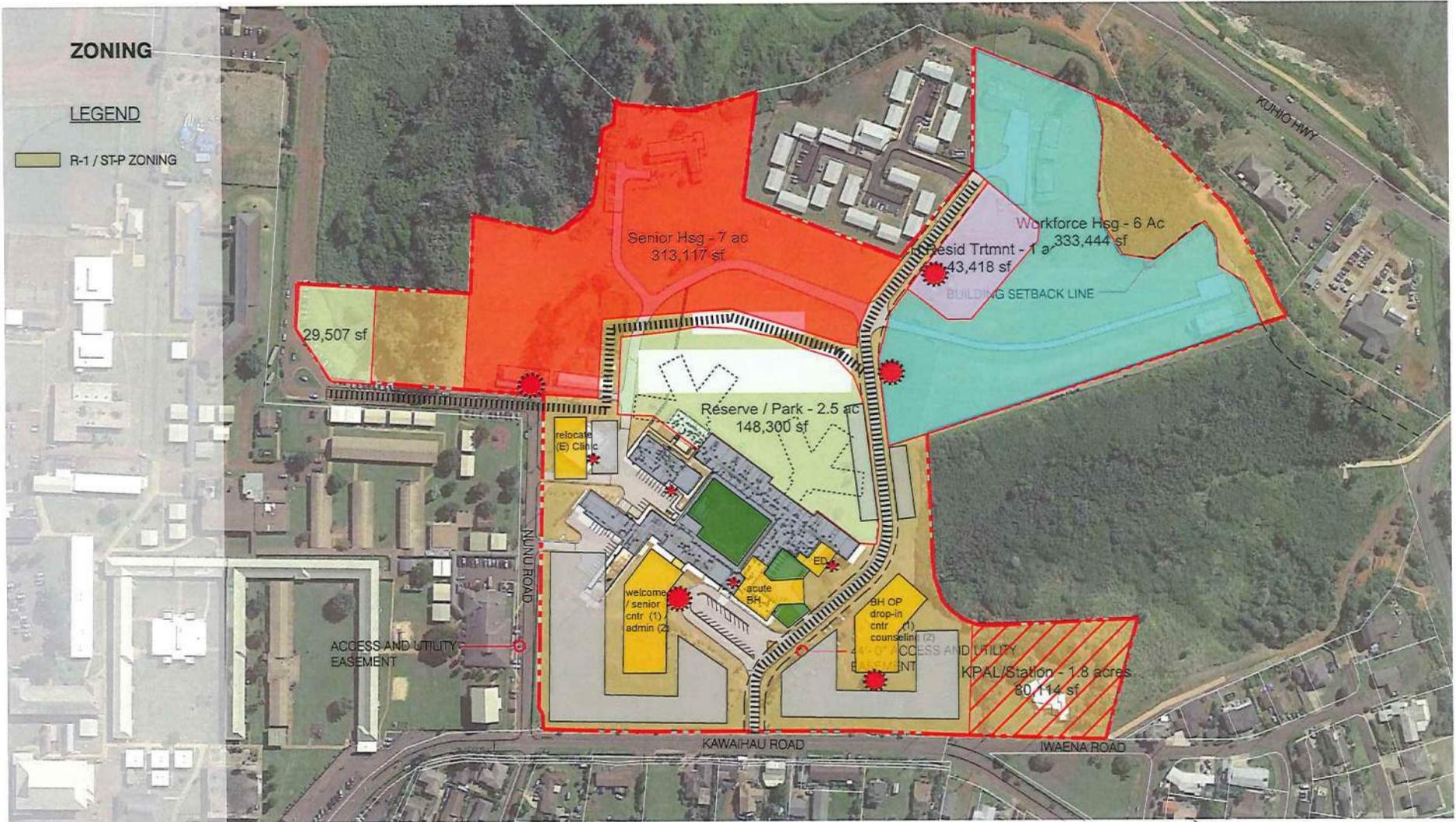
Conclusion:

- Skilled Nursing Facilities on Kauai are primarily hospital based, but residential alternatives exist.
- Anecdotally, some SNF beds are occupied by patients who do not need SNF level of care, but because affordable discharge options are scarce, patients continue to occupy SNF beds. Transitional care homes might be a discharge option where residents can establish themselves in the community and get care they need prior to fully integrating into residential neighborhoods.
- Some senior care providers are moving away from providing skilled nursing because of high costs, lower reimbursement rates, and movement to shift such care into lower cost residential settings.
- While a SNF inventory exists on Kauai, there will continue to be needs for affordable care for Kauai's seniors.
- Comparing the forecasts to actual licensed beds suggests shortages in this level of care will occur in the future.



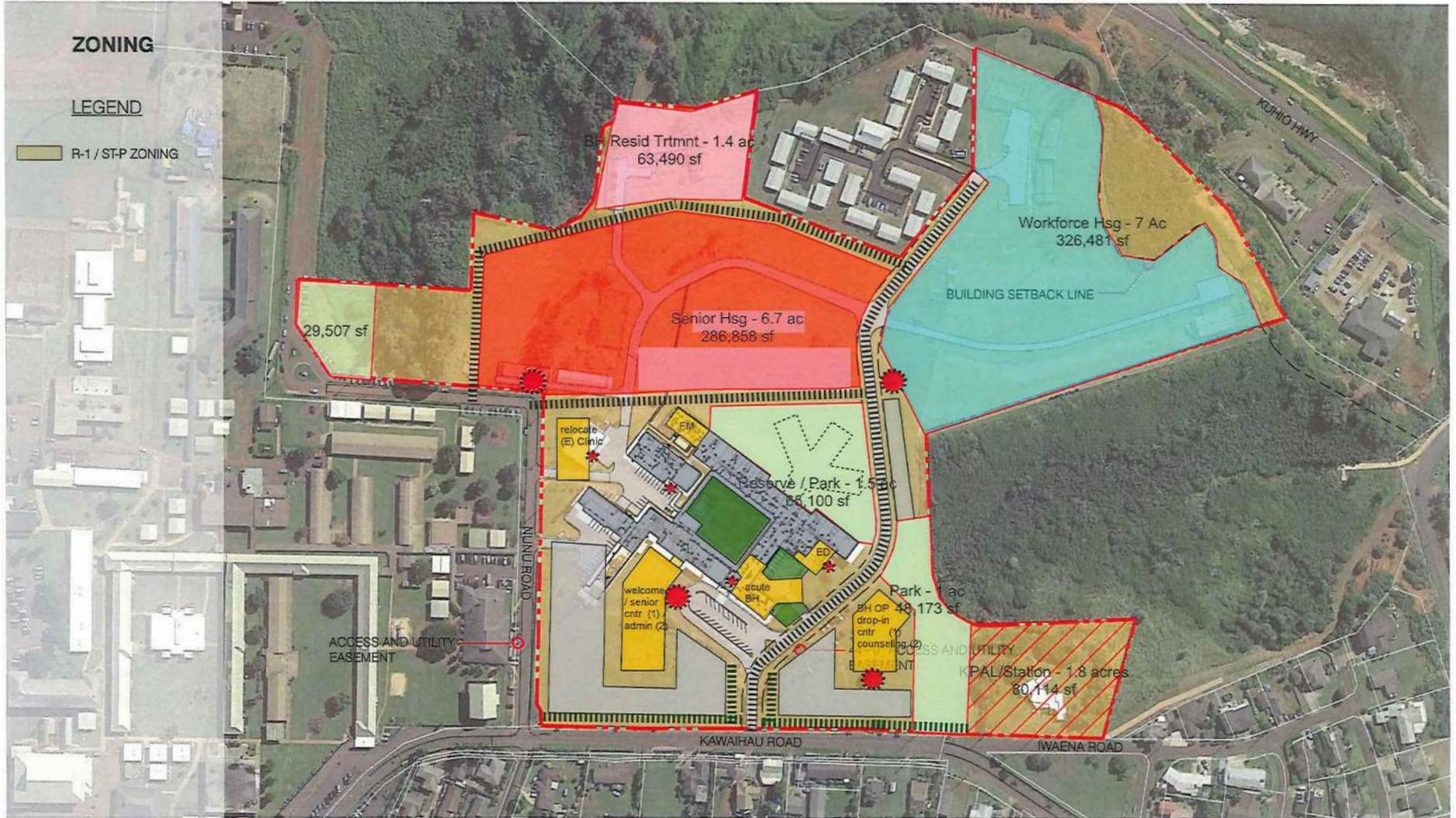
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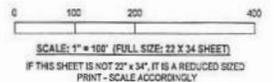


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08-09-19 Alt 3



**SMMH Master Campus Plan Project
Behavioral Health Vision Group - 7
October 15, 2019 Meeting Minutes**

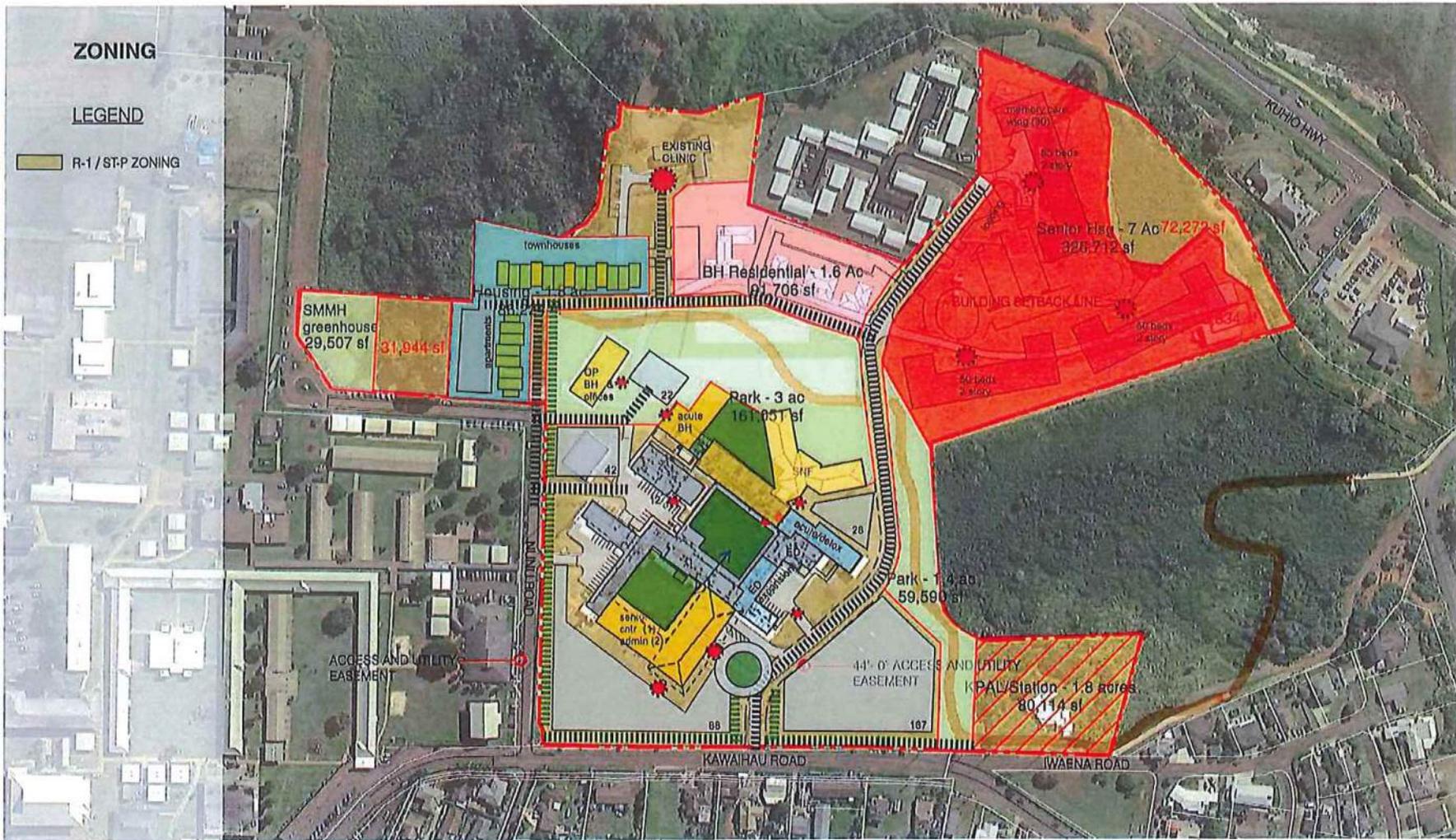
Present: Madeleine Hiraga-Nuccio, Dr. Janet Berreman, Terry-Ann Moses, Lance Segawa (Chairperson), Karen Alapai (recorder)

Via Phone: Terri Martin, Katie MacNeil, Theresa Koki, Janelle Saucedo, Rei Cooper

Excused: Katie McGinness, Paige Javier, Chesne Cabral Kitamura, Ah-Lan Coloma, Novelyn Hinazumi, Angela Lim, Melinda Montgomery, Jennifer Palisbo, Vonnell Ramos, Tito Villanueva, Bill Arakaki, Dr. Gerald McKenna, Edward Mersereau, Lani Nagao, Amy Curtis, Barbara Johnson, Toni Torres, Wayne Law, Matthew Barrett, Barbara Nakamura

Agenda	Discussion	Follow-up Action
1) Introductions	Meeting was called to order at 0905 hours by Lance Segawa.	Meeting was called to order at 0905 hours. Lance thanked everyone for their participation as we are near the end of our vision group work.
2) Minutes September 17, 2019	Minutes of the September 17, 2019 meeting perused. Motion made and seconded to approve. Motion carried.	The September 17, 2019 meeting minutes approved as written.
3) Review Future Capacity Requirements	Capacity survey reviewed. Numbers need to be vetted. Lance will coordinate for a site visit to Maui and will be sending out as to who is interested.	Capacity numbers to be reviewed by committee. Terri Martin will review and validate. Lance will coordinate a site visit to Maui.
4) Review Gap Stories	Lance encouraged everyone to send gap stories to him and let's try to get as many as possible so we can build on it. These stories will help populate the kind of services that we don't have data on.	Many gap stories are needed to help populate the kind of services.
5) Case Studies/Site Plan	See attached from Katie G70. Lance thanked Katie and this is a way to begin envisioning what might be and we'll continue to refine commit operational pieces of this.	See attached.
6) Next Community Meeting	Next community meeting number two will be the same day of our last group meeting. November 19 th . Meeting would	Next community meeting #2 will be the same day of our last group

Agenda	Discussion	Follow-up Action
6) Next Community Meeting (continued)	be the evening like the last time and we'll have a chance to refine a few things.	meeting; 11/19/19.
7) Next meeting	Our next group meeting will be November 19 th at 9:00 AM in the SMMH-VTC Conference Room.	Next meeting November 19 th .
8) Adjournment	Meeting was adjourned at 1046 hours.	



DRAFT -
10-14-19

CONCEPT



SCALE: 1" = 100' (FULL SIZE: 22 X 34 SHEET)
IF THIS SHEET IS NOT 22" X 34", IT IS A REDUCED SIZE
PRINT - SCALE ACCORDINGLY



CAMPUS PROGRAM SUMMARY

SAMUEL MAHELONA HOSPITAL MASTER PLAN | KAPAA, HAWAII

Date: 10/14/19	UNITS/BEDS	BLDG FLOOR AREA (SF)	PARKING (STALLS)	STORIES	MIN SITE AREA (ACRES)	NOTES
SMMH						
Bldg 1 - (E) Main Hospital- Existing						
Acute	5	57,204	68	1	2.32	existing
Long Term Care (LTC)	54					renovation 2019
Psychiatric	9	-3,069	-9			renovation 2019
Admin		-6,109				demo existing, build new
Bldg 1 (new) - Acute Psych Unit		4,500	9	1	0.21	ED expands, admin moves
Bldg 1 (new) - ED right size and Inpatient Detox	4	5,950	4			psych rebuild, maintain bed count
Bldg 1 (new) - LTC Expansion	21	19,560	21	2	0.60	max 4 beds, swing to acute
Bldg 1 (new) - Community Café & Senior Cntr		29,583	99	2	1.32	admin relocation to new build, right sizing
Bldg 2 - (E) OT Clinic		8,006	30	1	0.53	existing parking undersized
Bldg 3 - (E) Warehouse		5,103	15	1	0.29	existing
Bldg 4 - OP Behavioral Health Center		9,840	33	1	0.59	OP clinic - two providers, agency offices
Total		130,678	269		5.94	
RESIDENTIAL - BEHAVIORAL HEALTH						
Specialized Treatment Facility	20	20,000	20	2	0.69	residential detox treatment, dual diagnosis
Specialized Treatment Facility - future	10	9,000	10	2	0.31	residential detox treatment, dual diagnosis
Sober Living Facility (SLF) Main	8	4,800	8	2	0.18	long term residential, could also be Senior ILF
Sober Living Facility (SLF) Adjacent	12	4,800	12	2	0.20	long term residential, could also be Senior ILF
Sober Living Facility (SLF) Adjacent - future	12	4,800	12	2	0.20	long term residential, could also be Senior ILF
Total		43,400	62		1.57	
RESIDENTIAL - ELDERLY CARE						
Assisted Living Facility (ALF)	125	131,000	63	2	4.10	165 total including Memory Care
ALF Memory Care	30	39,000	15	2	1.23	secured outdoor area
Total		170,000	78		5.42	
RESIDENTIAL - WORK FORCE						
Garden apartments & townhomes	20	23,040	20	2	0.76	assumes two bedroom residences, 20 du / ac
Townhomes	14	12,000	20	2	0.46	assumes three bedroom with garage
Total		35,040	48		1.26	
COMMUNITY FACILITIES						
(E) Hoola Lahui Health Clinic		15,000	50	1	0.90	
Kaui Police Department Sub-Station		42,000	140	2	1.88	
KPAL Program		3,500	12	1	0.21	
Park, Walking Paths, Roadways, Unassigned Open Space					14.64	open space exceeds 30% requirement
Undevelopable Site Area					2.39	
Total		60,500	202		20.02	
CAMPUS SUMMARY		439,618	658		34.21	

NOTE: Site area assumed at 30% open space, actual site area dependent on site constraints.



SAMUEL MAHELONA MEMORIAL HOSPITAL | PRELIMINARY SPACE PROGRAM

Date: 10/14/19

	EXISTING	2019-2020 GROWTH	2019-2020 TOTAL	PHASE I GROWTH	PHASE I TOTAL	PHASE II GROWTH	PHASE II TOTAL DGSF	SF TARGETS	NOTES
Ancillary	14,584	0	14,584	22,933	37,527	0	37,527		
Lobby and Circulation	728							25% SF	
Admitting / Reg / Cashier	476								
Meeting Space (Auditorium/Stage)	1,090								
Patient Programmed Space (education room /	2,264								
Facilities Management Offices	3,184								
Storage	2,118								
Dietary (patient & staff dining, kitchen, dry storage)	2,157			3,985	6,142			70 sf/bed	includes former laundry, added to Dietary in Phase I includes multi-purpose room, 500 meal kitchen
Boiler Room (not functional)	1,225								
Restroom / Housekeeping / Material Management	552			6,528	7,080			60 sf/bed	less warehouse storage (xxx)
Community Café + Market				4,140	4,140				200 seat plus 450 SF market
Senior Center - fitness, craft and activity				6,480	6,480				2 fitness areas, 2 classrooms spaces; fitness, crafts,
Senior Daycare				1,800	1,800				20 person multipurpose room
Administration	7,908	-1,800	6,108	3,702	9,900	0	9,900	10% GDSF	Ph I - shell space
Offices	3,569	-1,800							
Meeting	841								
Admin Support (record room/copyroom/restroom)	880								
Restrooms	529								
Storage	129								
Circulation	2,160								
Emergency Department	2,911	1,940	4,851	3,630	6,481	0	6,481	900 dgsf / treatment station	
Departmental areas	812		812	2,308	3,118				right sizing
Exam - Emergent Care	574		574	126	700			140 nsf/ea station	3 bays/5 stations
Exam - Psychiatric Holding	0	140	140		140				add 2 bays / 5 stations total
Storage	0		0	154	154				
X-Ray Room	425		425	875	1,300			1300 dgsf/Unit	
CT Scan	0	1,800	1,800	0	1,800			1800 dgsf/Unit	replaces Admin offices
Restroom (incl. janitor)	69		69		69				
Circulation	1,031		1,031	169	1,200				
Long Term Patient Care Unit	20,972	-3,040	17,932	19,568	37,500		37,500	440-560 DGSF/ bed	Ph1 -54 beds; Ph 2- 75
Rooms/Stations/Storage/etc	17,057	-3,040	14,017						
Circulation	3,915		3,915						
Acute Patient Care Unit		2,900	2,900	2,320	5,220		5,220	500-660 DGSF/ bed	
Acute Patient Rooms			2,900		2,900				5 beds
Swing Detox Patient Rooms				2,320	2,320				4 beds
Psychiatric Inpatient	3,868	0	3,868	632	4,500	0	4,500	440-560 DGSF/ bed	9 beds
Subtotal	50,253	0	50,253	52,875	103,128	0	103,128		
2019-2020 Growth - accounting of current Improvements									
Phase I Growth - right sizing + expansion (Admin, Ancillary, ED, Psych Expansion, Detox)									
Phase II - right sizing + expansion (LTC)									

CASE STUDIES

- 1) INPATIENT PSYCHIATRIC UNIT
- 2) SPECIAL TREATMENT CENTER (STC)
- 3) SOBER LIVING HOUSE (SLH)
- 4) LONG TERM CARE / SKILLED NURSING (LTC)
- 5) SENIOR HOUSING - ASSISTED LIVING FACILITY (ALF)

DRAFT

PREPARED BY:

G7O | TERRIE MARTIN
CONSULTANTS

OCTOBER 2019



INPATIENT PSYCHIATRIC UNIT

Description:

Inpatient psychiatric nursing unit distinct unit of critical access hospital with maximum allowable bed count of 10.

Physical Attributes:

- Central meeting area or living room for staff and patients and provide smaller rooms where patients can visit with their families
- Provide maximum visibility of patient area for easy visual supervision of patients by limited staff
- Therapeutic Environment: non-institutional materials, ample daylight and views
- Inpatients have direct and easy access to controlled outdoor area(s)
- Single patient bedrooms provide visual, acoustical privacy and patient control of immediate environment

source: Psychiatric Facility by Robert F. Carr

<https://www.wbdg.org/building-types/health-care-facilities/psychiatric-facility>



FLOOR PLAN

source: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6339737/>



PATIENT ROOM

photo credit : Push Button Photography, LLC, Owner Paul Bomers



PATIENT CORRIDOR / NURSING STATION

photo credit: KMD Architects



SAMUEL MAHELONA
MEMORIAL HOSPITAL
CASE STUDIES

**SPECIAL TREATMENT CENTER (STC)
- DUAL DIAGNOSIS**

Physical Attributes:

- Typical features a group kitchen, library and activity area
- Facility size varies – 800 BGSF – 1,000 BGSF dependent on common areas
- Number of beds vary – 9 bedrooms – 32 bedrooms
- Typically single bedrooms
- Offices for administration and support staff



EXTERIOR

photo credit: Jay Mahler Recovery Center, San Leandro, CA - Design Build JL Construction / Byrens/Kim Design Works / Wilson Architecture, Inc.

INTERIOR

photo credit: Jay Mahler Recovery Center, San Leandro, CA - Design Build JL Construction / Byrens/Kim Design Works / Wilson Architecture, Inc.



EXTERIOR

Hope House, Martinez, California – TeleCare Corporation



BEDROOM

Hope House, Martinez, California – TeleCare Corporation



**SAMUEL MAHELONA
MEMORIAL HOSPITAL
CASE STUDIES**

SOBER LIVING HOUSE (SLH)

Description:

Sober living houses (SLHs) are living environments for individuals attempting to abstain from alcohol and drugs. SLHs differentiate from Halfway Houses in that SLHs offer peer support for recovery outside the context of treatment. SLHs typically utilize a 12-step program. SLHs invite the resident to stay in the house as long as they wish provided they comply with house rules.

Physical Attributes:

- Multiple residential facilities scaled to single family neighborhoods

- Size variation between 8 and 20 per house (not purpose built so sized to available housing)

- Main house serves as central hub with communal space for meetings, group meals, in-house manager quarters

- Main house sleeping rooms adjacent to communal space, benefits resident needing closer support and supervision

- Adjacent houses - 2 beds per bedroom for socialization, some programs have steps (Phase I and Phase II), moving from shared bedroom to single

- Adjacent houses - smaller common areas

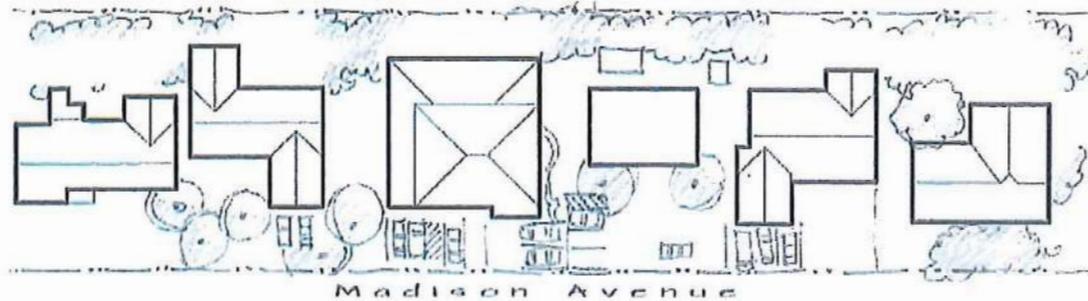
- Main and adjacent houses in close proximity, shared yards for Phase I residents. Phase II residents can be scattered sites.

- Length of Stay for Phase I typically 30 days

SOURCE:

Fred Willman, Ph.D., Babelle Jee, Architect, [...], and Diane Henderson, B.A.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4197974/>
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Detox
(6 beds)

Tranquillity House
& Meeting
(8 older men)

House of
Beginnings
(16 men, 3 women)

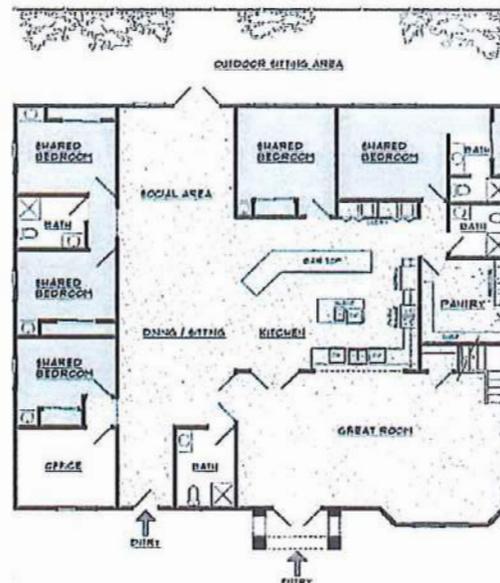
Rod's
House
(20 men)

House of
Miracles
(10 women)

Unlly
(10 co-ed)

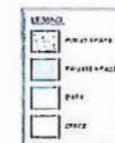
NEIGHBORHOOD PLAN

source: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4197974/figure/F2/?report=objectonly>



Clean & Sober Living
Fair Oaks, California

House of Beginnings
First Floor



scale

not to scale

FLOOR PLAN

source: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6339737/>



SAMUEL MAHELONA
MEMORIAL HOSPITAL
CASE STUDIES

G70

TERRIE MARTIN
CONSULTANTS

**LONG TERM CARE (LTC) -
TRENDS IN SKILLED NURSING UNIT**

Physical Attributes:

- Unit DGSF – 550- 800 DGSF / bed
- Unit size 24 bedstypical
- All private bedrooms
- Open concept living area with kitchenette, adjacent to nursing station



OPEN CONCEPT

photo credit: Gulf Coast Medical Center Skilled Nursing Unit – 75 beds, 3 floors



PATIENT ROOM

photo credit: Gulf Coast Medical Center Skilled Nursing Unit – 75 beds, 3 floors



**SAMUEL MAHELONA
MEMORIAL HOSPITAL
CASE STUDIES**

**SENIOR HOUSING -
ASSISTED LIVING**

Development by operator.
6 acre site
191 total beds
- 141 bed ALF
- 50 memory care

Memory Care - secured
outdoor area

Walking paths, connectivity
to SMMH operated Senior
Center

Estimated Approximate Square Footage

~23,000 – 28,000 SF for 30 Apartment Units

~350 – 450 SF for a Studio
~550 – 600 SF for 1 Bedroom
~800 – 900 SF for 2 Bedroom
Add common space & offices
Assumes 10 of each type

or

~36,000 – 39,000 for 30 Bungalow units w/ mix of 1 & 2 bedroom

~1,100 for 1 bedroom
~1,400 for 2 bedroom, 2 bath
Range assumes 10 or 20 of 1 bedroom and 10 or 20 of 2
bedroom

plus

~7,500 – 8,500 SF for a Green House for 10 - 12 residents

***Could be developed in phases**



**SAMUEL MAHELELA
MEMORIAL HOSPITAL
CASE STUDIES**

SMMH Master Campus Plan Project
Behavioral Health Vision Group Meeting Minutes - 8
November 19, 2019

Present: Madeleine Hiraga-Nuccio, Dr. Matthew Barrett, Dr. Janet Berreman, Terry-Ann Moses, Terri Martin, Rei Cooper, Tito Villanueva, Lance Segawa (Chairperson), Karen Alapai (recorder)

Via Phone: Barbara Natale

Excused: Katie McGinness, Paige Javier, Chesne Cabral Kitamura, Ah-Lan Coloma, Novelyn Hinazumi, Angela Lim, Melinda Montgomery, Jennifer Palisbo, Vonnell Ramos, Bill Arakaki, Theresa Koki, Dr. Gerald McKenna, Edward Mersereau, Lani Nagao, Janelle Saucedo, Amy Curtis, Wayne Law, Barbara Nakamura, Barbara Johnson, Toni Torres, Katie MacNeil

Agenda	Discussion	Follow-up/Action
I. Introductions	Introductions were conducted and meeting was called to order at 0910 hours by Lance Segawa. This is meeting #8 and we've accomplished pretty much everything and I thank you.	Meeting was called to order at 0910 hours.
II. Minutes October 15, 2019	Minutes of the October 15, 2019 meeting perused. Motion made and seconded to approve. Motion carried.	The October 15, 2019 meeting minutes approved as written.
III. Review Future Capacity Requirements	Lance reported that he is comfortable with what we're projecting for Mahelona in acute psych beds. I'm asking you guys to reach out to your division leaders about getting some numbers. Once it's done, we present the fact that we'll have everyone's name, will be testament that we support this proposal; we support the numbers and it's everyone's best estimate. Lance will get information to the entire group regarding the excursion to Maui. To design our residential treatment facility and how to structure things.	Reach out to your division leaders on getting numbers. Group excursion to Maui; design and structure our residential treatment facility.
IV. Review "Gap" Stories	Lance said that he have not received gap stories. Will reach out again to all of the division members that they were intimately aware of and begin assembling stories. I will talk to Eddie about the possibility of making a video. Terri said that you don't have and actually nobody I know collects hard data to be able to predict in the future what the needs are. That's a reason why we decided on gap stories	All of the division members to begin assembling stories that you were intimately aware of and email it to Lance. It is important for all division members; need your gap stories.

Agenda	Discussion	Follow-up/Action
<p>IV. Review “Gap” Stories (continued)</p>	<p>because in the absent of data. These stories are really important to illustrate things that we don’t have a way of collecting data. Your stories will help populate the kind of services.</p> <p>Terri-Ann said that she definitely can write up a summary since she’s been at Friendship House.</p> <p>Dr. Berreman suggested to make it more story like.</p> <p>Lance questioned Tito from AMR’s point of view of when picking up someone and then taking them to ER and knowing right away that there’s nothing that can be done, the person gets discharged because there is no support.</p> <p>Tito answered that they have a lot of those; gets the patients and discharged and back. I don’t know if the hospital should be making these referrals, but we would like to take a referral to service, example I’ll tell you where to get the service, but if you’re not based here, where you have everything you connect. But we don’t know how to connect. I can look at how many times they call and run those data.</p> <p>Madeline said the closes thing is the crisis line. If you have a crisis you can call and dispatch will address the crisis or make referrals or will give ideas on who to connect.</p> <p>Rei said that Hawaii Care is the type of referral line and she believes they are extending. It’s a new service and probably need to talk to Janelle Saucedo.</p> <p>Lance agreed and will reach out to her.</p>	<p>Terri-Ann will summarize data on Friendship House and make it more story like; gap story.</p> <p>Tito will run data on how many times calls was made.</p> <p>Hawaii Care new service on type of referral line. Lance will reach out to Janelle Saucedo on this new service.</p>
<p>V. Miscellaneous</p>	<p>Lance shared when he had a meeting with Representative Nakamura and they went over everything. She did have some questions, she anticipates how people react to the final report and it’s going to touch your area Terri. How did we come out with our numbers? The best we can do is based on population projection, based on current state, this is what we think we need.</p> <p>Lance will set up a meeting with KPD to talk about specifics of the substation; in the original agreement, we’d ask to build a holding cell for Behavioral Health individuals. I was told it does not have that holding cell. So before it get finalized, I will make that request again; that was part of the original condition</p>	<p>Lance will meet with KPD on the holding cell.</p>

Agenda	Discussion	Follow-up/Action
VI. Next Meeting	<p>We will take December off for the holidays and come back in January 21st.</p> <p>Tonight is our next community meeting number two and will begin at 6:00 pm. It's going to be right here in the auditorium. And those interested, we'll do a tour at 5:00 pm. And you will see some drafts; the psych plan and where things are.</p>	<p>No meeting in December. Next meeting January 21st.</p> <p>Community meeting #2 is tonight at 6:00 pm.</p>
VII. Adjournment	Meeting was adjourned at 1007 hours.	

Appendix D

Long Term Care Vision Group Meeting Notes

SMMH Master Campus Plan Project
Long Term Care Vision Group - 2
August 23, 2019 Meeting Minutes

Attendees: Jen Chahanovich, Ron Fujimoto, Bronson Ho (via phone), Leila Ventar (via phone), Lance Segawa (Chairperson)

Excused: Alisa Racelo, Brandi Hori-Moises, Estelita Trinidad, Jasmine Yukimura, Katie MacNeil, Kurt Akamine, Lori Miller, Pam Arroyo, Terri Martin

Agenda	Discussion	Follow-up Action
I. Introductions	Introductions were conducted and meeting was called to order at 0903 hours by Lance Segawa.	Meeting was called to order at 0903 hours.
II. Review & Approve Draft Vision Statement	Draft statement shared. (See attached) After much discussion, the draft statement will be shared and finalized with all members at the next meeting.	Draft statement to be shared with all members and finalized at the next meeting.
III. Senior Living Residential & SMMH Service Forecasts	See attached report made by G70 on the Kauai Senior Living Forecasts and SMMH Service Forecasts. The needs analysis and takes into consideration.	See attached report made by G70 on the Kauai Senior Living Forecasts and SMMH Service Forecasts.
IV. Discuss Work Action Plan Development	Will be meeting with Ohana Pacific and confirm with Regency to be at our next meeting. The LTC vision will be based on our vision statement with an island wide prospective.	None at this time
V. Identify Data Requirements	The important step is the actual inventory on Kauai. Will reach out to all providers and get: 1) Current inventory within their organization. 2) What are their plans over the next 5 to 15 years; future Plans.	Reach out to all providers, actual inventory on Kauai.
VI. Miscellaneous Discussion	➤Will have both Case Managers; SMMH and Wilcox to work together and be able to say what is their biggest challenge. Have both case managers put bullet points together. ➤Lance shared with this group that they had their first community meeting this past Monday and was a success. Present at this meeting was Nadine Nakamura; Legislature, Felicia; Council,	Will request Kauai Region and Wilcox Case Managers to identify hard to place situations. First community meeting was held this past Monday.

Agenda	Discussion	Follow-up Action
VI. Miscellaneous Discussion (continued)	<p>Todd Raybuck; KPD Police Chief and couple of KPD officers with over 40 community members.</p> <p>We gave the group a view of the process the genesis and sharing where we are right now with the respect to the two vision groups. G70 gave everyone a view of the campus and preliminary assessment of the 34 acres. Community member shared about their visions. Will be sending you this site plan via email and you can begin seeing it. As everything starts to develop, we are planning at least two more community meetings. Vision work need to be done by December then turn it over to G70.</p> <p>➤An initiative the Behavioral Health group decided to assemble is a book of real stories that demonstrates gaps in care. The vision group is assembling their stories together on what's going on in our community.</p> <p>A current gap is memory care support. Stories would be helpful in this area.</p>	<p>At least 2 more community meetings to be held.</p> <p>Vision work will be completed by December.</p> <p>Assemble gap stories.</p>
VII. Next Meeting	Next LTC Vision Group meeting is September 27 th from 9:00 AM to 10:30 AM in the SMMH Conference Room.	Next meeting date is September 27 th to start at 9:00 AM.
VIII. Adjournment	Meeting was adjourned at 0940 hours.	

SMMH MASTER CAMPUS PLAN
LONG TERM CARE VISON GROUP
VISION STATEMENT

Create an island wide comprehensive coordinated continuum of care plan for Kauai seniors driven by the needs of our community. The overall objective is to enable our elders to age in place in an affordable way. The plan will be compassionate, culturally sensitive, and focused on the needs of the care giving family unit.

Senior Living Residential and Skilled Nursing Facility (SNF) Needs Analysis

The Needs Analysis for the Senior Living venues takes into consideration:

- Existing and forecast Kauai residents (65+)
- Industry benchmarks for utilization of various senior living situations
- Existing experience with caring for seniors
- An understanding of the differences in health status between the ‘general population’ and Kauai seniors

This paper provides the methodology and assumptions used to forecast the need for varying levels of supported care for seniors as shown in the following Table.

All Levels: Forecast Number of Residents

Total Kauai Forecast Summary						
	Existing Beds	2018	2020	2025	2035	2045
Independent Living	600+	290	320	428	619	678
Assisted Living	35	218	237	273	315	300
Memory Care AL	12	65	72	96	139	152
Skilled Nursing	383	407	443	510	589	612

Note: Existing Beds for Independent Living includes all units indicated for seniors and/or for affordable housing. Some units may be used by younger residents or may have only a certain number of affordable units.

Kauai Elders by Age

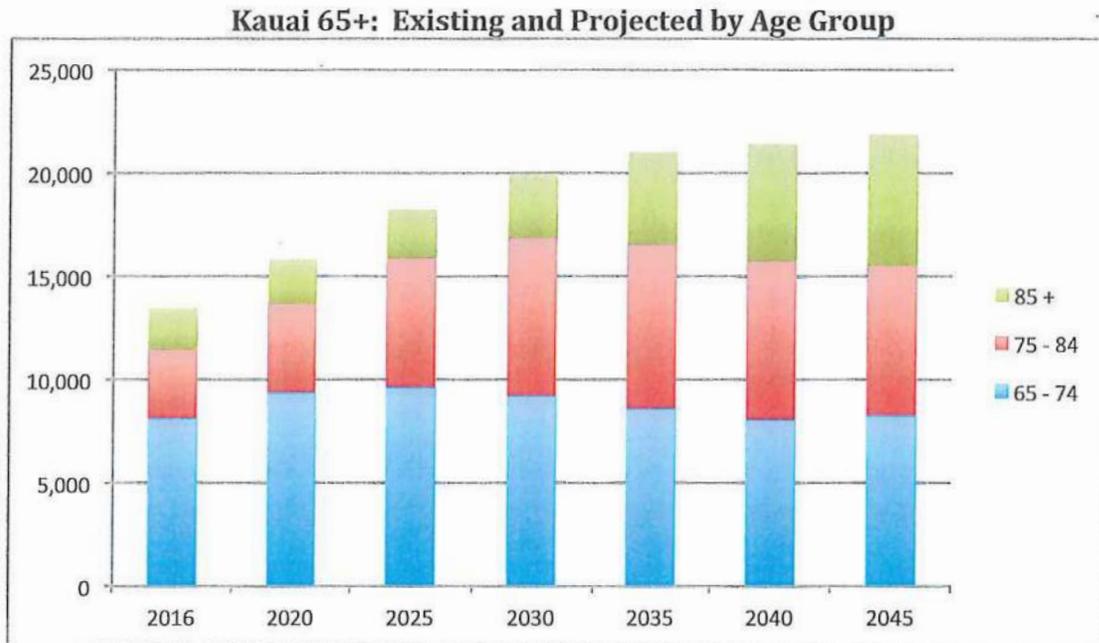
For Senior Living accommodations, the resident population (as opposed to De Facto population) is used as it is assumed tourists and visitors would not make use of Senior Living accommodations on Kauai. The existing and projected number of Kauai elders by age is shown below.

Kauai Elders 65+: Existing and Projected

Age group (years)	1990	2000	2010	2016	2020	2025	2030	2035	2040	2045
65 - 74	3,922	4,171	5,360	8,157	9,407	9,664	9,249	9,643	8,102	8,295
75 - 84	2,155	2,989	3,092	3,331	4,296	6,247	7,640	7,925	7,677	7,264
85 +	<u>585</u>	<u>1,055</u>	<u>1,643</u>	<u>1,945</u>	<u>2,101</u>	<u>2,317</u>	<u>3,073</u>	<u>4,450</u>	<u>5,631</u>	<u>6,298</u>
Tot 65+	6,662	8,215	10,095	13,433	15,804	18,227	19,961	21,017	21,411	21,857

Source: State of Hawaii DBEDT June 2018 Report

This forecast shows the population 65+ increasing by over 60% by 2045. The 85+ age group alone is expected to increase by nearly 225%. Generally, the older age groups are higher consumers of senior care residential services.



Industry Benchmarks

Residential models for seniors, like medical care, are constantly changing. With changes in technology and medical practice, more and more elders are now able to stay safely in their homes rather than being cared for in nursing homes or assisted living communities. There are also differences in utilization based on location. For example, the western states experience lower numbers of hospital and nursing home beds/population as compared to other states.

Understanding the differences in health status of Kauai compared to the general population is important to consider as well. As in the general population, an individual’s health status can vary significantly across age groups. In addition, there are cultural differences in how and where elders are cared for that impact senior living demand on Kauai.

The needs assessment tested ranges of industry benchmark rates and compared them to actual Kauai experience to assess the most appropriate assumptions for the forecasts.

Forecast Need

Independent Living

Independent Living is defined as follows:

- Typically apartments designed for a senior population that emphasizes safety and security – they may or may not be collated with Assisted Living (AL) units.
- Senior residents live independently but have the option to eat meals in an on-site dining area and hire help for housekeeping, laundry, personal assistance, transport to medical appointments, etc.
- Many independent living (IL) facilities are collocated with Assisted Living so residents can stay in their apartment to ‘age in place’. Such units are designed to accommodate either type of resident.

There appear to be over 600 Independent Living apartments that tout senior living opportunities on Kauai. It is unclear, however, how many apartments house residents that are not seniors or how many are affordable to those in lower income brackets or on a fixed income.

Regency at Puakea is the only facility that has both Independent and Assisted Living Apartments. They accept only private pay residents.

Many Kauai elders at this stage live with family, especially those whose families have lived on Kauai for generations and/or are of Asian decent.

Assumptions for needs assessment:

- 4% to 6% of population 75+ seek independent living situations (industry benchmark)
- 5% used

Independent Living Forecast Number of Residents

		<u>2018</u>	<u>2020</u>	<u>2025</u>	<u>2035</u>	<u>2045</u>
Kauai Pop 75+		5,799	6,397	8,564	12,375	13,562
	4%	232	256	343	495	542
	5%	290	320	428	619	678
	6%	348	384	514	743	814

Conclusion:

It appears there are an ample number of apartments available for Independent Living by seniors but it is unclear how many would be considered ‘affordable’. Lack of affordable housing is often a major reason for homelessness. Several situations have been shared about elders who are kept in hospitals (a higher level of care) because they do not have a safe and affordable place to go upon discharge. The forecast indicates that demand for this type of senior housing will double by 2045 increasing competition. Market pressures for either increased supply or if supply remains stable, increased costs would occur.

Assisted Living

Assisted Living is defined as follows:

- Patients typically need assistance with activities of daily living¹ (ADL) and some daily medication management but live in their own unit/apartment
- Services such as laundry, trash pick-up, housekeeping, group and individual social activities, transportation and excursions are typically available
- 24/7 trained staff available
- Access to licensed on-staff nurses visits
- Building and grounds maintenance provided

Regency at Puakea is the only Assisted Living facility on Kauai. They have 82 units total: 12 Memory Care AL units and 70 AL/IL units. The AL/IL units ‘swing’ between both levels of care as resident’s needs change. Units range from studio, to one bedroom to two bedrooms, so it is possible that each unit can house more than one AL resident. They only accept private pay residents so affordability is a question for much of the Kauai demographic.

Assumptions for needs assessment:

- 2% of population 65+ in Assisted Living based on national average per National Institute of Health (industry benchmark)
- Currently over 50% of the Kauai population is Asian or mixed race.
- Prevalence rates by ethnic groups (Hawaiian/Pacific Islanders and Asian Americans) are lower for assisted living for Alzheimer’s/Dementia – 81% and 90% respectively. Assume similar reduced rates for AL residents without memory care needs.
- Use 80% of national average for Kauai.

Assisted Living Forecast Number of Kauai Residents

	% of pop needing AL	2018 Need	2020 Need	2025 Need	2035 Need	2045 Need
<65	0%	-	-	-	-	-
65-74	2%	175	188	193	173	166
75-84	2%	76	86	125	159	145
85+	2%	40	42	46	89	89
Total		291	316	365	420	400
Assume Kauai at 80% of Nat'l need		218	237	273	315	300

Conclusion:

Today, with Regency at Puakea’s 82 units, the current need is 136 units increasing in 2025 to 191 if no other AL units are present on Kauai.

¹ Activities of Daily Living include personal hygiene and grooming, bathing, dressing, functional mobility/locomotion, continence managing and/or toileting, feeding oneself

Memory Care Assisted Living

Memory Care Assisted Living is defined as follows:

- Services listed in Assisted Living available to memory care patients
- Specially trained staff to assist memory care patients
- Facilities designed for memory care patients

The only Memory Care Assisted Living on Kauai is Regency at Puakea’s 12-unit facility. Their wait list is currently at 8.

Assumptions for needs assessment:

- Incidence rates for Alzheimer’s and dementia differ by age and race
- Rates for care outside the home are difficult to predict as well
 - Many Kauai elders with memory care issues live with family, especially local islanders.

Option 1:

- National rates from the Alzheimer’s Association adjusted downward to 75% of national average for race and Kauai local islander tendency to care for elders in family homes

Option 1: Memory Care Assisted Living Forecast Number of Kauai Residents

	US % w/ Alz & other dementias	2018 pop w/ Alz	2020 pop w/ Alz	2025 pop w/ Alz	2035 pop w/ Alz	2045 pop w/ Alz
<65	3%	1,762	1,768	1,795	1,899	2,101
65-74	12%	1,049	1,129	1,160	1,037	995
75-84	33%	1,247	1,418	2,062	2,615	2,397
85+	28%	561	583	643	1,235	1,235
Total	75.8%	4,619	4,898	5,659	6,786	6,728

	% w/ Alz that need AL	2018 # in need of AL	2020 # in need of AL	2025 # in need of AL	2035 # in need of AL	2045 # in need of AL
<65	0%	-	-	-	-	-
65-74	0%	-	-	-	-	-
75-84	7%	87	99	144	183	168
85+	11%	63	65	72	138	138
# w Alz in AL		150	165	216	321	306

Note: Rate of those with Alzheimer’s that need Assisted Living reduced down from national benchmark to reflect greater numbers of elders on Kauai that are cared for in the home.

Option 2:

- National benchmarks for those with memory care issues adjusted downward for the Kauai population
- National benchmark of 14% of those with memory issues in Assisted Living applied.

Option 2: Memory Care Assisted Living Forecast Number of Residents

	2018	2020	2025	2035	2045
75+ benchmark	8%	8%	8%	8%	8%
# 75+ Kauai Pop	5,799	6,397	8,564	12,375	13,562
# w/ Alz on Kauai	464	512	685	990	1,085
% w Alz needing AL	14%	14%	14%	14%	14%
# w Alz in AL	65	72	96	139	152

Conclusion:

Predicting the need for Memory Care Assisted Living residents on Kauai presents a number of challenges for the following reasons:

- The Hawaii rates for medical services tends to be much lower than the Mainland
- Rates vary by Island and by race
- There anecdotally are a number of memory care residents that receive care off-island for a number of reasons, including:
 - lack of units on Kauai
 - cost of care on Kauai
 - the desire for family members to be closer to other family members
- Data is not kept in a centralized location for tracking the number of memory care residents originating from Kauai

Because of the difficulty in finding data and forecasting the need for Memory Care Assisted Living, Options 1 and 2 offer a range for the potential number of memory care residents seeking assisted living. Option 2, the more conservative estimate, is shown in the summary table. That range is as follows:

Range of Memory Care Assisted Living Units based on Options 1 & 2

	2018	2020	2025	2035	2045
Option 1	150	165	216	321	306
Option 2	65	72	96	139	152
Need minus current number of Memory Care AL Units (12)					
Option 1	138	153	204	309	294
Option 2	53	60	84	127	140

Skilled Nursing Care

Skilled Nursing Care (SNF) is defined as follows:

- Patients need nursing care, but not intensive medical care as provided in an acute hospital setting
- Some SNF’s provide therapy for recovery from acute medical episodes, such as hip or knee replacements as a transition prior to returning home
- Current Skilled Nursing Care at SMMH is more custodial than therapeutic in nature
- Most patients are elderly
- Venues for patients needing skilled nursing care include:
 - Skilled Nursing Facilities /Hospitals
 - Adult Residential Care Homes – up to 5 residents in neighborhood homes with care provided by a CNA (Certified Nursing Assistant)
 - Community Care Foster Family Homes (CCFFH) – up to 3 residents in neighborhood homes providing a nursing home alternative in a family-like environment

On Kauai there are 333 licensed SNF beds, 31 beds in seven Adult Residential Care Homes (ARCH) and 19 beds in eight Community Care Foster Family Homes (CCFFH) for a total of 383 licensed beds. However, not all beds may be staffed and available. For example, the current renovation at SMMH has reduced the staffed and available beds to 54, compared to 66 licensed. In addition, assigning beds according to gender may reduce the number of available beds.

