

SENIOR COHOUSING: An Alternative for Hawaii's Elderly

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May 2014

Submitted towards the fulfillment of the requirements for the Doctor of Architecture Degree

School of Architecture
University of Hawai'i

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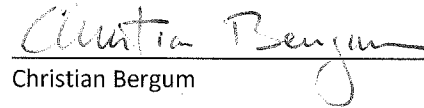
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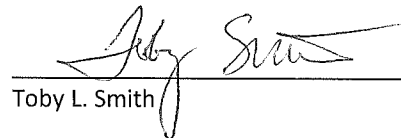
We certify that we have read this Doctorate Project and that, in our opinion, it is satisfactory in scope and quality in fulfillment as a Doctorate Project for the degree of Doctor of Architecture in the School of Architecture, University of Hawai'i at Mānoa.

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ACKNOWLEDGEMENTS

“Start by doing what is necessary; then do what is possible; and suddenly you are doing the impossible”....St. Francis of Assisi

There are no words that can express my deepest heartfelt gratitude to those who would have walked with me on this journey. Your support, encouragement, patience, and steadfast friendship and love have carried me from the darkest crevices up to the highest mountain. Thank you for always being there and having more faith in me than I, at times, had in myself. I am forever grateful and I am truly blessed everyday to have you all in my life.

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PROJECT STATEMENT

The goal of this project is to encourage the concept and building of senior cohousing communities in Hawaii. Senior cohousing communities offer the elderly an option to age in place and be engaged in a participatory process of designing, managing, and directing their living situation. This process of community building can aid in establishing and solidifying relationships that will foster interdependence among neighbors. The development of senior cohousing communities is accomplished by raising awareness in the architectural community and the general population, especially the elderly, to the concept, process, and the resources that can assist in the creation of these communities. Research, case studies, site visits and survey will aid in the development of a senior cohousing community design prototype for Hawaii. The purpose of this project is to provide guidelines for the process, site selection, and design along with valuable resources that interested parties can possibly utilize to aid in building senior cohousing communities that can be another alternative to the current elderly housing options in Hawaii.

ABSTRACT

Hawaii has a high elderly population compared to the mainland United States. There are a number of factors that contribute to the high percentage of elderly in Hawaii, which includes lifestyle, weather, genetics, and diet, to name but a few. Currently, there are a limited number of housing options available for the elderly in Hawaii. Current forecasts indicate an increase in the retirement population, which will further stress the elderly housing situation of the State. The theory of senior cohousing communities, as an alternative form of elderly housing in Hawaii, is based on a literature review of the historical successes already in practice in other locations outside of Hawaii. Case studies of faith-based organizations in Hawaii that exemplify designing, building, and living in community were chosen, analyzed, and incorporated into a prototype design that is reflective of Hawaii. Surveys of senior residents, currently living in a community setting in Hawaii, were conducted. GIS mapping was utilized to determine the optimal site selection for locating community resources that are vital to the elderly population. Senior cohousing communities can offer seniors the security of living amongst other seniors who will be integral members in their daily lives. Faith-based organizations can be the foundation upon which these communities are built. Inherent components of these organizations could include land holdings, outreach social services, parish ministries, and community-service programs. All of these can play a vital role in the success of these communities. Senior cohousing communities can be another alternative to the current senior housing options available in Hawaii. The compilation of this project's research and findings has resulted in a guideline that can aid the public in the process, site selection and design to further the development of such communities.

Chapter 1 Introduction



INTRODUCTION

In 2011, people born between 1946 and 1964, referred to as the baby boomer generation, had begun to reach their retirement age. It is estimated that in the United States, 10,000 people turn sixty-five years of age every day and that this will result in a senior population of over 70 million by the year 2030.¹ In Hawaii, the total number of elderly sixty years and older is expected to constitute 29.7% and while those eighty years and older is expected to be 4.5% of the total population by 2035 according to the Hawaii Department of Business, Economic Development and Tourism.²

The resident population growth is expected to increase in all counties: Hawaii Island, Maui, Honolulu, and Kauai. Hawaii Island will have the largest growth at an annual increase of 1.7%, and Honolulu will have the smallest at 0.5% annual growth. In comparison to its overall total population, Kauai will have the smallest increase although it has the largest percentage of the older population.³

¹ Michael A. Fornaro, *Relocation in Later Years*, (United States: iUniverse, 2006), 71.

² State of Hawai'i, "Hawai'i State Plan on Aging: October 1, 2011 - September 30, 2015 Executive Office On Aging," <http://hawaii.gov/health/eoa/Docs/State.pdf> (accessed April 25, 2013).

³ *Ibid.*, 13.

Hawaii State Total Resident Population (60+, 85+), 1980-2035

Age Group	1980	1990	2000	2010	2020	2025	2030	2035
(Population in 1000s)								
Total 60+	115.67	174.05	207.00	277.40	373.65	415.67	448.71	474.59
% Total Pop.	11.9%	15.6%	17.1%	21.4%	26.1%	27.9%	29.0%	29.7%
# Change from 1980		58.38	91.33	161.73	257.98	300.00	333.04	358.92
% Change from 1980		50.5%	79.0%	139.8%	223.0%	259.4%	287.9%	310.3%
Total 85+	5.69	10.22	17.56	30.24	42.76	45.37	54.61	71.55
% Total Pop.	0.6%	0.9%	1.5%	2.3%	3.0%	3.0%	3.5%	4.5%
# Change from 1980		4.53	11.87	24.55	37.07	39.68	48.92	65.86
%Change from 1980		79.6%	208.6%	431.5%	651.5%	697.4%	859.8%	1157.5%
Total Pop.	968.50	1113.49	1211.48	1299.57	1432.54	1492.25	1547.46	1598.68
# Change from 1980		144.99	242.98	331.07	464.04	523.75	578.96	630.18
% Change from 1980		15.0%	25.1%	34.2%	47.9%	54.1%	59.8%	65.1%

Source: Hawaii Department of Business, Economic Development and Tourism, DBEDT 2035 Series (July 2009) - Years 2020 and above are projections. Years 2000-2010 (60+ and 85+) – U.S. Census bureau.

Figure 1: State of Hawaii Population Table of residents 60+ and 85+ years old between 1980-2035. The state’s population for resident 60+ and 80+ years old is expected to increase. The projection for the total state population in 2035 will be 1,598,680. Of this, 474,590 and 71,550 will be 60+ and 85+ years of age respectively.⁴

⁴ Ibid., 13.

Resident Population by County: 1980-2035

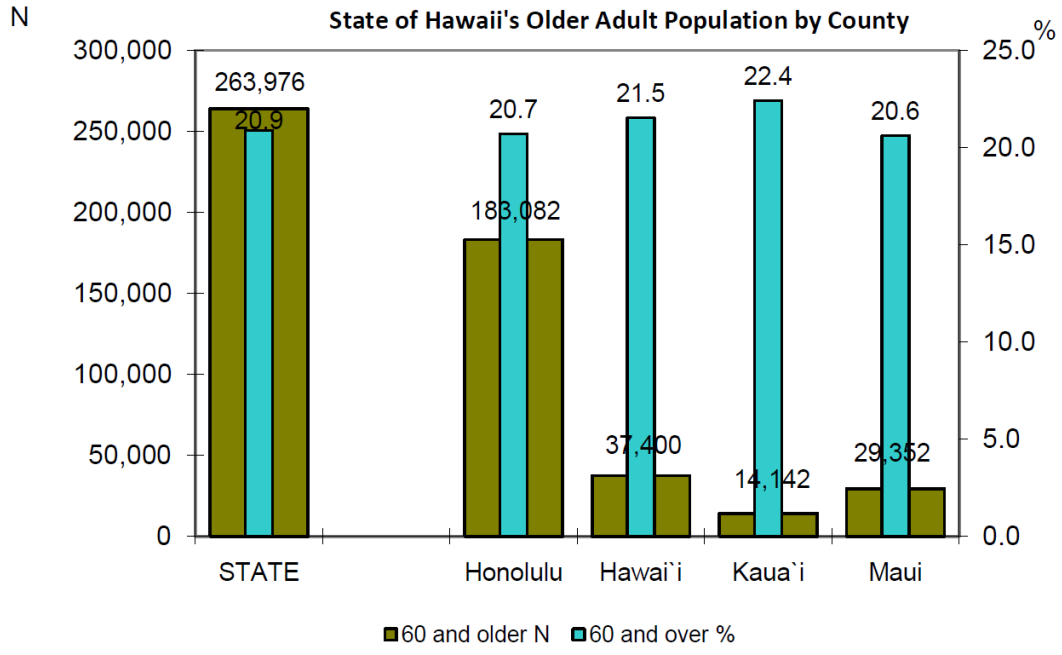
Year	State Total	Hawaii County	Honolulu County	Kauai County	Maui County
1980 ^{1/}	968,500	92,900	764,600	39,400	71,600
1985 ^{1/}	1,039,700	105,900	804,300	44,400	85,200
1990 ^{1/}	1,113,500	121,600	838,500	51,700	101,700
1995 ^{1/}	1,196,900	140,500	881,400	57,100	117,900
2000 ^{1/}	1,211,500	149,100	875,100	58,500	128,900
2005 ^{1/}	1,264,500	164,500	900,000	61,600	138,700
2010 ^{2/}	1,299,600	176,700	911,800	64,600	146,500
2015 ^{2/}	1,367,800	199,500	941,800	68,400	158,000
2020 ^{2/}	1,432,500	221,900	969,500	72,200	169,100
2025 ^{2/}	1,492,300	242,600	994,600	75,600	179,400
2030 ^{2/}	1,547,500	261,800	1,017,600	78,800	189,300
2035 ^{2/}	1,598,700	279,700	1,038,300	81,900	198,700