Assumptions for needs assessment:

- Rates are applied to 65+ population
- Current rate on Kauai is 1.9% (85% occupancy rate applied to licensed beds)
- Rate in Washington State is 2.8%
- National Rate is 4.2%
- Adjust industry benchmarks so total use rate is same as Washington State

Skilled Nursing Forecast Number of Residents					
	2018	2020	2025	2035	2045
Pop 65 - 74	8,741	9,407	9,664	8,643	8,295
Pop 75 - 84	3,777	4,296	6,247	7,925	7,264
Pop 85+	2,021	2,101	2,317	4,450	6,298
Tot 65+	14,540	15,804	18,228	21,018	21,857
Rate /65+ used	2.8%	2.8%	2.8%	2.8%	2.8%
SNF Residents	407	443	510	589	612

Other national use rates were tested resulting in numbers that are much higher than applying the Washington State rate. The use rates for the western states are always lower than the rest of the country so it makes sense to use a rate that is more in line with what Kauai currently experiences. There are currently 333 licensed skilled nursing beds in hospitals on Kauai. At an 85% occupancy rate, the average daily census would be 283 in 2018. The actual rate of SNF residents per 65+ population is

1.9% currently. Part of the difference between the 1.9% and 2.8% might be due to seniors in SNF off island or the use of ARCH and CCFFH beds in the community coupled with tendency to care for elders in their family homes.

Source: SHPDA Health Care Utility Report for licensed beds for Kauai.

Conclusion:

- Skilled Nursing Facilities on Kauai are primarily hospital based, but residential alternatives exist.
- Anecdotally, some SNF beds are occupied by patients who do not need SNF level of care, but because affordable discharge options are scarce, patients continue to occupy SNF beds. Transitional care homes might be a discharge option where residents can establish themselves in the community and get care they need prior to fully integrating into residential neighborhoods.
- Some senior care providers are moving away from providing skilled nursing because of high costs, lower reimbursement rates, and movement to shift such care into lower cost residential settings.
- While a SNF inventory exists on Kauai, there will continue to be needs for affordable care for Kauai's seniors.
- Comparing the forecasts to actual licensed beds suggests shortages in this level of care will occur in the future.

Samuel Mahalona Memorial Hospital (SMMH) Service Forecasts

The SMMH Service Forecasts address currently provided services. The Master Plan assumes these key services will continue on the campus. The forecast takes into consideration:

- Existing and forecast Kauai residents of all ages
- Historical and existing services provided at SMMH, namely:
 - Acute care beds
 - Acute adult psychiatric beds
 - Long Term Care/Skilled Nursing Facility (LTC/SNF)¹ beds
 - Emergency Room visits
- An overview of SMMH's health care market
- Forecast of need as a basis of Master Plan space and functional requirements

This paper provides the methodology and assumptions used to forecast the need for the services currently provided at SMMH as summarized in the following table.

Forecast SMMH Service Needs

	Existing	2018	2020	2025	2035	2045
Acute Care Beds	5	.3	1.9	2.0	2.2	2.3
Adult Psych Beds	9	3.8	3.8	4.0	4.3	4.6
LTC/SNF Beds*	54	54	55	63	73	75
ER Stations	5	4.0	4.3	4.5	4.8	5.2

*License is for 66 beds, but set up is 54

Kauai Population by Age

Currently, there are approximately 74,000 people residing in Kauai County. By 2040, total population is expected to increase by some 16,000 people. Existing and projected number of Kauai residents by age is shown below.

Kauai Population by Age Group: Existing and Projected

	1990	2000	2010	2018	2019	2020	2025	2030	2035	2040	2045
0-14	12,167	12,520	12,642	13,788	13,878	13,968	14,387	14,716	15,312	15,937	16,620
15-19	3,334	4,068	4,106	3,991	4,044	4,099	4,398	4,662	4,617	4,817	4,992
20-44	20,159	18,779	19,926	21,651	21,867	22,088	22,839	23,638	24,860	25,729	26,753
45-64	9,354	14,986	20,457	19,317	19,050	18,787	18,194	18,242	18,496	19,342	19,822
65-84	6,077	7,160	8,452	12,519	13,090	13,703	15,911	16,889	16,568	15,779	15,559
85+	585	1,055	1,643	2,021	2,061	2,101	2,317	3,073	4,450	5,631	6,298
Total	51,676	58,568	67,226	73,287	73,990	74,746	78,046	81,220	84,303	87,235	90,044

Source: State of Hawaii DBEDT June 2018 Report

Analysis by age cohort is especially useful in determining healthcare needs since the elderly are major consumers, especially for inpatient resources. This forecast shows the population 65+ increasing significantly by 2045. The 85+ age group alone is

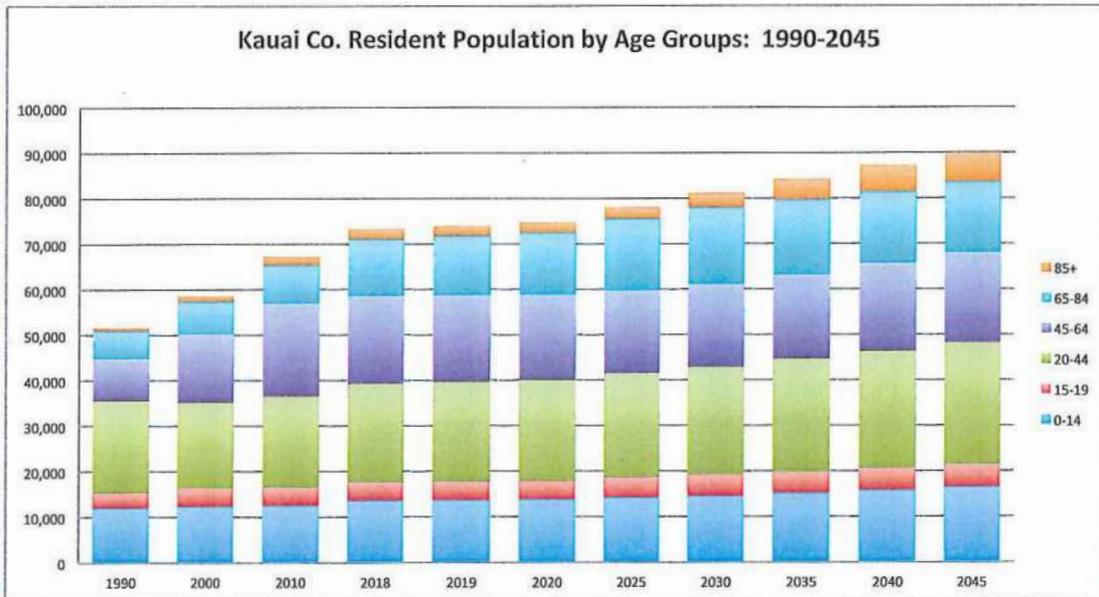
¹ Long Term Care/Skilled Nursing Facility (LTC/SNF) for SMMH Services refers to the Skilled Nursing beds provided on the campus. Long Term Care for elders can also refer to other types of residential based care such as Assisted Living.

expected to increase over 200%. Generally, the older age groups are higher consumers acute care hospital services.

At the same time, the younger age groups are growing also, but staying at the same proportion of the total population (see next table). This is important because the Emergency Room reports that many of their patient diagnoses are substance abuse issues arising from the adolescent age group.

% Kauai Population by Age Group: Existing and Projected

Age group (years)	1990	2000	2010	2018	2019	2020	2025	2030	2035	2040	2045
0-14	24%	21%	19%	19%	19%	19%	18%	18%	18%	18%	18%
15-19	6%	7%	6%	5%	5%	5%	6%	6%	5%	6%	6%
20-44	39%	32%	30%	30%	30%	30%	29%	29%	29%	29%	30%
45-64	18%	26%	30%	26%	26%	25%	23%	22%	22%	22%	22%
64-84	12%	12%	13%	17%	18%	18%	20%	21%	20%	18%	17%
85+	1%	2%	2%	3%	3%	3%	3%	4%	5%	6%	7%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%



The visitor population adds about 27,000 per day bringing the total Island population to over 100,000 today. But 2045 visitor population is expected to be about 36,000 per day bringing the total to 126,000. Percent growth in visitor population is more than resident population (6% every 5 years to 2035 and 5% to 2045 versus 4% and 5% respectively for Kauai residents).

For purposes of this study, it was assumed the resident population changes would be the primary factors influencing the change in SMMH workloads. Local residents are the primary users of the Acute, Long Term Care/Skilled Nursing Facility and Psych beds. While it is recognized some visitors may use the Emergency Department, the major driver of changes is assumed to be the resident population as well.

Acute Care Bed Utilization

Methodology

The method for determining the acute care bed utilization involved the following steps:

- Establish 2018 as the base year
 - Used 2018 since this was the most current data from the Lualaba Data base for acute care discharges by major diagnostic category
- Forecast horizon to 2045 provides a 25 year forecast
- Apply Kauai County population changes to Kauai County resident admits
- Apply SMMH Market Share of Kauai County Admits to provide SMMH Admits
- Sherry Lauer, Regional Chief Quality Officer and Cheryl Tennberg, Regional Chief Nursing Executive both of the HHSC Kauai Region provided assumptions regarding two new services that will change patient admits: a CT Scanner and a Hospitalist.
 - Due to acquisition of a CT Scanner by 2020, additional 50 admits added due to having a CT Scanner
 - Due to Hospitalist coming on board at SMMH by 2020, an additional 40 patients are assumed for 2020.
- Use SMMH's 2018 Average Length of Stay (ALOS) to forecast Patient Days (PDs)
- Calculate Average Daily Census (ADC) and bed need based on a 65% occupancy rate

Assessment of the Kauai Market

Kauai medical/surgical acute care beds are provided at the following hospitals:

- 72 Beds at Wilcox Memorial Hospital
- 25 Beds at Kauai Veterans Memorial Hospital (10 are Acute/SNF Swing)
- 5 Beds at Samuel Mahalona Memorial Hospital (4 are Acute/SNF Swing)

Kauai residents who were historically hospitalized on Kauai or off-island along with the forecast of admits are shown in the following table. Future admits are increased by the rate of demographic increases forecast out to 2045.

Kauai Resident Med/Surg Acute Care Discharges: Historical and Projected

	2016	2017	2018	2020	2025	2035	2045
Total Kauai Residents	5,513	5,598	5,050	5,151	5,378	5,809	6,205

Discharges per 1000 population for Kauai residents, including those that are hospitalized off-island, is as follows:

	2016	2017	2018
Total Kauai Residents	5,513	5,598	5,050
Total Population	72,634	73,287	73,990
Discharge/1,000 Pop	75.9	76.4	68.3

Kauai rates are about 15 points below west coast rates, and 36 points below the national discharge rate. Kauai is also lower than the discharge rate of the State of Hawaii, which is about 78.

Medical/Surgical Acute Care Forecast Need

Assumptions for needs assessment:

SMMH Market Share

SMMH's market share of the total Kauai current and future discharges are shown below. In the future, with the addition of a CT scanner and Hospitalist, SMMH's market share is expected to increase.

SMMH Market Share

	2016	2017	2018	2020	2025	2035	2045
Mkt Share of IP Discharges	0.34%	0.39%	0.40%	2.15%	2.15%	2.15%	2.15%

SMMH Average Length of Stay (ALOS)

From 2016 to 2018 SMMH's ALOS has fluctuated quite a bit. With a small number of patients, abnormal stays of just a few patients can greatly influence ALOS. The spike in ALOS in 2017 was due primarily to a few patients whose diagnosis was substance abuse. In 2018, ALOS was down from 13.8 days to 4.15 days. The 2018 ALOS was used to forecast future need.

	SMMH ALOS		
	2016	2017	2018
Total	6.47	13.82	4.15

SMMH Med/Surg Bed Forecast:

The projected bed need for SMMH's Med/Surg Acute beds based on population growth and addition of CT Scan and a Hospitalist are shown here:

	Actual		Projected based on total Pop Growth & New Svcs-->				
	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2020</u>	<u>2025</u>	<u>2035</u>	<u>2045</u>
Total Kauai Admits	5,513	5,598	5,050	5,151	5,378	5,809	6,205
SMMH Admits	19	22	20	111	115	125	133
SMMH Market Share	0.3%	0.4%	0.4%	2.1%	2.1%	2.1%	2.1%
SMMH ALOS	6.47	13.82	4.15	4.15	4.15	4.15	4.15
SMMH Pat Days	123	304	83	459	479	518	553
SMMH ADC	0.34	0.83	0.23	1.26	1.31	1.42	1.51
SMMH Occ Rate	65%	65%	65%	65%	65%	65%	65%
SMMH Bed Need	0.5	1.3	0.3	1.9	2.0	2.2	2.3

Conclusion:

Based on the assumptions used in this forecast, the existing 5 Med/Surg beds are ample for accommodating future needs. Increased inpatient utilization will likely increase revenues in the future.

Acute Adult Psychiatric Bed Utilization

Assessment of the Kauai Market

SMMH's 9-bed licensed unit is the only adult psychiatric facility on Kauai. Three rooms are semi-private which limits occupancy because genders cannot be mixed. Their approach is to admit, treat, stabilize and discharge. Therapy is not part of their charge.

If an adolescent or child needs acute psychiatric care, they are sent to Honolulu. As is the case for adults, once discharged very few venues exist with trained caregivers to continue care in the community.

Kauai residents with a psychiatric diagnosis who were or forecast to be hospitalized on Kauai or off-island are shown in the following table. Future admits are increased by the rate of demographic increases forecast out to 2045.

Kauai Resident Psychiatric Acute Care Discharges: Historical and Projected							
	2016	2017	2018	2020	2025	2035	2045
Total Kauai Res Admits	176	185	191	195	203	220	235

As shown, discharges have not increased significantly over the last couple of years.

Acute Adult Psychiatric Bed Forecast Need

Assumptions for needs assessment:

SMMH Market Share

Because SMMH is the only inpatient Psych facility on the island, SMMH's market share is quite high. There are a few patients who are hospitalized off-island, but most stay on Kauai. Current and future discharges for Kauai residents are shown below. 2018 market share is assumed for the forecasts.

SMMH's Acute Adult Psychiatric Market Share							
	2016	2017	2018	2020	2025	2035	2045
Total	97.2%	95.7%	96.3%	96.3%	96.3%	96.3%	96.3%

SMMH Average Length of Stay (ALOS)

From 2016 to 2018 SMMH's ALOS dropped from 6.0 to 4.9 days. The 2018 ALOS was used in the forecast to predict future days.

SMMH Psychiatric Unit ALOS			
	2016	2017	2018
ALOS (use 2018)	6.00	6.06	4.86

The projected bed need for SMMH's Psych Acute beds is shown here:

SMMH Psychiatric Unit Forecast

	Actual		Projected based on total Pop Growth -->				
	2016	2017	2018	2020	2025	2035	2045
Total Kauai Admits	176	185	191	195	203	220	235
SMMH Admits	171	177	184	188	196	212	226
SMMH Market Share	97.2%	95.7%	96.3%	96.3%	96.3%	96.3%	96.3%
SMMH ALOS	6.00	6.06	4.86	4.86	4.86	4.86	4.86
SMMH Pat Days	1,026	1,072	894	912	952	1,028	1,098
SMMH ADC	2.81	2.94	2.45	2.50	2.61	2.82	3.01
SMMH Occ Rate	65%	65%	65%	65%	65%	65%	65%
SMMH Bed Need	4.3	4.5	3.8	3.8	4.0	4.3	4.6

Conclusion:

Based on the assumptions used in this forecast, the existing 9-bed psychiatric license is ample for accommodating future needs. There are current plans to upgrade the unit to address some safety issues for patients and staff. However, the unit has some space and functional issues beyond what can be addressed in the current upgrade.

SMMH Long Term Care/Skilled Nursing Facility Bed Utilization

Assessment of the Kauai Market

There are 333 licensed long-term care/skilled nursing facility beds on Kauai spread across 5 locations as follows:

- 110 beds at Garden Isle Rehab & Healthcare Center
- 84 beds at Hale Kupuna Heritage Home
- 53 Beds at Kauai Care Center
- 66 beds at SMMH
- 20 beds at West Kauai Medical Center/KVMH

Key statistics compiled by SHPDA is shown in the following table.

Long-Term Care/Skilled Nursing Facilities Key Statistics

	Lic Beds	Inpatient Days			Admissions			ALOS		
		2015	2016	2017	2015	2016	2017	2015	2016	2017
Garden Isle Rehab & Healthcare Center	110	35,944	36,866	34,472	278	231	216	129	160	160
Hale Kupuna Heritage Home	84	25,321	25,025	25,808	77	61	49	329	410	527
Kauai Care Center	53	17,032	17,166	17,872	99	77	66	172	223	271
SMMH	66	19,864	19,890	16,828	30	24	50	662	829	337
West Kauai Med Cen/KVMH	20	7,263	7,243	7,219	21	15	13	346	483	555
Total	333	105,424	106,190	102,199	505	408	394	209	260	259

SMMH Long Term Care/Skilled Nursing Facility Bed Forecast Need

Assumptions for needs assessment:

- Increase long-term care/skilled nursing facility admits by growth in the population 65+ per SHPDA
- Increase market share in 2020 after renovation from 7.3% to 7.5% to achieve goal of reducing 2 – 3 waitlisted patients
- Average length of stay is assumed at 540 days, approximating the current ALOS
- At SMMH, after patient room renovations, there will be 54 set-up beds - 12 fewer beds than the license
- For future-year forecasts, assume 54 set-up beds is not a limiting factor. The goal is to determine future need based on accommodating growth in population and slightly increasing and maintaining market share
- Assume a 90% occupancy rate is achievable in the future

The projected need for SMMH's Long Term Care/Skilled Nursing Facility beds based on population growth is shown here:

SMMH Long Term Care/Skilled Nursing Facility Bed Forecast

	as reported to SHPDA			Projected based on pop growth of 65+ & 2.8% requiring skilled nursing				
	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2020</u>	<u>2025</u>	<u>2035</u>	<u>2045</u>
Total Market Admits	505	408	394	407	443	510	589	612
SMMH new admits	30	24	50	30	33	38	44	46
SMMH Mkt share	5.9%	5.9%	12.7%	7.4%	7.5%	7.5%	7.5%	7.5%
SMMH ALOS	662	829	337	558	540	540	540	540
SMMH Pat Days	19,864	19,890	16,828	16,743	17,921	20,670	23,834	24,785
SMMH Average Daily Census	54	54	46	46	49	57	65	68
SMMH Occ Rate based on 66 & 54 beds available until 2020	82%	83%	70%	85%	90%	90%	90%	90%
SMMH Bed Need	66	66	66	54	55	63	73	75

Conclusion:

The long term care/skilled nursing area at SMMH is currently being upgraded. The nursing station is being modernized, there are plans to upgrade the hallway flooring, lighting and finishes, and patient rooms are being modernized. The unit has been operating at a reduced bed number of 54 beds during renovation and upon completion will have 54 beds available. By 2025, the forecast shows a need for 9 additional beds (63 beds) – still well within the bed license. Assuming current admit rates and a steady market share, the need by 2045 is expected to be 75 beds.

It should be noted however, that because of the lack of safe and affordable discharge venues, some patients are held for longer than is medically necessary in long term care/skilled nursing facility beds. In the future, should care homes and transitional housing be available, ALOS may be reduced and therefore patient days and bed need would be reduced.

Emergency Room Visit Forecast

Assessment of the Kauai Market

There are 3 Emergency Rooms (ER) on Kauai provided at the following hospitals:

- Wilcox Memorial Hospital in Lihue
- Kauai Veterans Memorial Hospital in Waimea
- Samuel Mahalona Memorial Hospital in Kapaa

In addition, there are a number of Urgent Care Clinics available, or soon to be available on Kauai, including:

- Kauai Urgent Care in Lihue
- Urgent Care at The Clinic in Poipu
- Hale Le'a Family Medicine & Urgent Care in Kilauea
- Makana North Shore Urgent Care in Princeville
- Kapaa Clinic Urgent Care in Kapaa (soon to be open)

With the addition of a CT Scanner at SMMH, it is expected that more patients will be brought into SMMH ER to be treated and fewer patients will need to be transferred to get a CT Scan. Currently there are a number of patient that are transferred or simply sent home after being told to go get a CT Scan 'if it gets worse'.

Plus, the addition of a Hospitalist that can oversee inpatient care on a regular basis is also expected to increase ER visits for those patients that need to be admitted.

Emergency Room Forecast Need

Assumptions for needs assessment:

- Increase Kauai visits by overall growth in the population per SHPDA
- On top of population growth, increase ER visits by 5% in 2020 to account for increase in volumes due to CT Scanner and Hospitalist (assume EMR bring more ER patients to SMMH because of increased capabilities)
- By 2025, increase visits by another 5% for a total 'bump' in volumes of 10%. Beyond 2025 no additional increase due to CT Scan or Hospitalist.
- Assume visits from Kauai County account for about 85% of visits, as in 2018
- Assume visits from out of Kauai County remains in same proportion as 2018
- Stations required used a 'rule of thumb' of 1,500 visits/station

Emergency Room Forecast

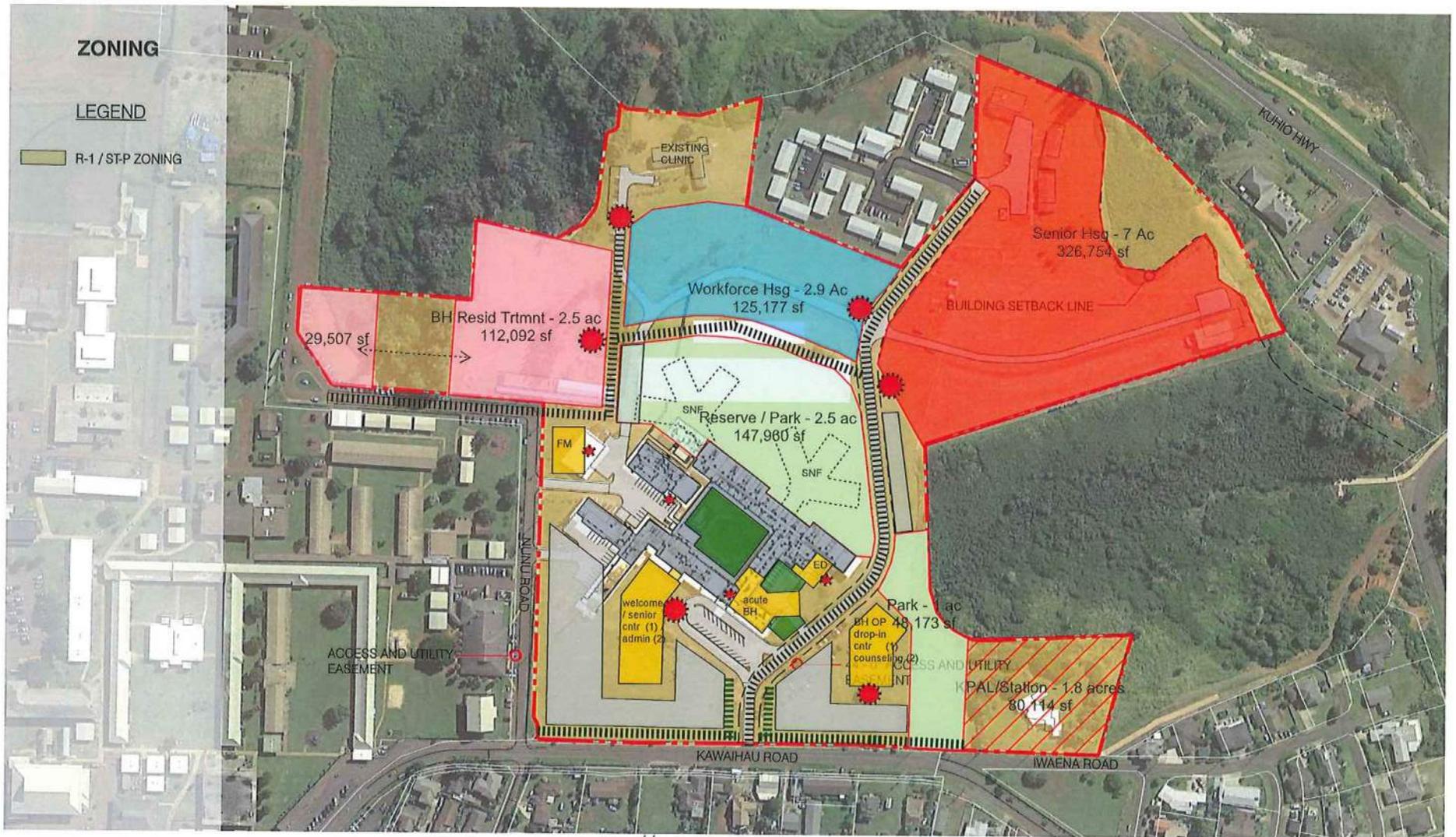
The projected ER visit and station forecast is shown here:

SMMH ER Forecast							
Inc Kauai by State Demographic Forecast + CT scan + Hospitalist							
	Actual	same % distribution by pat origin as 2018					
	<u>2018</u>	<u>2020</u>	<u>2025</u>	<u>2030</u>	<u>2035</u>	<u>2040</u>	<u>2045</u>
Kauai County	5,134	5,498	5,741	5,974	6,201	6,417	6,623
Oahu County	36	39	40	42	43	45	46
Maui County	20	21	22	23	24	25	26
Hawaii County	9	10	10	10	11	11	12
Out of State	812	870	908	945	981	1,015	1,048
Total	6,011	6,437	6,721	6,995	7,260	7,513	7,755
# stations @ 1,500 visits/station	4.01	4.29	4.48	4.66	4.84	5.01	5.17
% Increase in ED visits							
- CT Scans		3%	3%	0%	0%	0%	0%
- Hospitalist		2%	2%	0%	0%	0%	0%
Total Increase		5%	5%	0%	0%	0%	0%

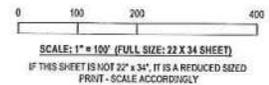
Conclusion:

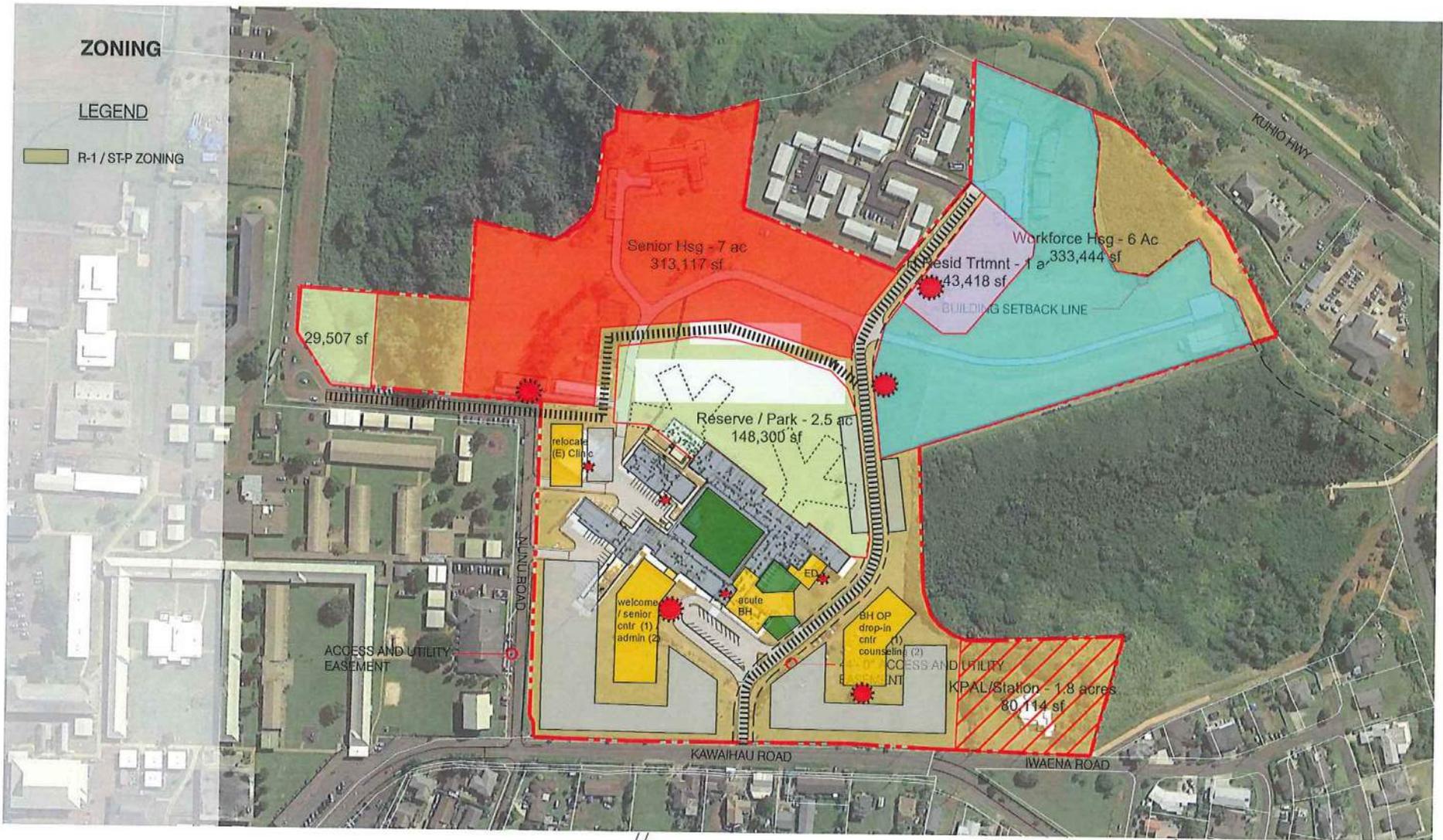
Based on the assumptions used in this forecast, 5 stations will be required in the future. SMMH has 5 ER stations in three rooms. Two rooms have 2 stations each and one is private. In the semi-private rooms, it is difficult to have two patients occupying the room at the same time because the supply cabinets are on the back wall next to the far bed. This means staff needs to interrupt the patient in the far bed if supplies are needed for the patient nearest the front of the room. And, because of SMMH's focus on Psychiatry, many ER visits are for patients with either substance abuse or psychiatric issues where staff observation is important. While the semi-private rooms are directly in front of the nursing station, they are not designed for the safety of accommodating patients with behavioral health issues. Plans are underway for creating a safe station for behavioral health patients.

The forecast for 5 stations assumes all stations can be occupied at the same time. This is difficult given the existing layout. There are other departmental deficiencies, such as limited storage and staff break areas, which cannot be fixed within the physical limitation of the current facility and renovation plan.

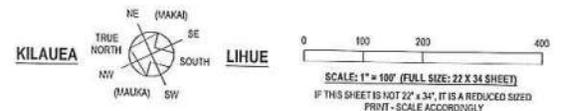


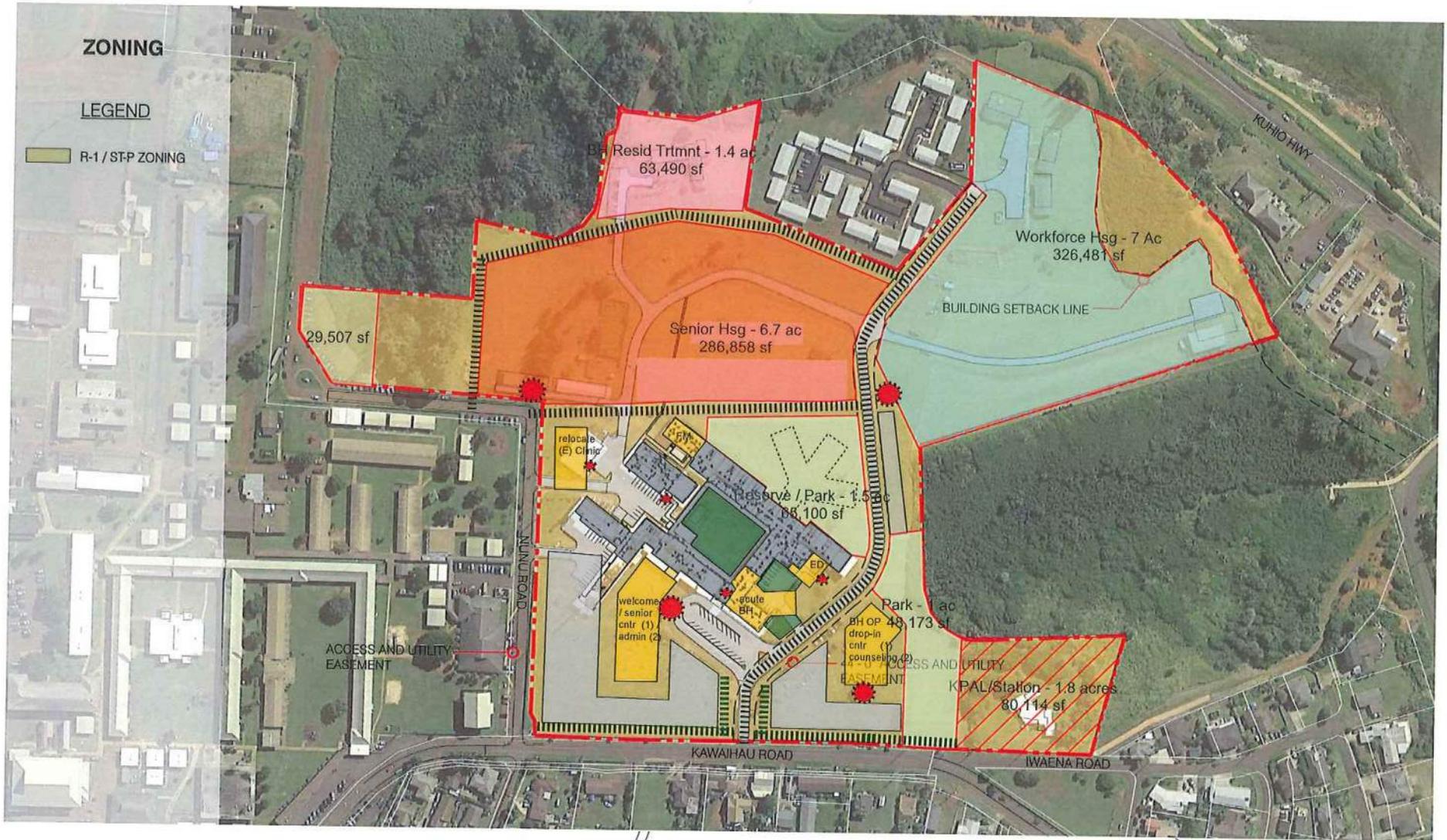
DRAFT - LAND USE CONCEPT
08-09-19 - ALT 1



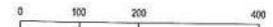


DRAFT - LAND USE CONCEPT
08-09-19 Alt 2





DRAFT - LAND USE CONCEPT
08-09-19 Alt 3



SCALE: 1" = 100' (FULL SIZE: 22 X 34 SHEET)
IF THIS SHEET IS NOT 22" X 34", IT IS A REDUCED SIZED
PRINT - SCALE ACCORDINGLY

**SMMH Master Campus Plan Project
Long Term Care Vision Group - 4
November 22, 2019 Meeting Minutes**

Attendees: Estelita Trinidad, Lance Segawa (Chairperson)

Via Phone: Bronson Ho, Katie MacNeil, Terri Martin, Mark Perriello

Excused: Alisa Racelo, Brandi Hori-Moises, Jasmine Yukimura, Kurt Akamine, Lori Miller, Pam Arroyo, Jen Chahanovich, Ron Fujimoto, Leila Ventar, Thomas Royer

Agenda	Discussion	Follow-up Action
I. Introductions	Introductions were conducted and meeting was called to order at 0903 hours by Lance Segawa.	Meeting was called to order at 0903 hours.
II. Minutes August 23, 2019	Minutes of the August 23, 2019 meeting perused. Motion made and seconded to approve. Motion carried.	The August 23, 2019 meeting minutes approved as written.
III. Review and Approve Draft Vision Statement	The vision statement was proposed and approved as follow: “Establish a Kauai County safety net long term care facility which will address at risk seniors and other special need individuals. The overall objective is to enable these individuals to age in place in an affordable way. The facility will be compassionate, culturally sensitive, and focused on the needs of the care giving family unit”.	Vision statement perused and approved.
IV. Conceptual Plan Development	See attached Campus & Preliminary Assessment. Katie reported that what you have there is the beginning which lays the foundation for the plans. Terri Martin did a demographic and needs assessment for the island of Kauai for Seniors and elders. Her needs assessment were requested approach for long term care and translated into expansion of the capacity of beds at Mahelona. Target is going from currently 54 beds to 75. Caregiver providers said they would really benefit and be interested in being part of the campus that has the skilled nursing facility, and Day facility for Seniors. Caregivers could bring their Seniors and continue to get Day Care services that would allow them to maybe continue with work outside the home or other responsibilities. The other 3 plans that you’re looking at concentrate on Assisted Living. Terri did a projection that allows for memory care. We’re	See attached. LTC beds going from currently 54 to 75. Day Care for Seniors Assisted Living and Memory Care.

Agenda	Discussion	Follow-up Action
IV. Conceptual Plan Development (continued)	<p>looking to plan space for about 155 unit of assisted living, which 30 are memory care units.</p> <p>Adding about 100 plus or minus new affordable housing.</p> <p>When we met with the community and a need to help with recruitment through all the staff that the hospital needs, assisted living complex, bringing more workforce.</p> <p>Lance thanked Katie and asked if there was any questions. We are at the early stages of these concepts so we can anticipate that we're going to be tweaking things. It kind of gives you an idea of where we are now.</p>	Affordable housing.
V. Next Meeting	<p>In terms of our next meeting is an optional thing. I'm going to have a conversation with the other 3 facilities and see where they're at and if there's a need to reconvene everyone, I will do so otherwise we'll keep you in the loop by communication. You would know at what stage we are with the initiative for master campus planning for Mahelona.</p>	Lance will meet with the other 3 facilities.
VI. Adjournment	<p>Lance thanked everyone and said we'll be in touch and have a great Thanksgiving and a good weekend and take care everybody.</p> <p>Meeting was adjourned at 0928 hours.</p>	

Appendix E

Long Term Care Profiles

Profiles for Senior Living

Independent Living Resident Profile - Tom

Elder Tom moved into a Senior Independent Living facility, not because of a physical frailty (although his arthritis continues to bother him), but due to some social and chore needs. He found maintaining his house and keeping up with yard work was getting too difficult. His wife passed away recently and while he has children and grandchildren in the area, he needs assistance with meals and other household chores and doesn't want to be a burden on his family.

Tom receives up to three meals per day, weekly housekeeping and linen laundry, scheduled transportation, and planned activities over at the Senior Center. Sometimes he goes to the senior center for lunch, sometimes he eats in his apartment and sometimes he eats with other residents in dining area. He enjoys working out in the gym and playing pool with friends. Many people like Tom, who would be seen as a candidate of Independent Living may not necessarily have visible disabilities but rather need assistance with driving, chores or needs a more socially active environment. Tom lives in a small, but comfortable one bedroom apartment and still has his car – though as time goes on he relies more and more on community transport services for seniors. He is glad to be so close to the Clinic and Dr. Shimizu, as Dr. Shimizu has been the family's doctor for many years.

He visits with his children and grandchildren in his apartment or in the community areas of the Senior Independent Living Center. He especially enjoys sitting outside on the covered porch and talking with friends or just enjoying the scenery.

Assisted Living Resident Profile – Alani

Alani was born and raised on the Kaua'i, but spent much of her adult life in the Honolulu area. She is the youngest of seven children and has some nieces and nephews in the area, but her own children live on the mainland. She decided to move back to Kaua'i a few years ago to return 'home'. She is in her early eighties and is mobile, but needs assistance with medication reminders each day, grooming assistance and household chores. Alani lives in a comfortable alcove apartment and has three meals per day in the small dining area just off her apartment. Alani exhibits some memory loss at times but she is not in any current danger of wandering or of putting herself or others in any physical danger.

She is so happy to have her little dog Georgie living with her as he makes her laugh and is good company while she watches TV. She enjoys visiting with old friends at the Senior Center luncheons and craft activities. When her children and grandchildren visit, they stay at a nearby motel. They are grateful for the staff that watch out for Alani and help with Georgie.

Alani can remain in the assisted living area – with the assistance of Certified Nurses' Aides and medical support for most, if not the rest of her life. If there comes a time that Alani needs round-the clock care or is in need of a two-person assist situation – then she can be transferred a skilled nursing facility.

Assisted Living Memory Care Resident Profile - Betty

Betty was diagnosed with Alzheimer's Disease about five years ago. Alzheimer's Disease is one of about 30 different types of Dementia and is the most common, accounting for an estimated 60–80 percent of cases. Until recently, Betty lived with her sister Ruth Anne and her family. All the activity at Ruth Anne's house began to agitate Betty. Initially, she displayed apathy and depression, which are often early symptoms. Later Betty's symptoms included impaired judgment, disorientation, confusion, behavior changes and difficulty speaking, swallowing and walking. Betty has had difficulty for some time remembering names and recent events.

Now Betty lives in a memory care center in a small studio apartment that faces the common spaces. The living room and small kitchen area serves a small group of people like Betty. Here, Betty and the other residents have caregivers there to prepare snacks, engage them in activities and assist with ongoing direction. Her Alzheimer's has advanced to the stage where now she needs help with bathing, dressing, using the bathroom, eating and other daily activities.

Ruth Anne has been counseled by staff that the disease may progress such that Betty may lose the ability to communicate, fail to recognize loved ones and become bed-bound and reliant on 24/7 care. The inability to move around in late-stage Alzheimer's disease can make a person more vulnerable to infections, including pneumonia. Ruth Anne is grateful for the kind and loving care the staff provides her favorite sister.

Skilled Nursing Home Resident Profile – Waiola

Waiola comes from a family of 5 children. Her parents instilled a sense of pride and independence in all their children, so when Waiola became too sick to stay at home, it was difficult to see herself in a 'rest home'. She was relieved to learn the Skilled Nursing Center provided the care she required in a more home-like setting where she can be around other elders and sometimes serves Hawaiian food.

At age 67 Waiola has struggled with a number of chronic medical conditions for several years now. She has diabetes, heart disease, and has had a hip replacement and a knee replacement. Her diabetes has led to skin sores and infections have been frequent. She requires nursing care around the clock to keep her comfortable, administer her meds and to watch out for infections that can be especially dangerous because of her hip and knee replacements. She is mostly bed ridden, but enjoys visiting with family and friends on her 'good days'. Her grandchildren miss her, so they try to visit frequently. Waiola appreciates the ceiling mounted lift that helps get her out of bed into her wheel chair so she can be with her grandchildren outside on nice days.

Appendix F

Community Needs Assessment



**OUTREACH FOR
SAMUEL MAHELONA HOSPITAL
Master Plan Community Meeting
August 20, 2019**

1. Emailed Kapa‘a El, Kapa‘a High and St. Catherine schools and asked them to include in their school newsletter/website.
2. Listed the event in free online calendars (Kauai Muse Letter/Heartbeat of Kaua‘i, forkauaionline.com)
3. Emailed all contacts with flyer and ask them to disperse to their networks
 - a. Community Coalition Kauai
 - b. Wailua-Kapa‘a Neighborhood Association (posted on fb page)
 - c. Queen Deborah Kapule Hawaiian Civic Club
4. Mailed out flyers to 235 homes within 1,000 ft of hospital
5. Sent out press release to newspapers (Garden Isle, MidWeek Kaua‘i, Kaua‘i Muse Letter, forkauaionline.com) and radio stations (KFMN, KHKU, KIPL, KKCR, KQNG, KUAI) to see if they will pick up the story (no response to date)
6. Rep. Nadine Nakmura and Lance Segawa called in to the KKCR Kauai Community Radio - Kaua‘i Soapbox on Tuesday, 8/13 at 5pm. Soapbox is a weekly call-in talk show that explores issues of concern or projects underway as topics are stimulated by the listeners.
7. Hung banner announcing meeting at SMMH
8. Sent out reminder emails



Connecting the Hearts of Kaua'i Together



[Home](#) » [Events](#) » [Samuel Mahelona Memorial Hospital Community Visioning Meeting](#)

Samuel Mahelona Memorial Hospital Community Visioning Meeting

◀ \$Free

[Map](#)

[Contact](#)

[Poster](#)



Personal or Company Name: Kapa'a Elementary School Cafeteria
Street: 4886 Kawaihau Rd
City: Kapa'a
State / Province: HI
Country: United States
Zip/Postal Code: 96746
Area Code & Phone: 8085235866
Listed: July 30, 2019 7:44 pm
Expires: 24 days, 5 hours

Description

Samuel Mahelona Memorial Hospital Community Visioning Meeting
Tuesday, August 20, 6:00pm – 8:00pm
Kapa'a Elementary School Cafeteria

We invite your input to:

- Develop solutions to community issues
- Create comprehensive health programs for our 'ohana
- Become an even better resource for the neighborhood

Come share your ideas and help define our community vision!

Refreshments Provided

Optional Site Tour: 5:00pm – 5:45 pm (meet in SMMH lobby)

Please RSVP to Barbara Natale, G70 Planner: SMMH@g70.design or (808) 523-5866

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Samuel Mahelona Memorial Hospital Community Visioning Meeting

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Samuel Mahelona Memorial Hospital Community Visioning Meeting

Starts in 15 Days, 4 Hours
 August 20, 2019 6:00 pm - 8:00 pm

We invite your input to:

- Develop solutions to community issues
- Create comprehensive health programs for our 'ohana
- Become an even better resource for the neighborhood

Come share your ideas and help define our community vision!

*Refreshments Provided

Community Meeting: 6:00pm – 8:00pm (Kapaa Elementary School Cafeteria)

Optional Site Tour: 5:00pm – 5:45 pm (meet in SMMH lobby)

Please RSVP to Barbara Natale, G70 Planner: SMMH@g70.design or (808) 523-5866

Related



Pineapple Yoga 15th Anniversary COMMUNITY APPRECIATION CELEBRATION
 June 2, 2016
 Similar post



Anaina Hou Community Park (Home of Kauai Mini Golf) to present Free Movie: "Wall-E"
 Friday, June 24, 2016, at 7:00pm
 June 16, 2016
 Similar post

Kauai County Farm Bureau Fair

4 Days of food, farming, family and fun. Rides, games, farm animal competition, petting zoo, commercial tents, bonsai display, orchid
 July 2, 2015
 Similar post

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COMMUNITY

VISIONING SESSION



FOR

SAMUEL MAHELONA MEMORIAL HOSPITAL

WE INVITE YOUR INPUT TO:

- *Develop solutions to community issues*
- *Create comprehensive health programs for our 'ohana*
- *Become an even better resource for the neighborhood*

Come share your ideas and help define our community vision!

TUESDAY, AUGUST 20

6PM – 8PM

Kapa'a Elementary School Cafeteria

Optional Site Tour: 5:00pm - 5:45pm (Meet in SMMH lobby)

Please RSVP to Barbara Natale, G70 Planner: (808) 523-5866 or SMMH@g70.design



ST. CATHERINE SCHOOL

KAPA'A ELEMENTARY SCHOOL

SAMUEL MAHELONA MEMORIAL HOSPITAL

HO'OLA LAHUI HAWAI'I COMMUNITY CENTER

HALE NANA KAI O KEA (STATE PUBLIC ELDERLY HOUSING)

KAWAIHAU ROAD

KUHIO HIGHWAY

KAUAI POLICE ACTIVITIES LEAGUE (KPAL) YOUTH CENTER

PREVIOUS HOSPITAL HOUSING - PROPOSED POLICE SUBSTATION



SITE MAP

G70

Press Release

For Immediate Release: August 9, 2019

COMMUNITY MEETING SCHEDULED TO DISCUSS MASTER PLANNING FOR SAMUEL MAHELONA MEMORIAL HOSPITAL

KAPA'A, HI — Samuel Mahelona Memorial Hospital (SMMH) will be holding a community meeting to discuss Master Planning for development of the SMMH hospital and grounds at the following location and time:

Date: Tuesday, August 20, 2019
Location: Kapa'a Elementary School Cafeteria
4886 Kawaihau Road
Time: 6:00 PM to 8:00 PM
(Optional Site tour at SMMH – 5:00 PM to 5:45 PM)

The community is also invited to attend a hosted site tour to begin at 5:00 PM at the SMMH entrance. Reservations are requested and information is listed below.

SMMH is being envisioned as the hub for Long-term Care and Behavioral Health to accommodate current and future demand for the island of Kauai. Sam Mahelona Memorial Hospital is seeking to create a holistic and comprehensive health resource for our community that supports the well-being of our 'ohana. We encourage the community to attend this meeting and bring their ideas! For details on existing hospital services, please visit <http://kauai.hhsc.org/facilities/samuel-mahelona-memorial-hospital-smmh/>.

Reservations for the site tour, requests for project information, or to be added to the project mailing list should be made to Mrs. Barbara Natale, Environmental and Community Planner; G70; phone: 808-523-5866 or e-mail: SMMH@g70.design.



Photo credit: <http://kauai.hhsc.org/facilities/samuel-mahelona-memorial-hospital-smmh/>

###

COMMUNITY VISIONING SESSION



SAMUEL MAHELONA MEMORIAL HOSPITAL

**Come share your ideas
and help define our
community vision!**

**TUESDAY, AUGUST 20
6PM – 8PM**

**Optional Site Tour:
5:00pm - 5:45pm
(Meet in SMMH lobby)**

Kapa'a Elementary School Cafeteria

Please RSVP to Barbara Natale, G70 Planner: (808) 523-5866 or SMMH@g70.design



COMMENT FORM

Name: _____

Address: _____

Phone: _____

Email: _____

Comments: *Make the Mahelona land into a
Community Educational, Residential, intergenerational - transitional facility - interactional groups, store and kitchen serving meals to the community.*

Mahelona is already on state land need affordable housing for recruitment of professionals and training island workers exercise classes / gardening / wellness / interesting classes. A space to bring behavioral clients rather than going first to a hospital assessment. a community house for groups to utilize.