^{1/} Source: Population Division, U.S. Census Bureau.

^{2/} Forecasts by the Department of Business, Economic Development and Tourism.

Figure 2: This table shows the resident population for the State of Hawaii by counties between 1980-2035. In 2035, the projected total resident population for the state will be 1,598,700. Honolulu will have largest number of residents, 64%, followed by Hawaii County, 17%, Maui County, 12%, and Kauai County, 0.05%.⁵

⁵ Ibid., 14.



Source: Hawaii Health Survey, Department of Health, Special Run (2007-2008), February 2010.

Figure 3: The State of Hawaii Older Adult Population table by counties. Of the 4 counties, Kauai County, which has the smallest population, has the highest percentage of residents 60 years old and over.⁶

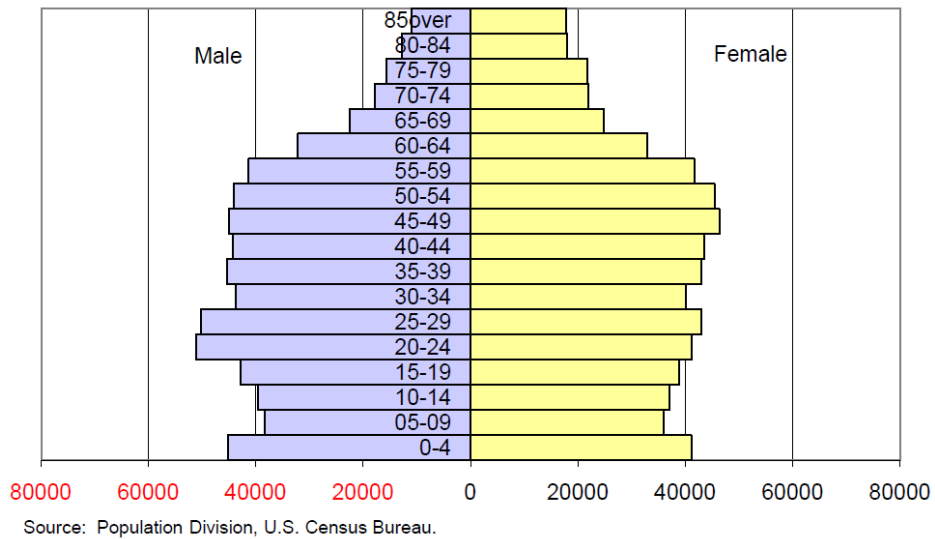
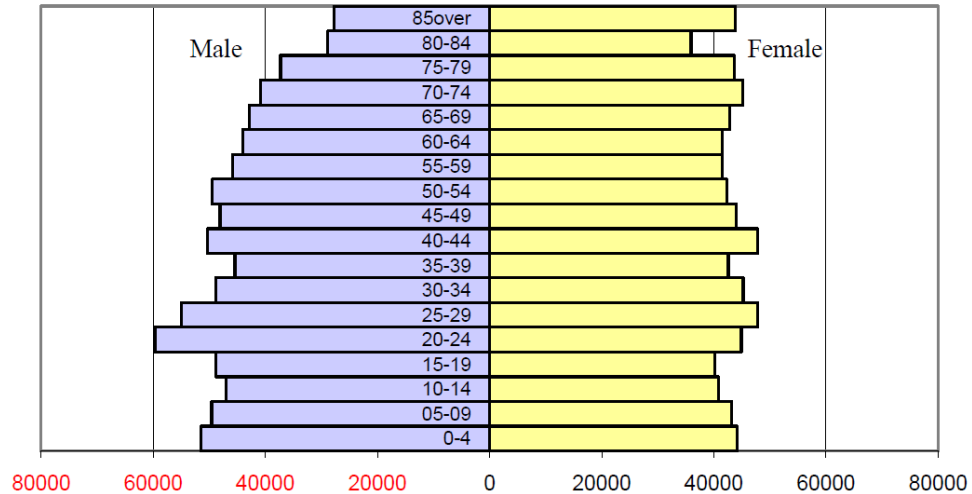


Figure 4: The graph shows the age distribution of Hawaii's resident population in the year 2007, prior to the retirement of the baby boom generation. The age distribution in 2007 was in the shape of a pyramid.⁷

⁶ Ibid., 14.

⁷ Ibid., 15.



Source: Department of Business, Economic Development and Tourism Projections.

Figure 5: The graph shows the projected age distribution of Hawaii’s resident population in the year 2035. The increase number of the baby boom generation (1946-1964) who will be in retirement age will shift the shape of the age distribution to a square.⁸

This increase in growth will place added pressure on the state’s social services and programs for this age group. These include housing, transportation, medical, and education to name but a few.⁹ Currently, the senior housing options available in Hawaii include residential multi-generational living, assisted living facilities, adult residential care homes, continuing-care retirement communities and long-term care facilities. The cost of these facilities is not covered by private insurance. Long-term care policies may cover these costs for those owning such policies. Loss of independence and privacy are some of the concerns that plague seniors contemplating these types of housing options.

⁸ Ibid., 16.

⁹ Ibid., 16.

Public Funding for Long-Term Care Services

Long-term care services can be very expensive—particularly when needed for more than a few months—and are unaffordable to many if not most individuals and families. Long-term care services in Hawaii are substantially more expensive than in the nation as a whole (*Exhibit 7*).

Exhibit 7. Cost of Private-Pay Long-Term Care Services in Hawaii, 2010

Type of Care	Average Hawaii Cost	Average National Cost
Year in nursing home care (private room)	\$132,860	\$83,585
Year in assisted living facility	\$50,676	\$39,512
Home health aide (per hour)	\$22	\$21

Figure 6: Table showing the average cost comparison for long-term care for Hawaii residents versus the national average. In Hawaii, the average nursing home and assisted living facilities cost 1.5 and 1.2 percent, respectively, more than the national average.¹⁰

An alternative to the current senior housing situation in Hawaii could be senior cohousing. Cohousing is a type of collaborative community, which relies on a resident's participation in the designing of the community. Residents also play an active role in the operations and maintenance of the facilities. The design of these communities includes private residences and a common house with shared outdoor areas. These communities, small in scale, promote social interaction among neighbors. For seniors these types of communities can offer a sense of security, companionship, and purposefulness. Although intergenerational cohousing has been around for decades, senior cohousing is a recent phenomenon taking root within a handful of communities being built across the United States in the past several years. Senior cohousing communities creates neighborhoods where seniors can feel a sense of belonging. For many seniors, the re-creation of this type of neighborhood is similar to the communities they may have experienced while growing up. Senior cohousing communities are a way for seniors to age in an environment that allows them the freedom of choice while meeting the needs of their aging process.