COMMENT FORM

Name: _____

Address: _____

Phone: _____

Email: _____

Wellness Campus

Comments: _____

Intergenerational Housing creates community -
reduces competition btw. private + public resources
reduces public expenditure
supports learning
improves well being of elders
" socialization + integration of youth

Housing can serve work force for hospital + schools
(disappointed) work force + family/children reduces traffic congestion

Community Center ^{for island} can include - ^{model for all} over island
educational ^{but for health professionals}
& health training youth
intergenerational education w/ schools/elders
recreational center all ages
Community Kitchen, gardens, farmers' mkt. fairs

alternative modalities for health
transitional housing for elders
kind for health + mental health + work force, adult and on

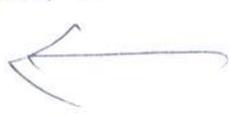
all services and resources (stores) within community to reduce traffic
electric cars to reduce gas + save money
venues for island-wide cohesion + meetings/events
cultural education + expression
Native Hawaiian



Island
Over-all Systems approach

Inventory
State owned
land on Kaui
available

Inventory of needs
hospitals
- homeless
- workforce
- elder
- young families



Cross
Reference
these to

secure
State lands
for community use
& non-profits
only
no profit development



COMMENT FORM

Name: [REDACTED]

Address: _____

Phone: _____ Email: (Holoa La hui Hawaii County Center)

Comments: • Pull in Hawaiian Health Clinic into

wellness community being envisioned

shared programming → cultural healing practices
providers / SVCS, eg ^

sharing equipment, lab, spaces (shared spaces + kitchen)



COMMENT FORM

Name: [Redacted]

Address: [Redacted]

Phone: [Redacted] Email: _____

Comments: _____

Presenters & group leaders did a great job. Knowledgeable & courteous. Listened to suggestions, comments without being critical.

Thank you -

From: [REDACTED]
Subject: Fwd: Mission and Vision writing
Date: July 23, 2019 at 5:51 PM
To: [REDACTED]

I'd love to be part of the conversation with [REDACTED]. Here are the goals and vision I've been working on with [REDACTED]. He likely would be interested in speaking with [REDACTED] also.

----- Forwarded message -----

From: [REDACTED]
Date: Mon, Jun 3, 2019, 4:22 PM
Subject: Mission and Vision writing
To: [REDACTED]

Aloha [REDACTED]. Here are some important components to me for visioning. [REDACTED]
[REDACTED]. Junk format sorry.

VISION MISSION

Crisis Outreach Counselors- to be with person in need within an hour, for companionship and counsel, providing compassionate active listening support and resources to relieve situational suffering and depression.

Place: A place to provide care that is non institutional, comforting, safe, homey and retreat like. A place where people can stay until they feel mentally stable and have a solid residential and occupational plan.

Experienced Residential Staff and Volunteers: People willing to stay with people for 4 to 48 hours minimum with 24 hour availability including weekends, evenings and holidays. Varying levels of training and expertise.

A compassion driven program: Sufferant impacted, empathetic and listening, working with the wishes of the sufferant as much as possible. Workers grounded in the knowledge that compassion heals.

Integrative interim care: Naturapathic, acupuncture, Massage, Body work, Chiropractic, Nutrition, Exercise, Companionship, Vocational Counsel, NLP, Psychology, Herbalist and Shamanistic modalities. Patient access to healthy organic foods, sleep and transitional support. Hygiene and topical treatments. Art and music included in healing

Professional and volunteer counseling-A place of empathetic empowering encouragement: where supportive visitors are welcome. Friends and family come to celebrate what they love about the person struggling, to help them remember that good times come and go and will return. Encouragement to sufferant as they wait for the miracles of life to return.

Place where people can vacation from medicines that are no longer working without being inundated with new ones. Non toxic alternatives available.

Helping the person that's suffering to **create a team** composed of their friends and loved ones, that works with professionals when needed. Family must be welcome and invited to participate in healing as an important component. Ongoing care if needed.

If the person has no family that can participate as part of a caring team, "connection gifted" volunteers spend time with this person.

Focus on the forgotten and less productive, we all have value to contribute even if our value is being needy. The needy perhaps have the most valuable gift to offer, a place for our compassion that many of us need to cultivate giving.

A place to give back to, for when you were once with needs. Pro Bono services solicited and welcomed.

Barbara Natale

From: [REDACTED]
Sent: Wednesday, August 21, 2019 9:42 PM
To: Barbara Natale
Subject: SMMH Community Visioning Meeting - more input

Aloha Barbara,

Sorry I had to leave before the large group reconvened. Please, please incorporate one more comment... that the design plan incorporate a campus-like feel with walking paths, view corridors and green space, and preserve access along the bluff for the community to enjoy ocean views.

mahalo
[REDACTED]

-----Original Message-----

From: Barbara Natale <barbaran@g70.design>
Sent: Fri, Aug 16, 2019 9:32 am
Subject: Reminder! SMMH Community Visioning Meeting Tuesday, August 20th

Aloha,

Just a quick reminder about our upcoming Samuel Mahelona Memorial Hospital (SMMH) Community Visioning Meeting! Your participation will help SMMH evaluate needs for the hospital as well as the surrounding property. If you have already replied, thank you! If not, please take a moment now to let us know (it will help us with our bento count!). Please feel free to forward to your interested networks.

Community Meeting: Tuesday, August 20, 6pm-8pm
Kapa'a Elementary School Cafeteria
Refreshments Provided
Optional Site Tour: 5:00pm-5:45pm (Meet in SMMH lobby)

Please RSVP to Barbara Natale, G70 Planner: (808) 523-5866 or SMMH@g70.design

Please let me know if you have any questions.
Mahalo!
Barbara



Barbara Natale, AICP
Environmental and Community Planner

111 S. King Street, Suite 170
Honolulu, Hawaii 96813
t 808.523.5866
d 808.441.2117
e barbaran@g70.design
www.G70.design

Barbara Natale

From: [REDACTED]
Sent: Friday, August 30, 2019 8:59 AM
To: Barbara Natale
Subject: Re: Reminder! SMMH Community Visioning Meeting Tuesday, August 20th

Hi Barbara,

Thank You for the opportunity to contribute thoughts and ideas in the development of the SMMH Master Plan. Unfortunately I missed the tour and had to leave before the compilation from all four groups. I had little to contribute but appreciated and endorsed the contributions of others in our corner group, especially with regards to mental health. As I reflected on the future needs of our community I eventually realized I had experienced both living and working on a campus much like SMMH. As a young adult I trained as a Psychiatric Nurse at a State Psychiatric Hospital (North Ryde Psychiatric Center) in Sydney NSW Australia. I also lived in dorms on the property and walked to my workplace every day. This was all in a park like setting. This campus and hospital is still in existence today but with enhanced community services. This facility is now known as Macquarie Hospital. I will send the link. From what I am seeing online this campus offers what some have suggested for the redevelopment of SMMH. The similarities are remarkable!

You will see in the link the services this State Hospital offers but I would also like to point out the North Ryde Common area. Significant in that community events are held there. My brother and his family live in the residential area nearby. The whole nearby community were able to walk to outdoor events on the grass. I see also that there is the Northern Sydney Education Center providing meeting room and more. Dementia Australia providing memory care. I know also there are residential (group?) homes and housing and services for people with Intellectual disability. I believe there are residential group homes on the campus as well.

I have now lived in the Kapaa Community close to thirty years, I was Patient Liaison/KEO at Kauai Medical Clinic after hurricane Iniki to assist with the needs of the community and for the past ten years have been a Program Assistant at Easter Seals Hawaii Kapaa Center so I am quite familiar with the campus and existing services at SMMH. I myself have utilized the Sleep Disorder Services and Physical Therapy. The Emergency Dept. is a wonderful and much needed service and I hear it is quite wonderful to go there for emergency care.

I would endorse having the Police Sub Station in the location where the existing residence is. From what I have witnessed in the local parks while doing Adopt a Park with our ESH participants there is clearly a need for expanded mental health and drug addiction services. I have met and interacted with good people at the park who are just simply houseless. There are so many needs!

The stunning ocean views and open green space are valuable in themselves for the community I would hope the openness and green space can be maintained as much as possible in the development of the campus.

I applaud and support this effort to develop and expand services on the SMMH campus.

Thank you,

[REDACTED]
On Aug 19, 2019, at 1:54 PM, Barbara Natale <barbaran@g70.design> wrote:

Hi [REDACTED]
Great, thank you so much! See you then.
Barbara

Barbara Natale

From: [REDACTED]
Sent: Friday, September 6, 2019 11:17 AM
To: Sam Mahelona Hospital
Subject: Attention Barbara Natale and Lance Segawa

Follow Up Flag: Follow up
Flag Status: Completed

Categories: Red Category

Aloha Barbara Natale, Lance Segawa and Mahelona Master Plan committee,

Thank you for Tuesday 8/20's meeting and for future meetings about this important project. Thank you for carefully noting and recording community opinions. The impression I got from that meeting was that at last someone was genuinely thinking about community when they planned a new development on our island. Your approach to this Planning is encouraging for communities who have long hoped to be heard and included in supporting services that many of us already struggle to provide and that reflect and meet resident needs.

Kauai is rich with organizations and individuals who are already moving mountains to strengthen the island. What has been lacking is the realization of our togetherness on this finite island and of the strength that could lie in thinking and acting as a whole. What I saw in your Planning approach to Mahelona's future reflected that realization, and community members were also picking up on the possibility that Mahelona could be a unifying influence for Kauai.

Mahelona from the beginning has been a shelter for poorly served groups beginning originally with TB wards, up until presently providing the only psych ward and a significant number of badly needed long term care beds on the island. All of the ideas that came up Tuesday represented populations currently poorly served by limited resources and attention. It is significant that Mahelona has this unique history of serving generations of Kauai families, as a place of refuge, geographically central to the entire island.

It is also significant that Mahelona is a public facility, partly financed by, and on land owned by the State which gives some autonomy from constricting County resources and regulations. With the utilization of State land, the highest cost of development is mitigated.

All of these advantages point towards a potential future of strengthening Kauai's inadequately funded public services on Mahelona's new campus. The community response at your meeting suggests to me that Kauai's people are ready for development that serves our residents, We would like to have this beautiful, resort quality piece of land gifted back to support the quality of life for the dedicated residents who have served and continue to serve our people.

Some of these ideas were identified in your introductory presentations and all of the input from community spontaneously seemed to fall within the vision of Mahelona as an island wide, multi resource, and generation-ally rich, community serving hub. I believe this vision can be compatible with your Planning.

Housing is of course on everyone's mind because of Kauai's dire need for affordability. The Mahelona housing Plan could focus on capacity for poorly served groups. This focus could simultaneously bring critical attention to infrastructure overload and upgrade on the east side.

Work force housing for adjacent medical and school employment limits the impact of added population to this already congested intersection of major arteries. Use of electric carts within the campus would also help.

Housing for start up families working at hospital or schools, with children attending the school, reduces traffic.

Elder housing for partial or long term out-patient care for individuals without family support who can benefit from and contribute to a community structure.

Interim Housing for medical, psych, elder, drug-related, and detox patients in transition from any combination of police, hospital, or out-patient recovery care. This was clearly a primary need by all social sectors represented at your meeting and Mahelona could provide a synthesis of resources to cut facility and labor inefficiencies..

Homeless housing for those who qualify for this community emphasis on collective contribution and participation.

Community can serve these housing groups by providing partial self-sufficiency for the residents with employment opportunities for communal gardens and food kitchens, an all-purpose and partially self-provisioned market, parks/recreation on campus, produce and product fairs. The campus can provide a venue for island wide events, and teaching facilities for inter-generational partnering with schools and other groups to share skills and experience. Inter-generational communities improve the health of elders thereby reducing public expenditure, improve the socialization and community integration of young people, and reduce the competition for private and public resources by combining them. Even as affordable housing, the revenues for Mahelona housing rentals can be considerable.

Health Expanding the concept of traditional Health to include multi-generational lifestyle choices, a dietary supply and demand shift on campus, and alternative healing modalities for greater well being and healthy longevity, can be part of the educational programs and therapeutic offerings. Cultural practices should be foundational to this. These approaches have been proven to be cost-efficient in our climate of sky-rocketing medical expenses.

The success of this partially self-sufficient, multi-purpose, community-building, healthy medical and lifestyle model can be replicated throughout Kauai's geographical spread. The Moku and Ahupua'a models work. Mahelona can become a model, among the many world-wide, who are creating successful, self-sustaining community hubs for generations into the future.

I appreciate that Mahelona will be working with many agencies and interests and I hope that you will continue to seek out the vision of the communities as you navigate through these shoals. We are counting on you.

Aloha,



Wailua, Kauai

COMMUNITY

VISIONING SESSION #2



FOR

SAMUEL MAHELONA MEMORIAL HOSPITAL TUESDAY, NOVEMBER 19

6PM – 8PM

AT

Samuel Mahelona Memorial Hospital Auditorium

*Come to Review and Discuss Site Plan Alternatives developed from
Community Input received at the First Visioning Meeting in August*

Refreshments Provided

Optional Site Tour: 5:00pm - 5:45pm (Meet in SMMH lobby)

Please RSVP to Barbara Natale, G70 Planner: (808) 523-5866 or SMMH@g70.design



SITE MAP



Press Release

For Immediate Release: November 8, 2019

COMMUNITY MEETING SCHEDULED TO DISCUSS SITE PLAN ALTERNATIVES FOR SAMUEL MAHELONA MEMORIAL HOSPITAL

KAPA'A, HI — Samuel Mahelona Memorial Hospital (SMMH) will be holding a second community meeting to discuss Master Planning for development of the SMMH hospital and grounds at the following location and time:

Date: Tuesday, November 19, 2019
Location: SMMH Auditorium
4800 Kawaihau Road
Time: 6:00 PM to 8:00 PM
(Optional Site tour at SMMH – 5:00 PM to 5:45 PM)

The community is also invited to attend a hosted site tour to begin at 5:00 PM at the SMMH entrance. Reservations are requested and information is listed below.

The first community visioning meeting was held in August, 2019. SMMH is being envisioned as the hub for Long-term Care and Behavioral Health to accommodate current and future demand for the island of Kauai. Sam Mahelona Memorial Hospital is seeking to create a holistic and comprehensive health resource for the community that supports the well-being of our 'ohana. The community is encouraged to attend this meeting and see if the Master Plan site alternatives match with what was expressed at the first meeting. For details on existing hospital services, please visit <http://kauai.hhsc.org/facilities/samuel-mahelona-memorial-hospital-smmh/>.

Reservations for the site tour, requests for project information, or to be added to the project mailing list should be made to Mrs. Barbara Natale, Environmental and Community Planner; G70; phone: 808-523-5866 or e-mail: SMMH@g70.design.



Photo credit: <http://kauai.hhsc.org/facilities/samuel-mahelona-memorial-hospital-smmh/>

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(<https://www.thegardenisland.com>)

Hawaii News (<https://www.thegardenisland.com/category/hawaii-news/>)

Meeting set on master plan for Kapaa's Mahelona Hospital

By [The Garden Island](https://www.thegardenisland.com/author/gardenisland/) | Sunday, November 10, 2019, 12:05 a.m.

Share this story 

 (<https://twitter.com/intent/tweet?text=https://www.thegardenisland.com/2019/11/10/hawaii-news/meeting-set-on-master-plan-for-kapaas-mahelona-hospital/>)

 (<mailto:?subject=Meeting set on master plan for Kapaa's Mahelona Hospital&body=https://www.thegardenisland.com/2019/11/10/hawaii-news/meeting-set-on-master-plan-for-kapaas-mahelona-hospital/>)

KAPAA — Samuel Mahelona Memorial Hospital will be holding a second community meeting 6 to 8 p.m. Tuesday, Nov. 19, to discuss master planning for development of the hospital and grounds.

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(<http://www.oahupublications.com/terms-of-service/>) and our Terms of Service (<http://www.oahupublications.com/terms-of-service/>).



The meeting will be at the hospital auditorium at 4800 Kawaihau Road in Kapaa.



The community is also invited to attend a hosted site tour set for 5 p.m. at the hospital entrance.

The first community-visioning meeting was held in August. SMMH is being envisioned as the hub for long-term care and behavioral health to accommodate current and future demand on Kauai, according to a press release.

ADVERTISING



“Sam Mahelona Memorial Hospital is seeking to create a holistic and comprehensive health resource for the community that supports the well-being of our ohana,” the release said.

The community is encouraged to attend this meeting and see if the master plan site alternatives match with what was expressed at the first meeting.

Reservations for the site tour, requests for project information or to be added to the project mailing list should be made to Barbara Natale, environmental and community planner, G70, at 808-523-5866 or SMMH@g70.design.

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ETXGz51FOq1yRKUVZud7jUafBhgKY4ileHPihMYMEVt1FEVjML3twyzJembKJ2EPB6yWZK I am acknowledging and agreeing to our updated Privacy Policy (http://www.oahupublications.com/privacy-policy/) and our Terms of Service (http://www.oahupublications.com/terms-of-service).

I Agree



COMMUNITY VISIONING SESSION #2



SAMUEL MAHELONA MEMORIAL HOSPITAL

TUESDAY, NOVEMBER 19

6PM – 8PM

SMMH Auditorium

**Come review and discuss
Site Plan Alternatives!**

**Optional Site Tour:
5:00pm - 5:45pm
(Meet in SMMH lobby)**

Please RSVP to Barbara Natale, G70 Planner: (808) 523-5866 or SMMH@g70.design



CAMPUS PROGRAM SUMMARY

SAMUEL MAHELONA HOSPITAL MASTER PLAN | KAPAA, HAWAII

Date: 11/15/19

	UNITS/BEDS	BLDG FLOOR AREA (SF)	PARKING (STALLS)	STORIES	MIN SITE AREA (ACRES)	NOTES
SMMH						
BUILDINGS						
Bldg 1 - (E) Main Hospital- Existing		57,204	68	1	2.67	existing
Acute	5					renovation 2019
Long Term Care (LTC)	54					renovation 2019
Psychiatric	9					repurpose existing to geriatric psych ltc
Admin		-6,108				ED expands, admin moves
Bldg 1 (new) - Acute Psych Unit	9	9,000	18	1	0.50	psych rebuild, add 18 to bed count
Bldg 1 (new) - ED right size and Inpatient Detox	4	5,950	4			max 4 beds, swing to acute
Bldg 1 (new) - LTC Expansion	21	15,700	21	2	0.65	75 total beds, all private beds
Bldg 1 (new) - Community Café & Senior Daycare		23,753	119	2	1.43	admin relocation to new build, right sizing; café adjacency to (e) kitchen
Bldg 2 - (E) OT Clinic		8,906	45	1	0.77	existing parking undersized
Bldg 3 - (E) Warehouse		5,103	17	1	0.35	existing
Bldg 4 - OP Behavioral Health Center		9,840	49	1	0.85	OP clinic - two providers, agency offices, meeting
Site - nursery, landscape cultivation lot						
Total		129,348	341		7.21	
COMMUNITY FACILITIES						
BUILDINGS						
(E) Hoola Lahui Health Clinic		5,000	25	1	0.43	existing parking undersized
Hoola Lahui Health Clinic - dental expansion		1,000	5	1	0.09	add one provider
Kauai Police Department Sub-Station		10,341	52	1	2.00	site area determined by County's preliminary plan
KPAL Program		3,500	12	1	0.24	need space for wrestling mats, can use off-site field
Bldg 5 (new) Senior Cntr		7,000	35	1	0.60	fitness, craft, offices
Bldg 5/6 (new) Convenience Retail / Service		1,160	6	1	0.10	market / sundry
Bldg 6 (new) Convenience Retail / Service		1,160	6	1	0.10	Alt C only
Total		29,161	140		3.56	
RESIDENTIAL - BEHAVIORAL HEALTH						
BUILDINGS						
Specialized Treatment Facility	20-30	30,000	20	1.5	0.90	residential detox treatment, dual diagnosis
Total		30,000	20		0.90	
RESIDENTIAL - ELDERLY CARE						
BUILDINGS						
Assisted Living Facility (ALF)	125	131,000	42	3	6.25	155 total including Memory Care
ALF Memory Care	30	39,000	10	3	1.50	secured outdoor area
Total		170,000	52		7.75	density yield for 20 units per acre
RESIDENTIAL - WORK FORCE						
BUILDINGS						
Garden apartments & townhomes	64	30,720	128	3	3.20	assumes two bedroom residences, 20 du / ac
Townhomes	16	19,200	32	2	0.80	assumes three bedroom with garage, 20 du / ac
<i>target 80 units (80% apts; 20% townhms)</i>						
Total		49,920	160		4.00	
PARK AND OPEN SPACE						
BUILDINGS						
Park, Walking Paths, Roadways, Unassigned Open Space					8.19	in excess of 50% open space allotted to commercial uses and 20 du/acre for housing
Undevelopable Site Area					2.39	
Total		0	0		10.58	
CAMPUS SUMMARY		379,268	572		34.00	

NOTE: Site area assumed at 50% open space, actual site area dependent on site constraints.

PROGRAM SUMMARY



CASE STUDIES

- 1) INPATIENT PSYCHIATRIC UNIT
- 2) SPECIAL TREATMENT CENTER (STC)
- 3) LONG TERM CARE / SKILLED NURSING (LTC)
- 4) SENIOR HOUSING - ASSISTED LIVING FACILITY (ALF)
- 5) AFFORDABLE HOUSING
 - GARDEN APARTMENTS
 - TOWNHOUSES
- 6) STOREFRONT COMMUNITY VILLAGE

PREPARED BY:



TERRIE MARTIN
CONSULTANTS

NOVEMBER 2019



INPATIENT PSYCHIATRIC UNIT

Description:

Inpatient psychiatric nursing unit distinct unit of critical access hospital with maximum allowable bed count of 10.

Physical Attributes:

- Central meeting area or living room for staff and patients and provide smaller rooms where patients can visit with their families
- Provide maximum visibility of patient area for easy visual supervision of patients by limited staff
- Therapeutic Environment: non-institutional materials, ample daylight and views
- Inpatients have direct and easy access to controlled outdoor area(s)
- Single patient bedrooms provide visual, acoustical privacy and patient control of immediate environment

source: Psychiatric Facility by Robert F. Carr

<https://www.wbdg.org/building-types/health-care-facilities/psychiatric-facility>



FLOOR PLAN

source: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6339737/>



PATIENT ROOM

photo credit : Push Button Photography, LLC, Owner Paul Bomers



PATIENT CORRIDOR / NURSING STATION

photo credit: KMD Architects

SPECIAL TREATMENT CENTER (STC) - DUAL DIAGNOSIS

Physical Attributes:

- Typical features a group kitchen, library and activity area
- Facility size varies – 800 BGSF – 1,000 BGSF dependent on common areas.
- Number of beds vary – 9 bedrooms – 32 bedrooms
- Typically single bedrooms
- Offices for administration and support staff



EXTERIOR

photo credit: Jay Mahler Recovery Center, San Leandro, CA - Design Build
JL Construction / Byrens/Kim Design Works / Wilson Architecture, Inc.



INTERIOR

photo credit: Jay Mahler Recovery Center, San Leandro, CA - Design Build
JL Construction / Byrens/Kim Design Works / Wilson Architecture, Inc.



EXTERIOR

Hope House, Martinez, California – TeleCare Corporation



BEDROOM

Hope House, Martinez, California – TeleCare Corporation

LONG TERM CARE (LTC) - TRENDS IN SKILLED NURSING UNIT

Physical Attributes:

- Unit DGSF – 550- 800 DGSF / bed
- Unit size 24 beds typical
- All private bedrooms
- Open concept living area with kitchenette, adjacent to nursing station



OPEN CONCEPT

photo credit: Gulf Coast Medical Center Skilled Nursing Unit – 75 beds, 3 floors



PATIENT ROOM

photo credit: Gulf Coast Medical Center Skilled Nursing Unit – 75 beds, 3 floors

SENIOR HOUSING - ASSISTED LIVING

Development by operator.

6 acre site

155 total beds

- 125 bed ALF

- 30 memory care

Memory Care - secured
outdoor area

Walking paths, connectivity
to SMMH operated Senior
Center

Estimated Approximate Square Footage

~23,000 – 28,000 SF for 30 Apartment Units

~350 – 450 SF for a Studio

~550 – 600 SF for 1 Bedroom

~800 – 900 SF for 2 Bedroom

Add common space & offices

Assumes 10 of each type

***Could be developed in phases**



SENIOR HOUSING - ASSISTED LIVING APARTMENTS

(continued)



APARTMENTS (floor plan)
ILIMA AT LEIHANO

AFFORDABLE HOUSING

GARDEN APARTMENTS

Cluster of low-rise buildings with open lawns, landscaping, and pathways alongside property. Garden apartments are typically spread out from each other providing garden spaces between buildings.

TOWNHOMES

Low-rise two to three story single family home that shares a common wall with adjacent units. Townhouse units include garage, backyard, and private entry into unit.



GARDEN APARTMENTS



TOWNHOMES



STOREFRONT- COMMUNITY VILLAGE

DESCRIPTION

One-story structure dedicated to community usage such as market, fitness, and meeting rooms. Storefront will also provide additional clinics to the community ranging from Senior Center, Convenience retail, and Dental Clinic.

* Relocation of existing programs on site may move into Storefront space:

- KPAL
- Hoola Lahui Hawaii Clinic



source: Pacific Business News



source: Alexander & Baldwin

STOREFRONT COMMUNITY VILLAGE

SMMH MASTER PLAN SITE ASSESSMENT

- 1) OPEN SPACE DIAGRAM
- 2) PARKING PLAN DIAGRAM
- 3) EXPANSION / CONSTRAINT DIAGRAM
- 4) WAYFINDING ISSUES

PREPARED BY:



NOVEMBER 2019



OPEN SPACE

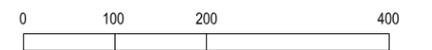
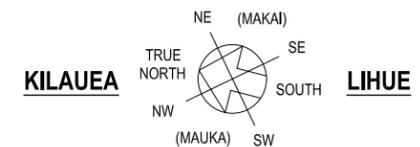
LEGEND

-  OPEN SPACE
-  DRIVEWAY
-  BUILDINGS
-  PARKING AND LOADING

OPEN SPACE SUMMARY

83% CURRENTLY PROVIDED
30% REQUIRED MINIMUM

BLDG. & PAVEMENT: 255,100 SF
LAND AREA: 1,469,802 SF



SCALE: 1" = 100' (FULL SIZE: 22 X 34 SHEET)
IF THIS SHEET IS NOT 22" X 34", IT IS A REDUCED SIZED PRINT - SCALE ACCORDINGLY

PARKING PLAN

LEGEND

- PARKING / LOADING
- BUILDINGS

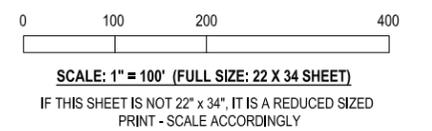
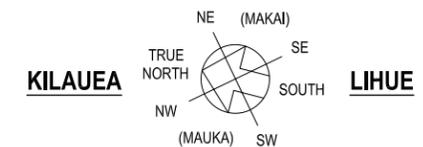
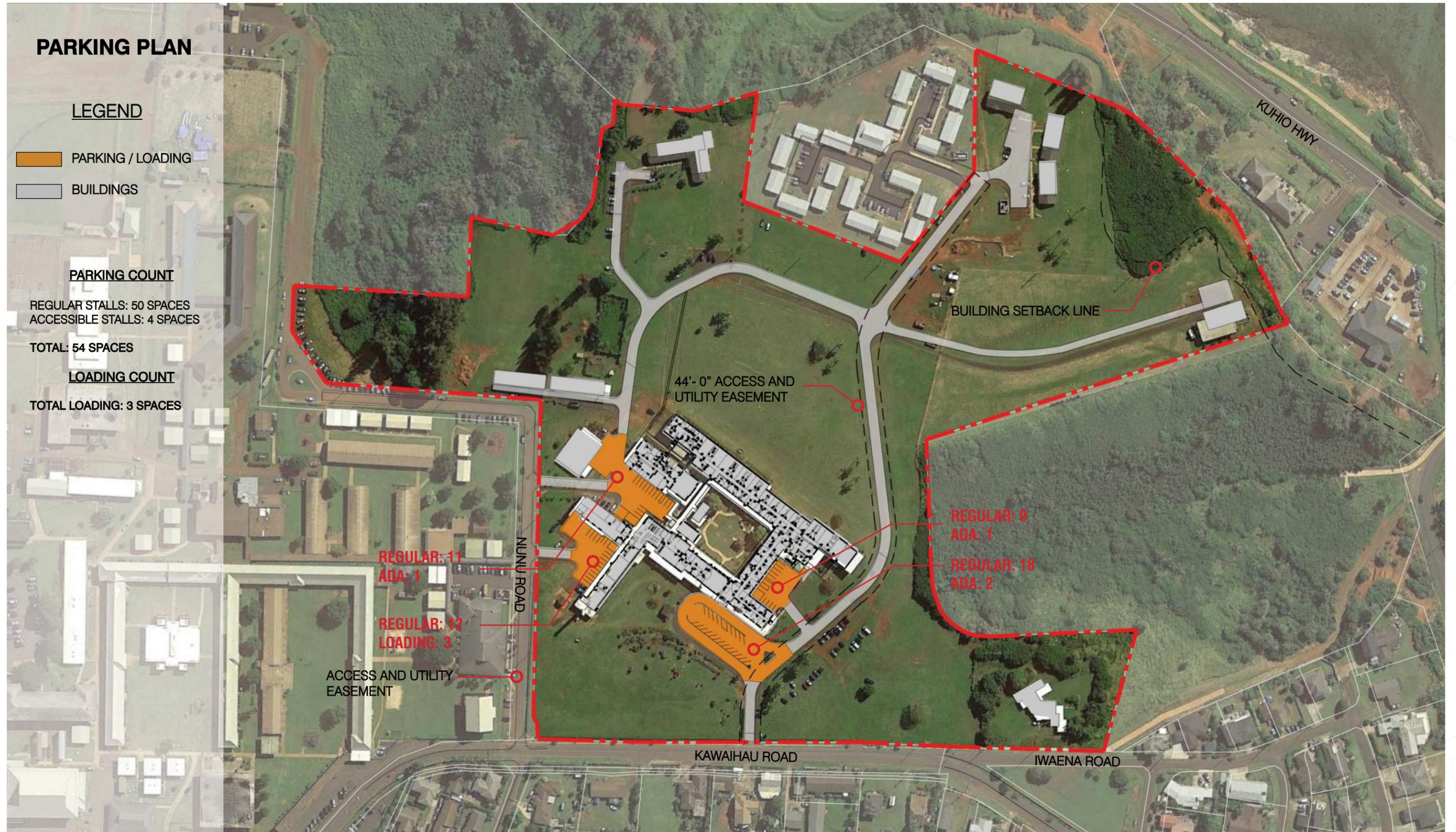
PARKING COUNT

REGULAR STALLS: 50 SPACES
ACCESSIBLE STALLS: 4 SPACES

TOTAL: 54 SPACES

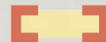
LOADING COUNT

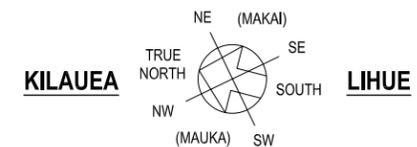
TOTAL LOADING: 3 SPACES



EXPANSION/ CONSTRAINT DIAGRAM

LEGEND

-  BUILDINGS
-  MAIN HOSPITAL
-  NEW GROWTH
-  OBSTRUCTION TO GROWTH



0 100 200 400
SCALE: 1" = 100' (FULL SIZE: 22 X 34 SHEET)
 IF THIS SHEET IS NOT 22" x 34", IT IS A REDUCED SIZED PRINT - SCALE ACCORDINGLY

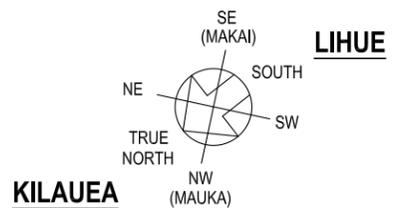
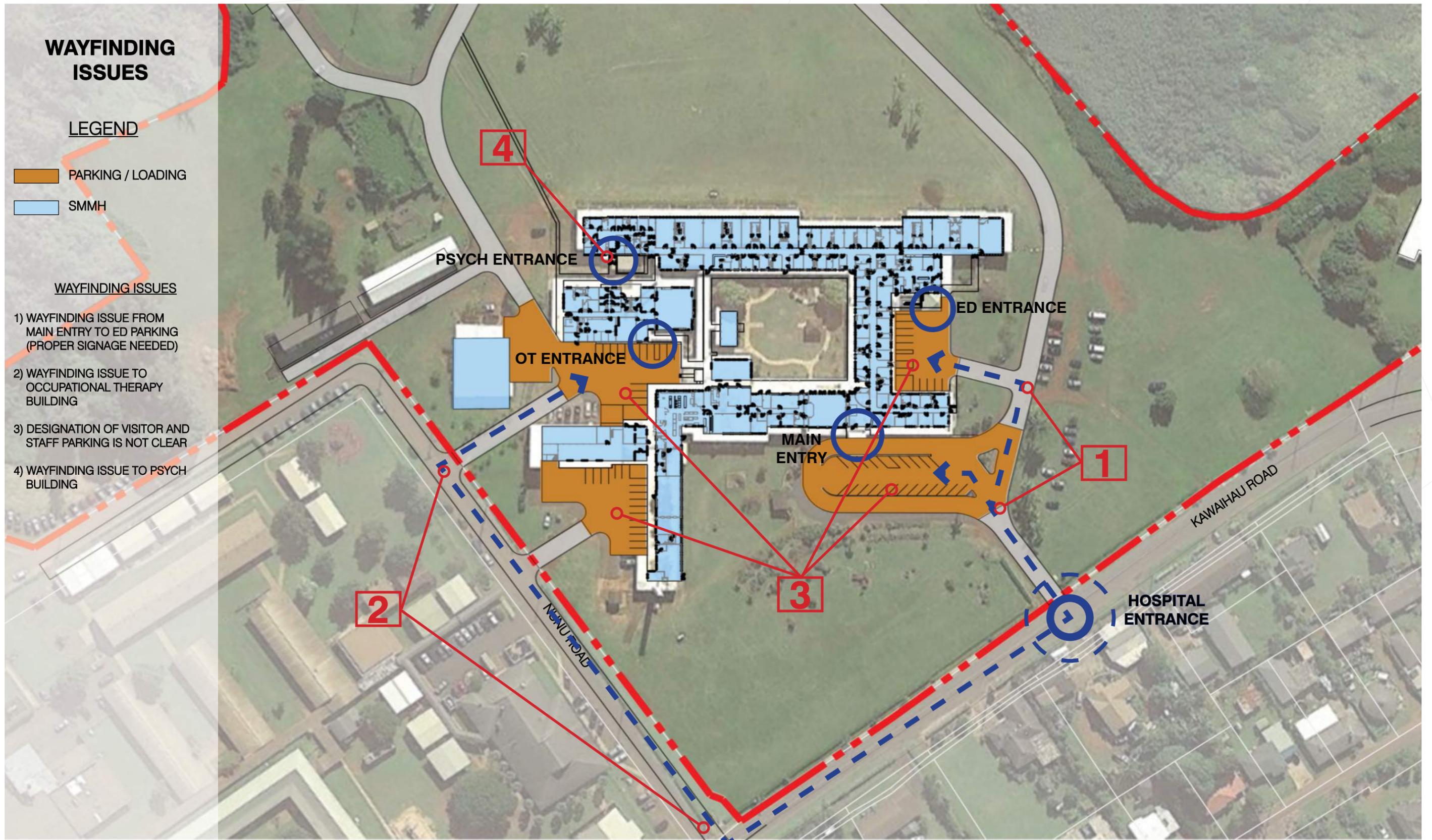
WAYFINDING ISSUES

LEGEND

- PARKING / LOADING
- SMMH

WAYFINDING ISSUES

- 1) WAYFINDING ISSUE FROM MAIN ENTRY TO ED PARKING (PROPER SIGNAGE NEEDED)
- 2) WAYFINDING ISSUE TO OCCUPATIONAL THERAPY BUILDING
- 3) DESIGNATION OF VISITOR AND STAFF PARKING IS NOT CLEAR
- 4) WAYFINDING ISSUE TO PSYCH BUILDING



SCALE: NTS

SMMH MASTER PLAN

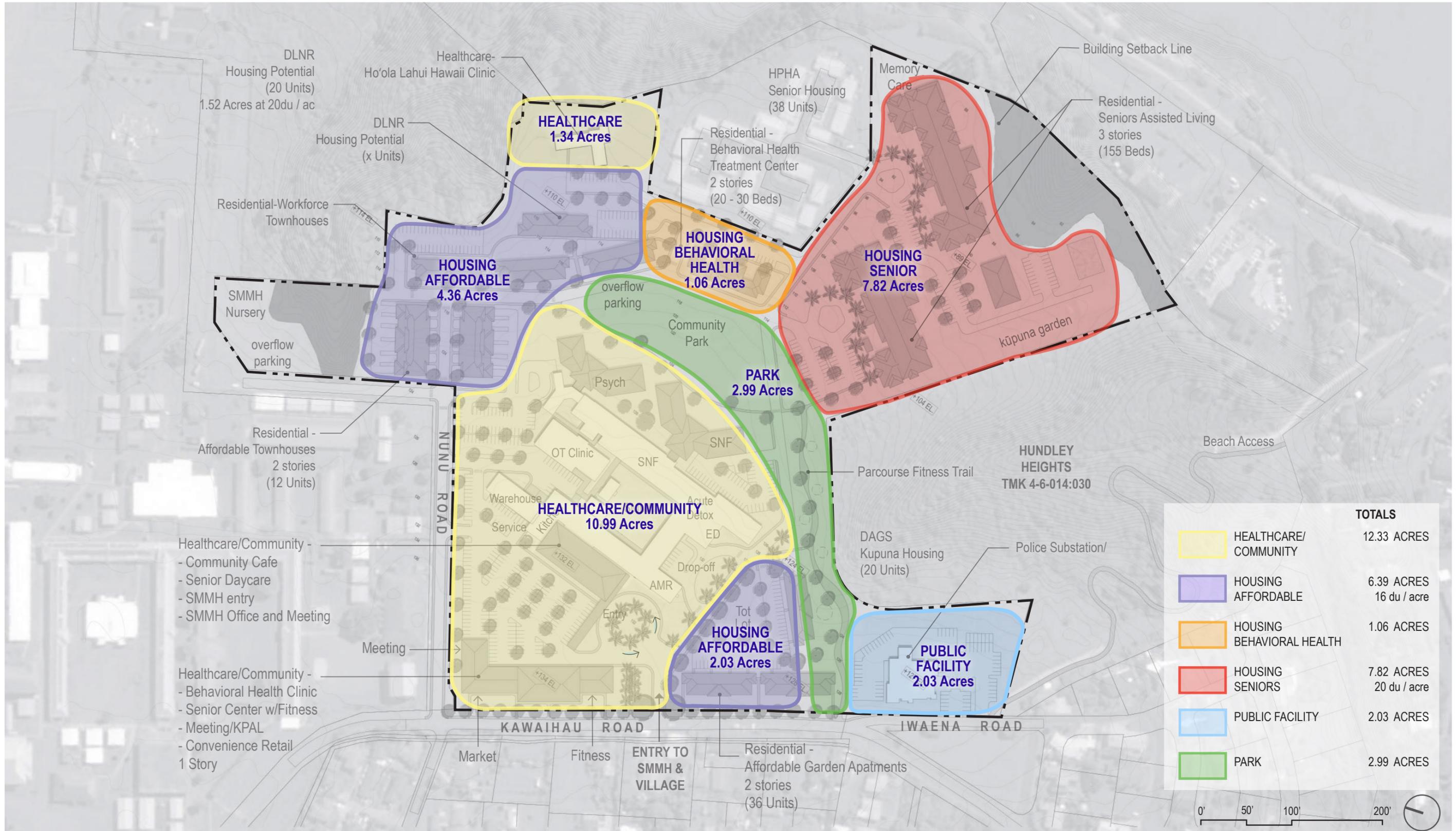
- 1) OPTION A
LAND USE PLAN & MASTER PLAN
- 2) OPTION B
LAND USE PLAN & MASTER PLAN
- 3) OPTION C
LAND USE PLAN & MASTER PLAN

PREPARED BY:



NOVEMBER 2019





	TOTALS
HEALTHCARE/COMMUNITY	12.33 ACRES
HOUSING AFFORDABLE	6.39 ACRES 16 du / acre
HOUSING BEHAVIORAL HEALTH	1.06 ACRES
HOUSING SENIORS	7.82 ACRES 20 du / acre
PUBLIC FACILITY	2.03 ACRES
PARK	2.99 ACRES









DLNR
Housing Potential
(20 Units)
1.52 Acres at 20du / ac

HPHA
Senior Housing
(38 Units)

Residential -
Affordable
3 stories
(120 Units)

Residential -
Seniors Assisted Living
3 stories
(155 Beds)

Building Setback Line

Park
**PARK
2.11 Acres**

**HOUSING
AFFORDABLE
5.53 Acres**

**HOUSING
SENIOR
7.82 Acres**

SMMH
Nursery
overflow parking

NUNU ROAD

**HEALTHCARE/COMMUNITY
13.91 Acres**

**HOUSING
BEHAVIORAL HEALTH
1.00 Acre**

HUNDLEY
HEIGHTS
TMK 4-6-014:030

- Healthcare/Community -
- Community Cafe
- Senior Daycare
- SMMH Entry
- SMMH Office and Meeting

- Healthcare/Community -
- Behavioral Health Clinic
- Senior Center
- KPAL
- Convenience Retail
- Hoola Lahui Hawaii Clinic
- Dental Clinic
- 1 Story

Psych
OT Clinic
SNF
Warehouse
Service
SMMH
Acute Detox
ED
Drop-off
AMR
Entry

Parcourse Fitness Trail

**PARK
1.28 Acres**

Police Substation

**PUBLIC
FACILITY
2.03 Acres**

KAWAIHAU ROAD IWAENA ROAD

Market Fitness ENTRY TO SMMH ENTRY TO VILLAGE

		TOTALS
[Yellow Box]	HEALTHCARE/COMMUNITY	13.91 ACRES
[Purple Box]	HOUSING AFFORDABLE	5.53 ACRES 20 du / acre
[Orange Box]	HOUSING BEHAVIORAL HEALTH	1.77 ACRES
[Red Box]	HOUSING SENIORS	7.82 ACRES 20 du / acre
[Blue Box]	PUBLIC FACILITY	2.03 ACRES
[Green Box]	PARK	3.39 ACRES







COMMENT FORM

Name: _____

Address: _____

Phone: _____ Email: _____

Comments: *Too much density on Kawaihau Rd. Walk to work isn't successful. People will never give up their cars. They have multiple jobs. Village Shops not viable. No discretionary funds. Psych facilities will be difficult to staff. Doubling beds will not meet the needs, I don't believe.*



COMMENT FORM

Name: _____

Address: _____

Phone: _____ Email: _____

Comments: *pigeons should be controlled because they
mess up the guardrails + patients hold on to them
and dirty their hands -
guests of patients would like a cafeteria/hospitality
room*

*would love senior housing
is there enough parking?
sewage treatment plants
is Kawaihan Rd. supporting all the traffic*



COMMENT FORM

Name: [REDACTED]

Address: _____

Phone: [REDACTED] Email: [REDACTED]

Comments: As HHSC Rehab Director, I agree Kauai has a huge need for SNF rehab based stays 2wks - 2mo's or more. We must work on our staffing + medical team quality + readiness for this project. I like the park, path, ~~play area~~ community spaces, activities, & would add technology, telehealth, education spaces, and programs like PT/OT/ST that integrate all areas from ED, beh health, acute, obs, SNF, LTC(ICF), and outpatient. Our youth growth will require programs + new activities - Could our park partner w/ Kauai County and include a skatepark? Kauai Parks & Rec are currently site assessing for this. I love the connection to the E-side bike path.

Thank you all for your work & presentation. ~~education~~ I hope we can afford, staff, telehealth + run this expansion, & I look forward to seeing it's success.

[REDACTED]

Planning Committee for Samuel Mahelona Hospital

Barbara Natale

We have a Lihue Garden Island Day Care Facility at the Lihue Christian Church in operation.

Gay & Robinson has donated a home on the Kaumakani Avenue for a West Side Day Care Facility we will call **Hale Ho'ohanohano** .

Once the care home facility is done, work will begin on the Day Care facility **Mālama i Nā Makua** .

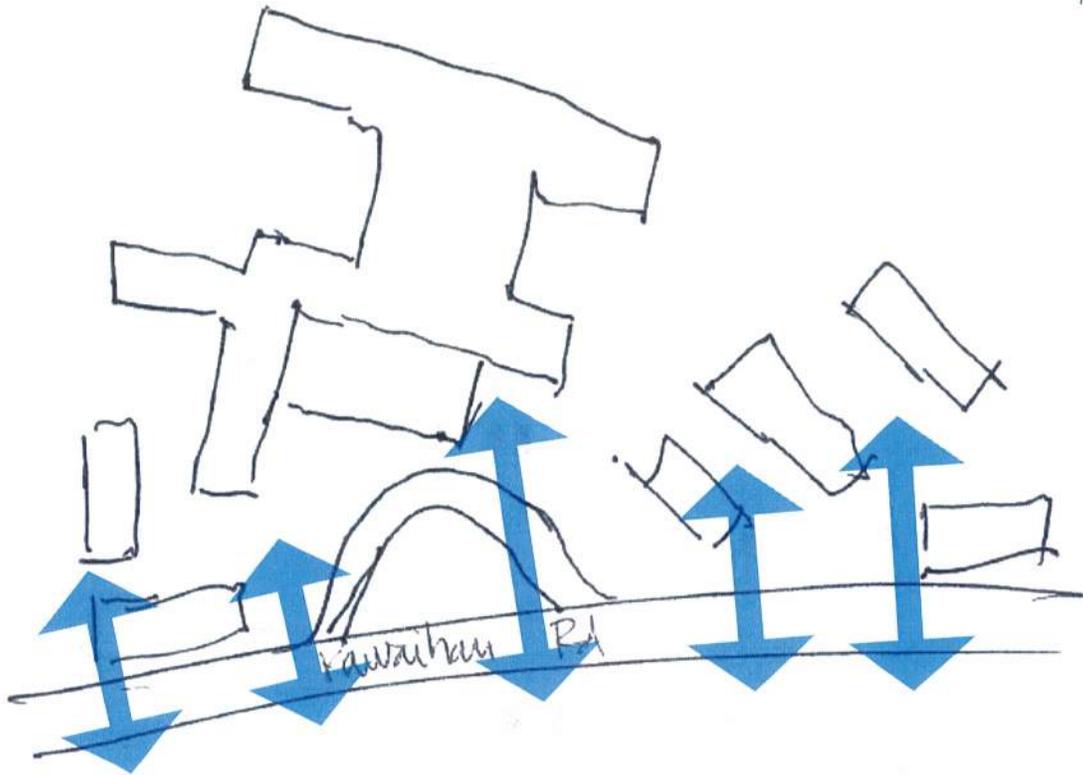
The East Side should also look to form a Day Care facility where families can bring their kupuna for the day. As our elder population

size increases and caregivers continue to work, this is much needed.

Mahalo for your consideration.



[REDACTED] - min two
story →
more
together



- Structures along Kawaihau Road - break up and reorient structures to allow more prominent view and access to hospital and rest of site
- Maximize affordable housing potential—more units if feasible
 - Residential market-oriented facilities probably best located where there are views (current location of staff housing and KPAL center)
 - Could support use of SOH parcel, 4-6-14: 030, for housing or facilities
- Affordable housing should be walkable from bus stop (10-15 min. walk)
- Convenience retail onsite is important
- Siting of behavioral health residential facility is important for security reasons
- Explore feasibility of relocating HPHA public housing and redevelop the prime view lot

Barbara Natale

From: Barbara Natale
Sent: Thursday, November 14, 2019 1:26 PM
To: Lance Segawa; Katie MacNeil
Cc: Christine Mendes Ruotola; Mark Tabucbuc
Subject: SMMH Community Member Input

Hi Team,

I received a phone call from [REDACTED] this morning. She was at the first meeting but unable to attend this one, and wanted to relay her concerns. She is a nearby resident, retired nurse, soldier, Kapaa EI teacher.

- Stressed the importance for preparedness (for example, there were 5 lockdown incidents in surrounding schools this last year, and another shooting in CA)
 - Is the ER ready for an incident as the only facility in the area? Does the hospital have an internal plan of action for an onslaught of trauma?
 - Are there agreements in place with fire, police, school (safety committee)?
 - Happy with the siting of the police substation, may reduce incidents.
 - Does the hospital have trauma boxes, including pediatric supplies for all of the students in the area (600 at Kapaa EI alone) including child-size masks, AED, etc?
 - Property currently has minimal access and narrow roads
 - Need to be prepared for worst case scenarios
- Homeless on the hill
 - Grass underneath walkway was cleared so homeless are on the move, and will move up into other areas.
 - Lack of housing
- Initiative for healthy walking
 - However sidewalk in front of SMMH is not ADA accessible
 - School put new curb around the back side of the hospital. Wheelchairs were not able to get over it, had to dig it up.
 - Peanut-about going to be installed down the road

Thank you,
Barb



Barbara Natale, AICP
Senior Planner

111 S. King Street, Suite 170
Honolulu, Hawaii 96813
t 808.523.5866
d 808.441.2117
e barbaran@g70.design
www.G70.design

Appendix G

Small Stakeholder Meeting Notes



CONFERENCE REPORT

111 S. King Street
Suite 170
Honolulu, HI 96813
808.523.5866
www.g70.design

TO:	Files		
FROM:	G70 – Barbara Natale		
DATE:	12/14/18	LOCATION:	Sam Mahelona Hosp.
PROJECT:	Sam Mahelona Hospital Property Assessment and Master Plan	PROJECT NO:	218048-01
SUBJECT:	Steering Committee Kickoff Meeting	NO. OF PAGES:	4
THOSE PRESENT:	HHSC – Lance Segawa, John Pimental; State Representative Nadine K. Nakamura; HPH Wilcox Medical Center - Jen Chahanovich; OPMC – Kurt Akamine, OP – Rodney Funakoshi; HHFDC – Stan Fujimoto, Genoa Ward; G70 – Katie McNeil, Christine Mendes Ruotola, Barbara Natale.		