In Hawaii, people have a strong connection to community living. The ancient Hawaiians were accustomed to this way of life. Kauhale is a traditional Hawaiian homestead where multiple

¹⁰ University of Hawaii, "An Overview of Long-Term Care in Hawaii," http://www.publicpolicycenter.hawaii.edu/documents/RTI_Overview_of_LTC_System-FINAL.pdf (accessed May 7, 2013), 10.

families and generations live within a communal system of shelters. The pioneer plantation workers similarly lived in communal settings.

This re-creating of community can be found in the recent development of Kaupuni Village located in Waianae on Oahu, Hawaii. Here a group of nineteen homes was built within a cul-de-sac, which created a community setting with members sharing the common goals of learning how to perpetuate the native Hawaiian culture and practices.

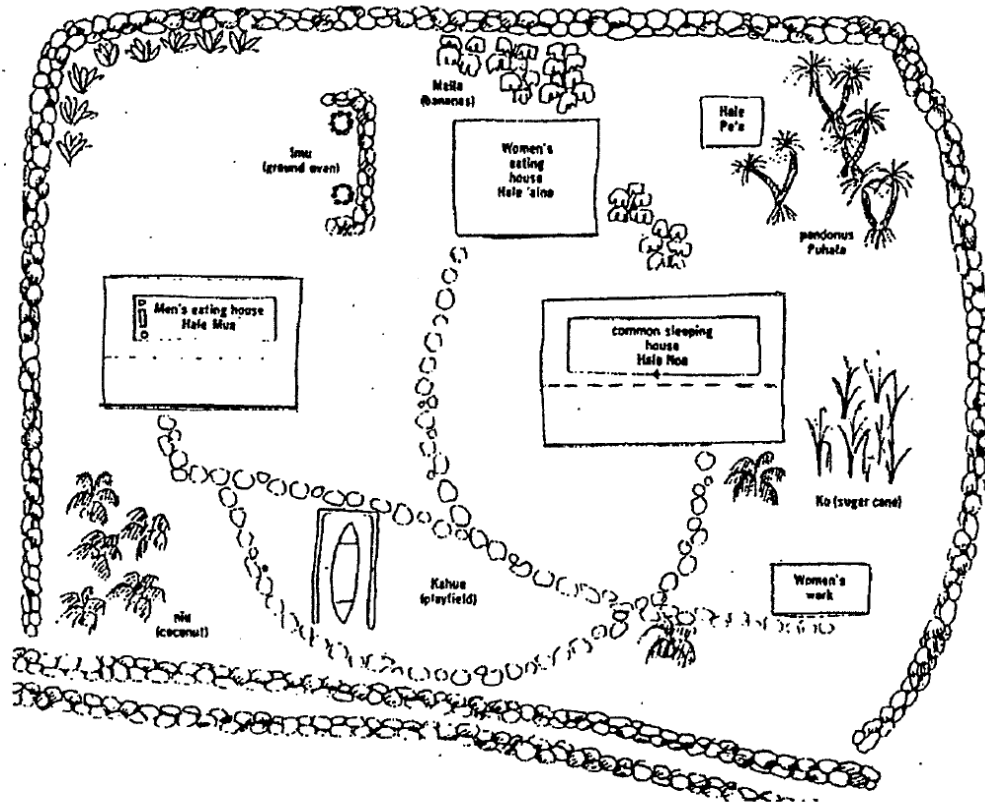


Figure 7: Diagram of an ancient Kauhale layout. The group of houses within a Kauhale are defined by their tasks, such as eating, sleep, and cooking and are utilized by the members living within the compound.¹¹

¹¹ Francine Mikiala Park Palama, "Hawaiian Architecture: Developing Responsible Stewards of Our Land," (DArch diss., University of Hawaii, 2012).



Figure 8: Port of Honolulu 1819, Watercolor by Louis Choris¹²



Figure 9: Kaupuni Village, is located in Waianae on the island of Oahu. The Department of Hawaiian Home Land's Net-Zero Energy, LEED Platinum project consist of nineteen single-family homes. The community is the nation's first low-income affordable housing project to achieve this certification.¹³

¹² Don J. Hibbard, *Buildings of Hawaii*, (United States: University of Virginia Press, 2011), 2.

¹³ Image by Google Earth.

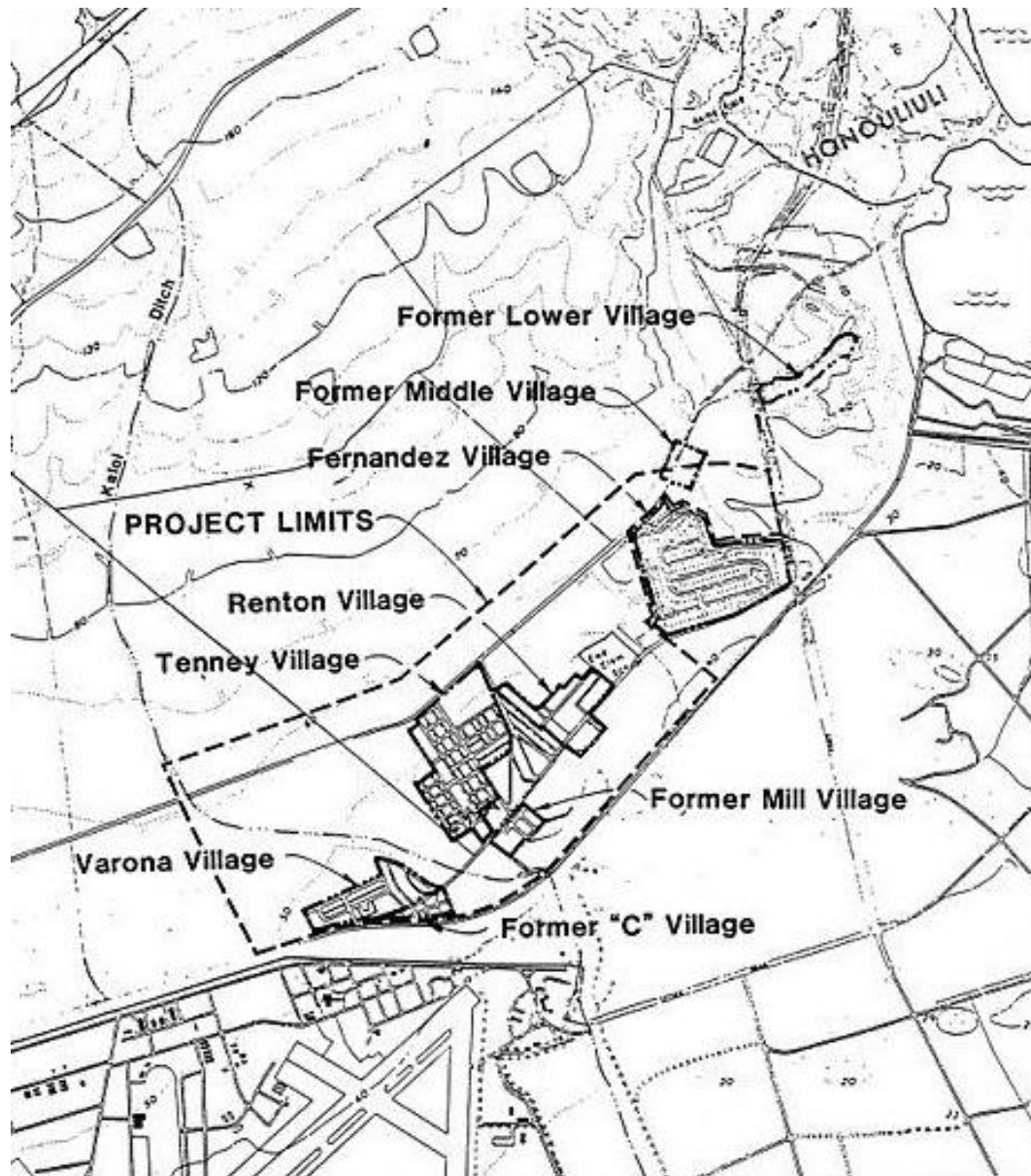


Figure 10: Ewa Plantation Villages is located on Renton Road in Ewa on the island of Oahu. The villages, which were organized according to ethnicity, were built for the plantation laborers who worked for Ewa Plantation Company.¹⁴

What this dissertation hopes to accomplish is to give seniors a life-giving housing option in Hawaii. Rather than experiencing their final years in isolation, cohousing can offer seniors a supportive atmosphere that encourages participation in all aspects of their living situation. In a

¹⁴ Horng-Wei Chen, "Protecting Sense of Place: Historic Preservation in 'Ewa Villages," Wikispaces.com http://willchen.wikispaces.com/file/view/Chen_AOC_12082011.pdf (accessed May 10, 2013), 32.

very real sense, senior cohousing is a return to the Hawaiian concept of quality living in a group setting.

Several case studies will be presented to exhibit existing options that currently are available here in Hawaii. Each offers a variation to senior living but does not embrace the spirit and design of senior cohousing. My hope is to unfold the necessary components that can go into the planning of a senior cohousing community In Hawaii.

Chapter II Senior Cohousing



History of Cohousing
6 Characteristic of Cohousing
ElderSpirit Cohousing

HISTORY OF COHOUSING

The development of the cohousing community concept was born in Denmark during the 1960s. Architect Jan Gudmand-Hoyer, who studied at Harvard in the early 1960s, was inspired and fascinated by a school project on *kibbutzim*, a Hebrew word for “communal settlement,” and the reading of *Utopia* by Thomas More.¹⁵ Disenchanted by the traditional housing type in Denmark at the time, Gudmand-Hoyer and a group of friends began discussing the possibility of a collective housing archetype that reflected the new and changing times of the country. In the 1950s the country saw a rapid shift in the roles within the family as more women began to enter the workforce.¹⁶ Gudmand-Hoyer believed that housing should allow its dwellers to “move from Homo productivos to Homo ludens”--from “man the worker” to “man the player.”¹⁷ To combat the stresses of daily life, these liberties could be found in village-type communities within the proximal distance of thriving economic centers.¹⁸ The existing housing model of the suburban home and multilevel apartment units in Denmark was not the answer to this new concept of community lifestyle. The idea was to create a small community that allowed and encouraged social interaction of residents with each other by sharing common facilities.¹⁹ The Danish used the term “bofoellesskaber,” or “living communities,” to describe this.²⁰

By the end of 1965, the group purchased a site outside of Copenhagen with plans of building twelve terraced houses set around the shared common house and swimming pool.²¹ Due to the disapproval of the neighbors the project was abandoned and the site sold. Four years later Gudmand-Hoyer penned an article titled *The Missing Link between Utopia and the Dated One-Family House*, which received wide acclaim. During this same period others had similar ideas. Bodil Graae authored the 1967 article, “Children Should Have One Hundred Parents,” in which she argues that all adults should look after all children in a community, so that children will feel

¹⁵ Grace Kim, “Friday Keynote: Cohousing in Denmark - A Look Back and Forward,” The Cohousing Association of the United States, accessed May 5, 2013, <http://www.cohousing.org/2009/prog/frikeynote>.

¹⁶ Ibid.

¹⁷ Kathryn McCamant and Charles Durrett, *Creating Cohousing: Building Sustainable Communities*, (Canada: New Society Publishers, 2011), 39.

¹⁸ Ibid., 39.

¹⁹ Ibid., 40.

²⁰ Ibid., 5.

²¹ Ibid., 40.

free to move about and feel a sense of belonging.²² The influence of this article resulted in Graae spearheading a group of parents interested in creating a similar model like Gudmand-Hoyer's.²³ Together with Gudmand-Hoyer, the first cohousing communities, Saettedammen in Hillerod, and Skraplanet in Jonstrup, were completed in 1970 and 1972 with twenty seven and thirty three families respectively.²⁴ These earlier prototypes faced the challenges of bringing together a group of people diverse in age and income. In the end they made concessions, which were not in keeping with the true spirit of cohousing.²⁵ Initially, the groups were combined into one, but due to differences in design intent, resulting from the members' varied interests, such as one wanting a larger common space and the other a smaller one, the groups eventually split into two.²⁶ In 1976, Nonbo Hede cohousing community in Viborg, the third built, incorporated the basic elements of cohousing design.²⁷



Figure 11: Saettedammem, completed in 1970, is the first cohousing community. Pictured here is Saettedammem's common house.²⁸

²² Kathryn McCamant and Charles Durrett, *Creating Cohousing: Building Sustainable Communities*, (Canada: New Society Publishers, 2011), 41.

²³ Danny Milman, "Where It All Began: Cohousing in Denmark," accessed May 5, 2013, http://www.cohousing.org/cm/article/related_denmark .

²⁴ Kathryn McCamant and Charles Durrett, *Creating Cohousing: Building Sustainable Communities*, (Canada: New Society Publishers, 2011), 41.

²⁵ Danny Milman, "Where It All Began: Cohousing in Denmark," The Cohousing Association of the United States, accessed May 5, 2013, http://www.cohousing.org/cm/article/related_denmark.

²⁶ Kathryn McCamant and Charles Durrett, *Creating Cohousing: Building Sustainable Communities*, (Canada: New Society Publishers, 2011), 41

²⁷ *Ibid.*, 42.

²⁸ "Saettedammem in Hillerod," The Cohousing Network, accessed May 5, 2013, http://l.cohousing.org/dk99/DKtour_SA1.htm.



Figure 12: Jan Gudmand-Hoyer, Architect²⁹



Figure 13: Bodil Graae, Author³⁰

In 1971, a design competition for the building of low-rise, clustered housing was sponsored by the Danish Building Research Institute. The not-for-profit seventy nine-unit housing complex of Tinggarden, which was government subsidized, was the first rental cohousing development in Denmark and made a huge impact on all other subsidized housing projects that followed.³¹ To date, Denmark has over 700 cohousing communities, and the idea has spread to other parts of the world: Europe, Canada, New Zealand, Australia, and the United States.³²

The introduction of cohousing in the United States was due to the efforts of Charles Durrett and his wife, Kathryn McCamant, in the 1980s. They had studied cohousing typology while attending school in Copenhagen. After extensive research they returned to the United States and co-authored *Cohousing: A Contemporary Approach to Housing Ourselves*, 1988. They took the Danish *bofoellesskaer*, “living communities,” and coined the term “cohousing.”³³ The first cohousing community in the United States, Muir Commons in Davis, California, was completed in 1991. The concept of cohousing is not a new phenomenon because for centuries people have

²⁹ Grace Kim, “Friday Keynote: Cohousing in Denmark - a look back and forward,” The Cohousing Association of the United States, accessed: May 5, 2013, <http://www.cohousing.org/2009/prog/frikeynote>.

³⁰ “Da kvinderne blev journalister,” Journalistveteraner.dk, accessed: May 5, 2013, <http://www.journalistveteraner.dk/journalisterindringer/da-kvinderne-blev-journalister/>.

³¹ Kathryn McCamant and Charles Durrett, *Creating Cohousing: Building Sustainable Communities*, (Canada: New Society Publishers, 2011), 43.

³² Kathryn McCamant and Charles Durrett, *Creating Cohousing: Building Sustainable Communities*, (Canada: New Society Publishers, 2011), 5.

³³ Kathryn McCamant and Charles Durrett, *Creating Cohousing: Building Sustainable Communities*, (Canada: New Society Publishers, 2011), 5.

lived in communities and village settings. Durrett and McCamant believe that cohousing is a contemporary approach to recreate these neighborhoods and a sense of place.³⁴ In the beginning, cohousing took root in four states: California, Colorado, Washington, and Massachusetts. Today, there are over 167 cohousing communities located in thirty seven states across the United States.³⁵



Figure 14: Muir Commons Cohousing Community, located in Davis California, is the first intergenerational cohousing community to be built in the United States. The community, completed in 1991, is built on 2.9 acres and consist of 26 units. Architects Charles Durrett and Kathryn McCamant, who built the community, did extensive research on cohousing in Denmark.³⁶

³⁴ Pauline S. Abbott et al, *Re-creating Neighborhoods for Successful Aging*, (Baltimore: Health Professions Press, 2009), 146.

³⁵ "Cohousing Directory," Cohousing Association of the United States, accessed May 5, 2013, <http://www.cohousing.org/directory>).

³⁶ "Cohousing Communities," The Cohousing Company, accessed March 26, 2014, <http://www.cohousingco.com/projects/muir-commons-cohousing-community/>.