SUMMARY:

This initial Steering Committee Meeting reviewed the scope of the project, vision for the Hospital and surrounding area, and stakeholder outreach protocol.

Legislative Intent

- To look at the big picture, including lands around hospital, ceded lands, and the needs of this community/region to realize what can be done. Would like to engage the community in a thoughtful way to come up with a plan that will work.
- \$1M was previously brought in but used in different ways. With this new \$500,000, HHFDC and OP were brought in to help with community development.
- For this facility – what are our alternatives? What do we do to really make this work for the next 100 years? What will it take to get us there? What is the repurposed life of this facility, both physical and programming?

Community Opportunity

- Would like to bring in every part of the community.
- Our meeting group may grow to bring in all segments of health care.
- Would like to bring a program to legislature to solidify healthcare for Kauai.
- Want to be key solutions for the community.
- At least a year effort. For good community outreach, need to take time.
- The community outreach will inform the master plan.
- Two components
 - Master Plan for Hospital
 - Another for the Hospital and surrounding grounds

Healthcare Needs

- Initial assessment of need is behavioral health and long-term care.
- The Community Health Needs Assessment (CHNA) effort is performed each year to fulfill requirements mandated by the Affordable Care Act, and in accordance with final IRS rules issued on December 31, 2014. The Healthcare Association of Hawai'i led this collaboration to conduct state- and county-wide assessments for its members - fifteen Hawai'i hospitals across the state, including Wilcox. A Community Benefit team met to prioritize the community health needs to be addressed by the hospital's Community Health Improvement plan. The plan is data-driven and interview-driven, and in alignment with County needs such as walkable and bikeable communities.
- The 2016 Wilcox Medical Center CHNA, 2013 and 2015 Kauai County CHNA, and 2013 Kauai's Community Health Needs Assessment reports can be found here: <http://hah.org/reports-data/community-health-needs-assessment/>
- The 2016 priority needs for Wilcox included access to care and diabetes. These are broad categories that include facets such as education and diet. It is really only possible to move forward with two initiatives a year.
- The Wilcox Medical Center CHNA was approved by the Board of Directors. The most recent report will be released in January 2019.
- The CHNA gives data on health needs but does not go into recommendations. It will be up to us to make these recommendations.

Financial Considerations

What is the ultimate goal/outcome of the Master Plan? What limits do we have from a financial standpoint? Community input? Utilize access? Return of investment?

- Due to the property being ceded land, development parameters apply, and 20% of revenue returns to Office of Hawaiian Affairs. The legal counsel for Sam Mahelona Hospital has reviewed this information, which will be made available to G70 for review.
- After initial discussions with the community, possibilities include small scale housing and some commercial to facilitate walkable and health sustaining communities. This may reduce the amount of funding needed from the legislature in the future.

Opportunities for Housing

- There is a shortage in this State for housing at every price point - affordable housing, low/moderate income, special needs, all the way up to market. Will need to be strategic for who we are going to serve.
- Current tenants on campus
 - Transitional housing for employees (3 duplexes)
 - State public housing on adjacent Hawaii Housing Authority land (19 duplexes)

- Is it possible to work with the State to move this housing to another part of the campus and replace with additional housing?
- HHFDC is looking for opportunities for housing, however, does not master plan housing communities that are not primarily for affordable housing. Their purpose is to oversee affordable housing finance and development in Hawaii. Another financing avenue may be Department of Accounting and General Services. If looking at affordable housing for seniors, HHFDC could release a request for proposals targeting this specific type of housing.

Existing Uses

- The front lawn of the hospital is used as overflow parking for the nearby schools.
- Civil defense area - people drive up to the area for tsunami warnings. Both Kapa'a High and Elementary are civil defense hurricane shelters.
- Mahelona hosts a number of community events, including bon dance, etc.
- Not a lot of traffic in the back part of the property. Many people are walking in the area. This was put in the Development Plan.
- Have become the community dog park. Received a complaint by resident that dog was attacked by non-leashed dogs.

Proposed Uses

- Request for relocation of Kapa'a police sub-station to little house on the corner (knock-down rebuild). Design of substation from Big Island with holding cells, weight room. Will need get community input before presenting to Board for approval. Need to spend money soon before money lapses.
- Other ideas: adult day-care center, assisted living facility, affordable rental housing, elderly/kupuna housing.
- Kapa'a Beach pool may need to relocate to mauka lands due to shoreline erosion. Relocation adjacent to the schools would be beneficial for the students.
- Mahelona is already pursuing the creation of a kitchen/cafe where seniors can come for meals. Looking to source locally. Apply for meals on wheels. One of the largest production kitchens in the area, can produce 1,000 meals.
- Healthcare Anchor Network (Richmond, VA) working in collaboration to have the right things in the community. Biggest need they found was a retail space/grocery store to where seniors can walk. Could make this a café/supermarket with more prepared food versions.
- Some previous discussions with OHA created an initial MOU, but no real plans were completed.
- The biggest pushback may come from the fact that that people are used to seeing this land open. Therefore, any development plans will be more readily received if the

suggestion comes from the community and is phased. It may help to integrate community design with pleasant walking spaces and an environment that brings value.

- The County will be adding an oval roundabout and bus stop near the front of the property (Kawaihau Road Complete Streets Improvements). County and Mahelona will be meeting with them on 12/18/18. John can give G70 Civil associated information.
- There is an intersection on the highway that DOT wants to close off once they create another south bound road. Construction was supposed to start, but possibly stalled because of north shore floods.

Property Assessment

- The second part of the engagement is the property assessment, with John as primary contact. Will look at specific needs for the hospital, including acute care and analyzing bed count. Mahelona and Wilcox are in discussions to determine how to collaborate care for the island. Lance, Jan and Terrie Martin (subconsultant) will be contacts for these needs.
- What is the state's plan commitment to remain a healthcare provider? We saw what happened on Maui and Big Island. Is this purely an engineering plan? Consider this as part of the discussion.

Project Schedule

- Begin with physical facility assessment - POC Lance.
- Then leading community engagement activities. Planning workshop does not occur until May of 2019. Legislature concludes the first week of May, so the timing of these meetings is favorable. These workshops will form the plan.
- Physical planning can then begin after the initial community workshop. Second workshop in November.
- Will meet with this internal steering committee group on a fairly regular basis. Would like to add someone from the County (Lee Steinmetz was asked to come but couldn't make it). Lee is coordinating the ESA Phase 1. (Has to be County sponsored, could not be State, as EPA funding goes through DOH.) Lance will ask Lee to provide ESA Phase 1 summary.

Looking Past the Plans

- The hospital group will have community input but will have final approval of the master plan.
- Would like to create an Implementation Plan with a clear outline on what each State and County agency need to do. Many times, these agencies aren't engaged and don't understand how they need to be involved to realize the project.

- It may be too early to say, but we may end up with a partnership plan, especially when determining how everything gets financed, etc. Different agencies may have a role in this, including State DOH, HHFDC, etc.
- How is this land going to be managed in the future? May need to form hybrid entity. It will definitely require collaboration, but will operations look like? Examples include HCDA in Kakaako, Kalaeloa. Improvement district in Hilo; however this project does not have a focus on the use at this point. Want to prepare this at the start so that the agencies will be able to pick it up. Willing to propose hybrid entity to legislature to benefit the hospital.
- Do you want more private sector? This may be the project that brings agencies together in conjunction with transit-ready development (TRD). Council expanded this to neighbor islands. Mahelona was looked at a very good TRD site that can create synthesis of mixed use; higher density; walkable development. Also comes out of strategic plan.

Stakeholders

- See attached for initial stakeholder list.
- Gathering? Or interviews? Groupings? Structure?
- For healthcare planning side of it, could create behavioral health group (certainly on-island, then Oahu). Have that group begin discussion for Mahelona and then statewide. Then do the same thing with geriatrics and long-term care. Have these groups working together and come up with a plan.
- Then look at infrastructure issues. This would help with narrowing down the pieces.
- Lance can take the lead on the healthcare side of things to create these visioning groups. Can see at least 3-4 get together, assuming assignments, data gathering. Would like these meetings to be generative, identify barriers, resources. DOH, AMHD (adult mental health division), Ellison site division. Lance will create separate stakeholder lists for his groups.
- Housing piece? Need assistance here. Ideally County Planning to take lead. Kaaiana Hull, Kanani Fu, and Marie Williams, and Lee would be a good team to do a focus group just on housing. Someone from OHA at mother agency, not local. G70 volunteering to lead and create stakeholder list. First meet with planning group, as they already know the ways to reach out to the community that are effective.
- Has there been previous engagement with the community? Is there engagement fatigue? Don't think there will be fatigue. Any previous efforts were not as comprehensive. Feel that most folks will welcome opportunity.
- Any ongoing communication plan? What can they expect?
- There are also other projects close to this site, such as housing. A way to engage those that are close to the property. G70 will contact Rep. Nakamura for additional names. Possibly neighborhood interest groups from the schools? Mahelona Auxiliary Group - active and would participate.

- Eventually see a town hall meeting to present the ideas, not as a done deal but these are ideas. Can see using elementary school, can see 200 people. 500 people came out for the tree lighting. (Barb Q – how did they get them all to come?)
- The group that met today is the steering committee. Frequency of meeting once a month via conference call. Progress, issues.



CONFERENCE REPORT

111 S. King Street
Suite 170
Honolulu, HI 96813
808.523.5866
www.g70.design

TO:	Files		
FROM:	G70 – Barbara Natale		
DATE:	4/11/19	LOCATION:	Kapa'a Elementary
PROJECT:	Sam Mahelona Hospital Master Plan	PROJECT NO:	218048-01
SUBJECT:	Initial Small Community Meeting	NO. OF PAGES:	3
THOSE PRESENT:	Community - [REDACTED]; Community/KIUC - [REDACTED]; Community Coalition Kauai – [REDACTED]; HHSC – [REDACTED]; Kapaa Elementary - [REDACTED]; Kapaa High - [REDACTED]; Wailua-Kapaa Neighborhood Association - [REDACTED]; G70 – Christine Ruotola, Barbara Natale.		

SUMMARY: This initial Community Meeting reviewed the scope of the project, vision for the Hospital property, and discussion of community needs.

Overview

- Sam Mahelona Memorial Hospital (SMMH) partners with other hospitals such as Wilcox so that they complement instead of compete with each other.
- In terms of need, SMMH is looking towards long-term care for geriatrics, including a memory care unit or dementia/Alzheimer's.
- SMMH is also considering long-term care for mental health facility.
- Although the hospital is on State land, this could be a State/County partnership. SMMH is also working with public figures such as Ron Kouchi and Stephanie Iona.
- SMMH is open to the needs of the community.

Surrounding Schools

- The schools use SMMH for their Fire Evacuation Drill and overflow parking.
- Josie Pablo, Recreation Director at SMMH works with the Kapaa High health teacher to facilitate the Health Services Academy, a year-long program. Students go to the hospital to help with art projects, etc.
- [REDACTED] with Keiki to Careers (Planning and Action Alliance); focuses on healthcare and agriculture; bridging local businesses with the students to see what it's like to work in these areas.
- The High School would appreciate a classroom at the hospital, to help their students reach the next level and have more experience.
- At one time a charter school wanted to put a school on the SMMH campus, and there was concern with traffic. There is already a problem with traffic in the morning and afternoon.

Community Needs

- As a neighbor, concerned about the fencing at the KPAL facility and in general. Used the path to civil defense for running before it was fenced off. Neighborhood didn't really like the fencing.
- People are letting their dogs out on the open area, and it is becoming a safety issue.
 - Hospital has issues with sanitation and healthcare, with dogs in close proximity to mental health and ER patients. What about a pet therapy volunteer? Would have to check with State and Federal regulations.
 - Gore Park as an alternative? Partially fenced, and that area is used for parking for school. Maybe not use for dog park, not enough parking in the area.
 - Wailua-Kapaa Neighborhood Association (WKNA) was active in getting a dog park for Wailua Homesteads.
- The community is always looking for community meeting space. SMMH has rooms available for community use.

Healthcare

- Community support for using the land to expand the hospital for healthcare needs.
- As the only facility East to North, should expand the Emergency Room.
- To support the ER, an in-house lab with employees would be helpful. Currently contracted with Clinical Labs, who pick up samples and take them elsewhere to analyze.
- Geriatrics: Memory care, Alzheimer's, psychological units all have their different acuity levels. Could have a wing for each of these.
 - There is a great need for adult day care, which can be paid for by Medicare.
- Mental health: if SMMH could expand, it would not only help Kauai, also the State. Sometimes you can't put patients on a plane. Also looking into the possibility of a mental health outpatient facility. A majority of homeless are mental health patients.
 - Some concerns about long-term mental health patients in close proximity to the Elementary School. One community member grew up behind the Mahelona dairy and remembered when a few patients ran away.
 - It would be reasonable to put a mental health ward on the other side of the campus, close to the police substation.
- Obstetrics & Gynecology at SMMH? Most likely not, as OB is already serviced at Wilcox and KVMH.

Homeless

- The High School/DOE is responsible for clearing out the homeless in their area.
- Could have services such as drug rehabilitation (in-house and outpatient) and transitional housing to help the homeless.
 - These could also be sited furthest from the Elementary School.
- What is Friendship House? Part of the State Department of Health and provides social rehabilitation and community for adults with mental illness.

Housing/Infrastructure

- General questions: Who owns the surrounding areas? What is the zoning? What can be done there? Finding what is appropriate with traffic, water and sewer.
- Affordable housing is a need.
 - Kupuna housing may have less traffic. Could use a shuttle if they need to go shopping.
 - Elder housing would be complementary to the addition of senior care.
- There is a bus stop on property - recognize that a lot of people need to catch the bus to get to SMMH for their services.
- Really expensive for SMMH to get their roads done. There is quite a bit of traffic along the road to get to the public housing.
- Is SMMH hooked into Kapaa sewer system? Water coming from a well up the road.
 - Poor infrastructure not fully developed. What are the additional pressures this will create on the community along with the other development, such as visitor units and residential?
- KVMH in Waimea is installing PV panels. Currently don't have a plan for doing this at SMMH.
- Integrated plan with walking paths and park to retain sufficient green space for the community and allow residents to enjoy existing ocean views and mauka vistas.
- Kapaa HS is the only high school that doesn't have a pool, however that is fine due to liability issues.

Police Substation

- The house that is potential sub-station has issues with homeless.
- The police station at the armory is temporary.
- The substation is good for schools and mental health.

Disaster Relief

- After last April with the rains, it is important for SMMH to be able to take care of the North side and upper east side so they don't need to pass them up to go to Wilcox.
- Need to work on signage so that people know that SMMH is up the hill.
- SMMH cares about serving the community in times of need, such as tsunami, etc.



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111 S. King Street
 Suite 170
 Honolulu, HI 96813
 808.523.5866
 www.g70.design

TO:	Files		
FROM:	G70 – Barbara Natale		
DATE:	4/11/19	LOCATION:	Lihue Civic Center
PROJECT:	Sam Mahelona Hospital Master Plan	PROJECT NO:	218048-01
SUBJECT:	Agency Meeting	NO. OF PAGES:	4
THOSE PRESENT:	COK CIP - Wade Lord; COK Housing - Kanani Fu, Steve Franco; COK Planning - Lee Steinmetz; COK PW – Doug Haigh; DOH - Toni Torres; HHSC – Lance Segawa; KFD - Kilipaki Vaughn; KPD - Mark Ozaki; G70 – Christine Ruotola, Barbara Natale.		

SUMMARY: This initial Agency Meeting reviewed the scope of the project, vision and potential uses for the Hospital property, and explored ideas and issues relating to the surrounding community.

Project Overview

- Legislature appropriated \$500,000 for facility assessment and master planning.
- Sam Mahelona Memorial Hospital (SMMH) would like to be the hub of behavioral health and geriatric care for the entire island, working with other Kauai hospitals to complement and not duplicate services.
- Want to create momentum to carry the vision through, so have already requested \$70 million in funding from the legislature.
- This could be a public/private venture.

Healthcare

- Needed medical services are underfunded.
- Current emergency room visits give us a glimpse into current issues: Behavioral health, homelessness, opioid epidemic.
 - Department of Health (DOH) Mental Health Department will help with behavioral health and an overall plan for all ages.
 - Homelessness taxes the healthcare system.
- Geriatric Care: 80% of Kauai Fire Department calls are EMS, of which 85% are for medical assistance for kupuna.
 - Not everyone can take care of kupuna at home.
 - There is an increase in dementia/Alzheimer's due to the aging population.
 - What is our need for the next 10, 20 years?
 - Could see SMMH as 100 bed facility.
 - Two private dementia care units are being planned for the entire island.

Homeless

- HHSC/Lance is working with Bruce Anderson of DOH to access funds with regards to homelessness.
- The latest reports show that Kauai is up by 53% in homelessness but decreased slightly in other counties.
 - This is due to a better trained survey group and increased outreach this year for Kauai, giving a more thorough count.

- Even so, there is going to be more attention with the more realistic number and may receive more funding.
- The County has various programs to assist homeless
 - Kauai County Housing Agency Tenant Based Rental Assistance program, along with HUD Housing Choice Voucher federal program that helps subsidize rent for low-income tenants.
 - The county offers a newly-created Office of Human Concerns, called “Hale Kokua”, a one stop shop for county services as it pertains to homelessness and elderly affairs.
 - Lance has a meeting scheduled with the Mayor to discuss these issues.
- A lot of homeless live in the slope around the fire station. Could potentially draw them up to services offered at the hospital.
- The Housing First initiative also works to house the homeless.

Housing

- The hospital campus could also provide a home for a privately-owned assisted living facility
 - This would not only provide a need but could potentially create income for the region.
 - At this early stage, density is unknown.
- Kupuna Housing/Senior Housing is another potential housing option. According to County of Kauai Housing Department, models show that there is a need to build approximately 200 more units of senior housing. County would be supportive.
 - This would complement dementia care at the hospital.
- The Regency at Puakea, LLC provides private assisted living, and would be open to expanding on the east side. There is a lot of positive feedback from the group with this company, and many people would house their family members there.

Ceded Lands

- As part of the Transit Ready Development (TRD) initiative, a task force identified this site for housing (aka Hundley Heights).
 - Plans included a maximum of 30 units along the road, close to infrastructure.
- Housing Department ran into development problems due to the ceded lands rights to this property (which requires 20% of revenue payable to Office of Hawaiian Affairs (OHA)).
 - The understanding is that the housing had to service 51% native Hawaiians because that is the ceded land purpose.
 - The Housing Department utilizes federal funds, and can't discriminate, therefore not able to fund the project.
 - Could potentially work with Department of Hawaiian Home Lands (DHHL) or OHA, however they would need to be vested in the project. DHHL could potentially tap into Title 3 Federal Funds, allowing for funding of native Hawaiian projects.
- It is currently unknown if only a portion or the whole property is ceded.
 - DLNR inventory has ceded land maps.
- There is a pocket of state land on Hauaala Road (not ceded) that could also serve as a potential housing site.
- SMMH has corporate attorneys working on the ceded lands issue.

Police Substation

- A police substation is planned to replace an old hospital staff residence.
- The community is worried about extra sirens, however sirens aren't usually used until there is a need, such as at the highway.
- Doug with Department of Public Works is starting to work with a consultant on the police substation environmental assessment.

Transit-Ready Development (TRD)

- Kawaihau Road is being planned as a complete street with a new bus stop to accommodate the Kapahi Shuttle that runs in this area. This and the new boardwalk provide good pedestrian and bike access to town. This is a good site for those that have limited or no access to cars.
- SMMH is outside of the flood/tsumani zones and is a good place to increase density.
 - This fits into overall TRD plan.
 - When looking at housing, it is important to reach out to the community to address their issues and needs.

Community Needs

- SMMH would like to include everyone at the table.
- Community has been using the SMMH lawn as a place to run their dogs, however, has received a complaint by a resident of State Housing about a dog attack.
 - SMMH doesn't want to necessarily put up fences, but is looking to the Mayor as a possible conduit to come up with a solution.
 - Could put up signs about dogs.
 - Gore Park could potentially be used as a dog park.
- This project is addressing so many needs, and could potentially see NIMBY flags regarding mental health, homeless, housing, etc.
 - This project was appropriated under an Act, sponsored by Rep Nakamura. To keep things moving forward, could let the community know that there is appropriation timeline.
 - Will the project require a task force? No, but there is an advisory group.

Youth Activities

- The Kauai Police Department (KPD) runs the Kauai Police Activities League (KPAL) at the previous civil defense location.
- KPAL is a youth center, but not used during the day. Could be a Youth/Senior center, with use during the day for Seniors, and youth in the afternoon.
 - Would like to put ¼ mile rubberized track, covered area where seniors could cook, have basketball, etc. At a nearby senior center, seniors play basketball with the kindergartens on the weekends. Could really tap into overall, multigenerational plan.
 - Currently partner with Department of Education (DOE) wrestling, and work with wrestlers outside of wrestling season.
 - KPAL nonprofit got a lot of donations. Could eventually build a classroom that could be used by the high school.
 - Could have pavilions and be leased out on the weekends for parties, etc. If you overlook the area, there is a beautiful view. Would be a safe place for people to gather.

- Concerned about erosion. Been there for 10 years, were trees growing outside of the fence, now trees are gone.
- The Boys and Girls Club is right around the corner too.

Surrounding Schools

- Are there opportunities to work with the youth at the adjacent elementary and high schools?
 - The schools currently utilize the SMMH campus for special activities.
 - DOE is working towards Academies. SMMH helps with Mentoring/coaching under the Health Services pathway.
- Need to keep the safety of the students in mind when integrating homeless on site. Having the police substation on site will be helpful.

Agriculture

- SMMH is starting farm-to-table initiative.
- Want to feed the community, starting with seniors, maybe eventually homeless.
- Part of the Governor's initiative is to increase local ag production.
 - SMMH has 8 contracts with local ag.

Infrastructure

- SMMH is responsible for the infrastructure improvements.
 - Currently getting bids for resurfacing all the onsite roads.
 - It was suggested to connect with the Chief of Roads Division, as they will already be paving in the area and may be able to do the projects at the same time.
- Will the whole hospital be replaced? Unknown at this time, currently undergoing a facility assessment.



CONFERENCE REPORT

111 S. King Street
Suite 170
Honolulu, HI 96813
808.523.5866
www.g70.design

TO:	Files / Attendees		
FROM:	G70 – Barbara Natale		
DATE:	5/31/19	LOCATION:	SMMH
PROJECT:	Sam Mahelona Hospital Master Plan	PROJECT NO:	218048-01
SUBJECT:	Steering Committee Meeting 2	NO. OF PAGES:	5
THOSE PRESENT:	HHSC – Lance Segawa, John Pimental; State Representative Nadine K. Nakamura; HPH Wilcox Medical Center - Jen Chahanovich; OP – Rodney Funakoshi, Ruby Edwards; HHFDC – Ken Takahashi; KPC – Lee Steinmetz, Jodi Sayegusa; TMC – Terrie Martin; G70 – Katie MacNeil, Christine Mendes Ruotola (by phone), Barbara Natale (by phone).		

SUMMARY: Steering Committee Meeting held to review the status of the project and plan for the community workshop.

PROJECT SCHEDULE

Community Workshop

- Discussed preferred date for the Workshop. Week of August 19 – First General Community Workshop, consensus reached for Tuesday 8/20.
- Location – SMMH auditorium can accommodate 100-200 people in SMMH, has fixed seats. Preference is to have flexible seating so can organize into smaller breakout groups. Suggested venue is the Kapaa Elementary School cafeteria for breakout sessions. G70 to coordinate facility reservation.
- Recommendation to provide food and start at 5:30 or 6. Allow people to get food and then start meeting. Nametags.
- Plan to have a site tour prior to the start of the meeting and provide exhibits of the site for the meeting.
- Agenda for first meeting will focus on uses for the site

Schedule tracking for November to meet with community again on physical planning. Timeframe is ideal as the State’s Ways & Means and the HHSC board will be on island during this time. Discussed finalizing date in consideration of these other groups but prior to the start of the holidays. Finance schedule for trip in mid-Sept.

WORKING GROUPS

Two visioning groups have been formed: behavioral health and long-term care. Group is made up of stakeholders, providers, and major players. Between 20-30 people in each group. Looking to have every aspect involved. Looking at the needs of the entire island. Seeking to provide - What is the current state? What are the gaps in service? How can SMMH provide the home for these services?

For Long Term Care – Needs identified for Outpatient, in-house, memory care, assisted living, etc. Already have private assisted living entity involved and interested.

Both Groups are working towards the projected schedule of having Concept Plans done in early Spring 2020. (March/April). The Groups will work in concert with the project schedule. The Groups are not focused on barriers, no restrictions on the vision at this point, just coming up with what we think will be the needs on the island. 10-20 year outlook. For program development, a 10-year cycle. Know there will be restrictions, such as financial, but not looking at that this time. For adolescents, know it will be difficult to find an operator. But not worried about those things at this time. County is working on a plan for adolescents and having challenges finding an operator. DOH to be consulted for funding mechanisms.

Have identified 8 meetings, will be done by November. Everything will start to marry up. We won't be coming to the community with THIS IS THE PLAN, but these are alternatives for how these uses can be portrayed based on community input.

PROJECT STATUS

Health Needs Assessment and Interviews:

Terrie should have a report of health data by end of June which will feed into Community Meeting. Will also help with visioning groups. Will also allow visioning groups to weigh in on alternatives. The visioning groups also come with their own data and their objectives. Terrie will be able to pull this all together so that others can see the other side of the health story.

How does this tie into community meeting, and allowing them their input? We may have some plans already, ie a mental health wing, and discuss. What is the reaction to that concept that there is an absolute no-way by the community? SMMH will take this into consideration. However, initial community meetings did not have major pushback. It will be up to the programming, management, and physical location of the facilities. This will allow the community to have a reaction and allow us to be able to address it. Strategy is to get initial ideas from working group, interface with community for feedback, develop a plan that would have alternatives should Plan A be not viable Plan B could be pursued.

Terrie has been conducting many interviews. Addressing the needs as a safety-net hospital, as well as creating a revenue stream. This will help with the presentation to the legislature and HHSC board. Able to pick up on emotions of those interviewed, and the staff is very community focused. (G70 to extend invite to staff for community meeting). Not really a lot of data available for the extent of uses being discussed. Data is piecemeal, ie how many beds are needed for the youth? Will be beneficial to have the staff collect stories of those that fall through the cracks (i.e. those that are discharged and don't have a place to go). Ie someone was held in ER for a week until a place was found to discharge.

Community health needs assessment was usually data focused, the most recent CHNA is more anecdotal, depth than the past. Link will be sent to Committee. Terrie's report will incorporate similar anecdotal summaries.

Steering Committee Discussion led to ask whether there are other examples/models for what actually works to address the issues? Homelessness tends to intersect the problems. Teen suicide is a concern. What about affordable housing to house the homeless? What type of housing would work best here? The county has housing data. If we need these people to come to the table then we should include them. The state also has this information, such as the number of people that are homeless in this area. How does this then align to county/state initiatives? DHS oversees these issues – Lance to approach DHS to join the Steering Committee.

Reasons why someone is homeless – for some of them, housing alone may not work. For Housing First, DHS (Dept of Human Services), home first and then wrap services around it. For example, Purple Lady that is being admitted, after she gets care, then what happens to her? Her home is her wheelchair, need to help provide. Can't hold anyone against their will, however there is recent legislation to help those that can't make the determination on their own. Can't solve the world's problems, but if can understand what issue is, can address, and be clear on what cannot be provided. Size of the property will also make that determination.

Looking at revenue sources – does it make sense to expand the acute care services? Who is using the Emergency Department (ED)? The correlation between the ED and psychiatric care is high. Have to provide a process that works. I.e. Appointments, or outpatient clinics. For example, if have a high amount of asthmatic patients that come to the ED, then need to create an outpatient facility for asthmatic patients.

IMPLEMENTATION

Final product scheduled for second quarter of next year. Would like to figure out the next level of funding so that it is seamless. Phase I design would make most sense. Work on an implementation plan, and also determine who needs to do what by when to keep the process going.

CEDED LANDS

Separate working group on the financing group will also be related to the ceded lands piece. Will need to run some business cases to understand what this will mean. So far, it does not seem like any uses we have been looking at will be prohibited, but the financial implications are to be determined. There may need to be a specific percent to serve Native Hawaiians, however it is unclear. The County Housing Agency was unable to proceed with a past housing project due to requirement to allocate a certain percentage of units to Native Hawaiians (due to ceded lands) but requirement to not discriminate (due to use of Federal Funds). G70 will work with HHSC to understand details related to this. SMMH currently has an accounting of what percentage goes to OHA. SMMH financial will need to be involved in this area.

We have not approached OHA at this time. The team will discuss reaching out to OHA Kauai Trustee Dan Ahuna.

COMMUNITY INTERVIEWS & COUNTY AGENCIES

Meeting with community – called out a real need for Kupuna care. Housing of all kinds. Everyone is typically on the same page. Grocery store mentioned as well as community access to healthcare.

Police substation – another consultant is working on the Environmental Assessment (EA) based on a site location assessed by Architects Hawaii in 2014. Site selection confirmed by Lee and Lance as the site that replaces the existing vacant housing at the South end of the site.

KPAL has plans for continuing activities in the area and would like to continue with lease. The community sees the hospital campus as a public open space and even take their dogs there. The uses will need to flow. Have even seen people with a truck in the middle of the grass having a picnic. Have to be careful of liability and can put signs up. At the appropriate time, will need to educate public. As the campus evolves, it may just naturally change. Hospital will not be aggressive in making changes.

KPAL facility is really out of the way, have to go through the whole campus to get there. Benefit seen if possible to move it closer to the road/entry. Prime edge locations have been claimed. There are also easements that need to be honored.

Easter Seals/ARC facility is adjacent to property. Need to find out more information about this and possibly tie it in to the overall campus. For example, they could benefit from the kitchen.

Kauai County is in the process of doing community plans. East Kauai is still in the works. Are working on form-based code. If any amendments need to be made, would be a good time to do it. Current height limit is 30 feet. It may be acceptable to plan for a 50 foot limit via a zoning amendment under current zoning. There is no TOD overlay for site.

Hoola Lahui Clinic – would like to expand, are running out of space. Terrie talked to the CEO there David Peters – has a native healer that comes once in awhile. Site is leased from HHSC. Clinic programs could tie together with the Hospital. Clinic is also located on East Campus of KVMH. David expressed a need for dental services in the area. Waianae Comprehensive Health Center is a good model. David said they are out of space primarily in the dental area. In their current building, they cannot expand dental chairs to make their current dentists more efficient so they can see more patients. Need to assess if SMMH is utilizing/maximizing the services they have now.

COMMUNITY WORKSHOP FACILITATION PLAN

Committee posed a few questions – what is the process to inform the community about this meeting? What do you see as the outline/agenda for the meeting? Before the meeting, an open house of the site may be appropriate. Say at 4pm offer the open house to the community so they understand what is available. Most people are unaware of the services at the hospital as well as the renovations that are occurring. Could even give a presentation of the hospital.

Outreach - mailer? Talk with Lee separately for a targeted method. Also how does SMMH make outreach to community? Want to cast the net wide, don't want them to be lectured, but a basis will need to be presented, and then breakout into groups for discussion. After the August and November meetings, how will we keep communication open with the community? May need to create an outreach plan. At the health fair/cancer walk, could have a table with info/handout.

Community buy in key to success. Lance emphasized Senator Kouchi's comment that the number one priority is to obtain community support and then seek the funding. It was also emphasized that the SMMH staff needs to take the lead in continuous community contacts throughout the process.

TRAFFIC

Bus is currently entering site to drop off at front entry. SMMH sees this need to continue into the future.

ENVIRONMENTAL

Phase 1 complete. Funding for Phase 2 delayed for 4 months. This work is outside of G70 scope and being managed by the State Office of Planning.

SITE

Lance, Lee and John to meet and coordinate with G70 Civil on County needs for community drainage.

FACILITY

SMMH moving forward with capital improvements including

1. Continuation of upgrades of LTC rooms. After all renovations are complete they will have 54 available beds. Bed license is for 66.
2. CT Scan installation by end of year
3. Renovation of a hallway in ER for a behavioral health 'safe room'.
4. Renovations to move acute beds to solarium and relocate solarium.
5. Psych Unit under renovation. In future, use can be adapted for Long Term Use.
6. G70 reviewed Physical Conditions Report and will finalize.

NEXT STEPS

1. G70 to work with Lance/HHSC on Community Workshop Facilitation Plan.
2. G70 to establish a sharefile site for Committee to access the reports as they are published.

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CONFERENCE REPORT

111 S. King Street
Suite 170
Honolulu, HI 96813
808.523.5866
www.g70.design

TO:	Files / Attendees		
FROM:	G70 – Barbara Natale		
DATE:	11/5/19	LOCATION:	SMMH
PROJECT:	Sam Mahelona Hospital Master Plan	PROJECT NO:	218048-01
SUBJECT:	Steering Committee Meeting 2	NO. OF PAGES:	2
THOSE PRESENT:	HHSC – Lance Segawa, John Pimental; OP – Rodney Funakoshi, Ruby Edwards; HHFDC – Stanley Fujimoto; KPC – Lee Steinmetz, Jodi Sayegusa; TMC – Terrie Martin; G70 – Katie MacNeil, Christine Ruotola, Barbara Natale.		

SUMMARY: Steering Committee Meeting held to review the two site alternatives and plan for the community workshop.

Community Visioning Session #2

- Scheduled for Tuesday November 19, SMMH Auditorium
- Optional site tour will again be provided prior to the meeting
- Recommendation to provide food at the back of the room so latecomers don't disturb speaker.
- Food and sign in at back of room
- Large screen with projection of site plan – need to be large enough (handouts as well?)

Safety Net Vision

- A new Psychiatric Wing will be expanded
 - Psych unit – flex male/female, also for long term care and difficult patients.
- Community expressed concern about safety at meeting we'll need to be prepared to explain the need and how it can be met.
- Gaps tend to be in long-term care.
- Need partners for Assisted Living / Memory Care.
- Adolescent psych/numbers are low. Send to Oahu. What is facility there? Need high level of skillset. Outpatient for behavioral health.
- Lance anticipates another community meeting at the time the money is available for development. Phase I will need community support.

Police Substation

- Substation is a done deal. Need to have conversation with design.
- Kauai Regional Board waiting for final concept drawing. Support from HHSC is there, but terms of lease agreement haven't been formalized (non-issue).
- Giving clarity to substation early will be helpful. Communicate value of police station: police as neighbors to residential treatment facilities.
- Provides additional level of safety. Many pieces that need to come together.
- Recent article – Police / homeless integration programming. Partner w/SMMH to provide safety net. How would this similar concept work here? Facilitators of health vs. enforcers.

- Get back in touch with KPAL police.
- AMR – emergency substation.

Alternative B – more workforce housing

- Establish fund for workforce housing and endowment.
- State will need to meet the needs of the community and attract all the players.
- 2 level 25 beds each SNF, and same for Psych Unit.
- Hipped roofs – residential in character, reduce feeling of high density.

Existing Neighbors

- Better use of Easter Seals and Public Housing
- Be sure they are on the email list
- Potential for Easter Seals to be on campus? What are the uses that are needed? Adult Day Care? Talk with them to see how it can be integrated fully.

Transit-Oriented Development

- Concept w/TOD, walkable community with mixed uses. More workforce housing, commercial uses, incorporate transit accessibility/coordination.
- At meeting – need to focus on how it will benefit community.
- Barber shop, convenience store, small restaurants, office space, yoga studio, community café, store to pick up milk if needed (how it is positioned – outward facing services).
- Bus stop currently at bus circle. Would like to continue this. ID bus stop on plan.

Affordable Housing

- Affordable housing comes with revolving funds that could be utilized.
- 80 units operationally optimal for developers to get affordable tax credits.
- 60% and below. DURP 140 (not used, for interim financing).
- Assisted living higher end market process
- Housing – who are we serving? Not just to increase affordable housing. Will also depend on market.

NEXT STEPS

1. G70 to work with Lance/HHSC on Community Workshop Facilitation Plan.
2. G70 to establish a sharefile site for Committee to access the reports as they are published.

June 6, 2019

To: SMMH Master Plan File

From: Terrie Martin

Subject: Summary of Stakeholder Interviews
(see Attachment A for those interviewed)

This document summarizes work-to-date with respect to potential uses for the SMMH Master Plan. It is based on interviews with key stakeholders and review of prior reports/studies. In parallel with the stakeholder interviews are efforts to gather data and develop forecasts of need on potential uses and to collect 'stories' from staff and providers of patients and residents who need services for which data is not collected. These stories will illustrate gaps in services on Kauai, that if available, would benefit the people in need and providers by providing the right kind of service at the right time.

Potential Uses for future SMMH Master Plan

Hospital

1. Continue current services and have appropriate space and facilities for the future:
 - a. Dedicated unit for acute Critical Access Hospital (CAH) beds
 - i. Current plan is to build 3 beds in 'Solarium'
 - ii. Two additional beds would be directly adjacent to the 3 beds
 - iii. Area where CAH beds are currently would be repurposed for LTC beds and/or service areas.
 - b. Behavioral Health acute bed area
 - i. Mission: Admit/treat/stabilize/discharge (no therapeutic treatment per se, just treat acute issues)
 - ii. Plans for Behavioral Health bed unit upgrades to eliminate ligature points
 - iii. Future might include new Behavioral Health Inpatient Unit where outdoor area would have an ocean view.
 - c. Long Term Care (LTC) Beds
 - i. Resident stays are mostly custodial – do not do therapeutic treatment
 - ii. If new Behavioral Health unit is built, current unit can be renovated for more LTC beds
 - iii. Might include designating LTC unit for different populations: step down/rehab, memory care, complex medical conditions, care for difficult patients
 - iv. Future might include outdoor lanai areas where residents/patients can enjoy the ocean views

- d. Emergency Room
 - i. Current plan is to build a 'safe room' for psych patients in the hallway on the south side of the department
 - ii. Existing 'double' ER rooms are not usable as doubles because the supply cabinets are along the back of the rooms accessible for only the patient nearest the wall. ER Director would like to move cabinetry along foot of beds to allow access by both beds.
 - iii. Future volumes will likely increase when the CT scanner is installed and when the Hospitalist is on board. These additions will allow more ER patients to be seen and admitted at SMMH.
 - e. Kitchen/Dining
 - i. In the future, having food service for the community might be considered
 - 1. Would require community entrance so public is not mingling with LTC patients who use the courtyard
 - 2. Affordable take-out meals or eat in meals would be a benefit to the community
 - ii. The Kitchen might provide affordable meals for other facilities or services near-by such as 'meals on wheels' (current 'meals on wheels' is \$14/meal), assisted living and/or group homes if located on campus in the future.
 - f. Staff housing:
 - i. Current units need to be updated
 - ii. Available for temporary/transitional housing until staff can find permanent housing
 - iii. Important because cost of housing is in short supply and is expensive
2. Plan for eventual replacement hospital

Long Term Care 'Gaps' for Seniors

1. Assisted Living (affordable)
2. Affordable independent housing
3. Long Term Therapeutic (current LTC at SMMH is more custodial)
4. Senior Center
5. Affordable Meals
6. Day Services
7. Outpatient
8. Transitional Housing
9. Social Services
10. Respite for Families
11. Dental

Behavioral Health

Services for both adults and adolescents (may require separate facilities/services):

1. Hospital based treatment
2. Group Homes
3. Counseling
4. Transitional Housing/services
5. Group Homes
6. Outpatient Services
7. Respite for families
8. Education/outreach
9. Dental

Note: Lance will develop survey for BH Vision Group that will ask about adequacy of each element on continuum of care, what currently exists on Kauai, and where gaps in service exist. This will be sent out with two weeks to complete survey.

Community

1. Wellness/Healing Campus
2. Traditional Healing
3. Community Center w/ gym, meals, program area
4. Parking for campus functions as well as community 'overflow'
5. Open space for exercise, dog walking, gathering
6. Affordable Housing
7. Police Substation
8. KPAL
9. Community access to kitchen
10. Certified kitchen
11. AMR Base Station
12. Grocery Store

Issues/Barriers to Success

1. Physical Access to the campus
2. Transportation
3. Provider recruitment and retention for future and expanded programs
4. Staffing – filling positions is difficult and takes too long
5. Public/private partnerships returning ample revenue
6. Safety net hospital mission/suboptimal revenue streams
7. Convincing the Legislature to fund development
8. Mandated change for some community housing from cesspools to septic system opportunity for providing for neighbors
9. ENGAGE COMMUNITY in meaningful way (most important component for Legislative support per Senator Kouchi)
 - a. Community supports the Master Plan
 - b. Naysayers don't kill the project

Attachment A

Stakeholders Interviewed as of June 1, 2019

Senator Ron Kouchi

Representative Nadine Nakamura

Stephanie Iona – Chair of Kauai Region HHSC

David Peters – CEO of Ho’ola Lahui Hawaii

Janet Berreman – Kauai District Health Officer, DOH

Toni Torres – Director of Public Health Nursing, DOH

Dr. Linda Rosen – CEO of HHSC

Jen Chahanovich – CEO of Wilcox Health

Lance Segawa, CEO, HHSC Kauai Region

Cheryl Tenneberg – Chief Nurse Executive, HHSC Kauai Region

Christine Asato – CFO, HHSC Kauai Region

Sherry Lauer – Chief Quality Officer, HHSC Kauai Region

Liza Trinidad – SMMH LTC Manager

Barbara Nakamura – SMMH Behavior Health Unit Manager

Devon Leopold – SMMH Emergency Room Manager

Greg Pacilio – Director of Physical Therapy, HHSC Kauai Region



CONFERENCE REPORT

111 S. King Street
 Suite 170
 Honolulu, HI 96813
 808.523.5866
 www.g70.design

TO:	Files / Attendees		
FROM:	G70 – Barbara Natale		
DATE:	1/27/20	LOCATION:	SMMH
PROJECT:	Sam Mahelona Hospital Master Plan	PROJECT NO:	218048-01
SUBJECT:	Steering Committee Meeting 3	NO. OF PAGES:	5
THOSE PRESENT:	Legislature – Rep. Nakamura; HHSC – Lance Segawa; OP – Rodney Funakoshi, Ruby Edwards; KPC – Lee Steinmetz; G70 – Katie MacNeil, Barbara Natale, Kahea Winchester.		

SUMMARY: Steering Committee Meeting held to review the two site alternatives and plan for the community workshop.

Project Status and Schedule Update

- In the final stages of deliverable. Have met with several groups separately to understand each agency’s concerns. Met with County twice – Dept. of Planning and Dept. of Transit.
- Added additional Community Meeting to review most recent plan and next steps (scheduled for late March)
- Also added small community meeting of those residents that live closest to SMMH (scheduled for mid-March)
 - Rep. Nakamura had a concern that her neighbors didn’t really know about the meeting. Was wondering why there weren’t more residents in attendance.
 - Some people wanted a hardcopy of the plan, but one was not provided.
 - Rep Nakamura would like to see a charette so people can place uses.
 - Would like to have a longer meeting more than 2 hours – shoot for a Saturday. Feel this group has not been part of this – need to walk the site, get the background, workshop to look at plans, bring in speakers like HFD, Lee Steinmetz to talk about their plans. Need SMMH staff support to go door to door. Use a cafeteria open floor plan vs. theater-style seating.
 - Focus on commercial strip and community park? Here are some alternatives, what do you like, don’t like? How would you redo it?
 - How many community members would have to be there? No number, just the right people.
 - Will work closely with Rep. Nakamura to make sure those people are there, and give them enough time to save the date.
- Will be handed over to HHSC to continue implementation, including additional permits needed and pursuing partnerships
- Will move analysis of costs until after meeting with community.

- Master Plan
 - Program
 - Site Plan
 - Lee – May have contributed to the idea of buildings along the street because of TOD, but open space is valued by neighbors.
 - How does the community view access to the park? Is some of the housing for patients or is this cut off from the public? Who will manage park – SMMH or County? Has not been discussed yet. However, have had liability issues in the past regarding dogs being brought onto the property. Even now have neighbors that use the open space to park their cars, and hopefully nothing will happen. Has been this way for years so there may be residents that feel like this is there area. Even recently accommodated a funeral that was held at a neighbor's house. Park is meant to be available for the public to use, and have roundabout driveway. Walking pathways to interconnect back into the neighborhood.
 - Any recommendations for reaching out to the community? Lee – the best way to address would be to go door-to-door with a flyer in hand. When they did TIGER project in particular neighborhoods they did this. GP was broader, internet, emails. Rep. Nakamura feels that door-to-door is important, she will even take part in this. Need to go to Hundley Heights, Pulehu, etc. Can call Lee separately for additional ideas. Rodney agrees that as the steering committee possibly 6 or 7 of us could canvas the neighborhood.
 - Ruby – what are the issues? Density, on the street? Housing? All of the above? Infrastructure impacts. Noone wants to see a substation there. Needs to be education for this is what we have now, and what do you think? Feels like the biggest concern is impact along Kawaihau road. What is the County looking for from a TOD perspective? Having the commercial area near the road is good. Can these be pushed back away from the street to create a “front yard”? However will reduce parking. Who will the park be for? Public or residents? If Residents, can move to the front. Would be good to have multiple plans for the residents to review.
 - Lee - from the first meeting, the vast majority who were there were tied to the hospital in some way, and a smattering of the community but not enough to weigh in heavily.
 - Lee feels that there has not been enough outreach regarding the substation by KPD. Would be good to possibly have a joint meeting. Would ask the police chief.
 - Looking at overflow parking for SMMH events. Have these been tied to metrics? Yes. Over 600 stalls on-site. G70 will continue to work with COK Transit and their public transit forecasts. Parking management plan will be recommended. There are other State properties that could accommodate parking, such as the triangle park, or State DLNR lands.
 - Ruby – feels that the community will need to reach a comfort level to understand what they will be losing and gaining. For example, if there is a farmer's market, library, senior center, coffee shop, there could be other benefits that the

community could see as reasonable trade-offs. May be willing to make the trade-offs but the discussion needs to happen.

- Need from State and County for affordable housing, so Hoola Lahui was relocated to the front.
- We don't have a community focus group like we do for the behavioral health and long-term health vision groups. (start one?)
- Possible idea to create more space would be to push Behavioral Health onto DAGS land (previous site plan idea)
- Lance would like to meet with the community first before meeting with State and County (KPD) agencies. Then can make proper suggestions to agencies.
- Preschool – 2 classrooms for 3-year olds and 4-year olds. Ruby: Wondering if there is room on the school campus. Possible to stack up the buildings on the road to meet the additional needs. Could even push them up against SMMH. For example, library doesn't need to be one floor, can put Senior Housing above.
- For TOD, needs to have access to transit. You can create a facility with interior walking. Need to look at density to free up open space – to be able to see others doing things – ie I need to go to the doctor – I'm going to get coffee first, after check out a book and have lunch.

- Phasing

- Phase 1 (5-10 years) – Hospital psychiatric ward and behavioral health. Will work with Legislature and DOH to access funds for this. Substation is in first Phase as well, but we are not sure where the funds are coming from. This reflects priority needs. As we listen to mental health professionals, the need has become a crisis. Whether Phase 2 or 3 come into play, at least we have made an impact.
- Phase 2 (15-20 years) – Start to add in assisted living facility, affordable housing, snf, structure to parking, and initial commercial. Two or three providers are interested in assisted living, which would create a funding source and generating passive income.
- Phase 3 (20-25 years) – rest of commercial and library. This last phase will be flexible based on the needs of the community. Is more parking needed? Are more services needed? This is far out, but at least we have a vision.

- Traffic Assessment and Improvements Plan

- See the need for flow around the property, but not recommending any additional traffic _____s such as stoplights.
- Looking at widening Nunu Road and providing grade-separated sidewalk. Need to work out parking with school.
- A large 8-10' multi-use path along Kawaihau road.
- Will need to look into left-turn lane into Kawaihau – need to look at easement
- An additional road to Kuhio Highway may not be feasible, but a road to Malihuna may be possible but would need further study.
- Some initial trip generation rates have been produced. Need to include commercial numbers.

- Infrastructure Assessment and Improvements Plan
 - Wastewater connection comes up from Kuhio Hwy near the Fire Station. From the Fire Station, is gravity fed and goes to a pump station, then to wwtp.
 - Would like to use existing laterals along the hill so that we don't need to build a new one.
 - Currently enough capacity for plans in the wastewater system.
 - Potable water is in a looped system. There are various meter boxes located along Kawaihau that could be used for the police substations, commercial buildings, etc.
 - The existing Kapaa area does have a water volume concern, and are working on installing a well now. Not sure which phase they are in – Rep. Nakamura believes in funding stage. Will need to see if the proposed design tanks and facilities will work for our plans. If not, will need to install our own tanks and boosters.
 - Drainage – may need to put detention ponds to hold before allowing to drain down the hillside. County would like to drain roadway through to DAGS property.
 - Build road to County specs. Still have a question as to whether the roads would be turned over to the County. How is this related to the ceded land issue? Nunu Road is still State owned/maintained.
 - Current site plan keeps bus stops at the front of the hospital as well as along the route. Is the additional bus stop within ¼ mile of the other? Would be inefficient for the bus to go this way. Currently county would like to remove the one on SMMH, Lance is pushing towards
 - Request to add 4 classrooms of 20 students within infrastructure calculations, not necessarily on HHSC land but adjacent.

NEXT STEPS

1. State (Rodney) working on meeting with State agencies. Not sure if part of current efforts or next step. As much as possible, provide any ideas such as parking management plan, preschool for DOE, whatever you feel would be useful for them. Rep Nakamura would like to see Ed Mersereau of Dept of Health in attendance.
2. Next Steering Committee Meeting
3. Small community meeting – March 14



CONFERENCE REPORT

111 S. King Street
Suite 170
Honolulu, HI 96813
808.523.5866
www.g70.design

TO:	Files		
FROM:	Barbara Natale, G70		
DATE:	February 10, 2020	LOCATION:	Legislature Conference Room 312
PROJECT:	Samuel Mahelona Memorial Hospital Master Plan	PROJECT NO:	
SUBJECT:	Adjacent Agency/Landowners Meeting	NO. OF PAGES:	
THOSE PRESENT:	DLNR - K. Miller; DOE – Robyn Loudermilk; DOH – E. Mersereau; HHFDC – S. Fujimoto, D. Neupane; HHSC/SMMH – L. Segawa; HPHA – K. Auger, B. Park; HSPLS – S. Aldrich, M. Fujitani, S. Kaneshige; OP – R. Edwards, R. Funakoshi, C. Miura; Rep. Nakamura’s Office – R. Nakamura, T. Shiramizu, B. Viernes; G70 – K. MacNeil, B. Natale		

SUMMARY:

SMMH Agency Meeting 2/10/2020

Legislature Conference Room 312

Sign-in sheet

When Rep. Nakamura started office, funded the SMMH lands. Felt that the area could be used to raise funds to help fund the hospital. It turns out that approximately 75% is public need.

TRD site, major bus stop in the community and connected to walking path. Prime location, lots of land underused. Lots of possibilities for community benefits. 34-acre site, very large. Main building is Sam Mahelona Hospital. Undergoing some renovations. Lots of expansion possibilities.

Adjacent land use: Kapa’a Elementary School, High School (combined 65 acres), Easter Seals Adult Center (leased by DLNR), Ho’ola Lahui Native Hawaiian Health Center. Elderly public housing – currently in fairly good shape but hopefully could be relocated.

DLNR land with Easter Seals has Nunu Road that is used by the school community. Land previously identified as DAGS land is DLNR but DAGS was a funding arm to develop Hundley Heights, otherwise does not have any oversight of this piece of land. This includes the beach walk which has an easement by the county. The triangle park is also owned by DLNR to be developed into a park.

Main access to SMMH is from Kawaihau Road, and is also an easement (including water line) to the HPHA housing.

Background for how we reached today’s site plan. In 2018 underwent planning with HHSC. Hospital is long-term and behavioral health, skilled nursing and occupational therapy. Healthcare campus. Focused in on the needs of long-term and behavioral health, created vision teams. Significantly high demand for assisted living. Only one facility in Lihue. State priority is affordable housing, including workforce housing. Important to provide housing for those that are working at the hospital.

UNLESS WRITTEN OBJECTION IS RECEIVED WITHIN SEVEN DAYS, WE ASSUME STATEMENTS CONTAINED WITHIN ARE ACCEPTED

ARCHITECTURE // CIVIL ENGINEERING // INTERIOR DESIGN // PLANNING & ENVIRONMENT

Community desires for convenient retail, fitness opportunities, bring Ho'ola Lahui (will increase dental services) and KPAL forward. HHFDC will only be the master developer if there is affordable housing. Question for HHFDC – to make a project work, what is the minimum number of units that are needed to have a development that will make the numbers pencil out, not grab all of the tax credits. 150-200 units is good. Anything under 100 is too small. HHFDC feels that 147 is fine. As the master developer, HHFDC could identify what else could be done on the property. P3 developer, as operator. Low-income housing credit.

155 beds in assisted living, including 30-bed memory care. Typical business model. If separate out, if there are standalone memory units that may not pencil out. Rep Nakamura said there are standalones on Oahu that are successful, 36 units.

Continuum of care – assisted living, could transition to memory care or skilled nursing if needed. Senior community center. Café, current kitchen can serve 500 ppl/day (2 meals ea), not at capacity. For all of the elderly folks that live in north shore and east side, if they want adult day care, they need to drive into Lihue.

DOH – acute need, Acute Psychiatric. Existing facility will be absorbed into SNF and renovated for geriatric psych of 18 beds, 9 beds more than existing. The visioning group identified the need for not only inpatient but outpatient facility, 6-month stay at Behavioral Health Treatment Center.

Raise mental health of all residents, address outpatient services as well. Currently not planning for youth facilities, don't pencil out/make sense at this facility, plus new facility that just opened in Lihue. But community park for youth to use.

Civic/TRD uses – take advantage of the bus stop. Police substation and Regional library. Substation preceded Master Planning efforts. Currently doing an EA for the site. Kapaa library looking to relocate, currently in the flooding/tsunami zone. Fits within the overall vision of active community engaged Health and Wellness village. Bring students and seniors into the area to gather. Library would need to go through a site selection process.

Library site features looking for – more space than current structure. Single story is best for managing staff. Would like to face mostly along street for better accessibility Meeting space is #1 thing communities look for. Flexible, big or small. 9,000 square feet would be a good size for them. Generally state-owned structure, as leasing doesn't work for them if funds aren't available. If 2-story, maybe DAGS, state uses in the top floor. Need to figure out agreements. Preschool would be good fit for library (will go through DHS not DOE).

Triangle park – bit of open space, slightly slopes. Difficult to access.

Ways to develop front of parcel – plaza area, farmers markets. Medical office spaces on second story of the buildings along the road. Scale – is single story vs 2-story preferred by community?

With the whole Pre-K initiative, 3 and 4-year olds. Elementary school doesn't have room for additional buildings. Library says this is a good co-location for them. Possibly adjacent DLNR land. Does it need to be near cafeteria? Ask Robyn about this. Elementary school is currently building

library. Lost funds early on and building sat for two years. From public library viewpoint, is fine to keep elementary school curriculum at elementary school. Public library supplements students and community. Would prefer to have most of library along road. Rep. Nakamura concerned that there will be community pushback with the buildings along the road.

DLNR did not do previous research on the area. Would need to get TMKs on these lands to determine if anything could be built in these areas.

Ed Mersereau – Behavioral health would like to have office space in the area where library was previously placed. Okay with not having full street frontage. Good triangulation with emergency room, substation, and SNF. One idea is to switch property of Easter Seals with area up front and put residential behavioral health in the back. But may need to be renovated for residential. Just something to explore. Residential Behavioral Health will be cooperation with DOH and HHSC. How would you describe the average person at this facility? Co-occurring disorder, substance abuse such as lower-level mental issues. The acute facility will be secure facility. The triangulation piece is great because if someone at the facility decompensates, they are close to other facilities which would be needed. Cluster is good for management of the continuum. There is only a small percentage of folks that are dangerous to community if properly medicated. The goal to have continuum of care is important. Would defer to Lance and community. The vision group had conversations around community perception, what is real, how to explain things. Early concept was isolated in the corner. Will need to provide description of the type of patient that these types of facilities will treat. Difficult patients would be kept in locked unit.

Rep Nakamura is concerned that this is not a locked facility and will be near library and preschool. The most dangerous of dangerous would be at facility on Oahu, vs. the facility at Mahelona. The reality is that there has been a residential women's treatment facility in the middle of Kahala for 20 years. Have things feel safe but not necessarily quarantine people that are suffering from these issues. Did look at various places around the campus and talked with community and they had a remarkable acceptance of the mental health. This is the number one need. If built first, everything else would be built around it.

If there was a forensic patient that came through SMMH, they would be held in a locked unit until they are transferred to Honolulu. The needs of a forensic patient are very different. Not proposing that SMMH is the solution for these types of patients.

Ed feels that triangulation is very spot on. For DLNR – if move behavioral health to their lands, is this a direction we can move? Meeting will need to be scheduled with DLNR, Ruby and Katie to see what can be done. Appreciates all of the inclusion for behavioral health. Looking at checkbook right now. A lot of things that could be utilized as far as 3rd party building and utilization. Linking brand new youth center for back and forth. Really excited about what is going on and in full support.

Still exploring how much open space the community desires, as far as buildings along road and walkways. Rep Nakamura walks around the hospital. Current plans include walkability and community park area.

The assisted living and commercial are only money-making facilities. However, public needs are priority. Senior association at HPHA Public Senior Housing? No.

What is role of preschool with elementary school? May or may not be, will run through DHS. Right now is pilot program using DOE facility, but comes under early childhood education. Impetus is DHS to have the lead on pre-k. If have houses, are going to need a place for the kids to go to school.

Classroom is not just classrooms, outdoor space, criteria for licensed preschool. Dedicated preschool yard, not to be shared with public. If could use some of the DOE yards, would be helpful. Robyn – don't preclude anything but there is some downslope. Prior DOE had role over preschools but now it only relates to SPED. New territory. Jurisdictional issues. EO to DOE. Preschool is not part of education purpose. What about area near existing Kindergarten area at the elbow of Nunu road? When Rep. Nakamura's kids were there the K classrooms were spread out. Robyn will find out about the classrooms. 4 classrooms near library but not near residential or behavioral health. Library already has issues with mental health around their libraries.

Looking at public/private partnerships to make preschool, others to make things happen. Could also possibly put preschool where current greenhouse is.

Current water, sewer, power. Traffic – an additional right-turn lane out of the driveway.

Part of the majority package is \$75 million for neighbor island infrastructure. Money in for EIS to be ready to move on this once MP is done. Working together to move forward.

Use other words besides poor, old and mental health. Doing overall health, longevity, mental wellness, using more positive words. Healthy wellness community. Adopt this language as we describe it. Even the labeling using on the site plan. ie workforce housing vs affordable health. In the end really need to know what it is.

Follow-up DLNR information provided by Luke Sarvis, DLNR:

FYI this is the response from the Kauai District Office regarding the pedestrian path.

Yes, the subject multi-use bike and pedestrian boardwalk is under an easement to the County of Hawaii, identified as Land Office Deed No. S-29,204.

We are planning to conduct a sweep of the area to identify the unauthorized campers in the area, in hopes have them vacate the property. We also intend to clear or trim the vegetation.

Appendix H

Large Community Meeting Notes



CONFERENCE REPORT

111 S. King Street
 Suite 170
 Honolulu, HI 96813
 808.523.5866
 www.g70.design

TO:	Files		
FROM:	Barbara Natale, G70		
DATE:	August 20, 2019	LOCATION:	Kapa'a Elementary School Cafeteria
PROJECT:	Samuel Mahelona Memorial Hospital (SMMH) Master Plan	PROJECT NO:	218048-01
SUBJECT:	Master Plan Community Meeting	NO. OF PAGES:	8
THOSE PRESENT:	(see sign-in sheet)		

SUMMARY: A meeting was convened to gather community input on their thoughts related to the future of both Samuel Mahelona Memorial Hospital itself, as well as adjacent uses on the property. The community needs and desires will be integrated into the Master Plan as much as possible, within the guiding mission of the hospital.

Representative Nadine Nakamura opened the meeting. Samuel Mahelona Memorial Hospital (SMMH) currently relies on \$4M per year from legislative funding. This master plan will help to investigate potential income-producing services for the hospital. Rep. Nakamura lives in the neighborhood and talked about many of the community activities held at SMMH of which she has taken part.

Lance Segawa, Regional CEO Hawaii Health Systems Corporation (HHSC), Kauai Division. Lance provided background on current hospital services. SMMH is the only facility on-island with in-patient behavioral health. Mr. Segawa has convened two vision groups to inform the master plan, comprised of service providers in the fields of behavioral health and long-term care. SMMH would like to provide services to the community of the highest quality, and considers the community as all of Kauai.

Terrie Martin of Terrie Martin Consulting reviewed population statistics, hospital-based services needs and long-term care needs for Kauai. There is a large population over the age of 85 that will need long-term care. This age group is expected to increase by 225% over the next 25 years. This indicates there may be a need for more long-term beds by the year 2025. A high percentage of the population is forecasted to also be made up of children under the age of 18.

The statistics relating to an aging population convey the need for assisted living, memory care, transitional homes, and care homes. Independent living is not as high of a priority, as there is generally a good stock of housing to fulfill this need. However, there is a need for "aging in place", to transition from independent living to assisted living. There is a shortage for these services on island. Currently, 12 beds are all that is available for memory care, and 50 beds in care homes that provide skilled nursing. Initial analysis shows that there are gaps in care homes and transitional homes for both long-term and behavioral health.

Katie MacNeil, Architecture Principal at G70, reviewed the current layout of the hospital, and potential changes to increase efficiencies. Other facilities on property were reviewed. The feedback received from the community at this meeting will be considered in the overall design and layout of the hospital and surrounding property.

Christine Ruotola, Planning Principal at G70, reviewed the land use laws for the hospital grounds. Generally, anything that fulfills the mission of HHSC is allowed with the approval of land use permits, including medical care, housing, parks, etc.

Meeting participants separated into four smaller groups to discuss their needs and desires for SMMH. Facilitators recorded the discussion. Participants were also encouraged to share input by contacting Lance Segawa or Barbara Natale (G70) directly at any time, and/or providing written comments on forms at the meeting. The dialogue is grouped by topic, below.

Existing SMMH Facility

The existing SMMH infrastructure, current capacity, and possible improvements were discussed.

- Need to reconfigure space to de-conflict gender impact on occupancy.
- Add Risk Management Solutions (RMS) to assess finance, safety and patient care.
- Emergency Room (ER) numbers are steady even with opening of Urgent Care nearby. No expansion of number of stations necessary, but existing physical space does not support the uses well.
- ER finds psychiatric patients are slow to place.
- Need to keep parking.

Other Uses on Property

- Kauai Police Activities League (KPAL) clubhouse and field for youth programs.
- Ho'ola Lahui Hawai'i Native Hawaiian Community Health Center.
- Staff housing (6 units).
- Vacant house.
- Note: HPHA Hale Nana Kai O Kea State Public Elderly Housing is accessed through the property but is not within the property.

Housing

A variety of housing needs were identified.

- Work force housing (for hospital staff), to also include families:
 - Temporary / permanent
 - Part of benefits package
- Affordable housing (possibly micro units?).
- Intergenerational Living (IL) – students, seniors, young adults as resident assistants, hospital staff, families with children.

- Residential transitional/assisted living housing for both behavioral health & long-term care are lacking on Kauai.
- Group homes with assistance.

Temporary Transitional Facilities

- There is a need for a central intake facility with temporary transitional facilities and crisis outreach counselors where a client/patient has a safe and non-institutional (homey) place to decompress during a crisis.
- This could also serve as a location where police bring detainees that need evaluation.
- Kauai Police Department asked if a crisis intervention team could be housed on site? It can take several hours before patients are evaluated by both the clinician and then the psychiatrist.
- More staff availability is needed to reduce wait time.
- A patient sent home before diagnosis could result in suicide.

Behavioral Health

Mental illness is diverse and not easy to identify. Mentally ill are more likely to be victims than perpetrators. There are various needs and spectrums of mental health as well as stigmas. For example, one could be skeptical and think "I'm not as sick as those people." Several participants had family members who need(ed) behavioral health services.

What's the next place if no care at home is available? There was a closure of mental health facilities in 1980's. Hospitals discharge to Sam Mahelona and O'ahu for mental health.

- Behavioral Health services are lacking on the island.
- Need double the facilities of what we have today – especially long term with therapy, not necessarily acute care.
- There is only one psychiatrist on Kauai who takes private pay patients.
- Lack of practitioners for mental health. There is an 8-month wait.
- All mental health professionals are booked solid with a backlog.
- Finding case managers/social workers is very difficult.
- Unless you are a harm to yourself or others, not much care is available.

Mental health management is needed, to include counseling, wraparound services, care and support for family members, functional care and integrative care. Expand patient psych. Multi-functional behavioral health services could include:

- All mental health professionals.
- Health clinic.
- Case management, social worker.
- Security / safety plan.
- Outreach.
- Family support.

Many stated that acute inpatient, residential and outpatient drug/alcohol detox and rehabilitation services are needed for both adults and adolescents. Services to treat the whole family do not exist on island. The elementary school should be separated from a detox unit.

Adolescent Behavioral Health

An inpatient/outpatient diagnostic and treatment facility is needed to treat pediatric and adolescent psychology, ADHD, etc. Early intervention is key.

- There is an 8 semi-private room facility nearing completion for adolescent behavioral health near Lihue that will serve the entire island.
- An operator has not yet been identified.

Memory Care

- A memory care unit is needed, and not only for the elderly.
- The one 12 bed unit on the island is for private pay only and has a long wait list.
- Alzheimer's, dementia.

Long Term Care

- Care home that takes Medicaid. Really need places for patients "too good" for long term care.
- Acute - Long term care patients on ventilators.

Respite Care

- Respite services for family – a safe in-patient place for caretaker to have their loved one (adult or child) cared for while they rest or take care of other needs.
- This would be available both for emergencies and a few days or over a weekend.
- Services for an in-house assistant also needed.

Continuum of care / Fill in Medical Gaps

- The whole continuum of care is needed, from outpatient, inpatient, day care to acute care. SMMH will need to see where they are able to fill in the gaps.
- Medical gaps: for example, inpatient dialysis, care for patient on dialysis who gets sick (some capacity at Wilcox).

Alternative Healthcare

- Functional medical approach.
- Alternative health care without stigma and exclusivity.
- Examples: acupuncture, hydro colonic therapy, chiropractor.
- Cultural healing practitioners.
- Dental.

Healing Campus

The Hospital is known by some as the 'looney bin' or as an 'old folks home'. Would like to see those characterizations change in the future, to instead be known as "The pride of the community," an intergenerational, community and cultural healing/wellness campus that could be a model for not only Hawaii, but beyond.

- Wellness focus.
- Education and Training.
 - Medical and community.
- Day care – kids, adults, seniors.
- Senior community center with children, intergenerational activities.
- Best place to be a Kupuna.
- Native Hawaiian Cultural Center.
- Kupuna and local reconnection with cultural practice and lifestyle.
- Where anyone can come to meet, come together, a place to belong.
- Campus feel / approach, residential in character - scale, setback and landscape needs to work with neighborhood, capitalize on views.
- Community use space, classrooms, arts and crafts, music, community gardens and training, exercise classes, commercial kitchen for community use/make Meals on Wheels.
- Focus on movement/exercise – provide a nexus of bike paths, walking paths, stairs, paths for wheelchairs, movement inspiring plaza, glassed in activity centers where exercise is emphasized, gym-type function, pool to swim.
- Focus on healthy food with community gardens for healthy food, a healthy market / convenience store / farmers market, a cafeteria for patients but also open to the community to eat in or take out healthy food, farm to table.
 - Provide opportunities for school age children to participate in preparing healthy meals alongside elders and other community members.
- Provide a physical environment that is safe – lighting, trails, the right eyes on activities, outdoor and indoor.

Education and Training

- Professional: Short-term / continued development courses regarding mental health.
- Medical Students: Transitional courses from academic to professional. Bring doctors to train students. Need to attract and support psychiatric professionals, physician assistants (undergrad, grad), nurses, etc. Vibrant community with credibility.
- High School Students: Opportunity to provide high school student with education experience, job opportunities. Enhance support to Kapa'a High School Health Academy, possibly provide space.
- Community: Chronic disease education management, diabetic behavior therapy, high blood pressure, diet and nutrition (diabetes, inflammation, etc.), group therapy; co-facilitate.

- Course curriculum facilities, multiple classrooms, breakout rooms, computers. Rooms could be reserved to hold classes about mental health.

Medical Staff Recruitment

- Effort to attract/recruit/ retain providers. Telemedicine is not effective. Need the relationship, family team.
- Recruitment and retention is a huge issue.
- State process for hires is cumbersome and slow.
- Affordable housing on campus for professional staff would be a terrific asset, enticing for new recruits.
 - Temporary housing for recruits/interns while they search for permanent or for their tenure on Kauai.
 - Permanent affordable housing for full range of staff.

Resilience Hub

The hospital can act as a resilience hub in time of disaster (i.e. storms, tsunami, extreme heat events). It is centralized, close to the roadway, and could provide shelter.

Sustainable building/site

- Renewable energy – PV integrated or parking canopy. Decrease energy use of hospital.
- Sustainable, green building.
- Increase tree canopy coverage/restoration of land. Create a natural environment.
- Use electric cars on campus to reduce footprint and save money.

Funding / Phasing

How to fund services/facilities and continue to have financial sustainability?

- Pursue partnerships with Kaiser, public/private partnerships, Federal money, SAMHSA, County residential drug.
- Recognition that the master plan would need to be implemented in phases because it would be too costly to implement all at once
- Start with a core of services that would 'seed' the future development.
- First services should be to prevent folks from needing more costly healthcare services – education, community-based services that promotes health, services that allow patients to be at the 'right' level of care for their health.

Provider Collaboration

- Continued communication among providers.
 - County, State, new adolescent treatment facility.
 - Partnering with organizations. NAMI, others on-site?
- Increased square footage to increase services, providers, partnerships, multi-services.
 - Shared spaces.
- La'i'Ōpua – Kona / Waipā Foundation.

Police substation

There was discussion about the police sub-station, why it is a use on the campus, how big it would be, how would it work, should it be somewhere else... etc.

- The presence of police is sometimes disturbing to the mentally ill.
 - Does their presence exacerbate their state of mind or is the safety they provide more important?
 - Police presence nice when scary people come.
- Some neighbors support it.
- Not enough is known about the intent to be able to assess it.

Traffic and Access

- Increased traffic level of service (LOS) on highway with increased use.
- Alternate access to highway?
- Widen “back” road; increase access.
- Onsite housing reduces traffic congestion.
- KPAL blocks off “old” walking path.

The groups reconvened and each group gave highlights of their discussions.

Group A: This group focused on the need for a wellness campus, with educational training for both medical students and community, as well as housing for staff, students, and long-term assisted living. Transitional facilities are needed, primarily for mental health to provide a space to decompress while waiting for diagnosis. Respite care is lacking both for emergency purposes and longer needs, such as a few days or week.

Group B: Many in this group were either from the neighborhood or medical practitioners, some also currently staff at SMMH. Behavioral health services are lacking on the island. Hiring medical professionals is slow, and recruitment and retention is difficult. On-site housing for staff would be a draw. Long-term care and behavioral health should continue on campus. Pros and cons of a police substation onsite was discussed. A vision emerged for a safe multi-generational wellness campus, with opportunities for movement and healthy eating opportunities, and implemented in phases.

Group C: Providing expanded mental health and senior care were the priorities of this group. Mental health management would include counseling and a 'wrap around' facility. Senior care would include adult day care, transitional housing, assisted living, and long-term acute care. SMMH as a community resilience hub and cultural center would help with local reconnection to cultural practice and lifestyle. This group saw that the campus could be developed to be in scale with the residential community, setback and with a well landscaped frontage, aspiring to make it the pride of the community.

Group D: In addition to what the other groups said, new/more square footage is needed at the campus to support increased services, additional providers, partnerships, etc. Recruitment and retention of service providers is critical, to include providing training, housing, etc. Financial stability is important.

The information gathered from tonight's community meeting will be incorporated into physical plans. Variations of these plans will be available for the community to review at the next meeting in November, date to be determined.



CONFERENCE REPORT

111 S. King Street
 Suite 170
 Honolulu, HI 96813
 808.523.5866
 www.g70.design

TO:	Files		
FROM:	G70		
DATE:	November 19, 2019	LOCATION:	Samuel Mahelona Memorial Hospital (Auditorium)
PROJECT:	Sam Mahelona Memorial Hospital (SMMH) Master Plan	PROJECT NO:	218048-01
SUBJECT:	Master Plan Community Meeting #2	NO. OF PAGES:	3
THOSE PRESENT:	(see sign-in sheet)		

SUMMARY: A meeting was convened to gather further community input related to the future of both Samuel Mahelona Memorial Hospital and the property. Three Master Plan alternatives were presented for response. Community members were asked to provide feedback during the meeting and/or to team members separately.

Representative Nadine Nakamura opened the meeting, thanking the community for its continued participation.

Lance Segawa, Regional CEO Hawaii Health Systems Corporation (HHSC), Kauai Division, provided updated status on the two vision groups (behavioral health and long-term care) convened for the master plan process. The groups continue to meet to identify island-wide needs and solutions and to identify SMMH's role in provision of services.

Terrie Martin of Terrie Martin Consulting reviewed population statistics, hospital-based services needs and long-term care needs for Kauai. There is a large population over the age of 85 that will need long-term care. This age group is expected to increase by 225% over the next 25 years. This indicates there may be a need for more long-term beds by the year 2025. A high percentage of the population is forecasted to also be made up of children under the age of 18.

Christine Ruotola, Planning Principal at G70, provided an overview of input received at the first community meeting (8/20/2019). Generally speaking, there is support for expanded health care services at SMMH, particularly those related to behavioral health and long term care, as well as further use of the site for housing and community facilities set in a park-like residential scale village environment.

Katie MacNeil, Architecture Principal at G70, shared examples of specific health care and housing facility types. She then presented 3 early concept alternative plans for the SMMH campus based on input from vision groups, community outreach, state & county agencies, and market research. All alternatives provide a level of health services, affordable and senior housing, and community support facilities. Alternatives varied by configuration and quantity of facilities on the campus.

Discussion / Questions / Comments from Community Members

Program:

- What numbers did we use for the total population of the island? Are we using a static number? Come and go population?
(Terrie): Non visitor/residential numbers. Numbers are not static. We used projected numbers to 2045.
- The growth of beds presented was a forecast of 5 years?
(Terrie): The team forecast need in 5 year increments to the year 2045 regarding data gathering and planning (Long-term Vision). The team relied on vision groups to accurately target what is needed. The plan is looking towards the growth of affordable housing to support local workforce.
- Is there a place where Kauai Community Correctional Center (KCCC) may transfer patients into the SMMH facility?
(Lance/Katie): Expansion of the Psychiatric wing from 9 to 18 units will help accommodate future transfers. Also, SMMH will provide expansion spaces for patient detox/acute care units; 4 beds are planned.
- Is storefront needed? – people from the neighborhood will not be driving there to do business. Not enough disposable income on site to support the businesses.

Design Characteristics

- What is the limit of the building planning area – 3 stories?
(Katie): The current zoning height requirement is flexible with building heights due to its R-1 / ST-P zoning designation. Multi-family residences will be maxed out at 45'-0" (three to four stories). Density of affordable housing is presented at 20 units per acre. Residential design direction will also be implemented with hipped roofs throughout the property to complement the surrounding neighborhood. Alongside Kawaihau road, storefront will be at 1 to 2 stories. to keep the character of adjacent residential neighborhood.
- Due to the fact of land cost on island is so high, we are not visualizing vertical construction above 3 stories. The overall concept is great; however, the density will need to increase.
- Walking within the campus. I see no covered walkways in masterplan.
(Katie): We have implemented generous drop off areas at each major facility within the village (Hospital, Psych Unit, Assisted Living Facilities). Conceptual masterplan will also include covered bus stop geared towards County bus transportation. Implementation of additional tree canopies will provide shade between each zone.
- How can Kawaihau road support traffic?
(Katie): Team is currently working with traffic engineers to identify issues moving forward with future conceptual master plan. Based on initial review, no red flags have been identified. Implementing additional entry points along Kawaihau and Nunu road will help alleviate traffic, especially during peak hours.

Infrastructure / Traffic

- New Project at Koloa Village will be a traffic nightmare, similar situation is being presented: school adjacent, commercial, housing, etc.
- Clientele is great as they are directly close to the hospital. However, can this road really support 200 residential members? We also need to talk about infrastructure.
- Increase the workforce housing so people can walk to work therefore lessen traffic on Kawaihau Road.
- Nunu Road along the west side of the campus is already a 'mess' when drop off and pick up occurs for the daycare.
- Concerns people will drive through the campus to drop off kids at the daycare adjacent to the school.
- Exploration if another access road from Kuhio Highway was possible near Easter Seals.
- Question regarding sewage capacity and if the hospital was connected to area system. Engineers are assessing existing system and needed improvements.
- Climate change, what is being done to be energy dependent and self-sufficient? With sea level rise roads will be engulfed and closed. Consider plan to handle waste on site when County facilities are unavailable.

Next Steps / Engagement

- Process question: What is the process of development plan. Is EIS next? Is a smaller plan incremental in phase next? We are always caught into process of parceling which delays the overall project.
(Christine): Prior to EIS, it would be strategic to meet, receive additional feedback, and further refine the master plan. The plan alternatives will be developed further towards a preferred plan. Once a master plan is settled, an EA/EIS is the next step.
- Are the vision groups still meeting?
(Lance): Vision groups are still meeting; we are nearing the end of concept design. Those who are interested in this process please contact Lance.

Appendix I

Historic Review – Site

**SAMUEL MAHELONA MEMORIAL HOSPITAL
CAMPUS REDEVELOPMENT PROJECT**

CULTURAL AND HISTORIC RESOURCES REVIEW

Project Location:

4800 Kawaihau Road
Kapa'a HI 96746
'Ili o Ulukiu, Ahupua'a o Kapa'a,
Moku o Puna, Mokupuni o Kaua'i
TMK (4) 4-6-014:113

Prepared for:

Hawai'i Health Systems Corporation
Kaua'i Region
4800 Kawaihau Road
Kapa'a HI 96746

Prepared by:



111 S. King Street, Suite 170
Honolulu HI 96817

October 2019

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Evaluation of Project Need to Comply with State Historic Preservation Law

Samuel Mahelona Memorial Hospital (SMMH) is seeking to redevelop its campus at 4800 Kawaihau Road in Kapa'a on the island of Kaua'i, on TMK (4) 4-6-014:113. The SMMH is currently in the conceptual planning stages of redeveloping its existing campus and facilities in accordance with its mission and community wishes. The proposed project is to meet the need for long-term senior care and mental health services on Kaua'i as well as to provide public spaces to host events and gatherings for the surrounding community of Kapa'a.

Under Hawai'i Revised Statutes (HRS), Chapter 6E-8, before any state or county agency issues a permit, license, certificate, land use change, subdivision, or other entitlement for use, it shall advise the State of Hawai'i, Department of Land and Natural Resources (DLNR), the State Historic Preservation Division (SHPD) as to the proposed project. Prior to any issuance of approval, the state or county agency must allow SHPD an opportunity to review and comment on the effect of the proposed project on historic properties or burial sites.

For purposes of this analysis, the following statute definitions apply:

"Historic property" means any building, structure, object, district, area, or site, including heiau and underwater site, which is over fifty years old.

"Burial site" means any specific unmarked location where prehistoric or historic human skeletal remains and their associated burial goods are interred, and its immediate surrounding archaeological context, deemed a unique class of historic property.

Rules governing procedures to complete the state historic preservation review process under HRS 6E-8 are codified under Hawai'i Administrative Rules (HAR), Title 13, Subtitle 13, Chapter 275.

On behalf of the Hawaii Health Systems Corporation (HHSC), this initial evaluation does not fulfill the requirements of conducting or completing the state historic preservation review process under HRS 6E-8. Rather, the intent of this evaluation is to assess the range of opportunities and constraints relative to the care and protection of known historic and cultural properties within the immediate and affected project parcels and/or identify the steps necessary to adequately meet the review requirements under HAR 13-275 as early as possible in the planning process.

This evaluation is based upon the review of available records provided through research conducted in February 2019 at the SHPD O'ahu office library located at 601 Kamokila Blvd #555, Kapolei, HI 96707 as well as the SHPD office library located at 1720 Haleukana St., Lihu'e, HI 96766. Additional sources consulted include the archives of the Kaua'i Historical Society, historical resources, scholarly research, online databases such as the Office of Hawaiian Affairs Kīpuka, Waihona 'Āina, AVA Konohiki, the State of Hawai'i General Survey, Ulukau, Nūpepa, and other private collections of historical accounts.

Executive Summary

Below are the findings of research as it relates to the specific project parcel:

- a. The project is located at 4800 Kawaihau Road on TMK (4) 4-6-014:113. The proposed project is in the 'ili of 'Ulakui/Ulukiui in the ahupua'a of Kapa'a and the moku of Puna on the island of Kaua'i. Historical records indicate that area predominantly was part of a traditional landscape for agricultural cultivation and eventually a part of the evolving landscape in sugarcane production in the 1840s.
- b. SHPD State Inventory of Historic Places records show approximately 15 previously recorded cultural and historic properties containing historic sites and features within a 2-mile radius of the project area. These sites spanned the area between Waipouli and Keālia but were largely concentrated in Kapa'a proper. They consisted of eight (8) archaeological sites and seven (7) historic properties. A total of 26 traditional and historic burials were identified from these eight archaeological sites along with evidence of permanent Polynesian or Hawaiian occupation dating from as early as A.D. 1160-1290 according to radiocarbon samples.
- c. According to records obtained from the State Historic Preservation Division, approximately 13 archaeological investigations have been completed in the twentieth century within an approximate 2-mile radius of the project area. These studies have identified both pre- and post-contact historic resources such as traditional unmarked Native Hawaiian burials; midden and artifacts suggesting permanent habitation; and subsurface features such as postholes and pits.
- d. However, upon review of available resources, no Land Commission Awards (LCAs) have been identified within the immediate project site. however, an archaeological monitoring study by Dagher & Dega (2016) located three LCAs within an approximate 0.5-mile radius of the parcel. According to the records of two LCAs located to the north of the proposed project site, the area consisted of traditional house lots (2), lo'i terraces (6), and kula, or open fields (1), which may have been utilized for traditional cultivation practices. These LCAs were awarded to Kaawapupuule (8842:2) and Umiumi (10906:1) and
- e. According to Executive Order No. 30 dated July 20, 1915, 120 acres of Crown Land in Kapa'a were set aside for the Samuel Mahelona Hospital. Executive Order No. 30 was cancelled on November 14, 1975 by then Governor George Ariyoshi, who then created Executive Order No. 3373, which designated approximately 60 acres of land in Kapa'a for the SMMH site on November 9, 1987. On August 28, 1998 the Board of Land and Natural Resources approved the cancellation of Executive Order No. 3373, along with several others issued to the Department of Health, for the purpose issuing the lands to the newly created Hawaii Health Systems Corporation (HHSC).
- f. No formal historic preservation review has been completed under HRS 6E-8 for this parcel to date.

Traditional and Historical Background

Land Names

The proposed project is in the 'ili of 'Ulakia/Ulukiū in the ahupua'a of Kapa'a and the moku of Puna on the island of Kaua'i. Little is known about the 'ili of 'Ulakia/Ulukiū in the ahupua'a of Kapa'a. It appears as a triangulation point in Registered Map No. 2324 "Hawai'i Territorial Survey map of Kapa'a, Kaua'i." It also makes small appearances as an 'ili or site of a village in various Māhele documents. Little information beyond this was able to be attained [Dagher and Dega 2016].

Traditionally, Puna, located on southeast coast of Kaua'i, includes ten ahupua'a. One of the five traditional districts on Kaua'i, Puna's boundaries were changed in the 1840s during an era of rapid modernization in the islands. This ancient district soon became known as the Lihu'e District, named after a well-known town within its defined area [Belluomini, Yucha, & Hammatt 2016].

Like its neighboring moku, Ko'olau, Puna contains streams that originate from Hanalei Valley and the Wailua River. Farmers grew a variety of plants here, including coconuts, breadfruit, taro, and sweet potatoes [Handy & Handy 1972].

Kapa'a, meaning "solid," [Wichman 1998] is a large ahupua'a of Puna containing small ridges and a valley where Kapa'a residents grow taro [Bennett 1931]. Many legends have been written about this ahupua'a. It was the home of ancient chief Moikeha who sailed here from Kahiki to settle, as well as that of Paka'a, keeper of the supernatural gourd that held all the winds of Hawai'i.

"Kaua'i is famous for its wet and rainy climate. In keeping with this portrayal, at least five rain names have been identified for the Kapa'a area. These include Hā'ao, Kea, Makanoe, Nāulu, and Tēhau [Akana and Gonsalves 2015].

Hā'ao is a type of rain that falls in successive showers, similar to the way the retinue of a chief follows in a procession. It is also part of the name of a kapa pattern called uahā'ao or naouahā'ao.

Kea, misty or "white," rains are found in Puna and are said to "measure the expanse of Kapa'a" in the makena, or lament, for 'Emalani Kaleleonālani, Queen consort of Hawai'i, wife of Kamehameha IV.

Makanoe, or "misty face," rains are described in a kanikau, or lament, for David Kahalepouli Pi'ikoi as cold, upland rains found in the Puna district. Pi'ikoi was a high chief descended from the original high chiefs of Kaua'i and was the husband of Princess Victoria Kekaulike.

Nāulu, described in a mele about Kaua'i said to be composed by Kapa'akea, refers to sudden showers, a shower cloud and a wind. Kapa'akea was a high chief and the patriarch of the Kalākaua lineage.

The qualities of the Tēhau (also known as Kēhau) rain are defined as dew or mist.

‘Ōlelo No’eau

‘Ōlelo No’eau (‘ŌN) are Hawaiian proverbs that shed light on cultivated worldview. Some may be poetic, while others are allegorical. All are typically based around places, landscape, and important people in the Hawaiian historical tradition.

One expression tells of the calm and peaceful beauty of the island [‘ŌN 2060]. Several ‘ōlelo no’eau recorded about Kaua’i illustrate the tough character of its people. In one mo’olelo from the island, a stingy man who did not want to share his food with visitors would invite them to try his lumpy poi. All would decline until one day a hungry visitor from Hawai’i accepted and discovered the lumps were really pieces of dried octopus. Thus, the expression became “Kaua’i of the hard poi” [‘ŌN 1555]. Manokalanipō is immortalized as one of Kaua’i’s ancient chiefs in ‘ŌN 1556.

An epithet from the Legend of Kewalo describes Kaua’i as an isle of warriors who are ever on the defense [‘ŌN 2440]; another expression [‘ŌN 2560] proclaims “tough are the men of Kaua’i,” referring to a mo’olelo about a Kaua’i man who was a passenger on a canoe to O’ahu where they were welcomed by supernatural beings. Distrustful of the Oahu people, the man dug a hole that night, crawled into it and covered it with a mat. When his companions from the canoe fell asleep the beings came and ate them, but he was spared. The man hurried home and told his friends and together they made wooden images, hid them in the canoe, and sailed to O’ahu to be welcomed once more. This time the images were put inside the house while the men hid outside. When the hosts came around to eat the visitors, they instead bit into the hard, wooden images. The Kaua’i men burned the house, thus ending the evil on O’ahu.

‘Ōlelo no’eau for the Puna moku regard the land as beautiful and peaceful. One expression refers to the beauty of Puna, presenting it as simile for there being “nothing to complain about” [‘ŌN 838]. The chief Mo’ikeha chose to establish his permanent home in the expansive Kapa’a ahupua’a for its calming atmosphere [‘ŌN 1450] and lovers were said to enjoy whiling the time in the soft kalukalu plants in the area [‘ŌN 1736].

Culturally Important Resources of the Area

Makaleha Mountain

According to legend, there is a banana grove, known as Ka’ea, in the Makaleha mountains, the mauka lands of Kapa’a, beyond the hospital. The grove was said to belong to the kupua, or supernatural being, Palila [Handy & Handy 1972]. The banana trees in this grove were unique for their size and their fruit. The trees were each so wide that two men could not surround the base completely; they were also extremely tall, being approximately thirty-five feet high. In addition, each tree only grew two bananas: one facing east and the other facing west. These bananas also differed in flavor, as the one that faces to the east is tart in flavor; in contrast, the one that faces to the west is tasteless [Akina 1913].

The Hawaii Territory Survey Walter E. Wall, Surveyor map (May 1905) identifies several waterfalls, mountain peaks, and other significant geographic features. Among those falls distinguished by Wall are Waihunahuna Falls (may also be identified as Waihunehune), Kohina Falls, Opaeka’a Falls (meaning “rolling shrimp”), and Waihi’i Falls (meaning “lifted water”).

Important peaks include Kahoiwai (EL 326.0 ft), Pu'u Lau'i'i (named for a type of native fern; misspelt as "Lawii" within the map) (EL 852.4 ft), Kulamanu, Maka'ā (a type of fish or a variety of sugar cane) or, alternatively, Māka'a (a clearing or variety of sweet potato), Laipo (EL 110.7 ft), and Nounou mountain (also known as Sleeping Giant).

Kalukalu Grass

Kalukalu grass was used for weaving mats [Belluomini, Yucha, & Hammatt 2016]. The mat that shares the grass's name was usually part of a set of two mats. The kalukalu mat, which was stronger than a pandanus mat, would be laid on the ground before grass was spread over it, whereupon the owner would then lay a second mat on top. Since the kalukalu was soft enough to be comfortable and yet tall enough to hide any illicit doings, this plant became associated with lovers, who could enjoy their time together in nature since, during the ancient times, there were no mosquitoes [Wichman 1998].

Although this grass is now extinct, historians believe that the special plant would have grown around Kapa'a's marshlands during the time when it did grow on Kaua'i. Some residents have also claimed that the grass could be used as a food source since its roots were edible [Belluomini, Yucha, & Hammatt 2016].

Regional History and Land Tenure

Brief Timeline Overview

- Pre-Contact: Kapa‘a, as Puna’s largest ahupua‘a, thrives, as its fertile lands offer its residents the opportunity to cultivate taro.
- Early 1800s: The earliest English historical records about Kaua‘i indicate that missionaries were active within this region.
- 1837: Wilama Ferani is granted a twenty-year lease for the lands of Kapa‘a, Keālia, and Waipouli, a prediction of the region’s future as part of the sugar cane industry.
- 1850s: Kamehameha III introduces private property to the Hawaiian Islands in an event known as the Māhele. Only a few parcels in Kapa‘a are given to individuals through kuleana awards; most are designated as crown lands.
- 1860s: Ernest Krull, a German immigrant, becomes a successful merchant in the Kapa‘a region, thus proving that people could make a profit in this area.
- 1876: After buying the land from Ernest Krull, Captain James Makee and Colonel Z.S. Spalding, on behalf of the Makee Sugar Plantation, agree to partner with the Hui Kawaihau, a group of prominent business men under the patronage of King Kalākaua, in the attempt to build a successful sugar cane company in the Puna District.
- 1880: The Hui Kawaihau admits defeat after a fire destroys half their crop and Captain James Makee dies. The control of the property falls to Captain Makee’s son-in-law and his partner, Colonel Z.S. Spalding.
- Late 1880s to Early 1900s: The Makee Sugar Plantation turns out to be a success through the labor of Japanese and Portuguese immigrants. Meanwhile, the Chinese start to cultivate rice.
- 1910s: The town in Kapa‘a starts to change as more immigrants leave the plantations once their contracts are fulfilled. Over the next few decades, the town will continue to grow and thrive, both economically and culturally.
- 1913: The Hawaiian Canneries Company, Ltd. opens in Kapa‘a.
- 1920: The Akuhini Terminal and Railway Company, or AT&R, is established to provide cheap transportation for sugar.
- 1934: The Līhu‘e Plantation buys both the Makee Sugar Company and the Akuhini Terminal and Railway Company.
- 1940s: Kapa‘a suffers from severe floods, which finally causes the construction of the Waika‘ea and Mō‘ikeha Canals – a project that had been proposed as early as 1923.
- 1955: A project that proposed dredging coral at Kapa‘a Beach is proposed and approved, although it is later blamed when residents notice a faster rate of erosion.
- 1962: Due to foreign companies, the Hawaiian Canneries Company, Ltd. goes out of business.
- 1980s: The Līhu‘e Plantation finally starts shutting down with tourism helping to supplant the loss of industry.

Early Historic Accounts: Early 1800s

Unlike other ahupua'a on Kaua'i, the earliest written records in Puna only date back to the 1830s, when missionaries decided to take censuses of the area's population [Schmitt 1973]. However, these records only apply to the neighboring ahupua'a of Kapa'a: Keālia, whose population experienced a record decline during these years, as the number of people living went from 283 to 143 persons [Schmitt 1968].

During this time, most records of the English historical accounts in Kaua'i consist of missionary work. However, there were predictions that the sugar industry would take root through two experiments with land tenure. The first occurred when King Kamehameha III and Governor Kaikio'ewa granted Ladd and Company a fifty-year lease for land in Kōloa [Belluomini, Yucha, & Hammatt 2016]. Although Kōloa is not included within the project area, such an action is of vital importance because, in 1837, a twenty-year lease with very similar terms was granted to Wilama Ferani for the lands of Kapa'a, Keālia, and Waipouli [Belluomini, Yucha, & Hammatt 2016].

This lease was also very important because the terms allowed foreign companies to wield power that only the chiefs once possessed; therefore, as outsiders came to gain more influence within Hawai'i, the traditions of the original hierarchy eroded more [Donohugh 2001]. For example, Ferani's lease allowed him not only to cultivate any crop he desired, but also to decide what the people who were living on his new property should do, provided that they decided not to leave [Belluomini, Yucha, & Hammatt 2016].

Wilama Ferani does not appear in any record again, so historians do not know what happened to him or his lease. In fact, historians are not even sure whether a Wilama Ferani even existed, since there is no other proof, besides these lease documents, that gives any information on this supposed Honolulu merchant [Belluomini, Yucha, & Hammatt 2016]. As a result, some historians now believe Wilama Ferani to be an alias for William French, another Honolulu merchant who was experimenting with sugar cane in Waimea at the time the 1837 lease occurred [Joesting 1984].

While Ladd and Company turned their property into a successful business, now known as the Kōloa Sugar Company, missionaries, particularly William P. Alexander, still continued to work around the Puna District. Although Alexander's work was mainly focused on larger settlements, he does note the Kapa'a reef, which became the resting ground for many ships during the 1800s. So many schooners had perished there that a landing, known as Makee Landing, was later commissioned and built [Belluomini, Yucha, & Hammatt 2016].

In 1848, during the reign of Kamehameha III, the Māhele, a western concept of land tenure was derived into legislation, which created a reformation of the existing land system in Hawai'i. It was the first time a system of separation and identification of the associative rights of the king and the chiefs to the land was established. The result of the Māhele led to the division and distribution of land, thus creating a system of possession rights and private title to land. During this process, all lands were placed into one of three categories: Crown Lands (for the occupant of the throne), Government Lands, and Konohiki Lands. On March 8, 1848, Kamehameha III signed two instrumental documents. The first document surrendered a portion of the King's lands to the ali'i and people and served as his payment of commutation to the government. These lands became known as Government Lands and were designated for public land uses. The

second document conveyed perfect title of remaining lands in the king's holdings for his own personal use. The King's lands (later to be renamed as the Crown lands), were his own private lands. [McKeague 2003]

On June 7, 1848, an "Act Relating to the Lands of His Majesty the King, of the Government" codified the Māhele and the establishment of these two categorical classifications of lands. In 1850, the Kuleana Act acknowledged that "whoever had a share in making the land valuable, held an interest in the land." Thus, native tenants were permitted to acquire full title to lands that they had been utilizing and improving for their own use. [McKeague 2003]

In 1865, an "Act to Relieve the Royal Domain from Encumbrances, and to Render the Same Inalienable," was approved by Kamehameha V, which made the Crown Lands inalienable and placed them under the administration of the Board of Commissioners of Crown Lands. Prior to this act, the Crown lands were alienable, the private domain of the king, leased and sold at will, but subject to the rights of native tenants. As a result of this act, any income derived from the Crown lands would go toward the support of the kingdom and the lands would be inherited by the heirs and successors of the Crown. The act also established a 30-year limitation on leases made on Crown lands that were issued by the Commissioners. Conversely, Government lands were comprised of lands that were set-aside as public lands and included lands that were surrendered to the government by ali'i as commutation rather than being subject to engrossed tax assessment. [McKeague 2003]

All lands that were identified as Crown Lands, Government Lands, and Konohiki Lands were "subject to the rights of native tenants." To clarify the definition of these rights, the Privy Council adopted resolutions, which authorized the Land Commission to award fee simple titles to all native tenants who could demonstrate that they either occupied or improved any portion of these lands. Those awarded lands can be characterized as a small representation of the overall population. Most awardees were comprised of the local elite that possessed the financial and social authority to sustain further occupancy and usage of the property in question. [McKeague 2003]

Awards issued by the Land Commission to the maka'āinana were called kuleana awards. Native and foreign testimonies were provided to verify the legitimacy of an applicant that claimed residency upon a piece of land prior to 1839. Although the maka'āinana did not have to pay a commutation fee, they did have to pay for the survey of their kuleana claims. During the Māhele, only 14,195 kuleana claims were made of which only 8,421 of those claims were awarded. The total acreage of those lands included in these claims equated to approximately 28,658 acres, which consisted of only lands under direct cultivation and did not include lands that were fallow [Kame'eleihiwa: 1992, 295-297; Chinen 1958].

The end of this era was marked by the Māhele. During the mid-1850s, Kamehameha III, through the Organic Act, introduced private property to Hawaiian society [Chinen 1958]. Although most of the lands were divided into three types (Crown Lands, government lands, and lands given to the chiefs), individuals could still claim the property on which they farmed and lived through kuleana awards. During this time, the ahupua'a of Kapa'a was designated as Crown Lands, with only five individual plots being given to the common people within this relatively large area.

[Belluomini, Yucha, & Hammatt 2016]. There were no identified LCAs or Kuleana Awards in the immediate project area.

In 1894, Act 95 of the Constitution of the Republic of Hawai'i merged Crown Lands and Government Lands to create what are known as Public Lands. The passage of the Land Act of 1895 dissolved the Crown Lands Commission, whereby the function of managing Crown Lands were under the auspices of new government agencies that included the Board of Commissioner of Public Lands, Commissioner of Public Lands, and the Land Management Division upon approval of the Board of Land and Natural Resources. As a result, in 1915, enacted into law as Act 55, the project area was identified for the purpose of establishing and maintaining a County Farm and Sanatorium for the treatment and care of persons afflicted with tuberculosis. Executive Order No. 30, dated July 20, 1915, set aside 120 acres of land for the Samuel Mahelona Hospital. However, as all the lands were portions of the "Crown" lands, none were acquired by deed or exchange.