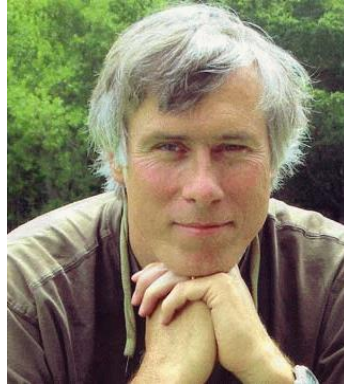


Figure 15: Charles Durrett, Architect³⁷



Figure 16: Kathryn McCamant, Architect³⁸

In recent years, cohousing projects specifically targeting the aged population have been built. Although intergenerational cohousing encompasses all age groups, some older members of these communities may feel left out and isolated when there are not members of their own age group living in the community. Some residents may prefer a community whose members are within the same age range, as the chances of sharing common interests, experiences, and preferences are greater. Coming together in a senior cohousing community can offer seniors a chance to take charge of their lives through the participatory process of building and designing their community, managing and caring of the community, and fostering the social inter-relationship that can be established while living in these communities.

One of the issues of aging is the sense of isolation and loneliness. While living in a multigenerational household or community may appear interactive, many of the seniors are left alone during the day as working parents and children head off to their workplace or school. Senior cohousing fills these gaps, as many of the residents are retired or employed part-time. Social connections are an integral component to the quality of the aging process. The automobile plays a major role in the sprawl of growth outside of the city nucleus that results in the growth of the suburban landscape.³⁹ As families become scattered throughout the country, the physical connections to one another become challenging. The challenge to dependence on the automobile is not fully realized until one gets older and the ability to maneuver behind the

³⁷ "2010 Featured Architects," The Cohousing Association of the United States, accessed May 5, 2013, <http://www.cohousing.org/2010/events/architects>.

³⁸ Ibid.

³⁹ Charles Durrett, *The Senior Cohousing Handbook: A Community Approach to Independent Living*, (Canada: New Society Publisher, 2009), 4.

steering wheel becomes compromised due to health issues.⁴⁰ This can result in dependency on others to provide transportation to do the necessary errands of daily life.

The Danes wanted to take the model of intergenerational cohousing and apply it to a Government-sponsored, not-for-profit, senior cohousing model. In 1987, the Danes built their first senior cohousing complex, Midgarden, with the help of a not-for-profit housing developer and received overwhelmingly positive reviews.⁴¹ To aid in the cohousing process for seniors, the Henry Nielson Model was created as a comprehensive method for the for the development of senior cohousing centering on the specific needs of the elderly.⁴² To date, the Danes have built over 200 senior cohousing communities.⁴³



Figure 17: Glacier Circle Senior Cohousing Community is the first senior cohousing in the United States⁴⁴

⁴⁰ Pauline S. Abbott et al, *Re-creating Neighborhoods for Successful Aging*, (Baltimore: Health Professions Press, 2009), 4.

⁴¹ Charles Durrett, *The Senior Cohousing Handbook: A Community Approach to Independent Living*, (Canada: New Society Publishing, 2009), 37.

⁴² *Ibid.*, 37.

⁴³ *Ibid.*, 67.

⁴⁴ "Photo Gallery," University of Georgia Institute of Gerontology, accessed May 7, 2013, <http://www.geron.uga.edu/eic/images/Glacier/Glacier%20Circle%20Davis%20CA%202008%20017.jpg>.

In America, the birth of senior cohousing began in 2005 with the completion of Glacier Circle, a privately developed community located in Davis, California. This \$3.2 million community consists of eight owner-occupied units that sit on 0.83 acres, which is by far the smallest senior cohousing community built to date. The group of life long friends, with the help of an experienced developer/contractor friend, built a community in which to age together. The concept came out of one member's vision of how she wanted to age and the concerns of being alone and lonely in the process.⁴⁵ Through their research and group meetings and with outside professionals who educated them on the various housing options available, they decided to build a new housing model that was reflective of their needs and expectations as they age. Although some members had left the group to move in with their children, the remaining members wanted to live independently for as long as possible. The mean age at move in was 81.7 years old.⁴⁶ The design of this cohousing community allowed its residents to be within close proximity of caring neighbors who share in the activity of one another.



Figure 18: ElderSpirit Community located in Abingdon Virginia is the first mixed-income senior cohousing community in America.⁴⁷

ElderSpirit Community, located in Abingdon, Virginia, was completed in 2006 and was the second senior cohousing community to be built. The community is the first mixed-income

⁴⁵ Anne P. Glass, "Elder Co-Housing in the United States: Three Case Studies," *Built Environment* vol 38 no3 (2012): 347-348.

⁴⁶ *Ibid.*, 350.

⁴⁷ "Photo Gallery," University of Georgia Institute of Gerontology, accessed May 7, 2013, <http://www.geron.uga.edu/eic/images/ESC/MAY%20to%20AUG%202008%20096.jpg>.

government-subsidized senior cohousing community. The concept of aging together among friends was the idea of Dene Peterson back in 1991. Together with others, they built a community that is centered around late-life spiritual and mutual care. Their mean age at move in was 71.2 years old. (See more about the community in the section titled “ElderSpirit Community.”)



Figure 19: Silver Village Sage Senior Cohousing Community⁴⁸

Silver Sage, located in Boulder, Colorado, was completed in 2007. The concept came about as a developer, with experience in developing many intergenerational cohousing projects, relished the thought of marketability of cohousing for seniors. The one acre sixteen-unit complex is built across from an intergenerational cohousing community. The units are owner-occupied with an affordable housing component required due to the funding from the Housing Authority of

⁴⁸ “Living: Community/Cohousing,” Bryan Bowen Architects, accessed May 7, 2013, <http://www.bryanbowenarchitects.com/index.php#mi=2&pt=1&pi=10000&s=11&p=2&a=0&at=0>).

Boulder. Income restriction requirements needed to be met in order to qualify for purchase. These units will remain permanently affordable as they are deed-restricted.⁴⁹ Cohousing grew out of the desire to recreate communities and neighborhoods, that had been lost in the development of detached homes, which no longer supported the socialized connectivity of people in their day-to-day lives. The success of cohousing, as a new form of community, has been embraced and spread throughout many parts of the world since its inception in the 1960s. The foundation that was laid in the intergenerational cohousing model, helped to build upon the new wave of cohousing designed specifically for seniors.

⁴⁹ Anne P. Glass, "Elder Co-Housing in the United States: Three Case Studies," *Built Environment* vol 38 no3 (2012), 358.

The following six definitions of cohousing are from The Cohousing Association of America's website.

6 CHARACTERISTICS OF COHOUSING⁵⁰

Although each cohousing community is unique and they may not share all of these characteristics, these 6 characteristics defines cohousing communities from other types of collaborative housing.

1. Participatory Process

Future residents participate in the design of the community so that it meets their needs. Some cohousing communities are initiated or driven by a developer. In those cases, if the developer brings the future resident group into the process late in the planning, the residents will have less input into the design. A well-designed, pedestrian-oriented community without significant resident participation in the planning may be "cohousing-inspired," but it is not a cohousing community.

2. Neighborhood Design

The physical layout and orientation of the buildings (the site plan) encourage a sense of community. For example, the private residences are clustered on the site, leaving more shared open space. The dwellings typically face each other across a pedestrian street or courtyard, with cars parked on the periphery. Often, the front doorway of every home affords a view of the common house. What far outweighs any specifics, however, is the intention to create a strong sense of community, with design as one of the facilitators.

3. Common Facilities

Common facilities are designed for daily use, are an integral part of the community, and are always supplemental to the private residences. The common house typically includes a common kitchen, dining area, sitting area, children's playroom and laundry, and also may contain a workshop, library, exercise room, crafts room and/or one or two guest rooms. Except on very tight urban sites, cohousing communities often have playground equipment, lawns and gardens as well. Since the buildings are clustered, larger sites may retain several or many acres of undeveloped shared open space.

⁵⁰ "What are the 6 Defining Characteristics of Cohousing?," The Cohousing Association of the United States, accessed January 2, 2014, http://www.cohousing.org/six_characteristics .