Sugar Cane: Late 1800s

The sugar cane industry actually did not begin with a large company but rather with German entrepreneur Ernest Krull, who proved that a business in Puna could be successful. By the early 1860s, Krull was running a thriving company in Kumukumu, where he not only supplied whaling ships with beef and dairy products from his ranch, but also gave travelers a place to rest through use of his residence [Joesting 1984; Lydgate 1991].

In 1876, Krull made the decision to sell his successful ranch to Colonel Z.S. Spalding and Captain James Makee, who would then go on to start the first large-scale agriculture enterprise in the region the following year [Belluomini, Yucha, & Hammatt 2016]. They would do so through the partnership of the Makee Sugar Plantation, which had experience with the plant through their plantations on Maui, and the Hui Kawaihau (originally a choral group founded by William Leleiōhoku, heir apparent to Kalākaua) whose members consisted of many prominent men from both Caucasian and Hawaiian backgrounds [Dole 1916]. With Kalākaua's approval, Captain Makee was able to build a mill in Kapa'a, under the agreement he would grind the cane produced by the Hui Kawaihau.

However, success eluded with partnership for four years and after a fire that destroyed half of the Hui Kawaihau's crop – along with the death of a crucial advocate, Captain Makee himself – the members of this choir admitted defeat [Belluomini, Yucha, & Hammatt 2016]. They soon dispersed the property, and control of the land fell to both Captain Makee's son-in-law and Colonel Z.S. Spalding [Dole 1916].

In 1885, the mill was moved to the neighboring ahupua'a of Keālia, and soon after (prior to the mid-1890s), a railroad was constructed on this plantation [Cook 1999; Conde and Best 1973]. Historians know that at least part of the rail was finished by 1891 because of Queen Lili'uokalani's visit to Keālia, where it is said that an O'ahu band, after an ocean journey, took a train there in order to entertain the monarch [Belluomini, Yucha, & Hammatt 2016].

By the turn of the century, Makee Plantation had proved itself to be a successful enterprise with over a thousand workers, most of them Portuguese and Japanese immigrants [Cook 1999]. However, the growth of the plantation's population also resulted in its owners having to build

new facilities [Belluomini, Yucha, & Hammatt 2016]. For example, the Filipino workers demanded an education for their children, as stipulated by the contracts they signed, which subsequently resulted in the construction of Kapa'a School in 1883 and later, in 1908, it transferred to a new location where it currently resides, immediately adjacent to the north of the hospital [Kapa'a School 1983; Garden Island 1983].

According to the 1905 Wall map, the project area is identified as part of Field 26, which was comprised of 242.1 acres for sugar cane cultivation.

Rice Cultivation & Modernization of Puna

Although the sugar industry remained the dominant force within the region, the latter half of the 1800s also was a witness to the cultivation of rice. Similar to the rest of the islands, the Chinese began to farm independent of large corporations in the Kapa'a region. These immigrants either obtained their land by renting and buying it through Hawaiian kuleana owners or through appeals to the government to lease and later purchase.

Meanwhile, a new road, known as the Kaua'i Belt Road, replaced the old wagon road. Historians believe that this newly built path would have mostly followed the "Old Government Road" [Cook 1999]. While both the former and the latter are constructed on the same ground in Kapa'a, in Keālia, there is evidence that the builders of the Kaua'i Belt Road were forced to deviate from existing roads [Belluomini, Yucha, & Hammatt 2016].

Immigrants in the Early 1900s

By 1913, the Keālia Bridge for the Kaua'i Belt Road was built, marking another step in the modernization of the Puna District. In Kapa'a, similar changes were underway, as the sugar cane workers fulfilled the terms of their contracts; in other words, as more immigrants left the plantation, the government was forced to sell more lands within this ahupua'a to accommodate them [Belluomini, Yucha, & Hammatt 2016].

During the 1920s and 1930s, the Japanese began replacing the Chinese as the most prominent merchants in the business sector of Kapa'a. Later, in the 1930s and 1940s, witnesses testified to how the Portuguese settled the area north of the Moikeha Canal [Bushnell et. al 2002 as cited Belluomini, Yucha, & Hammatt 2016]. Such changes in population created the need for more public services, such as a dispensary, fire station, jail, and courthouse. Although these structures are no longer standing, their construction and use demonstrate how drastically Kapa'a changed from the era of missionaries [Belluomini, Yucha, & Hammatt 2016].

The Railway: 1920s

In 1920, the Akuhini Terminal and Railway Company, or AT&R, was established. However, unlike the Kaua'i Belt Road, this company was mainly focused on how to provide cheap transportation for sugar [Conde and Best 1973]. Since the Makee Landing was no longer in use by this time, this company was responsible for extending the rail to Ahukini Landing, as well as the construction of two new bridges - the Waika'ea Railroad Bridge and the Mō'ikeha Makai Railroad Bridge - in order to connect Kapa'a with its surrounding areas, such as Keālia and Anahola [Belluomini, Yucha, & Hammatt 2016].

Hawaiian Cannery Companies

Similar to other islands, the sugar cane industry in Kapa'a was replaced by the pineapple companies. In Puna, there are two pineapple companies of note: the Hawaiian Canneries Company, Ltd. and the Lihu'e Plantation [Belluomini, Yucha, & Hammatt 2016].

In 1913, the Hawaiian Canneries Company, Ltd. opened in Kapa'a [Belluomini, Yucha, & Hammatt 2016]. Their opening helped spur their development of the region (see Immigrants in the Early 1900s for more details), as once the Japanese immigrants fulfilled their contracts with the company, they would move to town to open small stores. Similarly, more and more Portuguese immigrants also moved to this area in order to start their own dairy farms or repair shops, until the town truly became a multi-racial place where many different ethnicities could all work together to provide services from gathering garbage for pigs to selling fish and meat to providing fresh fruits and vegetables [Fernandez 2009].

In 1923, this growing company decided to purchase the 8.75 acres they were leasing in order to expand, for at that time, they only had four structures [Belluomini, Yucha, & Hammatt 2016]. By 1956 they were packing approximately 1.5 million cases of pineapple. Just four years later, in 1960, the Honolulu Advertiser recorded that the company was farming about 3,400 acres with 250 full-time workers and one thousand seasonal workers [Honolulu Advertiser 20 March 1960].

In contrast, the Lihu'e Plantation did not begin to impact Kapa'a until 1934, when it absorbed both the Akuhini Terminal and Railroad Company and the Makee Sugar Company to create the Makee Division of the Lihu'e Plantation [Conde and Best 1973]. As a result, the railway that was built was not only used to carry sugar, but also to haul a variety of products from the pineapple plantation, from canned pineapple to fertilizer [Belluomini, Yucha, & Hammatt 2016].

Unlike the Hawaiian Canneries Company, Ltd., the Lihu'e Plantation had a negative impact on Kapa'a. When they were using the train, they would dump pineapple refuse and waste on a concrete pier located on Kumukumu Stream. The waste left there would be carried to the nearby town, attracting fish and sharks [Bushnell et. al 2002]. The Lihu'e Plantation was the last plantation in Hawai'i to use the rail to transport goods; by 1959 they had fully converted to trucking operations [Conde and Best 1973].

Moreover, when the Makee Sugar Company was incorporated into the Lihu'e Plantation during the 1930s, residents of Kealia town began moving away. Although no definite reason is given for this departure, it was clear that people were dispersing from the plantation camps to buy property of their own. However, these camps still continued to be maintained; in fact, the camps bordering Kūhio Highway did not shut down until the 1980s [Belluomini, Yucha, & Hammat 2016].

The Aftermath of the Cannery's Closure

The Hawaiian Canneries Company, Ltd. was the first of the two major pineapple companies in the region to shut down. Despite its growth and success, foreign companies ultimately forced the plantation out of business in 1962 [Honolulu Advertiser 20 March 1960].

The Lihu'e Plantation persisted much longer, as they did not close its doors until the last part of the 1900s. Their negative impact on the region continued, as residents of Kapa'a town suffered

from the closure. By this time, however, tourism in the area was growing, becoming a form of unexpected economic assistance [Belluomini, Yucha, & Hammatt 2016].

During the reign of the pineapple industry in the 1940s Kapa'a suffered from severe floods. The tragedy resulting from this natural disaster spurred the construction of the Waika'ea and Mō'ikeha Canals, setting the stage for further development in the area. Although the Waika'ea Canal had been proposed as early as 1923, it was not until 1940 that Kapa'a submitted a master plan requesting that the Territorial Legislature allocate funds that would allow for the completion of this project [Belluomini, Yucha, & Hammatt 2016].

Later, in 1955, a project was proposed to dredge coral at the Kapa'a Beach Park in order for the coral to be used in the construction of plantation roads [Belluomini, Yucha, & Hammatt 2016]. The subsequent erosion of Kapa'a Beach was blamed on this project [Belluomini, Yucha, & Hammatt 2016]. Although there are currently several sea walls to help delay the process of erosion, long-time residents of Kapa'a claim that the beach once extended much further than it does now [Bushnell et. al 2002].

Recommendations

1. Based upon a review of available records, there has not been an archaeological inventory survey completed for the immediate project area. In order to fully comply with HRS 6E-8, further steps towards the identification of potential subsurface historic resources may need to be completed.
2. Further consultation with SHPD is recommended once detailed plans, inclusive of either extensive ground disturbance work for utility infrastructure or structural needs for future development are known.
3. However, given the extensive historical land tenure patterns of disturbance and alteration of the property prior to the establishment of the Mahelona Hospital in 1917, the project appears devoid of any surface level archaeological or traditional cultural resources and the probability of such historical or cultural resources and associated features appears low. As such, we believe SHPD will be able to concur with HHSC potential determination of "no effect" to historic properties.
4. Further consultation should also be conducted with knowledgeable individuals as to identifying any known cultural practices of the area. As appropriate, an ethnohistorical study as a supplement to any required permit or approval could be conducted to supplement the efforts of a future cultural impact assessment as part of the HRS 343 environmental review process.
5. Given the extensive nature and prominence of Makaleha Mountain and its associated place names, efforts in naming future wings or programmed areas to be inclusive of these wahi pana (storied places) should be considered. Pōhaku on the property should be maintained.

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Appendix C: Kapaʻa School (n.d.)

Appendix D: View of Samuel Mahelona Memorial Hospital (n.d.)

Appendix E: Hawaiʻi Territorial Survey map of Kapaʻa, Kauaʻi (1905)

Appendix F: Zoom-In of Project Area from the Hawaiʻi Territorial Survey map of Kapaʻa, Kauaʻi (1905)

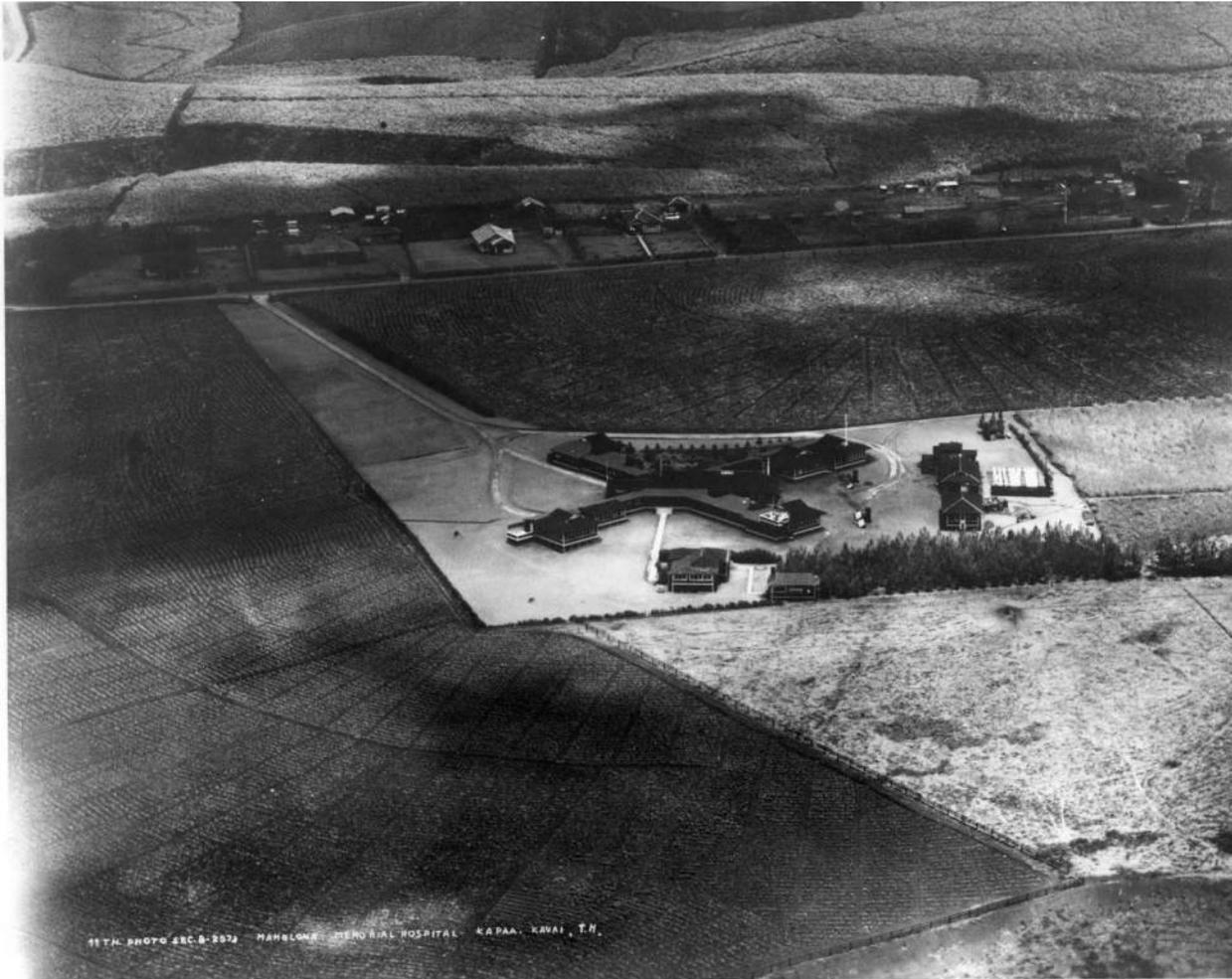
Appendix G: Google Maps regional overlay of Hawaiʻi Territorial Survey map of Kapaʻa, Kauaʻi (1905) and Project Site

Appendix A: Keālia Bridge, Kaua'i (1924)

This bridge was located to the north of Kapa'a along Kūhio Highway, crossing Kapa'a Stream.



Appendix B: Mahelona Memorial Hospital, Kapa'a, Kaua'i (n.d.)



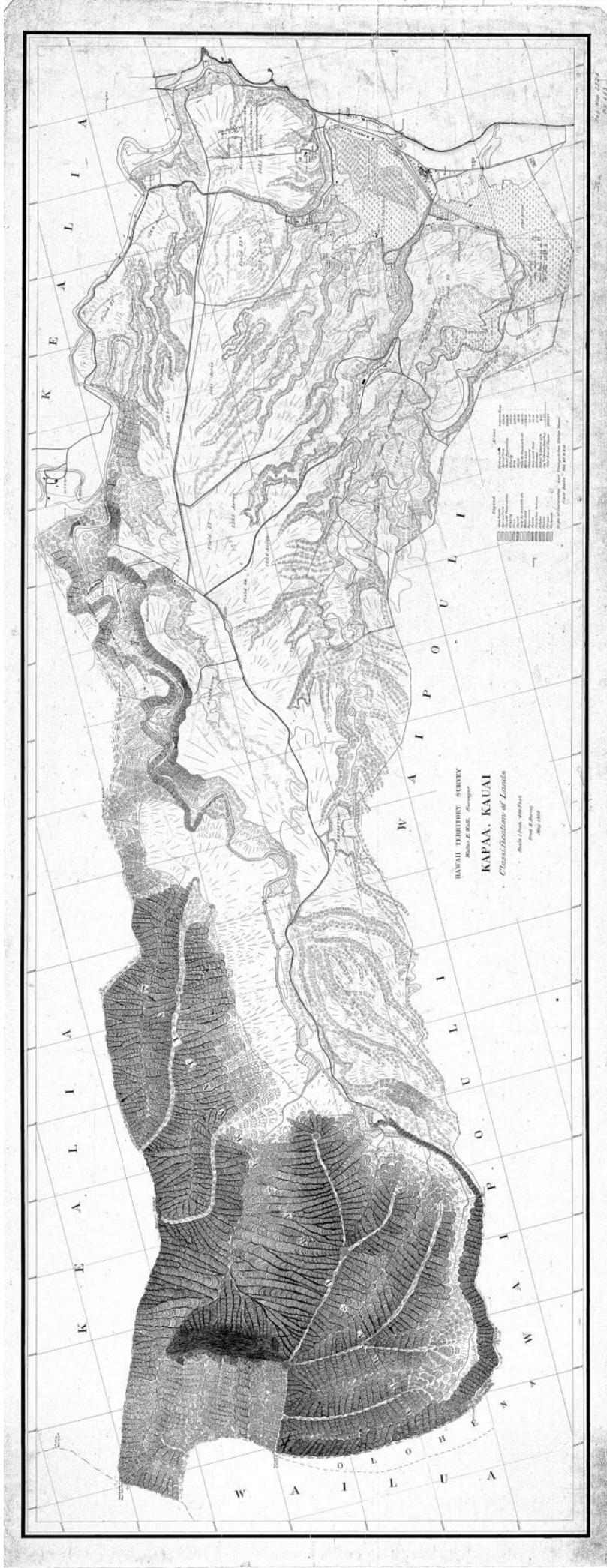
Appendix C: Kapa'a School (n.d.)



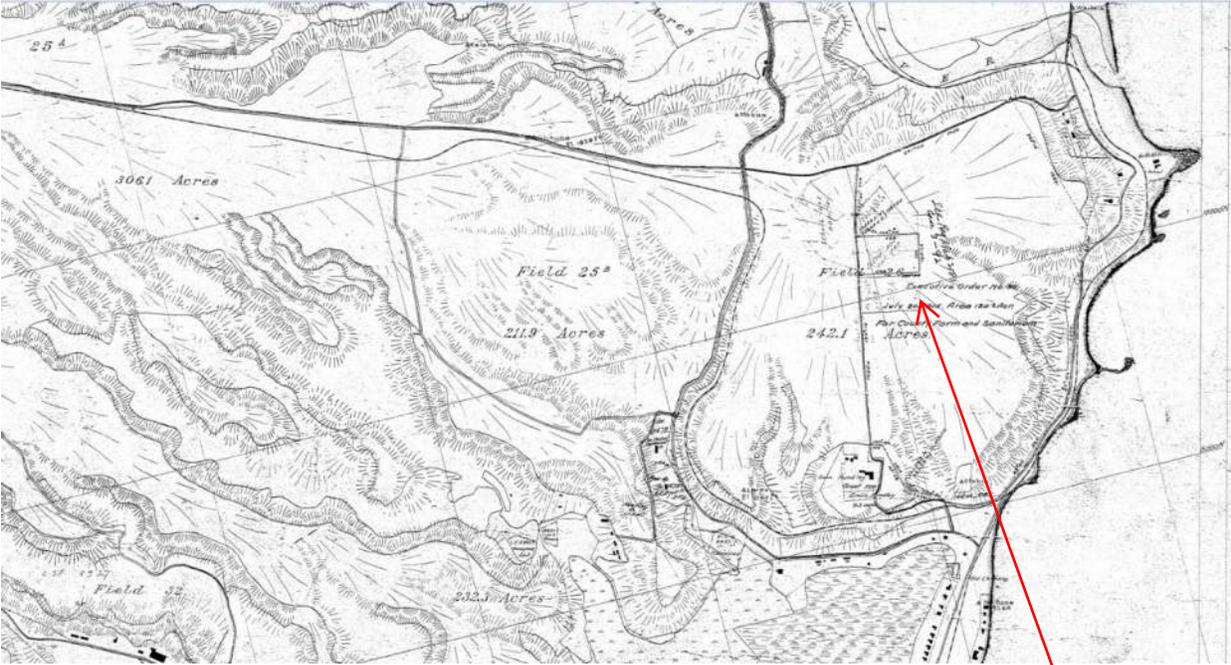
Appendix D: View of Samuel Mahelona Memorial Hospital (n.d.)



Appendix E: Hawai'i Territorial Survey map of Kapa'a, Kauai'i (1905)



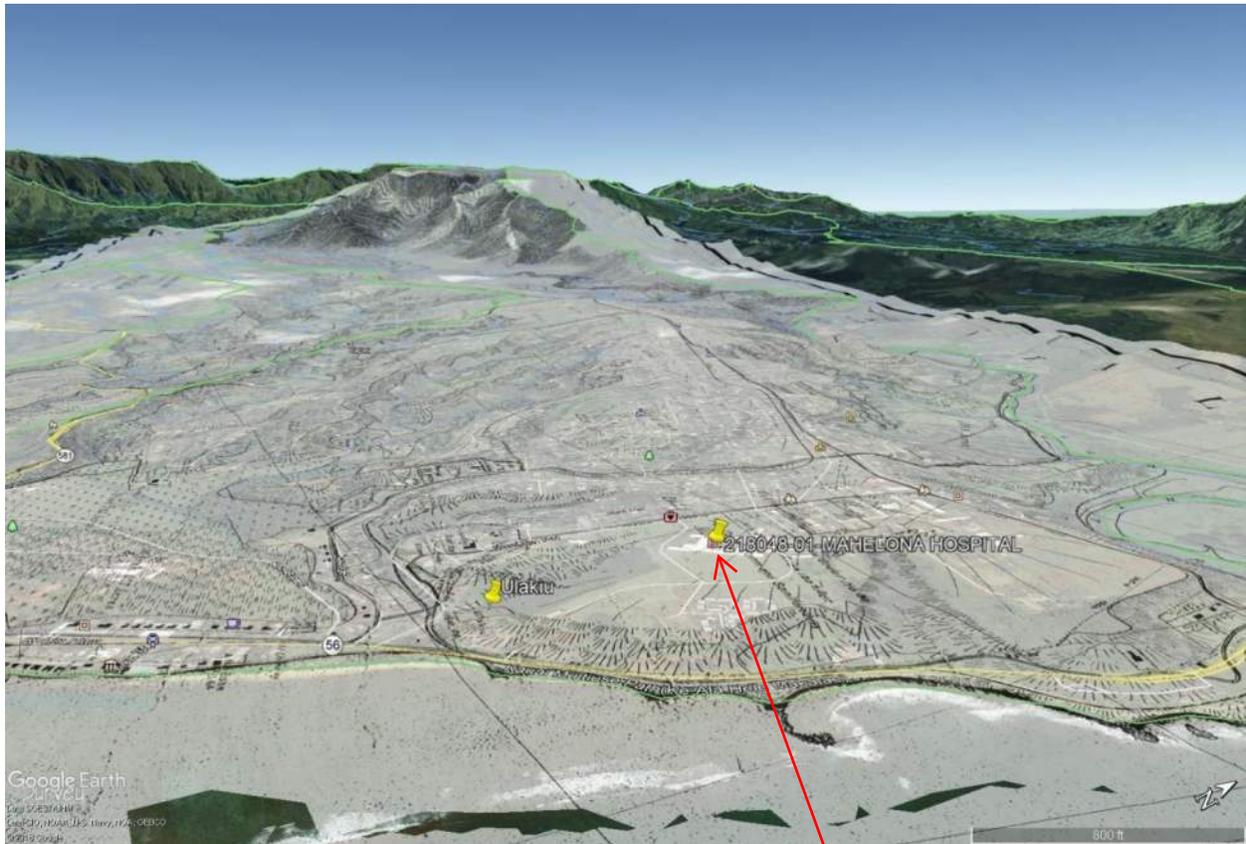
Appendix F: Zoom-In of Project Area from the Hawai'i Territorial Survey map of Kapa'a, Kaua'i (1905)



Approximate Location of Project Area

Appendix G: Google Maps regional overlay of Hawai'i Territorial Survey map of Kapa'a, Kaua'i (1905) and Project Site

Current hospital site within the historical geography and topography of the project area and ahupua'a.



Location of Project Area

Appendix J

Historic Review – Structures

district, area, or site, including heiau and underwater site, **which is over 50 years old** (HRS §6E-2).

Yes No

5.2) The date(s) of construction for the historic property (building, structure, object, district, area, or site, including heiau and underwater site) is

5.3) Is the Property listed on the Hawai'i and or National Register of Historic Places? To check:
<http://dlnr.hawaii.gov/shpd/>

Yes No

5.4) Detailed Project Description and Scope of Work:

5.5) Description of **previous** ground disturbance (e.g. previous grading and grubbing):

5.6) Description of **proposed** ground disturbance (e.g. # of trenches, Length x Width x Depth):

5.7) The Agency shall ensure whether historic properties are present in the project area, and, if so, it shall ensure that these properties are properly identified and inventoried. Identify all known historic properties:

5.8) Once a historic property is identified, then an assessment of significance shall occur.

Integrity (check all that apply):

Location Design Setting Materials Workmanship Feeling Association

Criteria (check all that apply):

- a – associated with events that have made an important contribution to the broad patterns of our history
- b – associated with the lives of persons important in our past
- c – embody the distinctive characteristics of a type, period, or method of construction; represent the work of a master; or possess high artistic value
- d – have yielded, or is likely to yield, information important for research on prehistory or history
- e – have an important value to the Native Hawaiian people or to another ethnic group of the state due to associations with cultural practices once carried out or still carried out, at the property or due to associations with traditional beliefs, events, or oral accounts - - these associations being important to the group's history and cultural identity

The following are the minimum number and type of color photographs required:

Quantity	Description
1-2	Street view(s) of the resource and surrounding area
1-2	Over view of exterior work area
1	exterior photo of the North elevation (if applicable)
1	exterior photo of the South elevation (if applicable)
1	exterior photo of the East elevation (if applicable)
1	exterior photo of the West elevation (if applicable)
1-2	interior photos(s) of areas affected (if applicable)

CHECKLIST

- SHPD FORM 6E** (this form)
- PROJECT SUBMITTALS** (any requested documentation for items 6.1 - 6.7 of this form)
- FILING FEE FORM** (if applicable)

Google Earth Aerial



Photographs: Front (north) Façade



Photographs: Front (north) Façade- Left Side



Photographs: Front Section-West Façade



Photographs: Northeast Façade



Photographs: Northeast facade



Photographs: Southeast Façade



Photographs: Northeast Façade



Photographs: East Façade



Photographs: South Façade



Photographs: West Façade



Photographs: West Façade



Photographs: West Façade



Photographs: West Façade



Photographs: Maintenance Building – South Façade



Photographs: Maintenance Building – East Façade



Photographs: Private Residence



Photographs: Kauai Police Activities League Youth Center



Appendix K

Civil PER and Plans

PRELIMINARY ENGINEERING REPORT

FOR

SAMUEL MAHELONA MEMORIAL HOSPITAL MASTER PLAN

Kapa'a, Kauai, Hawai'i

TMK: 4-6-014:113

October 2020

Prepared for:

Hawai'i Health Systems Corporation – Kaua'i Region

P.O. Box 337
Waimea, HI 96796

Prepared by:



111 South King Street, Suite 170
Honolulu, HI 96813
Phone: (808) 523-5866
Fax: (808) 523-5874

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1. INTRODUCTION

1.1 OVERVIEW

Samuel Mahelona Memorial Hospital (SMMH) is the oldest operating hospital on Kauai as it was founded in 1917 as a tuberculosis hospital. In the 1960’s, SMMH gradually transitioned to providing acute care, psychiatric care, skilled nursing care and acillary inpatient and outpatient services. An Occupational Therapy building was added in 1971 and in 1983 of the Main Hospital was renovated as a locked, separate nine-bed Acute Psychiatric Unit. In 1986, an eight-bed Hospice Building was completed. Today, approximately 145 employees, provide comprehensive services at its existing 80-bed hospital. SMMH desires to expand the hospital to continue to provide a greater continuum of care for the Kapa’a community by following their vision:

“Together we will deliver exceptional care in all services we provide to our communities through Best Practices and Innovative Solutions.”

1.2 SITE LOCATION

The Samuel Mahelona Memorial Hospital (SMMH) is located within a parcel approximately 33.74 acres in size located in Kapa’a, Hawaii on the island of Kauai (TMK: 4-6-014:113). The existing parcel includes the existing SMMH, the Ho’ola Lahui Hawaii Community Center and the staff quarters building and private roadways which utilize a fraction of the total property. The rest of the property is undeveloped. **See Figure 1 – Location Map**

1.3 PURPOSE OF REPORT

The purpose of this report is to describe the existing and proposed civil infrastructure and utilities that will serve the proposed Samuel Mahelona Memorial Hospital expansion master plan. In addition, this report will also evaluate the adequacy of the existing infrastructure and anticipated improvements which may be required for the proposed development.

The SMMH Master Plan will be incrementally developed in three different phases, spanning a 30-year period as represented in the table below.

Phase	Time Frame	Improvements
1	1 – 5 years	The addition of the Psych Unit building, the addition of the proposed Behavioral Health Housing and the proposed Kapa’a Police Substation.
2	10 – 15 years	The addition of the proposed Long-Term Care wing of the hospital, the proposed Senior Center/ Daycare and SMMH Admin building, the Community Healthcare Buildings 4 & 5, two Senior Assisted Living buildings and six Affordable Housing Garden Apartment buildings.
3	25 – 30 years	The addition of the proposed community facilities building 6 and 7.



Figure 1: Location Map (N.T.S.)

2. EXISTING CONDITIONS

2.1 LAND USES

The existing Samuel Mahelona Memorial Hospital is currently situated in the state's Urban District. The existing on-site improvements include the hospital, the Ho'ola Lahui Hawaii Community Center and the staff quarters building.

2.2 TOPOGRAPHY AND DRAINAGE RUNOFF PATTERNS

The Samuel Mahelona Memorial Hospital is located in Kapa'a, Hawaii and is accessible from Kawaihau Road. The topography of the property consists of primarily flat slopes surrounding the existing structures of the property and steep slopes around the adjacent gullies and cliffs surrounding the property.

The highest point of the project parcel sits at approximately 136 feet above mean sea level (MSL). The existing hospital is at elevations ranging from 130 feet to 134 feet above MSL. The existing Ho'ola Lahui Hawaii Community Center is located at elevations ranging from 104 feet to 110 feet above MSL. The staff quarters building is located at elevations ranging from 86 feet to 90 feet. The lowest elevation areas are at the bottom of the existing gullies around the site that range from 70 feet to 120 feet above MSL that carry storm water off the property. In periods of high rainfall, runoff flows into one of the gullies along the site and cross Kuhio highway at grade.

2.2.1 FLOOD HAZARDS

Based off the geographic information system (GIS) information, the property is located in Zone X, indicating that the property is located in an area determined to be outside the 0.2% annual chance floodplain. See **Figure 2 – Flood Hazard Assessment Map**.

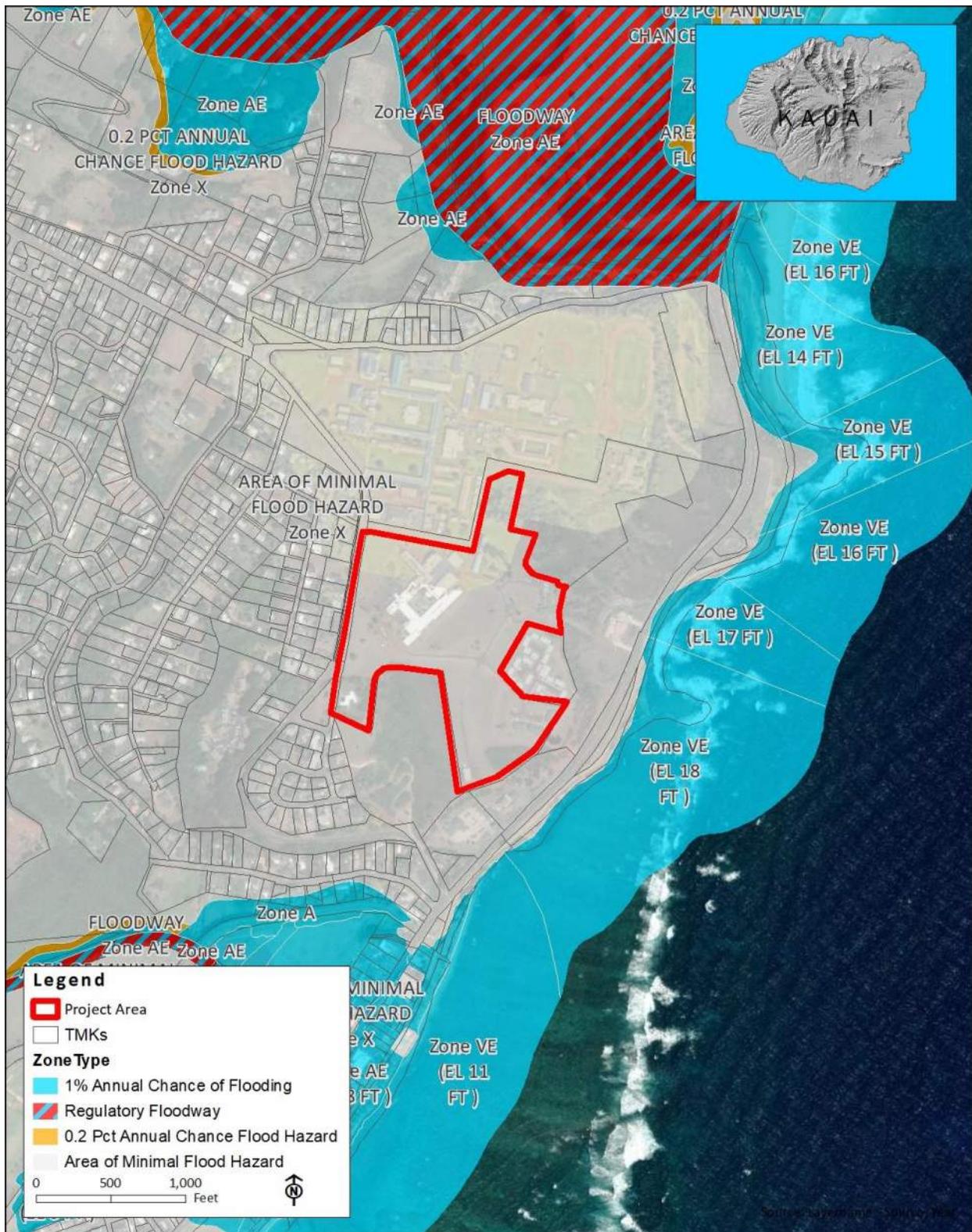


Figure 2: Flood Zone Map (N.T.S.)

2.3 ROADWAYS AND ACCESS

2.3.1 PUBLIC ROAD

The only public road fronting the property is Kawaihau Road, which is maintained and owned by the County of Kauai. Kawaihau Road is approximately 24 feet wide, asphaltic road and appears to be in good condition. There is landscape and a 4-foot-wide sidewalk fronting the Samuel Mahelona Memorial Hospital. The access to the Samuel Mahelona Memorial Hospital property is from an unsignalized intersection off Kawaihau Road. **See Figure 3 – Existing Site and Utility Plan**

2.3.2 PRIVATE ACCESS DRIVEWAYS AND ROADS

There is one primary driveway and two secondary driveways serving the Samuel Mahelona property. The primary driveway off of Kawaihau Road provides access to the Hospital's front entrance, the emergency room of the existing hospital, the staff quarters, the Ho'ola Lahui Hawaii Community Center and the HPHA Senior Housing on the adjacent property (TMK: 4-6-014: 105). The primary asphalt driveway is approximately 22-feet wide with longitudinal slopes ranging from 5%-10%.

Both of the secondary driveways are connected to the adjacent property (TMK: 4-6-014: 112) from a private road. Both of the secondary asphalt driveways are approximately 22-feet wide with longitudinal slopes ranging from 5%-10% and provide access to the back of house services for the existing Samuel Mahelona Memorial Hospital. **See Figure 3 – Existing Site and Utility Plan**

2.3.3 PARKING

On-site parking is exclusively for Samuel Mahelona Memorial Hospital users whether it be employees, patients, or users of the Ho'ola Lahui Hawaii Community Center. There are asphalt surface parking lots surround the existing hospital, the Ho'ola Lahui Hawaii Community Center and the staff quarters building. **See Figure 3 – Existing Site and Utility Plan**

2.3.4 FIRE ACCESS

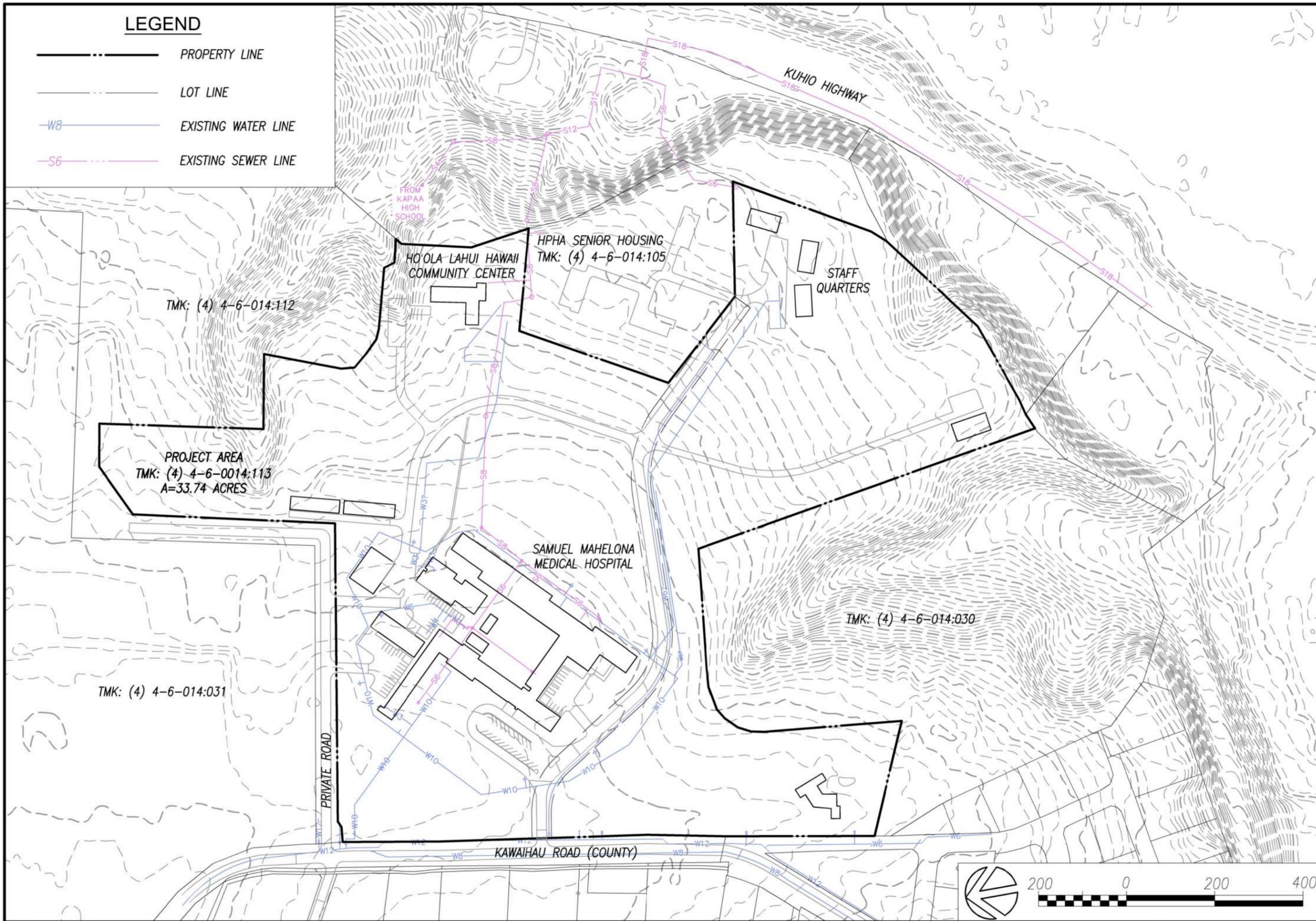
The internal private roads provide fire access to each of the existing buildings on the property. The internal roads also provide fire vehicle access to the seven private fire hydrants around the site and the hospital's fire sprinkler system.

2.3.5 PEDESTRIAN ACCESS

There are existing sidewalks from the parking lots into the existing Samuel Mahelona Memorial Hospital, the Ho'ola Lahui Hawaii Community Center and the staff quarters building. There are no existing sidewalks from the private road and Kawaihau Road onto the property. The existing unsignalized intersection along Kawaihau Road allows for a pedestrian crossing point, though there are no sidewalks here.

LEGEND

-  PROPERTY LINE
-  LOT LINE
-  EXISTING WATER LINE
-  EXISTING SEWER LINE



TMK: (4) 4-6-014:112

PROJECT AREA
TMK: (4) 4-6-0014:113
A=33.74 ACRES

TMK: (4) 4-6-014:031

HO'OLA LAHUI HAWAII
COMMUNITY CENTER

HPHA SENIOR HOUSING
TMK: (4) 4-6-014:105

STAFF
QUARTERS

SAMUEL MAHELONA
MEDICAL HOSPITAL

TMK: (4) 4-6-014:030

KUHIO HIGHWAY

KAWAIHAU ROAD (COUNTY)

PRIVATE ROAD

111 S. KING STREET, SUITE 170
HONOLULU, HAWAII 96813
808.523.5866
WWW.G7O.DESIGN



**SAM MAHELONA
MEMORIAL HOSPITAL**
EXISTING SITE AND UTILITY PLAN

CAD DRAWING:
218048-01 EXIST SITE+UTIL
SCALE: 1 IN = 200 FT
DATE: JULY 2020
PROJECT #: 218048-01

FIGURE
3

2.4 SEWER INFRASTRUCTURE

The County of Kauai has a 16-inch sewer main within Kuhio Highway that receives sewage flows from Sam Mahelona Memorial Hospital, the Staff Housing, HPHA Senior Housing and Kapa'a High School and Kapa'a Elementary School (TMK: 4-6-014:031). The sewage flows through a gravity pipe system towards the Wailua Wastewater Treatment Plant where it is treated. According to the May 2015 General Plan Update Kauai Infrastructure Analysis, the Wailua Wastewater Treatment Plant is operating at 50% capacity.

The Samuel Mahelona Memorial Hospital's existing on-site sewer system is a gravity pipe system that flows towards the northeastern corner of the Main Hospital building. The flow continues through an 8-inch sewer pipe system at the north eastern side of the property, past the Ho'ola Lahui Hawaii building and HPHA Senior Housing and towards the county sewer main within Kuhio Highway. According to the as-builts provided by the County, the existing sewer system serving SMMH predates 1996, although there is a small section of pipe that may have been installed between 1996 to 2000. According to the facility manager at SMMH, the hospital does not have any issues with sewer. The site sewer system serving SMMH appears to be in good condition, but due to its age, should be inspected before any future upgrades or additional flow is added. **See Figure 3 – Existing Site and Utility Plan.**

There is a separate on-site sewer system that services the Staff Housing and is conveyed through a gravity pipe system that flows towards the Kuhio Highway county sewer connection. According to the as-builts provided by the facility manager, the existing sewer system serving the Staff housing was installed between 1996 to 2000. The site sewer system serving the Staff Housing appears to be in good condition, but due to its age, should be inspected before any future upgrades or additional flow is added. **See Figure 3 – Existing Site and Utility Plan.**

2.5 WATER INFRASTRUCTURE

2.5.1 DOMESTIC WATER SUPPLY

The entire SMMH property receives water service from a single connection to the County of Kauai Department of Water (DoW) 12-inch water main in Kawaihau Road.

A 6-inch ductile iron pipe water lateral built in 1992 connects to the 12-inch water main and provides water service to the property and connects to an existing 6-inch water meter located on the northwestern corner of the property. The property manager stated that there are no problems with the water system. There is also a 5/8-inch water meter at the existing entrance to SMMH that provides service to the HPHA Senior Housing through an access and utility easement.

Records indicate that after the existing 6-inch water meter, the main line on the property expands to a 10-inch water line with a 10-inch Reduced Pressure Backflow Preventer (RPBP) and continues as a 10-inch water line loop around the hospital. The system provides both potable water and fire water services. The water lines vary in size from 10-inch mains to 3-inch lateral connections into the building. The RPBP and the 10-inch line was recently installed and appears is good condition. The Director of Facilities stated that they have no problems with water pressure or demand.

2.5.2 FIRE WATER SUPPLY

Fire water is provided via the 10" loop as the system is a combined fire and domestic water system. The main hospital has a fire sprinkler system and the lateral fed off the 10" fire line. The pressure at the fire sprinkler system connections range from 65 psi – 75 psi. There are also 7 private fire hydrants located around the hospital.

The DoW has not been able to provide fire flow data or the pressures at the public- fire hydrants as flow tests have been suspended. Flow data with pressures should be evaluated prior to the design and any expansion plans to ensure adequate water availability, pressure and flow is available prior for the new developments.

According to the 2019 Proposed Capital Improvement Projects for the Department of Water County of Kaua'i, the existing 313-foot storage tank is undersized and does not meet the Water System Standards for fire storage capacity. Department of Water has the following two projects: Drill and Develop Kapa'a Well No. 4 and Kapa'a Homesteads 325' Tanks, Two 0.5 MG Tanks planned to provide adequate fire storage capacity at Samuel Mahelona Memorial Hospital. The project "Drill and Develop Kapa'a Well No. 4" is currently under construction and is anticipated to be complete by April 2021. The project "Kapa'a Homesteads 325' Tanks, Two 0.5 MG Tanks" is anticipated to be start construction by April 2021 and completed by April 2023.

2.6 DRAINAGE INFRASTRUCTURE

The Samuel Mahelona Memorial Hospital receives stormwater runoff from both on-site and off-site drainage areas. The runoff onsite generally sheetflows overland into the adjacent gullies surrounding the property. There is some off-site stormwater run on from the Kapa'a Elementary School property that enters the property and eventually ends up sheetflowing into the gully north of the property. Once in the gullies, the runoff is concentrated and is conveyed across Kuhio Highway to the ocean. **See Figure 4 – Existing Drainage Map**

2.6.1 ON-SITE DRAINAGE AREA

- **Drainage Area E1:** Storm water sheet flows offsite in the eastern direction.
- **Drainage Area E2:** Storm water sheet flows offsite in the southeastern direction.
- **Drainage Area E3:** Storm water sheet flows onto the adjacent parcel into the adjacent HPHA Senior Housing property (TMK:4-6-014: 105)
- **Drainage Area E4:** Storm water sheet flows in the southern direction.
- **Drainage Area E5:** Storm water sheet flows in the southeastern direction.
- **Drainage Area E6:** Storm water sheet flows off the site in the western direction onto Kawaihau Road.

2.6.2 OFF-SITE DRAINAGE AREA

- **Drainage Area E01:** Storm water sheet flows onto the Samuel Mahelona Memorial Hospital property in the eastern direction from Kapa'a Elementary School and crosses before immediately entering the gully.

Detailed calculations for the drainage area flow rates from the existing Samuel Mahelona Memorial Hospital are provided in Appendix A. **See Appendix A – Existing Condition Hydrology Calculations.**

3. PROPOSED INFRASTRUCTURE IMPROVEMENTS

3.1 LAND USES

Samuel Mahelona Memorial Hospital expects to transform the existing property with the addition of new medical buildings, affordable housing buildings and community facilities buildings over a 30 year period.

- **Phase 1:** During Phase 1, the addition of the Psych Unit building and the Behavioral Health Housing building will be constructed as well as a Kapa'a Police substation. Phase 1 will also include the demolition of three warehouse buildings. **See Figure 5 – Site and Utility Plan – Phase 1.**
- **Phase 2:** During Phase 2, the addition of the Long-Term Care building, the Senior Center/Daycare and SMMH Admin building will be constructed as part as an expansion for the hospital. Also six affordable housing Garden Apartment Buildings, two Senior Assisted Living Buildings and Community Healthcare Buildings 4 and 5. Phase 2 will also include the demolition of the existing Ho'ola Lahui Hawaii Community Center and the existing staff quarters. **See Figure 6 – Site and Utility Plan – Phase 2.**
- **Phase 3:** During Phase 3, the addition of the new Community Healthcare Buildings 6 and 7. **See Figure 7 – Site and Utility Plan – Phase 3.**

3.2 GRADING AND TOPOGRAPHY

The finished floor elevations of the new buildings shall be determined based on overall drainage and will be planned to minimize the movement of earth on the property or the need for import or export of large amounts of material. Elevations range from 83 feet to 134 feet above mean sea level. See **Figure 8 – Proposed Drainage Map** for pad elevations.

3.3 ROADWAYS AND ACCESS

3.3.1 PROPERTY ACCESS

The existing unsignalized intersection at Kawaihau Road's driveway and the two driveways off the adjacent private road will continue to provide vehicular access way onto the property. There are also two new proposed accessways onto the property. One of the proposed accessways provides access to the new affordable housing garden apartments parking lot off of the private road on TMK 4-6-014:031. The other proposed accessway provides access to the Samuel Mahelona Memorial Hospital property also off of the private road on TMK 4-6-014:031.

3.3.2 PUBLIC ROADS

There are no future plans by the County to develop or build any new public roads with the project limits. Roads built on site will be privately owned/operated by SMMH. Driveways on-site will be privately owned/operated by SMMH.