4. Resident Management

Residents manage their own cohousing communities, and also perform much of the work required to maintain the property. They participate in the preparation of common meals, and meet regularly to solve problems and develop policies for the community.

5. Non-Hierarchical Structure and Decision-Making

Leadership roles naturally exist in cohousing communities; however no one person (or persons) has authority over others. Most groups start with one or two “burning souls.” As people join the group, each person takes on one or more roles consistent with his or her skills, abilities or interests. Most cohousing groups make all of their decisions by consensus, and, although many groups have a policy for voting if the group cannot reach consensus after a number of attempts, it is rarely or never necessary to resort to voting.

6. No Shared Community Economy

The community is not a source of income for its members. Occasionally, a cohousing community will pay one of its residents to do a specific (usually time-limited) task, but more typically the work will be considered that member's contribution to the shared responsibilities.

ELDERSPIRIT COMMUNITY

“Image a center that would provide a spiritual setting for older adults. I will call it an ElderSpirit Center resonating with traditional association of “elder” with wisdom, leadership, dignity and ritual.”⁵¹

-Drew Leder-



Figure 20: ElderSpirit Community Rendered Site Plan⁵²

Abingdon, Virginia

Architect Highlands Group, P.C., Architecture, Land Planning, and Interiors
Roanoke, Virginia

Building Characteristics

Number of Units	29
Number of Stories	2
Context	Rural
Housing Type	Senior Cohousing
Building Parti	Spine
Unit Size	590 -960 SF
Date of Completion	2007

Resident Characteristics

Age Range	57 – 91
Median Age	74
Number of Residents	33 On Site/ 13 Off Site
Number of Men	7
Number of Women	39
Number of Couples	3
Number Requiring Assistive Devices	2

⁵¹ Drew Leder, *Spiritual Passages: Embracing Life’s Sacred Journey*, (New York: Tarcher/ Putman, 1997), 109.

⁵² “Developing,” ElderSpirit Community, accessed May 1, 2013, <http://www.elderspirit.net/pages/developing.html> .

PROJECT HISTORY

ElderSpirit is a senior cohousing community for people fifty-five years and older. The community is comprised of residents from various walks of life who have come to live together in a community setting and who mutually support one another in the aging process and late life spiritually. They believe that spiritual growth is important as one ages and encourage and support one another in their search for spiritual enlightenment. The community is committed to the care of its members by offering support to one another through the stages of the aging process. If members should need further care due to declining health, the community will continue to offer their assistance and friendship. The name of the community rose out of Drew Leder's book titled *Spiritual Passages: Embracing Life's Sacred Journey*, referencing a spiritual community for elders.

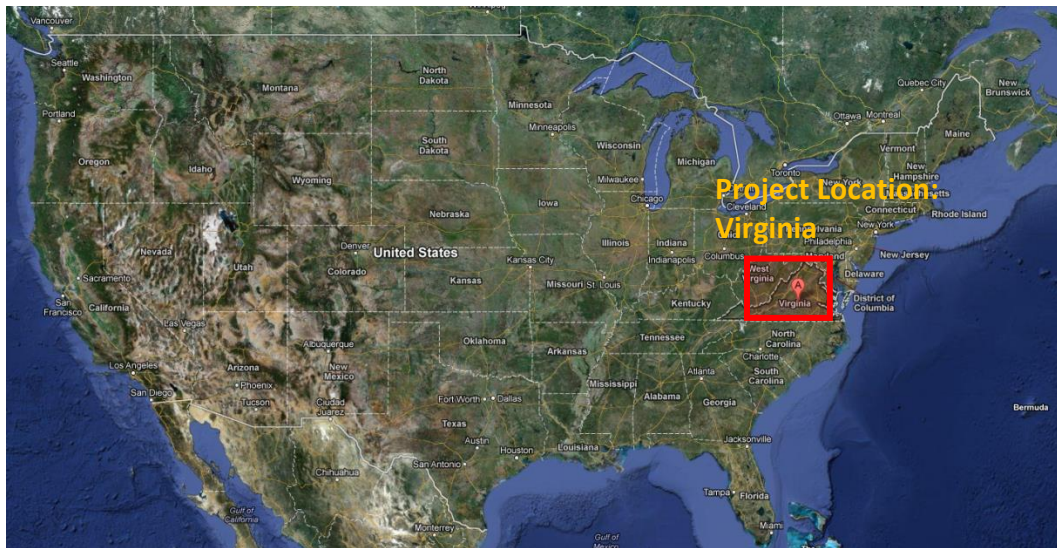


Figure 21: Map of the United States⁵³

⁵³ Image from Google Maps.

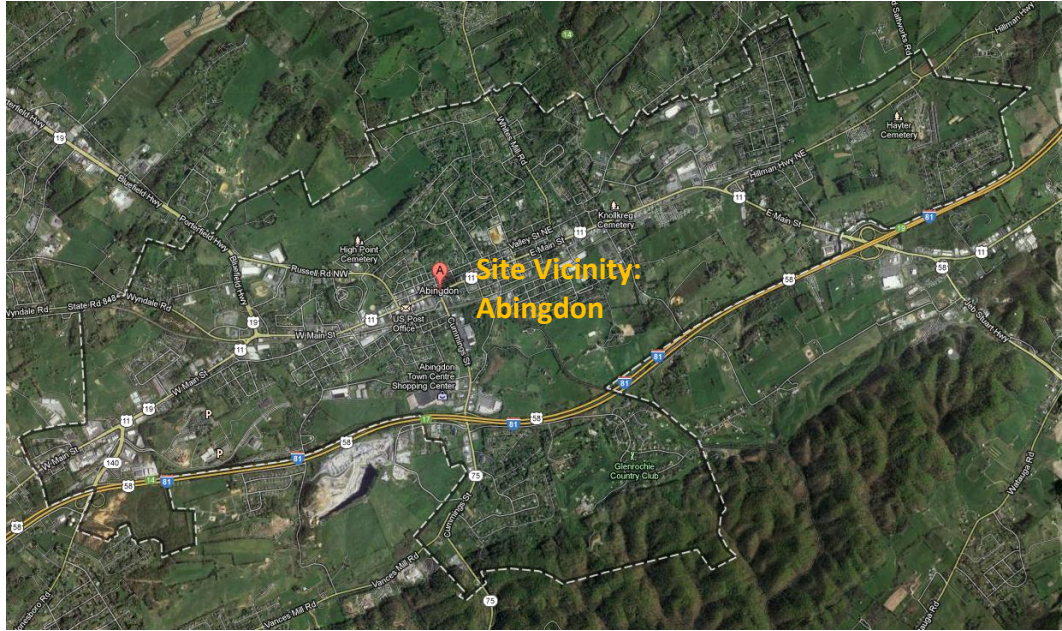


Figure 22: Abingdon Township Map⁵⁴

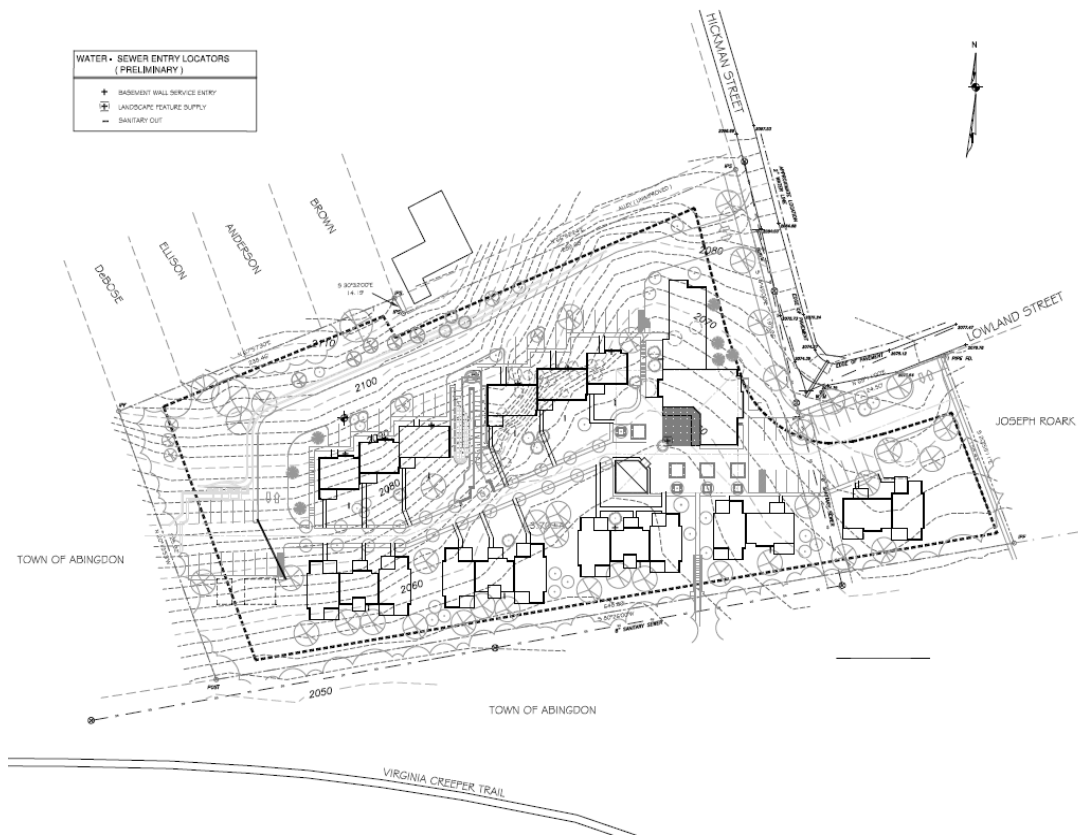


Figure 23: Site Plan⁵⁵

⁵⁴ Ibid.

⁵⁵ Drawing Courtesy of The Highlands Group, P.C., Architecture, Land Planning, and Interiors

This project was started by a group of former Catholic Glenmary nuns, spearheaded by Dene Peterson, who wanted to take the concept of intergenerational cohousing, and develop it primarily for the senior population.⁵⁶ Together with friends within an organization called the Federation of Communities in Services (FOCIS), they discussed how they would like to live as they grow older.⁵⁷ Out of this was formed FOCIS Future, a group whose mission was to explore the different living options available for seniors. Trailview Development Corporation, now known as ElderSpirit Development Corporation, a 501(c)(3) not-for-profit entity, is the land owner, which secured the finances, and had the project constructed.⁵⁸ Through the group's extensive background research, they chose the town of Abingdon and after a lengthy building process, the first occupants moved into their home in 2006.



ELDERSPIRIT COMMUNITY

MISSION: to be a participatory community of mutual support in which all spiritual paths are respected and encouraged.

VALUES

SPIRITUALITY

Members believe that spiritual growth is the primary work of those in the later stages of life. Members encourage one another in the search for meaning in life and commitment to a spiritual path. Freedom of religion is fundamental.

MUTUAL SUPPORT

Members develop face-to-face relationships through which they offer and receive support. They express their needs and convictions, listen to each other and strive to act responsibly, considering their good and the good of the other.

SERVICE

Support from the Community empowers members to help each other and to contribute service to the wider community according to their abilities, interests and opportunities.

SIMPLE LIFESTYLE & RESPECT FOR THE EARTH

Conscious that over-consumption by persons in wealthy countries threatens the earth's living systems, members seek a simplified lifestyle that reflects a respectful relationship with the environment.

ARTS & RECREATION

Leisure, recreational activities and travel contribute uniquely toward refreshing the mind, body and spirit. The arts form an integral part of the community. Members share and develop their gifts and talents through such activities as music, dance, theater, storytelling, gardening, crafts, weaving.

HEALTH

The word "health" comes from the same root as "heal," whole," and "holy". Recognizing this members pay attention to nutrition, rest, exercise and social interaction.

Residents of the senior cohousing community of mutual support also commit to the following values.

CARE DURING ILLNESS & DYING

The common goal of the cohousing neighborhood is to offer care to one another in the later years. It affirms home care and dying at home. However, when institutional care occurs, a member of the community stays in touch with the person and closely follows her/his condition. Members recognize that the process of living involves one's desire for tolerable health and a capacity to be generative. Within the community, the process of dying raises one's awareness that all surrender physical life, not in isolation, but as a sister or brother of the human community.

MUTUAL ASSISTANCE

Sharing of goods and services is the norm in the cohousing neighborhood. When members have needs beyond the individual and family group, they are encouraged to make their needs known. Community meetings and common meals provide opportunities for open discussion, sharing and mutual assistance.

Revised 7/11

Figure 24: Mission and Values⁵⁹

⁵⁶ "Elder Cohousing—An Idea Whose Time Has Come?" Neshama Abraham & Kate deLaGrange, accessed May 2, 2013, <http://www.plan-b-retirement.com/ElderCohoArticleC-Mag10.06.pdf>.

⁵⁷ Anne P. Glass, "ElderCo-Housing in the United States: Three Case Studies," *Built Environment* vol 38 no3 (2012): 353.

⁵⁸ *Ibid.*, 353.

⁵⁹ "Mission and Values," ElderSpirit Community, accessed May 2, 2013, <http://elderspirit.org/mission.html>.

DEMOGRAPHIC

ElderSpirit Community, the second senior cohousing project to be built in the United States, is located just west of the Blue Ridge Mountains in the historic town of Abingdon, Virginia. The site is located within walking distance from the heart of town, which is known for its art, music and cultural festivals. The town of Abingdon is 8.07 square miles and has a population of 8,183, of which 20.5% are persons sixty-five years and over.⁶⁰ The 2007-2011 American Community Survey reported the area's median household income as \$39,393.⁶¹ The median housing value is \$174,800⁶² and the area's poverty level is 19.3%.⁶³

DESIGN GOALS

The design of ElderSpirit Community follows the fundamental design concept of cohousing. The challenges of designing this community were the hillside location of the site and the size of the site. As with other cohousing designs, resident interaction is encouraged and supported through purposeful design, which allows this social activity to take place.⁶⁴ A centralized pedestrian pathway divides the residential complexes from owners' duplexes and triplexes on one side of the path whose homes overlook the Virginia Creeper Trail. The lower floor of the two story apartment is bermed into the hillside on the opposite side of the path that provides warmth in the winter and cooling in the summer for these lower units. All upper floor units have an exterior balcony that overlooks the trail and connects them with the community as residents traverse the pedestrian pathway.

FORM AND FUNCTION

The community is comprised of thirteen owner units arranged in clusters of two duplexes and three triplexes and sixteen low to moderate income units; six located in a two story apartment

⁶⁰ "State and County Quick facts," United States Department of Commerce, accessed May 2, 2013, <http://quickfacts.census.gov/qfd/states/51/5100148.html>.

⁶¹ "America Quick Facts," United States Department of Commerce, accessed May 2, 2013, <http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=bkmk>.

⁶² "America Quick Facts," United States Department of Commerce, accessed May 2, 2013, <http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=bkmk>.

⁶³ Ibid.

⁶⁴ Kathryn McCamant and Charles Durrett, *Creating Cohousing: Building Sustainable Communities*, (Canada: New Society Publishers, 2011), 248.

rental building and four located in the common house. The clustering of the units in cohousing allows for more cohesiveness among the residents living on site.⁶⁵