3.3.3 PRIVATE DRIVEWAY

- **Phase 1:** During Phase 1, a new driveway off of the private road will be constructed and leads to the new Psych Unit building and the new parking lot. Another driveway off of Kawaihau will be constructed and leads to the Kapa'a Police Substation and its new parking lot. **See Figure 5 – Site and Utility Plan – Phase 1.**
- **Phase 2:** During Phase 2, the primary driveway off of Kawaihau Road will be improved with an additional right turn lane onto Kawaihau Road. Also the two existing driveways off of the private road will remain and will lead to the parking lot adjacent to SMMH and the Community Healthcare Buildings 4 and 5. There are two new driveways off of the private road. One driveway will lead to the Affordable Housing Garden Apartments and its parking lot. The other driveway leads onto SMMH property and is the main road throughout the property. **See Figure 6 – Site and Utility Plan – Phase 2.**

3.3.4 PARKING

- **Phase 1:** During Phase 1, parking lots will be constructed adjacent to the new Psych Unit Building, the new Behavioral Health Housing Building, and the new Kapa'a Police Substation building. **See Figure 5 – Site and Utility Plan – Phase 1.**
- **Phase 2:** During Phase 2, parking lots adjacent to SMMH and new Community Healthcare Buildings 4 and 5 will be constructed. A parking lot for the new Affordable Housing Garden Apartments, the new Senior Assisted Living building and the new Preschool will be constructed as well. **See Figure 6 – Site and Utility Plan – Phase 2.**
- **Phase 3:** During Phase 3, a parking lot for the new Community Healthcare Buildings 6 and 7 will be constructed. **See Figure 7 – Site and Utility Plan – Phase 3.**

3.3.5 FIRE ACCESS

Design of the sites, structures, and fire access and water supply systems for the project will be based upon the State Fire Code: National Fire Protection Agency (NFPA) 1, Uniform Fire Code, dated 2012 and all additional amendments as part of the Hawai'i Administrative Rules (HAR) Title 12, Subtitle 7, Chapter 45.2 with Kaua'i County Code Section 15A-2.2 amendments. Additional requirements are noted in the BWS Water System Standards, dated 2002. Based upon the above referenced standards, the following criteria should be met in terms of adequate fire access and water supplies:

- Road Width = Unobstructed 20 ft.
- Road Vertical Clearance = Unobstructed 13.5 ft.

- Surface = Capable supporting 73,000 lbs and constructed with an all-weather material.
- Turning Radius = 42 ft. minimum on outside front wheel. 28.4 ft. minimum on inside rear wheel.
- Dead Ends = Provide appropriate turnaround (cul-de-sac or hammerhead).
- Signage = Required for entire length of roadway.
- Hydrant spacing at 350 ft. (R-20).
- Fire Department Connections (FDCs) for sprinkler systems should be placed on the address side of the building and within 50 ft. of an adequate water supply / fire hydrant.
- Further coordination with the Kauai Fire Department (KFD) will be required as the design progresses.

All new structures will have a fire sprinkler system added, a fire lane with a turnaround area at the end and able to accommodate fire vehicles.

3.4 SEWER

The onsite sewer system that services the senior assisted living buildings shall consist of a gravity flow system which will connect to the existing 6-inch sewer line with a new sewer manhole and flow into the existing offsite system. In accordance with the County of Kaua'i, *Sewer Design Standards*, dated June 1973, the senior assisted living buildings will generate the following flows:

- Average Total Daily Flow = 15,500 gallons of wastewater per day
- Maximum Flow = 77,500 gallons of wastewater per day
- Peak Flow = 79,360 gallons of wastewater per day

The capacity of the 6-inch pipe with a 2% slope and a peak flow discharging into the county's system is 25.5% full.

The onsite sewer system that services the rest of the site and the Hawaii Housing Association Senior Housing property (TMK: (4) 4-6-014: 105) shall consist of a gravity flow system which will connect to the existing 8-inch sewer line with a new sewer manhole and flow into the existing offsite system. In accordance with the County of Kaua'i, *Sewer Design Standards*, dated June 1973, the rest of the site and the Hawaii Housing Association Senior Housing property will generate the following flows:

- Average Total Daily Flow = 86,545 gallons of wastewater per day
- Maximum Flow = 432,725 gallons of wastewater per day
- Peak Flow = 433,519 gallons of wastewater per day

The capacity of the 8-inch pipe with a 2% slope and a peak flow discharging into the county's system is 41.6% full.

It is anticipated that the existing Wailua Wastewater Treatment Plant will have the capacity to handle the anticipated wastewater generated by the proposed development. **Refer to Appendix B – Wastewater Demand Calculations.**

3.4.1 SEWER IMPROVEMENTS

- **Phase 1:** A new sewer line will be constructed to provide service to the new behavioral health housing building and the new Kaua'i police substation. The existing sewer laterals that serve the existing Ho'ola Lahui Hawaii Community Center, the existing Samuel Mahelona Memorial Hospital and the Hawaii Housing Associations Senior Housing property will be connected to the new sewer line. The existing sewer line that provides service to the existing staff housing will remain. Part of the existing sewer 8-inch sewer line will be abandoned/removed . See **Figure 5 – Site and Utility Plan – Phase 1.**
- **Phase 2:** In Phase 2, the on-site sewer system will be expanded to the new Affordable Housing Garden Apartments the new Community Healthcare buildings 4 & 5 and the new Preschool. The existing staff quarters 6-inch sewer lateral and will be reused for the new Senior Assisted Living buildings. See **Figure 6 – Site and Utility Plan – Phase 2.**
- **Phase 3:** In Phase 3, the on-site sewer system will be expanded to the new Coummunity Healthcare buildings 6 & 7. See **Figure 7 – Site and Utility Plan – Phase 3.**

3.4.2 OFF-SITE IMPROVEMENTS

After the 8-inch sewer flow leaves the site, the flows then combine with the sewer flows generated by Kapa'a High School. In accordance with the County of Kaua'i, *Sewer Design Standards*, dated June 1973, at this point the following flows are within the pipe:

- Average Total Daily Flow = 112,570 gallons of wastewater per day
- Maximum Flow = 562,850 gallons of wastewater per day
- Peak Flow = 565,519 gallons of wastewater per day

The capacity of the 12-inch pipe with a 2.6% slope and a peak flow discharging through the pipe is 25.3% full.

The 6-inch sewer flow, the 8-inch sewer flow and the sewer flow from Kapa'a High School combine before entering the county's system within Kuhio Highway. In accordance with the County of Kaua'i, *Sewer Design Standards*, dated June 1973, at this point the following flows are within the pipe:

- Average Total Daily Flow = 128,070 gallons of wastewater per day
- Maximum Flow = 640,350 gallons of wastewater per day
- Peak Flow = 644,879 gallons of wastewater per day

The capacity of the 16-inch pipe with a 0.40% slope and a peak flow discharging through the pipe is 29.5% full.

Based on sewer demand generated by the development and the current off-site as-built plans, no off-site improvements will be needed at this time. Further coordination with the county will be required as design progresses.

3.5 WATER

3.5.1 PROPOSED WATER DEMAND

The projected water demand for the Samuel Mahelona Memorial Hospital development was determined based on Table 100-18 – Domestic Consumption Guidelines from the Water System Standards, 2002 (WSS). According to section 111.04 System Capacity of the WSS, the capacity of the distribution system shall deliver the maximum daily demand and the required fire flow or the distribution system shall also deliver the peak hour flow, whichever of the two is greater.

The phase 1 development of our site will be classified as a land use of “Schools, Retail Stores or Shops, Shopping Centers, Hotels and Hospitals” in Table 100-19A Fire Flow Requirements of the County of Kauai Department of Water 2008 Amendments to the 2002 Water System Standards. The water demand for the phase 1 development is a cumulation of the water demand generated by the existing Samuel Mahelona Memorial Hospital and the water demand generated by the phase 1 proposed development. The phase 1 development will generate the following water demands:

Average Daily Demand = 26,250 gallons per day (gpd)

Maximum Daily Demand = 39,375 gpd

Required Fire Flow = 240,000 gpd [2,000 gallons per minute (gpm) for 2 hours]

Maximum Daily Demand + Required Fire Flow = 279,375 gpd

Peak Flow = 131,250 gpd

Therefore, the required capacity of the distribution system shall deliver is 279,375 gpd.

The phase 2 development of our site will be classified as the land uses of “Schools, Retail Stores or Shops, Shopping Centers, Hotels and Hospitals” and “PUD Townhouses, Apartments R-20” in Table 100-19A Fire Flow Requirements of the County of Kauai Department of Water 2008 Amendments to the 2002 Water System Standards.

Although, it is not required to provide fire flow for both classifications. The “Schools, Retail Stores or Shops, Shopping Centers, Hotels and Hospitals” has a higher demand and will be used for these calculations. The water demand for the phase 2 development is a cumulation of the water demand generated from the phase 1 development and the water demand generated from the phase 2 proposed development. The phase 2 development will generate the following water demands:

Average Daily Demand = 112,480 gpd

Maximum Daily Demand = 168,720 gpd

Required Fire Flow = 240,000 gpd [2,000 gpm for 2 hours]

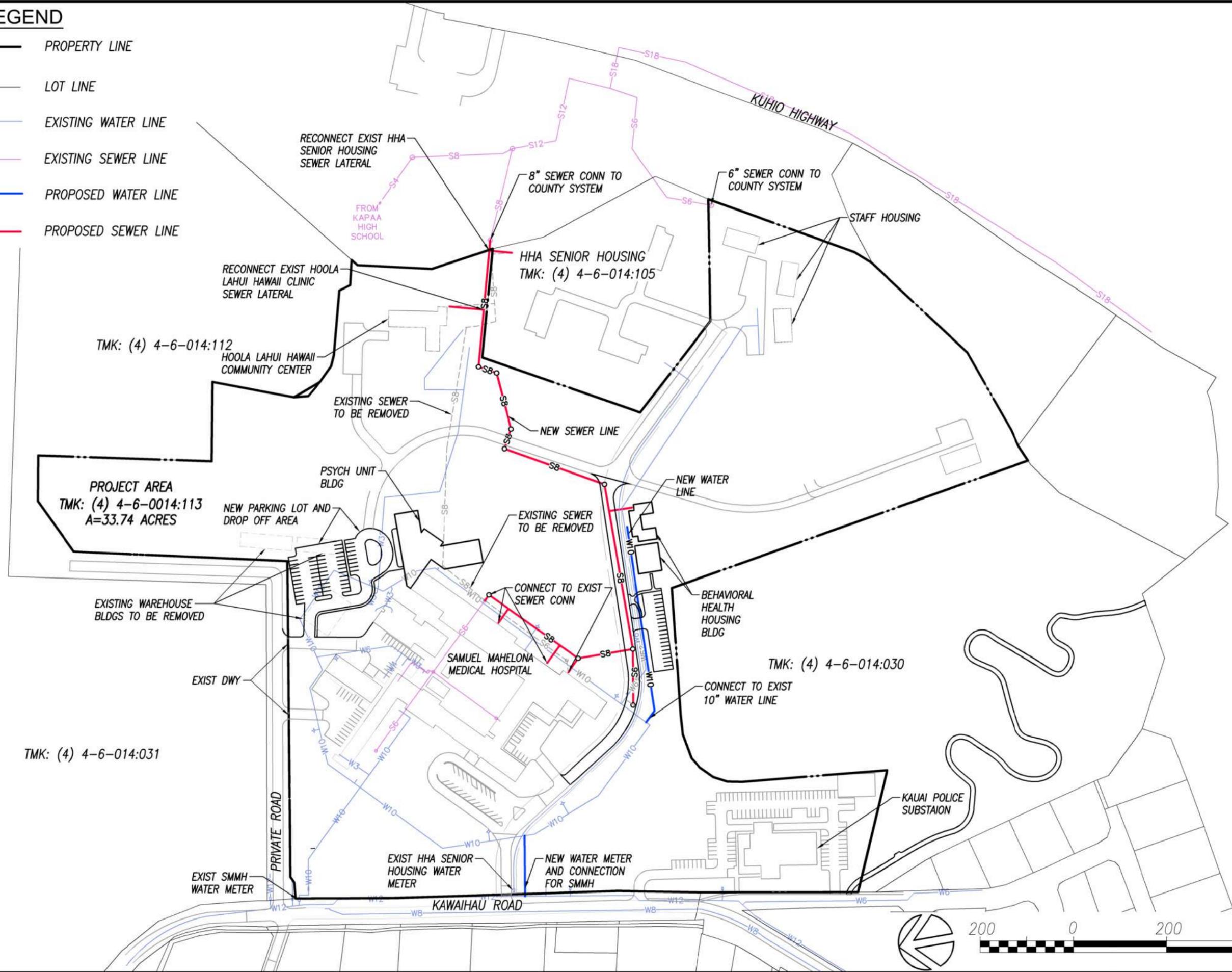
Maximum Daily Demand + Required Fire Flow = 408,720 gpd

Peak Flow = 562,400 gpd

Therefore, the required capacity of the distribution system shall deliver is 562,400 gpd.

LEGEND

- PROPERTY LINE
- LOT LINE
- W8— EXISTING WATER LINE
- S6— EXISTING SEWER LINE
- W8— PROPOSED WATER LINE
- S6— PROPOSED SEWER LINE



111 S. KING STREET, SUITE 170
 HONOLULU, HAWAII 96813
 808.523.5866
 WWW.G7O.DESIGN



**SAM MAHELENA
 MEMORIAL HOSPITAL**
 SITE AND UTILITY PLAN - PHASE 1

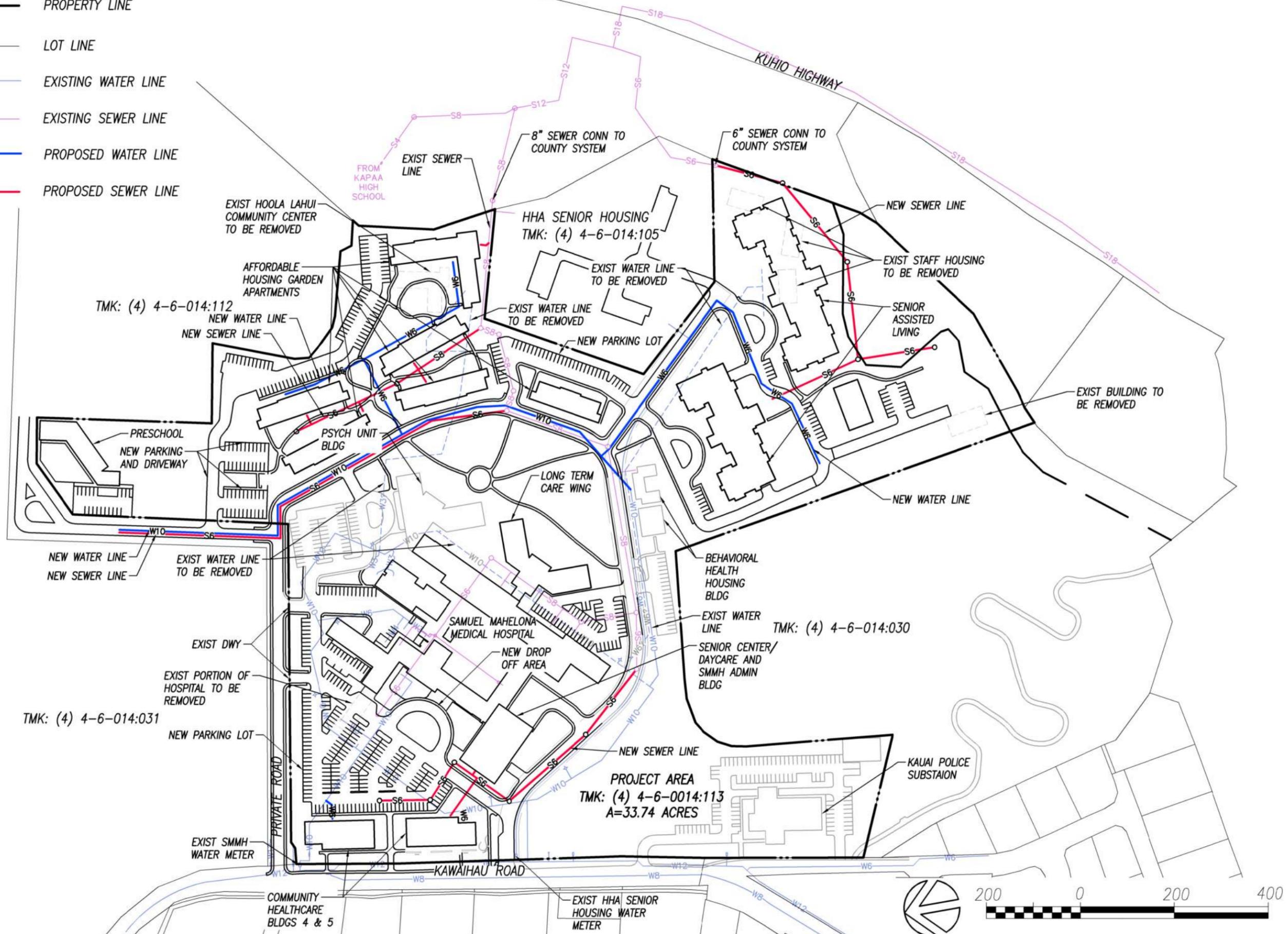
CAD DRAWING:
 218048-01 SITE+UTIL PLAN
 SCALE: 1 IN = 200 FT
 DATE: JULY 2020
 PROJECT #: 218048-01

FIGURE

5

LEGEND

- PROPERTY LINE
- LOT LINE
- W8 — EXISTING WATER LINE
- S6 — EXISTING SEWER LINE
- W8 — PROPOSED WATER LINE
- S6 — PROPOSED SEWER LINE



111 S. KING STREET, SUITE 170
 HONOLULU, HAWAII 96813
 808.523.5866
 WWW.G7O.DESIGN



**SAM MAHELENA
 MEMORIAL HOSPITAL**
 SITE AND UTILITY PLAN - PHASE 2

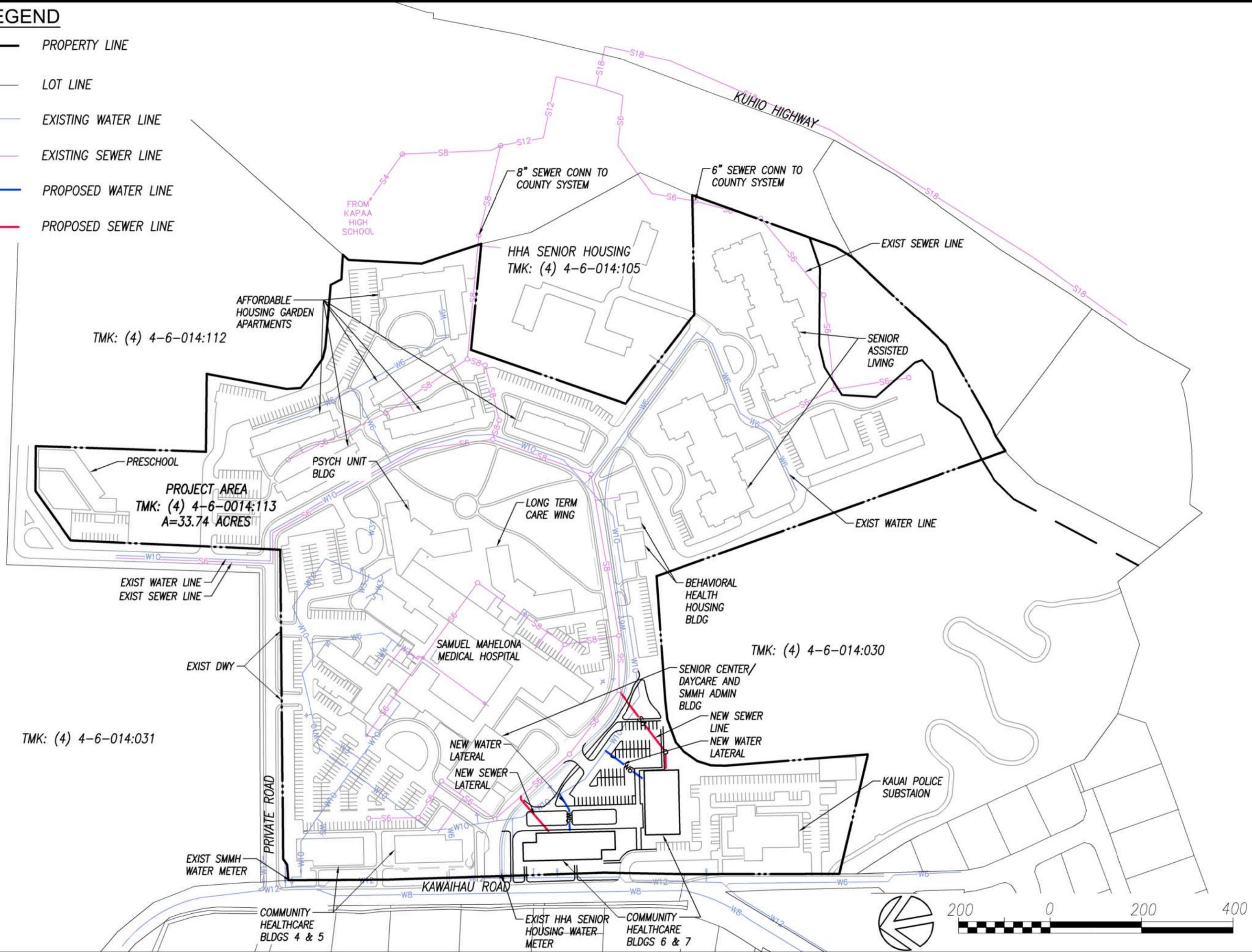
CAD DRAWING:
 218048-01 SITE+UTIL PLAN
 SCALE: 1 IN = 200 FT
 DATE: JULY 2020
 PROJECT #: 218048-01

FIGURE

6

LEGEND

-  PROPERTY LINE
-  LOT LINE
-  EXISTING WATER LINE
-  EXISTING SEWER LINE
-  PROPOSED WATER LINE
-  PROPOSED SEWER LINE



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 HONOLULU, HAWAII 96813
 808.523.5866
 WWW.G7O.DESIGN



**SAM MAHELONA
 MEMORIAL HOSPITAL**
 SITE AND UTILITY PLAN - PHASE 3

CAD DRAWING:
 218048-01 SITE+UTIL PLAN
 SCALE: 1 IN = 200 FT
 DATE: JULY 2020
 PROJECT #: 218048-01

FIGURE

7

The phase 3 development of our site will still be classified as the land uses of “Schools, Retail Stores or Shops, Shopping Centers, Hotels and Hospitals” and “PUD Townhouses, Apartments R-20” in Table 100-19A Fire Flow Requirements of the County of Kauai Department of Water 2008 Amendments to the 2002 Water System Standards, similar to Phase 2. Also similar to phase 2, it is not required to provide fire flow for both classifications and the “Schools, Retail Stores or Shops, Shopping Centers, Hotels and Hospitals” classification demand will be used for the phase 3 calculations. The water demand for the phase 3 development is a cumulation of the water demand generated by the phase 2 development and the water demand generated by the phase 3 proposed development. The phase 3 proposed development will generate the following water demands:

Average Daily Demand = 113,470 gpd

Maximum Daily Demand = 170,205 gpd

Required Fire Flow = 420,000 gpd [2,000 gpm for 2 hours]

Maximum Daily Demand + Required Fire Flow = 410,205 gpd

Peak Flow = 567,350 gpd

Therefore, the required capacity of the distribution system shall deliver is 567,350 gpd.

See **Water Demand Calculations** in **Appendix C**.

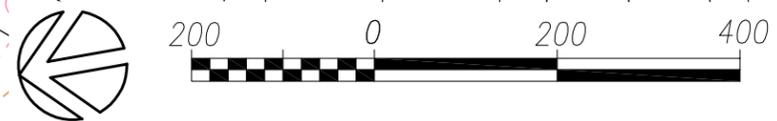
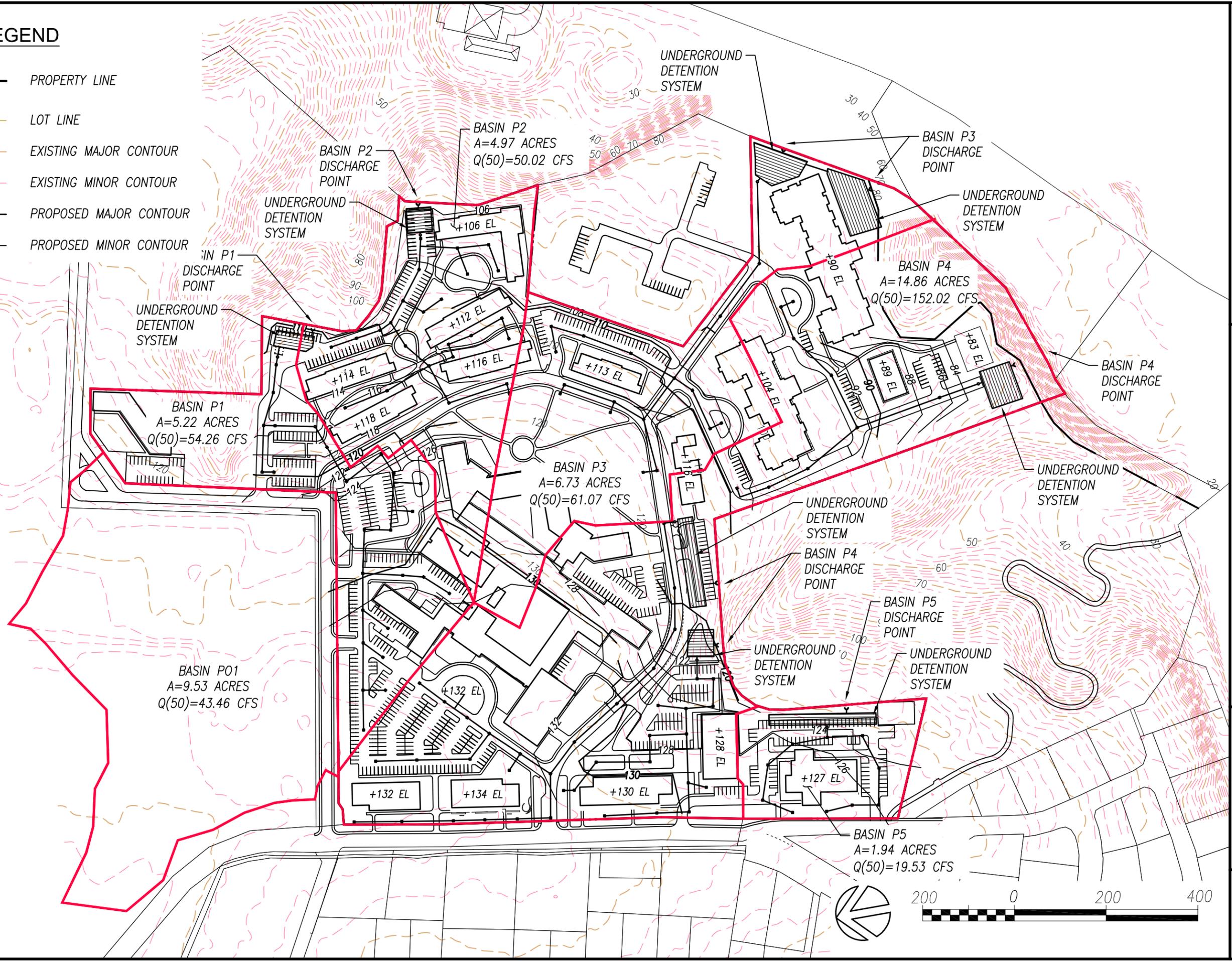
According to the County of Kaua'i Department of Water, there is no additional potable water availability for domestic or fire protection use at the present time as the existing source facilities for this area are operating at capacity. Although after further discussions with the County of Kaua'i Department of Water, it appears that they will be able to provide the additional water demand that the Phase 1 proposed developments generate but not the demand that the Phase 2 and Phase 3 proposed developments generate. Per discussions with the County of Kaua'i Department of Water, there are two offsite projects “Drill and Develop Kapa'a Homesteads Well No. 4” and “Kapa'a Homesteads 325' Tanks, Two 0.5 MG Tanks” that will provide additional water availability and fire protection for the Kapa'a area by April 2023. Any actual development of this area will be dependent of the adequacy of the source, storage and transmission facilities existing at that time. Another water availability request should be submitted after the offsite projects are completed to confirm that additional demand generated by the Phase 2 and Phase 3 developments can be supported.

3.5.2 FIRE PROTECTION

According to the County of Kauai Department of Water (DoW) 2008 Amendments to the 2002 Water System Standard Table 100-19A, developments consisting of hospitals and other non-apartment buildings shall meet the fire flow requirements of 2,000 GPM for 2 hours. Developments consisting of apartments shall meet the fire flow requirements of 1,500 GPM for 2 hours. A flow test on a critical fire hydrant is recommended to confirm that the county system can provide a residual pressure of 20 psi during the fire flow and the maximum daily flow. The buildings will be equipped with sprinklers, in accordance with NFPA 1 – Fire Code, a reduced fire flow requirement will be sought from the Kauai Fire Department and Department of Water during the building permit review phase. Design plans will be submitted for review by Kauai Fire Department (KFD) and DoW for each phase for approval under applicable NFPA and City and County Fire Code. KFD and

LEGEND

- PROPERTY LINE
- LOT LINE
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR



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HONOLULU, HAWAII 96813
808.523.5866
WWW.G7O.DESIGN



**SAM MAHELONA
MEDICAL HOSPITAL**
PROPOSED DRAINAGE MAP

CAD DRAWING:
218048-01 PROP DRAINAGE_KW
SCALE: 1" = 200'
DATE: JULY 2020
PROJECT #: 218048-01

DoW will determine its action dependent on policies and water system conditions at the time of the design plan submittal and review of permit application.

3.5.3 WATER INFRASTRUCTURE

All proposed water infrastructure will be sized for anticipated losses and peak flow. Fixture unit credit will be given for the demolition of existing structures on the Samuel Mahelona Memorial Hospital property. The proposed development will also need to meet the backflow prevention and cross-connection control requirements for the full buildout condition as designated by the DoW Water System Standards.

- **Phase 1:** Phase 1 will continue to be serviced by the existing 10-inch loop pipe. A new water meter box will be added with a 10-inch segment connected to the existing 10-inch loop providing SMMH with 2 meters. A 10-inch pipe will be extended towards the new Behavioral Health Housing building. A new water meter box will be installed and connect to the 12-inch pipe within Kawaihau Road and service the new Kapa'a Police Substation. See **Figure 5 – Site and Utility Plan – Phase 1.**
- **Phase 2:** In Phase 2, the on-site water system will branch off the existing water system and expand to the new Affordable Housing Garden Apartments, the new Senior Assisted Living building the new Community Healthcare buildings 4 & 5 and the new Preschool. See **Figure 6 – Site and Utility Plan – Phase 2.**
- **Phase 3:** In Phase 3, the on-site water system will branch off the existing system and expand to the new Coummunity Healthcare buildings 6 & 7. See **Figure 7 – Site and Utility Plan – Phase 3.**

Because flow and pressure data are not available, a flow test should ne performed to validate the recommendations in this report. And as the existing water infrastructure is at capacity, a water master plan should be developed prior to further definition of on-site water improvements.

3.6 DRAINAGE

3.6.1 DRAINAGE INFRASTRUCTURE IMPROVEMENTS

The Samuel Mahelona Memorial Hospital will manage all storm water runoff generated by the proposed on-site development. The new development will have similar drainage flow patterns to the existing drainage conditions, ultimately discharging into the adjacent gullies around the property.

3.6.2 LOW IMPACT DESIGN

Low Impact Design (LID) will be incorporated into the drainage design of the new development. There will be rain gardens constructed around the new buildings of all phases and will comply to LID standards.

3.6.3 DETENTION BASIN

The peak flow rates from the existing condition to the post-construction proposed condition have increased due to a larger impervious area from the development. However, effects of this increase can be mitigated through the utilization of a detention systems, where additional runoff volumes are stored and outlet peak flow rates are controlled through an outlet pipe prior to discharge into the existing gullies surrounding the property. The detention can be either underground to maximize the development footprint or above ground if space allows. Current design shows underground detention allowing for maximum development. However, if above ground detention was deemed feasible, the following volume would be the required as minimum per proposed basin.

- **Basin P1:** 5,900 cubic feet
- **Basin P2:** 7,400 cubic feet
- **Basin P3:** 10,500 cubic feet
- **Basin P4 + P5 :** 19,600 cubic feet

Runoff will enter an underground drainage system through inlets and roof drain connections that conveys it to the underground detention system from within their respective basins as shown on **Figure 8 – Proposed Drainage Map**. Runoff peak flow rates for the 50-yr storm will be attenuated in the detention system and post developed flows will be less than pre-developed flow rates. Runoff will be discharged from the detention system into the existing gullies surrounding the property.

- **Phase 1:** The underground drainage conveyance system and detention system for the Kapa’a Police Substation (Basin P5) can be installed as part of Phase 1. See **Figure 8 – Proposed Drainage Map**.

The partial underground drainage conveyance system for the new Psych Unit building can be installed, but a temporary above ground detention basin will have to be built in the northern portion of the affordable housing garden apartments until Phase 2.

- **Phase 2:** The underground drainage conveyance system and underground detention system’s for Basin P2 and P3 can be installed in Phase 2. Basin P1 will be the completion of the underground drainage conveyance system to the already installed system around the Psych Unit building and the installation of the underground detention system. Basin P4 will install a partial underground drainage conveyance system and underground detention system, excluding the area for the Community Healthcare Buildings 6 & 7. See **Figure 8 – Proposed Drainage Map**.
- **Phase 3:** In Phase 3, Basin P4 can be completed with the installation of the underground drainage conveyance system to connect to the already installed Basin P4 system. **Figure 8 – Proposed Drainage Map**.

3.6.4 HYDROLOGY

After grading and the construction of the proposed developments, the amount of sheet flow runoff from the site will experience an increase in flow. The roof runoff from all the proposed buildings will be directed into roof drain connections. The runoff from the remaining portion of the site will sheet flow towards low points on the site and collected by various types of drainage inlets. The conduits will convey storm water from the majority of site into the underground detention systems. The stormwater will be detained and released at a rate that would not exceed the pre-development designed flow rate for the existing sheetflow conditions at the existing discharge points. **Refer to Figure 8 – Proposed Drainage Map.**

Refer to **Attachment A** for the existing and proposed hydrographs for the drainage area, as well as the parameters used within the hydrologic calculations.

3.6.5 ON-SITE DRAINAGE AREA

- **Drainage Area P1:** Stormwater will be diverted to detention basin and discharged into existing gully through outlet control.
- **Drainage Area P2:** Stormwater diverted to detention basin and will be discharged into existing gully through outlet control.
- **Drainage Area P3:** Stormwater diverted to detention basin and will be discharged into existing gully through outlet control.
- **Drainage Area P4:** Stormwater diverted to detention basin and will be discharged into existing gully through outlet control.
- **Drainage Area P5:** Stormwater diverted to detention basin and will be discharged into existing gully through outlet control.

REFERENCES

County of Kaua'i, Department of Public Works, *Sewer Design Standards*, dated June 1973.

Kauai County Code, Title MC-15, Chapter 4, *Rules for the Design of Storm Drainage Facilities in the County of Maui*, dated November 1995.

Maui County Code, Title MC-15, Chapter 111, *Rules for the Design of Storm Water Treatment Best Management Practices*, dated November 2012.

County of Kauai, Department of Water Supply, *Water System Standards*, dated 2002.

State of Hawaii, Department of Health, Hawaii Administrative Rules, Title 11, Chapter 62, Appendix F, Wastewater Branch, April 15, 1997.

Appendix A

HYDROLOGY CALCULATIONS

G70
 111 South King Street, Suite 170
 Honolulu, Hawaii 96813
 Phone: 523-5866
 Fax: 523-5874

Samuel Mahelona Medical Hospital
 Job No.: 218048-01
 Prepared by: MS
 Date: October 2020

Methodology from Storm Water Runoff System Manual, Department of Public Work County of Kauai, July 2001, as amended

Runoff Flow rate (Rational Method) - $Q = CIA$:

Q = Flowrate, cfs

C = Runoff Coefficient

I_{50} = 1-Hour Rainfall Intensity, in/hr --> NOAA Rainfall Data

T_c = Time of Concentration

Rainfall Intensity Correction Factor --> Plate 2

A = Drainage Area, acres

Q(50) Value for Designated Areas

Onsite Drainage Basin	Runoff Coefficient C	1-Hour Rainfall Intensity, I_{50} (in/hr)	Time of Concentration T_c (min)	Rainfall Intensity Correction Factor	Corrected Rainfall Intensity, i_{50} (in/hr)	Area (ac)	Runoff Q_{50} (cfs)
E1	0.52	6	8.79	2.4	14.40	6.39	47.85
E2	0.41	6	6.29	2.6	15.60	3.56	22.77
E3	0.37	6	5.64	2.75	16.50	4.00	24.42
E4	0.43	6	8.28	2.5	15.00	10.16	65.53
E5	0.50	6	8.69	2.4	14.40	7.48	53.86
E6	0.35	6	7.5	2.5	15.00	2.15	11.29
TOTAL						33.74	225.72

Offsite Drainage Basin	Runoff Coefficient C	1-Hour Rainfall Intensity, I_{50} (in/hr)	Time of Concentration T_c (min)	Rainfall Intensity Correction Factor	Corrected Rainfall Intensity, i_{50} (in/hr)	Area (ac)	Runoff Q_{50} (cfs)
EO1	0.38	6	14.17	2	12.00	9.53	43.46
TOTAL						9.53	43.46

GRAND TOTAL						43.27	269.18
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EXISTING CONDITION HYDROLOGY CALCULATIONS

G70
 111 South King Street, Suite 170
 Honolulu, Hawaii 96813
 Phone: 523-5866
 Fax: 523-5874

Samuel Mahelona Medical Hospital
Job No.: 218048-01
Prepared by: MS
Date: October 2020

Methodology from Storm Water Runoff System Manual, Department of Public Work County of Kauai, July 2001, as amended

Runoff Flow rate (Rational Method) - $Q = CIA$:

Q = Flowrate, cfs

C = Runoff Coefficient

I_{50} = 1-Hour Rainfall Intensity, in/hr --> NOAA Rainfall Data

T_c = Time of Concentration

Rainfall Intensity Correction Factor --> Plate 2

A = Drainage Area, acres

Q(50) Value for Designated Areas

Onsite Drainage Basin	Runoff Coefficient C	1-Hour Rainfall Intensity, I_{50} (in/hr)	Time of Concentration T_c (min)	Rainfall Intensity Correction Factor	Corrected Rainfall Intensity, i_{50} (in/hr)	Area (ac)	Runoff Q_{50} (cfs)
P1	0.63	6	5	2.75	16.50	5.22	54.26
P2	0.61	6	5	2.75	16.50	4.97	50.02
P3	0.55	6	5	2.75	16.50	6.73	61.07
P4	0.62	6	5	2.75	16.50	14.86	152.02
P5	0.61	6	5	2.75	16.50	1.94	19.53
TOTAL						33.72	336.90

Offsite Drainage Basin	Runoff Coefficient C	1-Hour Rainfall Intensity, I_{50} (in/hr)	Time of Concentration T_c (min)	Rainfall Intensity Correction Factor	Corrected Rainfall Intensity, i_{50} (in/hr)	Area (ac)	Runoff Q_{50} (cfs)
EO1	0.38	6	14.17	2	12.00	9.53	43.46
TOTAL						9.53	43.46

GRAND TOTAL **43.25** **380.36**

PROPOSED CONDITION HYDROLOGY CALCULATIONS

Appendix B

WASTEWATER DEMAND CALCULATIONS

SAMUEL MAHELONA MEDICAL HOSPITAL - SEWER DEMAND

Kapaa High School

Type of Usage	School		
Average Daily Flows	25	gcd	
No. of Beds	1,041	capita	(2016-2017 SY according to google)
Average Daily Flow	26,025	gal/day	
Flow Factor	5	See Figure 22.2.3	
Maximum Flow of Sewage	130,125	gal/day	
Ground Water Infiltration	1,875	gal/day	
Assumption:	1,250	gad	Sewers laid above the normal ground water table
Peak Flow of Sewage	132,000	gal/day	

PHASE 1: 8-inch Sewer Pipe Connection (Expected Construction Date: 2025)

Hawaii Housing Authority

Type of Usage	Apartment (R10)		
Average Daily Flows	2,500	gad	
No. of Beds	0.750	acres	Existing Building footprint from google earth
Average Daily Flow	1,875	gal/day	
Flow Factor	5	See Figure 22.2.3	
Maximum Flow of Sewage	9,375	gal/day	
Ground Water Infiltration	938	gal/day	
Assumption:	1,250	gad	Sewers laid above the normal ground water table
Peak Flow of Sewage	10,313	gal/day	

Hoola Lahui Hawaii Clinic

Type of Usage	Light Industry		
Average Daily Flows	4,000	gad	
No. of Beds	0.120	acres	Existing Building Footprint (5,240 SF)
Average Daily Flow	481	gal/day	
Flow Factor	5	See Figure 22.2.3	
Maximum Flow of Sewage	2,406	gal/day	
Ground Water Infiltration	150	gal/day	
Assumption:	1,250	gad	Sewers laid above the normal ground water table
Peak Flow of Sewage	2,556	gal/day	

Samuel Mahelona Medical Hospital Expansion - Addition of Psych Unit

Type of Usage	Institutional		
Average Daily Flows	200	gcd	
No. of Beds	90	capita	Existing 72 beds Addition of: - 18 beds in Psych Unit
Average Daily Flow	18,000	gal/day	
Flow Factor	5	See Figure 22.2.3	
Maximum Flow of Sewage	90,000	gal/day	
Ground Water Infiltration	1,250	gal/day	
Assumption:	1,250	gad	Sewers laid above the normal ground water table
Peak Flow of Sewage	91,250	gal/day	

Housing Behavioral Health

No. of Beds	100	gcd	
Persons	75.0	capita	Addition of: - 30 Behavioral Health Units with 2.5 persons per unit
Average Daily Flow	7,500	gal/day	
Flow Factor	5	See Figure 22.2.3	
Maximum Flow of Sewage	37,500	gal/day	
Ground Water Infiltration	313	gal/day	
Assumption:	1,250	gad	Sewers laid above the normal ground water table
Peak Flow of Sewage	37,813	gal/day	

Community Facilities - Kauai Police Department Substation

Type of Usage	Light Industry		
Average Daily Flows	4,000	gad	
Area	0.24	acres	Addition of: - Kauai Police Department Substation (10,341 SF)
Average Daily Flow	960	gal/day	
Flow Factor	5	See Figure 22.2.3	
Maximum Flow of Sewage	4,800	gal/day	
Ground Water Infiltration	358	gal/day	
Assumption:	1,250	gad	Sewers laid above the normal ground water table
Peak Flow of Sewage	5,158	gal/day	

PHASE 1: 6-inch Sewer Pipe Connection (Expected Construction Date: 2025)

Staff Housing

Type of Usage	Light Industry		
Average Daily Flows	4,000	gad	
No. of Beds	0.153	acres	Existing Building Footprint
Average Daily Flow	614	gal/day	
Flow Factor	5	See Figure 22.2.3	
Maximum Flow of Sewage	3,068	gal/day	
Ground Water Infiltration	188	gal/day	
Assumption:	1,250	gad	Sewers laid above the normal ground water table
Peak Flow of Sewage	3,256	gal/day	

Total Phase 1 Flows: 8-inch Sewer Pipe Connection

Total Average Daily Flow	28,816	gal/day
Total Max Flow of Sewage	144,081	gal/day
Total Peak Flow of Sewage	147,089	gal/day

Total Phase 1 Flows: 6-inch Sewer Pipe Connection

Total Average Daily Flow	614	gal/day
Total Max Flow of Sewage	3,068	gal/day
Total Peak Flow of Sewage	3,256	gal/day

PHASE 2: 8-inch Sewer Pipe Connection (Expected Construction Date: 2035 - 2040)

Samuel Mahelona Medical Hospital Expansion - LTC Expansion

Type of Usage	Institutional		
Average Daily Flows	200	gcd	
No. of Beds	165	capita	Phase 2 capita + 75 additional beds from LTC Expansion
Average Daily Flow	33,000	gal/day	
Flow Factor	5	See Figure 22.2.3	
Maximum Flow of Sewage	165,000	gal/day	
Ground Water Infiltration	1,250	gal/day	
Assumption:	1,250	gad	Sewers laid above the normal ground water table
Peak Flow of Sewage	166,250	gal/day	

Samuel Mahelona Medical Hospital Expansion - Senior Center/Daycare & SMMH Admin

Type of Usage	Light Industry		
Average Daily Flows	4,000	gad	
Area	0.57	acre	Addition of: - 24,847 SF Senior Center/Daycare and SMMH Admin
Average Daily Flow	2,280	gal/day	
Flow Factor	5	See Figure 22.2.3	
Maximum Flow of Sewage	11,400	gal/day	
Ground Water Infiltration	1,250	gal/day	
Assumption:	1,250	gad	Sewers laid above the normal ground water table
Peak Flow of Sewage	12,650	gal/day	

Community Healthcare (Bldgs 4 & 5)

Type of Usage	Light Industry		
Average Daily Flows	4,000	gad	
Area	0.34	acre	Addition of: - 6,000 SF Hoola Lahui Health Clinic - 9,000 SF Convenience Retail/Services
Average Daily Flow	1,360	gal/day	
Flow Factor	5	See Figure 22.2.3	
Maximum Flow of Sewage	6,800	gal/day	
Ground Water Infiltration	483	gal/day	
Assumption:	1,250	gad	Sewers laid above the normal ground water table
Peak Flow of Sewage	7,283	gal/day	

Housing Affordable

Type of Usage	Residential		
Average Daily Flows	100	gpcd	
Persons	367.5	capita	Addition of: - 147 Garden Apartments with 2.5 persons per unit
Average Daily Flow	36,750	gal/day	
Flow Factor	5	See Figure 22.2.3	
Maximum Flow of Sewage	183,750	gal/day	
Ground Water Infiltration	1,475	gal/day	
Assumption:	1,250	gad	Sewers laid above the normal ground water table
Peak Flow of Sewage	185,225	gal/day	

Preschool

Type of Usage	School		
Average Daily Flows	25	gcd	
Persons	60	capita	6,000 SF assuming 1 capita per 100 SF
Average Daily Flow	1,500	gal/day	
Flow Factor	5	See Figure 22.2.3	
Maximum Flow of Sewage	7,500	gal/day	
Ground Water Infiltration	364	gal/day	
Assumption:	1,250	gad	Sewers laid above the normal ground water table
Peak Flow of Sewage	1,614	gal/day	

PHASE 2: 6-inch Sewer Pipe Connection (Expected Construction Date: 2035 - 2040)

Seniors Assisted Living

Average Daily Flows	100	gcd	
Persons	155	capita	Addition of: - 155 Assited Living Facility Beds
Average Daily Flow	15,500	gal/day	
Flow Factor	5	See Figure 22.2.3	
Maximum Flow of Sewage	77,500	gal/day	
Ground Water Infiltration	1,860	gal/day	
Assumption:	1,250	gad	Sewers laid above the normal ground water table
Peak Flow of Sewage	79,360	gal/day	

Phase 2 Total Flows 8-inch Sewer Pipe Connection

Total Average Daily Flow	85,225	gal/day
Total Max Flow of Sewage	426,125	gal/day
Total Peak Flow of Sewage	426,305	gal/day

Phase 2 Total Flows 6-inch Sewer Pipe Connection

Total Average Daily Flow	15,500	gal/day
Total Max Flow of Sewage	77,500	gal/day
Total Peak Flow of Sewage	79,360	gal/day

PHASE 3 (Expected Construction Date (2050 - 2055))

Community Facilities (Bldg 6 & 7)

Type of Usage	Light Industry		
Average Daily Flows	4,000	gad	
Area	0.33	acre	Addition of: - 5,500 SF Convenience Retail/Services - 9,000 SF Library
Average Daily Flow	1,320	gal/day	
Flow Factor	5	See Figure 22.2.3	
Maximum Flow of Sewage	6,600	gal/day	
Ground Water Infiltration	614	gal/day	
Assumption:	1,250	gad	Sewers laid above the normal ground water table
Peak Flow of Sewage	7,214	gal/day	

Phase 3 Total Flows 8-inch Sewer Pipe Connection

Total Average Daily Flow	86,545	gal/day
Total Max Flow of Sewage	432,725	gal/day
Total Peak Flow of Sewage	433,519	gal/day

Reference

Department of Public Works County of Kauai Sewer Design Standards
Chapter 20 Design of Sewers

Appendix C

WATER DEMAND CALCULATIONS

SAMUEL MAHELONA MEDICAL HOSPITAL - WATER DEMAND

EXISTING WATER DEMAND

Existing Samuel Mahelona Medical Hospital

Zoning Designation	Commercial Only		
Average Rate of Water Flow	3,000	gal/day	
Area	2.13	acres	Existing 92,737 SF Hospital
Average Daily Demand	6,390	gal/day	
Max Daily Demand	9,585	gal/day	1.5 x Average Daily Demand
Peak Hour	31,950	gal/day	5 x Average Daily Demand

Fire Flow Requirements

Land Use			
Schools, Retail Stores or Shops, Shopping Centers, Hotels and Hospitals	240,000	gal/day	2000 gpm for a duration of 2 hours

Existing Samuel Mahelona Medical Hospital

Total Average Daily Demand	6,390	gal/day
Total Max Daily Demand	9,585	gal/day
Total Max Daily Demand + Fire Flow Requirements	249,585	gal/day
Total Peak Hour	31,950	gal/day

PHASE 1 (Expected Construction Date: 2025)

Samuel Mahelona Medical Hospital - Addition of Psych Unit & Behavioral Health Center

Zoning Designation	Commercial Only		
Average Rate of Water Flow	3,000	gal/day	
Area	3.12	acres	Existing 92,737 SF Hospital Addition of: - 13,000 SF Psych Unit - 30,000 SF OP Behavioral Health Center
Average Daily Demand	9,360	gal/day	
Max Daily Demand	14,040	gal/day	1.5 x Average Daily Demand
Peak Hour	46,800	gal/day	5 x Average Daily Demand

Housing Behavioral Health

Zoning Designation	Residential: Multi-Family Low Rise		
Average Rate of Water Flow	350	gallons/unit	
Units	30	units	Addition of: - 30 units
Average Daily Demand	10,500	gal/day	
Max Daily Demand	15,750	gal/day	1.5 x Average Daily Demand
Peak Hour	52,500	gal/day	5 x Average Daily Demand

Fire Flow Requirements

Land Use			
Schools, Retail Stores or Shops, Shopping Centers, Hotels and Hospitals	240,000	gallons/day	2000 gpm for a duration of 2 hours

Total Phase 1 Flows (SMMH + Behavioral Health)

Total Average Daily Demand	26,250	gal/day
Total Max Daily Demand	39,375	gal/day
Total Max Daily Demand + Fire Flow Requirements	279,375	gal/day
Total Peak Hour	131,250	gal/day

PHASE 2 (Expected Construction Date: 2035 - 2040)

Samuel Mahelona Medical Hospital: LTC Expansion, Senior Center/Daycare & SMMH Admin

Zoning Designation	Commercial Only		
Average Rate of Water Flow	3,000	gal	
Area	4.020	acres	Existing 135,737 SF Hospital (from Phase 1) Addition of: - 21,446 SF LTC Expansion and right size support - 24,827 SF Senior Center/Daycare and SMMH Admin Removal of: - 4,406 SF Admin Wing - 2,640 SF Former Laundry/Boiler
Average Daily Demand	12,060	gal/day	
Max Daily Demand	18,090	gal/day	1.5 x Average Daily Demand
Peak Hour	60,300	gal/day	5 x Average Daily Demand

Community Healthcare (Bldgs 4 & 5)

Zoning Designation	Commercial Only		
Average Rate of Water Flow	3,000	gal	
Area	0.34	acres	Addition of: - 6,000 SF Hoola Lahui Health Clinic - 9,000 SF Convenience Retail/Services
Average Daily Demand	1,020	gal/day	
Max Daily Demand	1,530	gal/day	1.5 x Average Daily Demand
Peak Hour	5,100	gal/day	5 x Average Daily Demand

Seniors Assisted Living

Zoning Designation	Residential: Multi-Family Low Rise		
Average Rate of Water Flow	350	gals/unit	
Units	62	units	Addition of: -155 Assisted Living Facility Beds with 2.5 capita/unit
Average Daily Demand	21,700	gal/day	
Max Daily Demand	32,550	gal/day	1.5 x Average Daily Demand
Peak Hour	108,500	gal/day	5 x Average Daily Demand

Housing Affordable

Zoning Designation	Residential: Multi-Family Low Rise		
Average Rate of Water Flow	350	gals/unit	
Units	147	units	Addition of: - 147 Garden Apartments
Average Daily Demand	51,450	gal/day	
Max Daily Demand	77,175	gal/day	1.5 x Average Daily Demand
Peak Hour	257,250	gal/day	5 x Average Daily Demand

Fire Flow Requirements

Land Use			
Schools, Retail Stores or Shops, Shopping Centers, Hotels and Hospitals	240,000	gallons/day	2000 gpm for a duration of 2 hours

Phase 2 Total Flows (Phase 1 Total Flows + SMMH Expansion + Community Healthcare + Seniors Assisted Living + Housing Affordable)

Total Average Daily Demand	112,480	gal/day
Total Max Daily Demand	168,720	gal/day
Total Max Daily Demand + Fire Flow Requirements	408,720	gal/day
Total Peak Hour	562,400	gal/day

PHASE 3 (Expected Construction Date (2050 - 2055))

Community Facilities (Bldg 6 & 7)

Zoning Designation	Commercial Only		
Average Rate of Water Flow	3,000	gal/day	
Units	0.33	acres	Addition of: - 5,500 SF Convenience Retail/Services - 9,000 SF Library
Average Daily Demand	990	gal/day	
Max Daily Demand	1,485	gal/day	1.5 x Average Daily Demand
Peak Hour	4,950	gal/day	5 x Average Daily Demand

Fire Flow Requirements

Land Use			
Schools, Retail Stores or Shops, Shopping Centers, Hotels and Hospitals	240,000	gal/day	2000 gpm for a duration of 2 hours

Phase 3 Total Flows (Phase 2 Total Flows + Community Facilities)

Total Average Daily Demand	113,470	gal/day
Total Max Daily Demand	170,205	gal/day
Total Max Daily Demand + Fire Flow Requirements	410,205	gal/day
Total Peak Hour	567,350	gal/day

Reference

Water System Standards, 2002
 Table 100-18 - Domestic Consumption Guidelines
 Table 100-20 - Demand Factors

County of Kauai Department of Water 2008 Amendments to the 2002 Water System Standards
 Table 100-19A Fire Flow Requirements

Appendix L

Traffic Study

Memorandum

Date: October 30, 2020
To: Barbara Natale, G70
From: Stephanie Cheng and Sohrab Rashid
Subject: **Samuel Mahelona Memorial Hospital Master Plan – Traffic/Circulation Summary and Identification of Potential Mobility Hub Features**

SD19-0301

This memorandum summarizes existing traffic and circulation patterns, key transportation-related considerations, and potential mobility hub features in support for the development of the Samuel Mahelona Memorial Hospital (SMMH) Site Master Plan.



Introduction

The project site has been identified by the Hawaii Transit-Oriented Development (TOD) Council for Transit-Ready Development (TRD) as part of the TOD Strategic Plan. The vision for the site includes a mix of uses including healthcare and hospital services, housing, and community uses served by public transit with multi-modal facilities that would increase resident access and mobility in the region.

Priorities for the project include:

- Creating a sustainable Master Plan to serve needs of local residents and provide island-wide geriatric and behavioral health services
- Fostering more walkable and bikeable communities

- Improving access to health care
- Providing a mix of housing and community commercial uses to facilitate walkable development
- Supporting the kupuna community by providing expanded healthcare services, improved access, and elderly support housing

Project Location

SMMH is located in Kapa'a on the east side of Kauai at 4800 Kawaihau Road. It is located along Kawaihau Road between Nunu Road and Iwaena Road, mauka of Kuhio Highway, and adjacent to Kapa'a Elementary School.

Surrounding land uses include Kapa'a Elementary School, Kapa'a High School, Saint Catherine Parish and School, Kealia Beach, and single-family residential neighborhoods.

The Hawaii Housing Authority owns an adjacent public housing development that includes 19 duplexes on the same property as the proposed project. The public housing is located makai of the hospital and mauka of Kuhio Highway. Access to the housing area is provided from the SMMH driveways.

Existing Uses

SMMH is the oldest operating hospital on Kauai and is designated as a Critical Access hospital with 80 licensed beds, including 66 long-term care beds, nine (9) psychiatric beds, and five (5) acute care beds. The hospital has approximately 119 employees.¹ The hours of operation are generally 6:00 AM to 8:00 PM, though visitor access to patients who reside on-site is available 24-hours per day.

SMMH currently provides the following services:

- 24-Hour Emergency Services
- In-Patient Psychiatric Care
- Medical Care
- Skilled Nursing Care
- Long-Term Care
- Radiology
- Inpatient Pharmacy
- Recreational Therapy
- Occupational Therapy
- Physical Therapy
- Behavioral Health
- Dietary Counseling
- Social Services



¹ <http://kauai.hhsc.org/facilities/samuel-mahelona-memorial-hospital-smmh/>

In addition to medical services, the project site includes:

- Former civil defense building, where the Kauai Police Department currently runs the Kauai Police Activities League (K-PAL). K-PAL is a non-profit organization that hosts youth activities and programs.
- Ho'ola Lahui Hawaii Community Health Center
- A single-family residential house that historically provided housing for SMMH physicians but is currently vacant.
- Space for community events such as the Bon Dance.
- Frontage lawns used as overflow parking for SMMH and Kapa'a Elementary/High School events.



Surrounding Roadways

Kuhio Highway is a two-lane highway that provides access between Lihue and Princeville as well as connections to (Highway 50) towards South and West Kauai. Within the study area, Kuhio Highway is generally a two-lane roadway with intermittent left-turn lanes. Kuhio Highway intersects with Kawaihau Road, which provides direct access to SMMH. The posted speed limit varies from 40 miles per hour (mph) north of Mailihuna Road, 35 mph south of Mailihuna Road, and 25 mph in Kapa'a town where pedestrian activity and crosswalks are prevalent. Kuhio Highway has intermittent sidewalks through Kapa'a town and provides pedestrian access to the existing Ke Ala Hele Makalae multi-modal path along the shoreline. On-street parking is provided in Kapa'a town but generally not provided along other segments of the highway. Kuhio Highway is under jurisdiction of Hawaii Department of Transportation (HDOT).

Kawaihau Road is a two-lane connector roadway that traverses from Kuhio Highway to SMMH, Kapa'a Elementary and High Schools, and mauka to the residential neighborhood. It is generally a two-lane road with a sidewalk along the SMMH frontage. Crosswalks are provided at SMMH and in front of Kapa'a Elementary and High Schools. Kawaihau has a transit stop directly on-site and across the street from SMMH. There is also an existing school bus stop near Iwaena Road. A new pedestrian boardwalk was constructed near Iwaena Road that provides an off-street pedestrian and bicycle connection between Kuhio Highway and Kawaihau Road. On-street parking is not permitted on Kawaihau Road in front of SMMH. The speed limit on Kawaihau Road is 25 mph or 15 mph in school zones when children are present. Kawaihau Road is under the jurisdiction of the County of Kauai.

Nunu Road is a two-lane local roadway that traverses from mauka of Pelehu Road and makai of SMMH. Nunu Road is situated between Kapa'a Elementary School and SMMH properties and terminates at the Easterseals Kapa'a Service Center. Access connections to both Kapa'a Elementary School and SMMH are located along Nunu Road. No sidewalks or bicycle facilities are currently provided. On-street parking is provided along the Kapa'a Elementary school side of the road. The posted speed limit is 15 mph in school zones when children are present. Nunu Road is utilized for school and SMMH traffic. Nunu Road is under the jurisdiction of the County of Kauai.

Mailihuna Road is a two-lane local roadway between Kuhio Highway and Kawaihau Road, immediately north of Kapa'a High School. It has a shared bike route (Class III/sharrows) but no formal pedestrian paths or sidewalks. On-street parking is not permitted. The speed limit is 25 mph. Mailihuna Road is under the jurisdiction of the County of Kauai. At the time this report was prepared, a single-lane roundabout was under construction at the intersection of Mailihuna Road and Kuhio Highway. The addition of the roundabout will eliminate left-turns, improve operational efficiency, and facilitate pedestrian crossings. A new sidewalk on the mauka side of Kuhio Highway will be constructed to connect Mailihuna Road to the Kapa'a Stream Bridge along Kuhio Highway.

Existing Transit Services and Facilities

The Kauai Bus is the primary public transit provider on Kauai. The system provides bus and paratransit service. It operates nine (9) regular bus routes and two (2) limited service express routes. There is one (1) transit route (Route 60, the Kapahi Shuttle) through the vicinity of SMMH which provides hourly service between Kapa'a Skate Park and Kapa'a Middle School. The Kapahi Shuttle currently operates once per hour. Paratransit service vehicles drive directly to the on-site housing development using the SMMH main driveway.

Existing transit stops are located at the following locations:

- On-site at SMMH near the foyer and visitor parking lot
- Directly across from SMMH along the mauka side of Kawaihau Road
- Along the frontage of Kapa'a High School Pavilion
- Along the makai side of Kuhio Highway (across from the Friendship House)



In addition to The Kauai Bus public transit, school bus service is also provided to/from Kapa'a High School.

Existing Pedestrian and Bicycle Facilities

Pedestrian facilities consist of sidewalks, crosswalks, and pedestrian signals at signalized intersections. An existing paved sidewalk and striped crosswalks are provided along the SMMH frontage along Kawaihau Road. An asphalt pathway is provided on Kawaihau Road in front of Kapa'a Elementary School. Intermittent crosswalks are provided across Kawaihau Road in front of the schools. Other surrounding roadways and the mauka side of Kawaihau Road do not have paved pedestrian facilities. The sidewalk on Kawaihau Road along the SMMH frontage does not have a curb or gutter, it is a paved pathway with grass on both sides. There is minimal vertical separation from the roadway (i.e. less than 3").



A multi-use shoreline path (Ke Ala Hele Makalae) makai of Kuhio Road extends between Fuji Beach and Kealia Beach. The path connects to major intersections with marked crosswalks to provide pedestrian and bicycle access across Kuhio Highway. The long-term vision for the path is for it to connect to the Lihue Airport. In addition, a new pedestrian boardwalk was constructed near Iwaena Road (shown to the right) that provides an off-street pedestrian and bicycle connection between Kuhio Highway and Kawaihau Road.



Class III shared bike route (i.e. sharrows) is provided along Mailihuna Road. Bicycle racks are provided at the transit stop on Kawaihau Road across from SMMH.

Existing SMMH Traffic, Access, and Parking

Traffic patterns were observed in May 2019 around SMMH during the morning and afternoon peak hours on a weekday, including during Kapa'a Elementary drop-off and pick-up times. Overall, traffic throughout the day is low to moderate along Kawaihau Road with most congestion and queueing occurring along Nunu Road and along the school frontages during drop-off and pick-up, which lasts for approximately 15 minutes before and after school. Some students and parents park on the grassy area off of Nunu Road and walk to school. No traffic congestion, queueing, or conflict concerns were observed for traffic related to SMMH.

Regional trips to SMMH arrive via Kuhio Highway to Kawaihau Road, where vehicles enter SMMH at either the hospital entrance or along Nunu Road. For vehicles arriving from or departing to North Kauai, an additional connection from Kuhio Road is provided at Mailihuna Road.

Based on observations and discussion with SMMH staff, the majority of trips to SMMH arrive via Kuhio Highway at Kawaihau Road. Along Kuhio Highway, the close proximity between Cane Haul Road, Hauaala Road, and Kawaihau Road allow for short left-turn lanes. As such, traffic queues during the morning peak hours may extend past the provided left-turn lane at Kuhio Highway/Kawaihau Road. The maximum observed was a queue of five (5) vehicles waiting in the left-turn lane during the AM peak hours.

Primary access to SMMH is provided along Kawaihau Road at the hospital driveway. The intersection of Kawaihau Road and the hospital driveway is side-street stop-controlled (ie Kawaihau is uncontrolled with a stop sign at the outbound hospital driveway). The access driveway extends from Kawaihau Road to the foyer parking lot, continuing counterclockwise around the hospital building to connect to the housing duplexes, the KPAL building, and around to Nunu Road. Nunu Road provides direct parking and access to outpatient, specialist clinic, and the psychiatric units.

All SMMH parking is accommodated on-site. There are generally four (4) small parking lots surrounding the hospital. The foyer parking lot is for visitors, outpatients, and registration, and also includes accessible parking spaces. Behind the foyer parking lot is the Emergency Department parking lot. Nunu Road provides access to two small parking lots for employees and patients/visitors of the psychiatric, specialist clinic, and outpatient departments. Nunu Road is also the access road for all service and truck deliveries to SMMH.

Planned and Potential Improvements

In May 2019, Fehr & Peers met with County of Kauai staff from the Planning and Public Works Departments to discuss the project site and planned or potential improvements in the area. County staff indicated the following projects were planned in the immediate project vicinity:

- A peanut-shaped roundabout at Kawaihau Road / Mailihuna Road-Hauaala Road has been designed as a Complete Street and Safety Improvements project and will have crosswalks, raised medians, and an eight (8)-foot wide walkway for improved pedestrian visibility and access. Construction is anticipated to begin in 2020-2021.
- County staff indicated Kuhio Highway/Mailihuna Road is a high crash location. A new roundabout is under construction at the intersection as part of the Kapa'a Stream Bridge replacement project along Kuhio Highway. The bridge replacement construction began in 2019 and construction of the roundabout began in 2020. New sidewalk will be added along Mailihuna Road to provide pedestrian access from the Kapa'a residential and school areas to the beach.
- HDOT is considering converting Hauaala Road at Kuhio Road from a full access intersection to right-in, right-out only due to the close proximity of intersections on Kuhio at Cane Haul Road, Hauaala Road, and Kawaihau Road. The closure of the left-turn lane from Kuhio Highway to Hauaala Road would allow for a longer left-turn lane at Kawaihau Road. In addition, Cane Haul Road may become a two-way road. No anticipated date for implementation was available.
- Planned development projects in the project vicinity include:

- Hokua Place by Kapa‘a Middle School proposes to construct up to 700 homes off of Olohena Road.
- Kealia Mauka Homesteads

Proposed Project

The SMMH Master Plan will enhance the facility to meet the health needs of Kauai and integrate affordable housing and other uses to provide a mix of services and amenities along with transit service. The project will provide Kauai residents will better access to needed health services and facilities. Proposed land uses developed for the Master Plan include expansion of hospital services, including behavioral health facilities, senior housing, affordable housing, and a mix of community services. The specific land uses and sizes will be determined as the project moves forward.

The project trip generation was based on rates provided in the Trip Generation Manual, 10th Edition (2016) published by the Institute of Transportation Engineers (ITE). Use of these rates is consistent with state-of-the-practice procedures for estimating traffic. **Table 1** summarizes the anticipated daily, AM peak hour, and PM peak hour trip generation rates for each proposed land use at full buildout of the site. As shown, the proposed Master Plan may potentially add up to 3,646 new daily trips to the area throughout the day, including up to 288 AM and 420 PM peak hour trips, assuming no trip reductions.

The provision of the TOD project and bus transit in close proximity to the project site (along SMMH frontage) would allow some residents of the proposed project to reduce the number of vehicle trips they make by providing a reliable alternative to auto travel. In some cases, residents may choose to not own a vehicle and rely exclusively on the bus. Furthermore, some patrons of the retail uses, as well as some employees, would use bus transit further reducing traffic to the site. As an envisioned site for TOD, several mobility features and facilities are assumed to be constructed with the project to support and encourage more active transportation choices. A 10 percent *walk/bike/transit* reduction was applied at the assumed buildout of the project. *Pass-by trips* are made by those vehicles already passing by the site on Kawaihau Road, where those vehicles would simply turn into and out of the site during a trip that is already being made. For example, a local resident or trip to school may stop at the proposed library. In this case, pass-by trips are not new trips generated by the site or new to the roadway network, but still comprise a portion of site-generated traffic at its driveways. A 15 percent pass-by reduction was applied at the assumed buildout of the project, when a mix of community uses will be available. With the estimated *walk/bike/transit* and *pass-by trip* reductions, the project is estimated to generate up to 2,735 daily trips, including 216 AM and 315 PM trips with buildout of the proposed land uses.

In 2019, Kawaihau Road was reported to carry approximately 6,700 daily trips. Two-lane collector roads like Kawaihau Road are typically designed to carry up to 10,000 vehicles per day, after which traffic is considered to exceed capacity. Therefore, the addition of 2,735 daily project trips (at full buildout with assumed reductions) to the existing 6,700 trips is a forecasted total of 9,435 daily trips on Kawaihau Road with implementation of the project.

Table 1: Trip Generation Rates and Estimates

TRIP GENERATION RATES AND ESTIMATES								
SAMUEL MAHELONA HOSPITAL MASTER PLAN								
Trip Generation Rates								
Land Use (ITE Trip Rate)	Unit	Daily Trip Rate	A.M. Peak			P.M. Peak		
			In %	Out %	Total	In %	Out %	Total
Hospital (610)	KSF	10.72	66%	34%	0.85	34%	66%	0.97
Library (590)	KSF	72.05	49%	51%	6.25	52%	48%	8.53
Community Meeting ¹	KSF	--	<i>Estimated</i>			<i>Estimated</i>		
Health Clinic (630)	KSF	38.16	58%	42%	5.22	46%	54%	4.64
Preschool (565)	KSF	47.62	53%	47%	11.00	47%	53%	11.12
Behavioral Health (620) ²	Beds	3.06	72%	28%	0.17	33%	67%	0.22
Convenience Retail (880)	KSF	90.08	65%	35%	2.94	49%	51%	8.51
Assisted Living (254)	Beds	2.60	67%	33%	0.18	45%	55%	0.34
Apartments (221)	DU	5.44	27%	73%	0.32	60%	40%	0.41
Forecasted Project Trip Generation								
Land Use	Size/Unit (Net New)	Daily Trips	A.M. Peak			P.M. Peak		
			In	Out	Total	In	Out	Total
Hospital (610)	46.30 KSF	496	26	13	39	15	30	45
Library (590)	9 KSF	648	28	29	56	40	37	77
Community Meeting ¹	5.5 KSF	25	2	2	4	10	10	20
Health Clinic (630)	1 KSF	38	3	2	5	2	3	5
Preschool (565)	7 KSF	333	41	36	77	37	41	78
Behavioral Health (620) ²	30 Beds	92	4	1	5	2	4	7
Convenience Retail (880)	9 KSF	811	17	9	26	38	39	77
Assisted Living (254)	155 Beds	403	19	9	28	24	29	53
Apartments (221)	147 DU	800	13	34	47	36	24	60
Sub-Total New Project Trips		3,646	152	137	288	203	217	420
<i>Estimated Walk/Bike/Transit Trips (10%) Reduction</i>		-365	-15	-14	-29	-20	-22	-42
<i>Estimated Pass-by trips (15%) Reduction</i>		-547	-23	-21	-43	-31	-33	-63
		2,735	114	103	216	153	163	315

Notes: Based on ITE 10th Generation trip rates

¹Community Meeting area is intended to be used as an occasional community meeting or event space. Daily use is not anticipated.

²Behavioral Health is based on the Medical trip generation rate for Nursing Home

Issues and Considerations

The key transportation issues and considerations for the SMMH Master Plan are described below.

Kawaihau Road. The main entrance to SMMH is provided on Kawaihau Road. Based on observations, less than 20 vehicles arrived to SMMH during the morning peak hour, which suggests most of the existing traffic is generated by the schools and residential areas. The busiest hours on the roadway occur during morning drop-off and afternoon pick-up at Kapa'a Elementary and High Schools.

Access. The addition of a left-turn lane at the site driveway was considered during the master plan process. Occasionally, southbound vehicles turning left into SMMH must wait for clearance in northbound traffic. The maximum observed queue into SMMH was four (4) vehicles. The current and forecasted future volumes on Kawaihau Road do not indicate a need for a left-turn lane given that most traffic is travelling between Kuhio Highway and the neighborhoods and schools north of SMMH. However, two new roundabouts in the area may alter travel patterns around the site. A new roundabout at Kuhio Highway and Mailihuna Road is currently under construction and a peanut-shaped roundabout is planned for construction at Kawaihau Road/Mailihuna Road-Hauaala Road as a Complete Street project by the County. The roundabouts will provide improved traffic flow and are likely to shift traffic from Kawaihau Road to Mailihuna Road between upper Kapa'a and Kuhio Highway. This change in travel patterns may increase the number of trips arriving at the site from Mailihuna Road and increase need for a left-turn lane along Kawaihau Road. Therefore, the need for a left-turn lane on Kawaihau Road should be re-evaluated after the roundabouts open to validate the need for separate left-turn capacity into SMMH.

TOD Facilities. The majority of pedestrians observed in the area were traveling to and from the school campuses. Large groups or classrooms of elementary school students were observed walking along the makai side of Kawaihau Road along the SMMH frontage towards the multi-use path at Iwaena Road. Less than five bicyclists were observed traveling along Kawaihau Road. All bicyclists utilized the paved sidewalk on the makai side of Kawaihau Road along the SMMH frontage rather than travel in the roadway, indicating that bicyclists may not feel safe traveling in the roadway.

The vision for SMMH as a TOD site will encourage more walking, biking, and transit use along Kawaihau Road and surrounding roadways. As such, continuous grade-separated sidewalks, high-visibility crosswalks, and pedestrian facilities on surrounding roadways are recommended along with appropriate amenities, such as adequate lighting and landscaping for shade. Physical separation between people walking and biking from vehicle traffic on Kawaihau Road along the project frontage should be accommodated by placing a landscaped buffer along the curb edge between the sidewalk and roadway, as opposed to placing the sidewalk adjacent to the roadway. Additional recommendations are described in the "Potential Mobility Hub Features" section.

Nunu Road is used for SMMH and Kapa'a Elementary School. School drop-off and pick-up times experience heavier traffic and pedestrian activity, while traffic during the rest of the day is low to moderate.

Parking. Due to limited school parking, cars park perpendicularly and parallel to the roadway on Nunu Road along the shoulders and walk to campus. The lack of sidewalks requires people to walk in the shoulders or roadway. Therefore, it is recommended that parking needs and demands be coordinated with the schools to determine if shared parking can be accommodated at SMMH, particularly as the south side of Nunu Road is improved with construction of SMMH. Paved sidewalks are also recommended, where feasible.

Access. Nunu Road is currently constructed with one lane in each direction. To exit from Nunu Road, vehicles may either turn left on Kawaihau Road or right towards Mailihuna Road to access Kuhio Highway. With buildout of SMMH and greater use of Nunu Road, the addition of a left-turn lane on Nunu Road to Kawaihau Road may be beneficial in facilitating traffic through the area. However, the new roundabouts in the area may alter travel patterns around the site. A new roundabout at Kuhio Highway and Mailihuna Road is currently under construction and a peanut-shaped roundabout is planned for construction at Kawaihau Road/Mailihuna Road-Hauaala Road as a Complete Street project by the County. The roundabouts will provide improved traffic flow and are likely to shift traffic from Kawaihau Road to Mailihuna Road between upper Kapa'a and Kuhio Highway. This change in travel patterns may increase the number of trips arriving at the site from Mailihuna Road and decrease the need for a left-turn lane along Nunu Road. Therefore, the need for a left-turn lane on Nunu Road should be re-evaluated after the roundabouts open to validate the need for separate left-turn capacity onto Kawaihau Road.

In addition, a feasibility study to extend Nunu Road to Kuhio Highway should be considered to provide increased access to and from the site and possibly the greater community. Currently, all trips access to SMMH and Kapa'a schools utilize Kawaihau Road or Mailihuna Road. The addition of a new access point from the highway would disperse traffic on the adjacent roadways and improve traffic flow during peak hours. However, the construction of the roundabouts at Mailihuna Road may improve traffic flow in the area and reduce the need for additional access.

Kuhio Highway. Based on 2019 traffic counts from HDOT, Kuhio Highway carries an annual average of approximately 21,700 vehicles per day south of Hauaala Road and 15,700 vehicles per day north of Kawaihau Road. Congestion occurs on Kuhio Highway during the AM and PM peak hours, resulting in queues on the perpendicular stop-controlled streets (Cane Haul Road, Hauaala Road, Kawaihau Road, Mailihuna Road) as vehicles wait for a break in traffic on Kuhio Highway, which is uncontrolled in the immediate vicinity. Most inbound traffic to Kapa'a schools and SMMH come from the south and travel northbound on Kuhio Highway and turn left on Kawaihau Road. The close proximity between Cane Haul Road, Hauaala Road, and Kawaihau Road allow for short left-turn lanes. As such, traffic queues during the peak hours extend past the provided left-turn lane on Kuhio Highway at Kawaihau Road. The construction of the new roundabouts may shift vehicular travel patterns to utilize Mailihuna Road more than Kawaihau Road. Therefore, the need for

additional improvements to the highway should be explored and evaluated, following the construction of the roundabouts.

SMMH Potential Mobility Hub Features

Introduction

The proposed redevelopment of the SMMH site includes expansion of healthcare and administrative office space, a new library building, affordable housing units, an assisted living facility, a senior center, and a new police substation. Given the mix of proposed land uses and the amount of new traffic that could be generated, one means of reducing reliance on single-occupant vehicles is to develop and operate a mobility hub within the project site.

A mobility hub is a place where people can make seamless connections between public transit and other travel options, as well as integrating features designed to reduce vehicle trips. Hubs can and should be designed to accommodate additional features over time to address changes in travel demand and as new technology becomes available and feasible. Each mobility hub should be designed specifically for the surrounding community it serves, ideally making it easier for residents, employees, and visitors to use transit to travel from home to work and a wide variety of destinations in between. A mobility hub area includes not just the transit station itself but all those services and destinations that are accessible within a five-minute walk, bike, or drive to/from that location.

This memorandum provides an initial assessment of features that could be incorporated at the SMMH site.

Catalog of Mobility Hub Features

Mobility hub services and amenities can generally be grouped into five major categories:

Transit Amenities - features located in the immediate transit station area to help riders plan their trips and make connections while offering them a convenient and comfortable place to wait for their ride.

- Enhanced transit waiting areas
- Passenger loading zones
- Real-time travel information

Pedestrian Amenities - features are located within a five-minute walk to transit.

- Walkways
- Crossings

Bike Amenities - features are located within a five-minute bike ride to transit and provide connections to nearby "rideable" origins and destinations.

- Bikeways
- Bike parking
- Bikeshare

Motorized Service Amenities - features including services and infrastructure that are located within a five-minute drive to transit and allow users to use motorized services when necessary.

- Dedicated transit lanes
- Rideables (i.e., scooters, electric skateboards, hoverboards, and self-balancing boards with one or two wheels are all examples of rideables)
- Electric bikeshare and scootershare
- Carshare
- On-demand rideshare
- Microtransit
- Neighborhood electric vehicle
- Electric vehicle charging
- Smart parking
- Flexible curb space

Support Service Amenities - features that may exist within all mobility hubs to enhance traveler convenience and encourage the use of non-automobile modes where feasible.

- Wayfinding
- Package delivery
- Mobile retail services
- Universal transportation account

The amenities that have the highest potential for implementation at the SMH site are described in the next section.

Potential SMMH Mobility Hub Features

As noted in the Introduction, mobility hub features should be tailored to a specific site based on the land use context, frequency of transit service, likely use of services and amenities, and available physical space and infrastructure. The description of each potential feature within the amenities group is based on input from G70 and our understanding of the project site context. G70 has preliminarily identified a primary mobility hub location located within the parking lot serving library and community commercial buildings (shown by the red oval in the figure below).



Transit Amenities

- Enhanced transit waiting areas – bus stops should include shelters, benches/seating, refuse receptacles, shade trees nearby, ADA-compliant sidewalks/pedestrian pads, safety lighting, public art, USB charging ports.
- Passenger loading zones – a designated passenger loading zone (with a short maximum time limit of three to five minutes) should be provided as close to the primary bus stop(s) as possible. Given the density of the project uses, it is expected that at least two spaces should be provided to accommodate simultaneous drop off/pick up activities. Parking could be allowed in these loading zones during off-peak periods (e.g., 7pm to 6am). Ideally, some parking areas of the site can be converted to loading areas as autonomous shuttle and vehicles become more prevalent.
- Real-time travel information – including stub outs from electrical lines providing power to nearby lighting fixtures would allow for installation of future reader boards/screens indicating real-time bus arrival information and other modal options available at the site. Speakers should also be provided to accommodate all patron needs including those of the visually impaired. If not feasible at the stop itself, a centralized kiosk can be provided to provide transit information, arrival times, etc.

Pedestrian Amenities

- Walkways – the shortest and most direct paths for walking should be provided between the transit stop and other modal options within the transit hub. All paths and sidewalks should be a minimum of 5 feet wide clear, ADA-compliant, well lit, and include wayfinding where appropriate to ensure convenience and minimize confusion. Where feasible, walkways should be separated from, but can be immediately adjacent to, bicycle paths.
- Boardwalk extension – an extension should be provided to connect to the existing boardwalk along Kawaihau Road-Iwaena Road. SMMH is located approximately 700-feet from the entrance of an off-street multi-use boardwalk between Kawaihau Road/Iwaena

Road and Kuhio Highway. The boardwalk provides connections to the shoreline path (Ke Ala Hele Makalae), which extends between Fuji Beach and Kealia Beach. The path connects to major intersections with marked crosswalks to provide pedestrian and bicycle access across Kuhio Highway. The long-term vision for the path is for it to connect to the Lihue Airport. Extending the boardwalk between SMMH and the existing path expands the non-motorized network for SMMH and the Kapa'a community to more areas along Kuhio Highway.

- Crossings - Paths that include travel across parking lot drive aisles (e.g., to electric vehicle charging or carshare spaces) should include striping or signage indicating path of travel, and ADA-compliant ramps as appropriate. Crossing design is site-specific and should be tailored to the location and context.

Bike Amenities

- Bikeways – a direct off-street connection should be provided from the primary mobility hub area to the existing beach access path/boardwalk. In addition, a wide, shared use path should be built along the SMMH main driveway and Nunu Road alignments to: 1) provide a dedicated facility that would encourage bicycle use, and 2) accommodate adaptive bikes for rehabilitation and public use.
- Bike parking – in addition to providing dedicated bike parking near all new buildings, bike parking should be provided as close to the primary transit stop as possible. At a minimum, bicycle parking should include covered racks, and ideally a small, secured area either inside a community building or in a fenced enclosure to reduce potential for theft. Regular users (i.e., employees or residents) would have access to the secure area. Lastly, several areas should be identified for dockless bike share parking (and possibly scooters and other devices) throughout the project site to ensure these devices do not impede mobility for other modes.
- Bikeshare – while bikeshare is not currently available, space should be reserved for future bike share parking accommodating at least 10 bicycles as close to the transit stop as feasible and connected to the primary off-street bikeway.

Motorized Service Amenities - features including services and infrastructure that are located within a five-minute drive to transit and allow users to use motorized services when necessary

- Rideables – wider sidewalks and shared use paths may allow walkers and rideable users to share the space. Alternatively, a bike only path through and around the SMMH campus would provide a dedicated space for bikes (including e-bikes) and rideables. Rules governing speed and safety will need to be adhered to to make this option viable within the site.
- Electric bike share and scootershare - A shared fleet of electric bikes (e-bikes) or motorized scooters can make it easier for people to travel to work or other destinations when topography is challenging, or parking is scarce. Given the typical speeds of electric bikes and scooters, they are well suited for short trips of 2 to 3 miles – too far for many to walk, but close enough to allow access to central Kapa'a and as far south as Wailua. As

noted above regarding bike parking and bikeshare, space should be provided for both e-bike parking and dockless e-bikeshare.

- Carshare – this service typically requires a provider (e.g., Enterprise car share or Zipcar) but could also include new peer-to-peer services including Turo, which already operates on Kauai. Carshare would benefit from several dedicated spaces within the mobility hub. This would allow multiple individuals (i.e., employees, residents, and visitors) to use a single vehicle and reduce overall parking demand.
- On-demand rideshare – providing the curb space for passenger loading described under transit amenities would serve both traditional ridehailing (e.g., Lyft and Uber) and dynamic ridesharing (e.g., Scoop and Waze Carpool), where drivers are matched with passengers traveling in the same direction. Potential future partnerships between ridehailing companies and transit service may increase demand for curb space over time.
- Microtransit – may be a viable option for the SMMH campus that could include shuttles from Lihue and enhance typical transit service at peak times. Microtransit vehicles could stop at public stops or could be required to load/unload within the campus site.
- Neighborhood electric vehicle (NEV) – a viable option for the SMMH campus and surrounding community where travel speeds and traffic volumes are low enough to support shared use of public roadways. Preferential parking for NEVs or providing a fleet of vehicles for local area circulation could help reduce private vehicle ownership within the community.
- Electric vehicle charging – dedicated electric vehicle spaces within the immediate mobility hub and across the campus are expected to be installed with full infrastructure, while other areas may only include stub outs for future connections. Install multiple ports between stalls to increase access and reduce overall infrastructure requirements.

Support Service Amenities - features that may exist within all mobility hubs to enhance traveler convenience and encourage the use of non-automobile modes where feasible

- Wayfinding – depending on the final configuration of the mobility hub, wayfinding may be required to guide transit patrons to supporting modal options and vice versa. Ideally, most of the services would be in proximity to one another to minimize the level of wayfinding and potential user confusion. Signs should be simple but direct, and ideally employ branding to ensure consistent messaging island wide.
- Package delivery – this service may be a longer-term solution or may not be viable at this location given the relative low density of the campus and community. However, as delivery services expand on Kauai, it may be helpful to include delivery lockers at the mobility hub to centralize parcel pickup, reduce vehicle miles of travel (VMT) within the campus and in the surrounding community, and assist the delivery industry with streamlining service. If possible, a small area should be reserved for a future consolidated package facility.
- Mobile retail services – the typical mobile vendor is a food truck but can also include other services such as dry cleaning. Space for mobile vendors helps to reduce VMT by providing alternative food options for employees or residents by reducing the need to travel outside the community on selected days. Mobile vendors can use flexible curb space areas or

spaces and can be located within the proposed mobility hub or elsewhere within the campus.

Appendix M

Construction Cost Estimate

FINAL MASTERPLAN COST ESTIMATE

October 2020

SAMUEL MAHELONA MEMORIAL HOSPITAL

KAAPA, KAUAI, HAWAII
G70

Prepared By

Rider Levett Bucknall
American Savings Bank Tower
1001 Bishop Street, Suite 2690
Honolulu, Hawaii 96813
T: +1 808 521 2641
RLB.com

Samuel Mahelona Memorial Hospital

Final Masterplan Cost Estimate

Project Details

Description

Basis of Estimate

This report has been prepared at the request of G70 and is to provide a Conceptual ROM estimate for the Samuel Mahelona Memorial Hospital Master Plan, located in Ka'apa, Kauai, Hawaii.

The project includes new buildings, additions and renovations to existing buildings including SMMH and various supporting buildings on the site. Also included are the associated site improvements and demolition of existing buildings.

The estimate is based upon advised program and measured quantities and benchmarked rates prepared from the following provided document:

- Samuel Mahelona Memorial Hospital Conceptual Master Plan Draft Print dated 07/22/2020, provided by G70
- Sections 00, 04, 05, 06 of the Final SMMH Conceptual Master Plan provided on 10/27/2020

The following consultant cost estimate has been included in this estimate:

- Site Improvements cost estimate prepared by G70 received 10/13/2020, \$32.5M

Pricing is based on October 2020 costs. Escalation has not been included in this estimate.

Where information was insufficient, assumptions and allowances were made, based wherever possible on discussions with the architect and engineers.

The estimate allows for concrete frame construction for the residential buildings.

We have assumed electrical and mechanical systems that would be typical to hospital buildings.

The retail and community buildings have been estimated as "warm shell" with no allowance for tenant type fitout.

It is assumed that the method of procurement for the scope of work will be via a competitive bid method to at least 3-4 reputable, unionized (or non-union) general contractors and the prime contractor will be required to pay prevailing (or market) wage rates.

The following mark-ups have been included in the estimate unit rates:

- General Conditions: 12%
- Phasing and Temporary Works: 2%
- GC Bond and Insurance: 2%
- GC Overhead and Profit: 4%
- Regional Cost Index - Kauai: 20%
- General Excise Tax: 4.712%

Samuel Mahelona Memorial Hospital

Final Masterplan Cost Estimate

Project Details

Description

Please carefully note that the impact of the recent COVID-19 (Coronavirus) outbreaks have not been accounted for with regards to material supply, labor availability, General Conditions build-ups, etc., as they are unknown impacts to estimated costs

Items Specifically Excluded

- Hazardous materials abatement
- Contaminated or unsuitable soil removal or rehabilitation
- Piled foundation system and other special foundation systems
- Rock excavation
- Dewatering
- Furniture, Fixtures & Equipment (FF&E)
- Commercial kitchen equipment
- Medical equipment
- Owner Furnished Items
- Loose Furniture
- Murals and works of art
- Mock-ups
- Sub-station
- Emergency Power Generator
- Main Site Utilities Diversion
- Off-site water infrastructure
- Construction Management Fees
- Owner's Contingency
- Land and Legal costs
- Architectural, engineering and other professional fees
- Site investigations & geotechnical reports
- Items marked as "Excl" in the estimate
- Work outside the site boundaries unless otherwise noted
- Escalation beyond Dec 2020

Samuel Mahelona Memorial Hospital

Final Masterplan Cost Estimate

Location Summary

GFA: Gross Floor Area
Rates Current At October 2020

Location		GFA SF	Cost/SF	Total Cost USD	
P1 PHASE 1					
1_0	PCR Repairs and Maintenance			12,687,000	
1_1	Acute Psychiatric Unit	13,000	610	7,930,000	
1_2	Residential Treatment	30,000	610	18,300,000	
1_3	SMMH Cafe Renovation	6,465	380	2,456,700	
1_4	Phase 1 Site Improvements			7,808,000	
		P1 - PHASE 1	49,465	\$994	\$49,181,700
P2 PHASE 2					
2_5A	SNF Expansion	21,446	610	13,082,060	
2_5B	SMMH Renovation	33,374	500	16,687,000	
2_6	SMMH - Administration, Senior Center	24,847	439	10,905,860	
2_7A	Senior Assisted Living	170,000	505	85,850,000	
2_7B	Affordable Housing	211,680	490	103,723,200	
2_8	Commercial Building - OP Services and Retail	15,000	530	7,950,000	
2_9	Phase 2 Site Improvements			29,340,000	
2_10	Preschool	7,000	580	4,060,000	
		P2 - PHASE 2	483,347	\$562	\$271,598,120
P3 PHASE 3					
3_11A	Library	5,500	622	3,420,000	
3_11B	Community Meeting	3,500	380	1,330,000	
3_12	Commercial Building	5,500	430	2,365,000	
3_13	Phase 3 Site Improvements			3,000,000	
		P3 - PHASE 3	14,500	\$698	\$10,115,000
		ESTIMATED NET COST	547,312	\$605	\$330,894,820
MARGINS & ADJUSTMENTS					
Estimating and design contingencies		20 %		\$67,105,180	
Escalation - excluded				Excl.	
		ESTIMATED TOTAL COST	547,312	\$727	\$398,000,000

Samuel Mahelona Memorial Hospital

Final Masterplan Cost Estimate

Location Elements Item

P1 PHASE 1

1_0 PCR Repairs and Maintenance

Rates Current At October 2020

Description	Unit	Qty	Rate	Total USD
F1020 Integrated Construction				
1 Hospital Repair Costs as detailed in PCR Opinion of Cost Estimate dated April 2019	Item			12,307,000
20 Hospital Repairs Costs escalation from April 2019 to October 2020 (3.1%)	Item			380,000
Integrated Construction				\$12,687,000
PCR REPAIRS AND MAINTENANCE				\$12,687,000

Samuel Mahelona Memorial Hospital

Final Masterplan Cost Estimate

Location Elements Item

P1 PHASE 1

1_1 Acute Psychiatric Unit

Rates Current At October 2020

Description	Unit	Qty	Rate	Total USD
F1020 Integrated Construction				
4 New Addition : SMMH Acute Psychiatric Unit (18 bed; office space)	SF	13,000	610.00	7,930,000
Integrated Construction				\$7,930,000
ACUTE PSYCHIATRIC UNIT				\$7,930,000

Samuel Mahelona Memorial Hospital

Final Masterplan Cost Estimate

Location Elements Item

P1 PHASE 1

1_2 Residential Treatment

Rates Current At October 2020

Description	Unit	Qty	Rate	Total USD
F1020 Integrated Construction				
5 New Building : Residential Treatment / Behavioral (20-30 bed; communal space)	SF	30,000	610.00	18,300,000
			Integrated Construction	\$18,300,000
			RESIDENTIAL TREATMENT	\$18,300,000

Samuel Mahelona Memorial Hospital

Final Masterplan Cost Estimate

Location Elements Item

P1 PHASE 1

1_3 SMMH Cafe Renovation

Rates Current At October 2020

Description	Unit	Qty	Rate	Total USD
F1020 Integrated Construction				
6 Renovation : SMMH Cafe (excluding kitchen equipment)	SF	6,465	380.00	2,456,700
			Integrated Construction	\$2,456,700
			SMMH CAFE RENOVATION	\$2,456,700

Samuel Mahelona Memorial Hospital

Final Masterplan Cost Estimate

Location Elements Item

P1 PHASE 1

1_4 Phase 1 Site Improvements

Rates Current At October 2020

Description	Unit	Qty	Rate	Total USD
G1020 Site Demolition and Relocations				
3 Demolition of existing building	SF	145,200	40.00	5,808,000
Site Demolition and Relocations				\$5,808,000
G2040 Site Development				
2 Site cost including: underground utilities, earthwork, sidewalks, lighting. On-site and off-site improvements (as advised by G70) : State	Item			2,000,000
Site Development				\$2,000,000
PHASE 1 SITE IMPROVEMENTS				\$7,808,000

Samuel Mahelona Memorial Hospital

Final Masterplan Cost Estimate

Location Elements Item

P2 PHASE 2

2_5B SMMH Renovation

Rates Current At October 2020

Description	Unit	Qty	Rate	Total USD
F1020 Integrated Construction				
8 Renovation : SMMH SNF (27 bed), XRay, ED, Detox	SF	33,374	500.00	16,687,000
				<i>Integrated Construction</i>
				<i>SMMH RENOVATION</i>
				\$16,687,000
				\$16,687,000

Samuel Mahelona Memorial Hospital

Final Masterplan Cost Estimate

Location Elements Item

P2 PHASE 2

2_6 SMMH - Administration, Senior Center

Rates Current At October 2020

Description	Unit	Qty	Rate	Total USD
F1020 Integrated Construction				
9 New Addition : SMMH Administration	SF	10,000	460.00	4,600,000
10 New Addition : SMMH Senior Center	SF	8,300	460.00	3,818,000
11 Renovation : SMMH Senior Center	SF	6,547	380.00	2,487,860
			Integrated Construction	\$10,905,860
			SMMH - ADMINISTRATION, SENIOR CENTER	\$10,905,860

Samuel Mahelona Memorial Hospital

Final Masterplan Cost Estimate

Location Elements Item

P2 PHASE 2

2_7A Senior Assisted Living

Rates Current At October 2020

Description	Unit	Qty	Rate	Total USD
F1020 Integrated Construction				
12 New Building : Senior Assisted Living (125 beds/units, includes Memory Care, 3 stories)	SF	170,000	505.00	85,850,000
			Integrated Construction	\$85,850,000
			SENIOR ASSISTED LIVING	\$85,850,000

Samuel Mahelona Memorial Hospital

Final Masterplan Cost Estimate

Location Elements Item

P2 PHASE 2

2_7B Affordable Housing

Rates Current At October 2020

Description	Unit	Qty	Rate	Total USD
F1020 Integrated Construction				
13 New Building : Affordable Housing (147 beds/units, walk-up)	SF	211,680	490.00	103,723,200
				<i>Integrated Construction</i>
				<i>AFFORDABLE HOUSING</i>
				<i>\$103,723,200</i>
				<i>\$103,723,200</i>

Samuel Mahelona Memorial Hospital

Final Masterplan Cost Estimate

Location Elements Item

P2 PHASE 2

2_8 Commercial Building - OP Services and Retail

Rates Current At October 2020

Description	Unit	Qty	Rate	Total USD
F1020 Integrated Construction				
14 New Building : Commercial Building - Op Services and Retail (commercial, Ho ola Lahui)	SF	15,000	530.00	7,950,000
Integrated Construction				\$7,950,000
COMMERCIAL BUILDING - OP SERVICES AND RETAIL				\$7,950,000

Samuel Mahelona Memorial Hospital

Final Masterplan Cost Estimate

Location Elements Item

P2 PHASE 2

2_9 Phase 2 Site Improvements

Rates Current At October 2020

Description	Unit	Qty	Rate	Total USD
G1020 Site Demolition and Relocations				
3 Demolition of existing building	SF	21,000	40.00	840,000
Site Demolition and Relocations				\$840,000
G2040 Site Development				
2 Site cost including: underground utilities, earthwork, sidewalks, lighting. On-site and off-site improvements (as advised by G70) : State	Item			18,500,000
21 Site cost including: underground utilities, earthwork, sidewalks, lighting. On-site and off-site improvements (as advised by G70) : Private	Item			8,000,000
22 Site cost including: underground utilities, earthwork, sidewalks, lighting. On-site and off-site improvements (as advised by G70) : Preschool	Item			1,000,000
Site Development				\$27,500,000
G2050 Landscaping				
23 Landscaping: premium for trees and special landscaping	LS	1	1,000,000.00	1,000,000
Landscaping				\$1,000,000
PHASE 2 SITE IMPROVEMENTS				\$29,340,000

Samuel Mahelona Memorial Hospital

Final Masterplan Cost Estimate

Location Elements Item

P2 PHASE 2

2_10 Preschool

Rates Current At October 2020

Description	Unit	Qty	Rate	Total USD
F1020 Integrated Construction				
15 New Building : Pre-school (4 classrooms, support space)	SF	7,000	580.00	4,060,000
				<hr/>
				<i>Integrated Construction</i>
				<i>\$4,060,000</i>
				<hr/>
				<i>PRESCHOOL</i>
				<i>\$4,060,000</i>

Samuel Mahelona Memorial Hospital

Final Masterplan Cost Estimate

Location Elements Item

P3 PHASE 3

3_11A Library

Rates Current At October 2020

Description	Unit	Qty	Rate	Total USD
F1020 Integrated Construction				
16 New Building : Library	SF	9,000	380.00	3,420,000
				Integrated Construction
				LIBRARY
				\$3,420,000
				\$3,420,000

Samuel Mahelona Memorial Hospital

Final Masterplan Cost Estimate

Location Elements Item

P3 PHASE 3

3_11B Community Meeting

Rates Current At October 2020

Description	Unit	Qty	Rate	Total USD
F1020 Integrated Construction				
17 New Building : Community Meeting	SF	3,500	380.00	1,330,000
				<i>Integrated Construction</i>
				<i>COMMUNITY MEETING</i>
				<i>\$1,330,000</i>
				<i>\$1,330,000</i>

Samuel Mahelona Memorial Hospital

Final Masterplan Cost Estimate

Location Elements Item

P3 PHASE 3

3_12 Commercial Building

Rates Current At October 2020

Description	Unit	Qty	Rate	Total USD
F1020 Integrated Construction				
18 New Building : Commercial Building - Small Market	SF	5,500	430.00	2,365,000
19 New Building : Commercial Building - KPAL, excluded	SF	3,500		Excl.
Integrated Construction				\$2,365,000
COMMERCIAL BUILDING				\$2,365,000

Samuel Mahelona Memorial Hospital

Final Masterplan Cost Estimate

Location Elements Item

P3 PHASE 3

3_13 Phase 3 Site Improvements

Rates Current At October 2020

Description	Unit	Qty	Rate	Total USD
G2040 Site Development				
2 Site cost including: underground utilities, earthwork, sidewalks, lighting. On-site and off-site improvements (as advised by G70) : State	Item			3,000,000
			Site Development	\$3,000,000
			PHASE 3 SITE IMPROVEMENTS	\$3,000,000

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