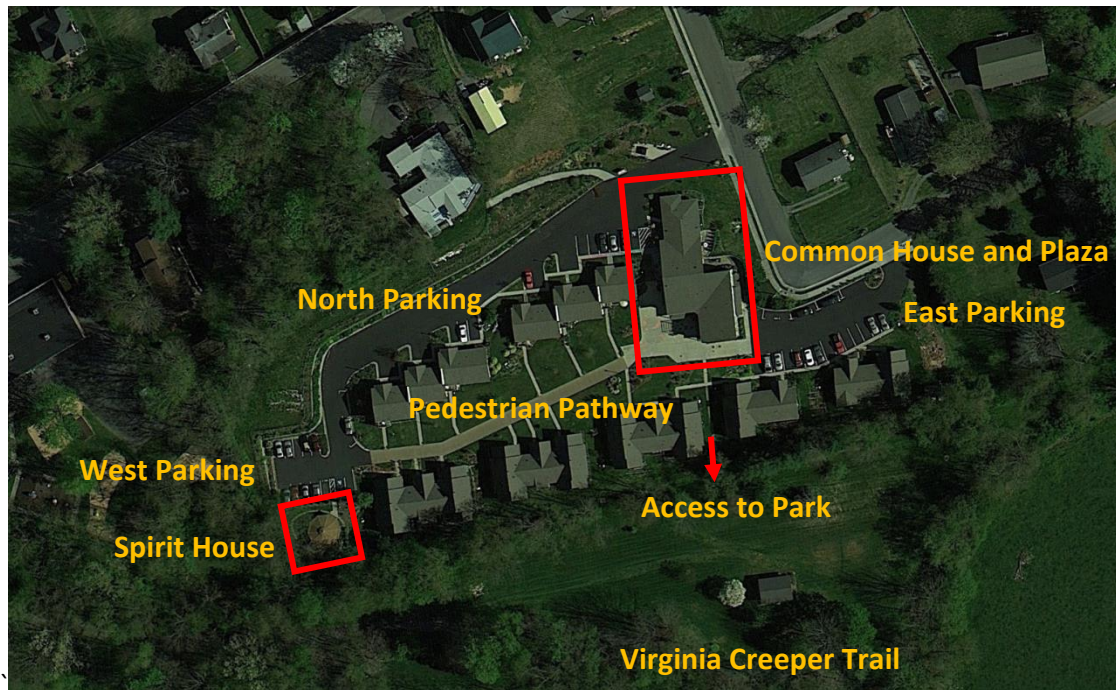


Figure 25: ElderSpirit Community Site Map⁶⁶

Another connection to the path is the orientation of the kitchen window, which faces the pathway, to allow residents to see passersby.⁶⁷ Micro-communities have developed according to the geographic location of the units: common house, upper floor apartment units, and end units. Residents living within close proximity to one another tended to have closer relationships with each other. The design also left residents who live on the top floor of the apartment complex to feel disconnected to the community below due to their inability to spontaneously join in the activities of those living along the central pathway.

⁶⁵ Kathryn McCamant and Charles Durrett, *Creating Cohousing: Building Sustainable Communities*, (Canada: New Society Publishers, 2011), 250.

⁶⁶ Image from Google Earth.

⁶⁷ Charles Durrett, *The Senior Cohousing Handbook: A Community Approach to Independent Living*, (Canada: New Society Publisher, 2009), 148.

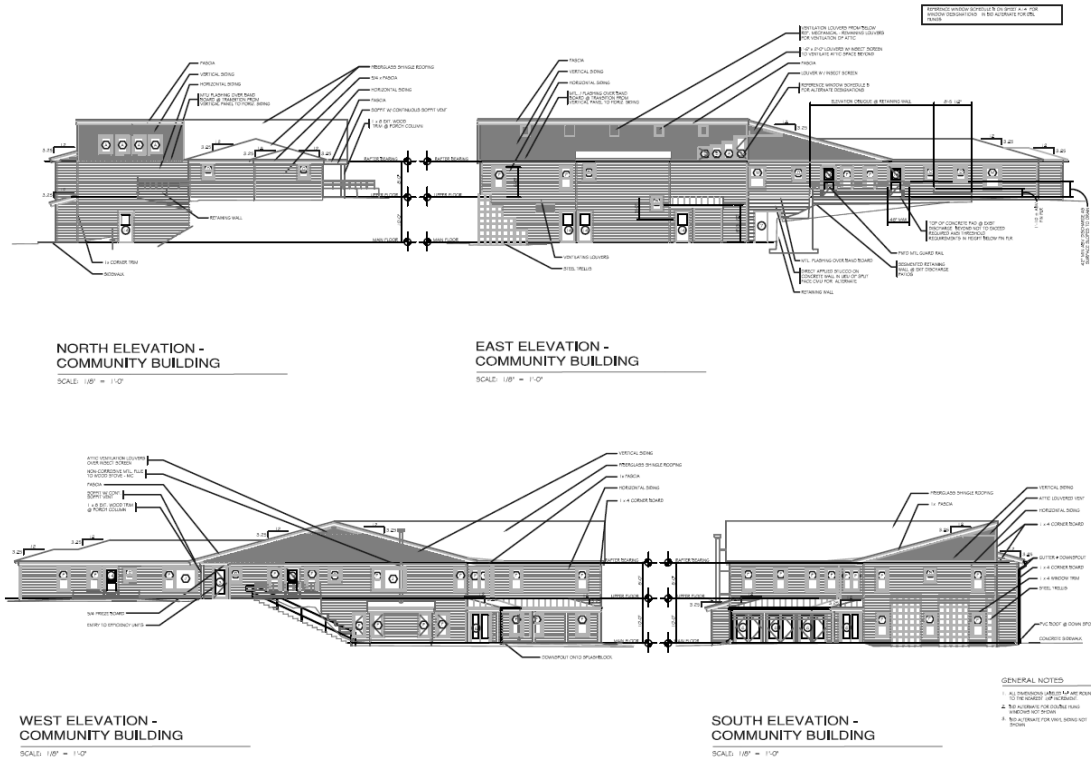


Figure 26: ElderSpirit Community Elevations⁶⁸

⁶⁸ Drawing Courtesy of the Highlands Group, P.C., Architecture, Land Planning, and Interiors.



Figure 27: Owner occupied duplexes and triplexes are located on the left, and rental apartment units are located on the right of the this image.
Photo by Author



Figure 28: The exterior view of the apartment rental units at ElderSpirit Community.
Photo by Author

Parking areas for residents and their guests are located on both ends of the complex and in front of the upper floor of the apartment units. In a cohousing design, vehicular pathways take a

secondary emphasis in the design of the community as compared to the pedestrian pathways. Most cohousing communities have carts or wagons for residents to use to aid in transferring items from their cars to their homes. ElderSpirit Community residents who are located the farthest away from their parking stalls find the lack of proximity to their vehicles challenging even with the assistance of these rolling devices. Health issues and the dependence on assistive devices, such as wheelchairs or walkers, make the layout of the parking area difficult to access, especially during inclement weather. The size of the pedestrian pathway is generous to allow for emergency vehicles to enter and on occasion for private vehicles to use. The complex is listed as a Planned Unit Development, which freed the project from subdivision restrictions. Town officials allowed the community to provide for less than required parking spaces for the development, resulting in decreasing the amount of disturbance to the natural surroundings and increasing more green space within the common area.⁶⁹



Figure 29: Signage of the pedestrian pathway. The width of the pedestrian path is wide to accommodate emergency vehicles and to allow for cars to drive closer to the dwelling units.

Photo by Author

⁶⁹ Dene Peterson, "Communities Magazine: Journal of Cooperative Living," <http://www.elderspirit.net/pages/communities%20magazine%20article.html> (accessed May 4, 2013).

FUNDING

The financial feasibility of the project called for an increase in the number of units to be built. The original plan was to build twenty units but ultimately twenty nine were built. Several different funding options were used to build the apartment units: The U.S. Department of Housing and Urban Development's, HOME Investment Partnership, which is designed exclusively to create affordable housing for low-income households, funding from the Virginia Housing Development Authority's low interest loan and a grant from the Federal Home Loan Bank of Atlanta. The collaboration of the Corporation, with the Virginian Housing Authority, helped to increase low-income rentals in the area. The owner-occupied units were originally priced at \$99,479 for a one bedroom and \$122,679 for a two bedroom unit in order to attract a broader financial range of seniors.⁷⁰

There are four 590 square feet apartment units in the common house. Within the two story apartment complex, units range from 760 square feet to 860 square feet; there are six one bedroom and six two bedroom units within the building. Monthly rental fees range from \$360.00 to \$505.00 depending on the size of the unit.⁷¹ Residents must be income eligible to qualify for a rental in the complex, with a maximum annual income for one person of \$17,150 and \$19,600 for two people.⁷² The owner-occupied one bedroom and two bedroom duplexes and triplexes are 760 and 960 square feet and are not restricted to income requirements. Fifty percent of the appreciation from the sale of all owner-occupied units goes to the community.⁷³

USER PROFILE

The community is comprised of thirteen owner units arranged in clusters of two duplexes and three triplexes and sixteen low to moderate income units; six located in a two story apartment rental building and four located in the common house. The clustering of the units in cohousing allows for more cohesiveness among the residents living on site.⁷⁴ Currently, the community consists of thirty three on-site residents comprised of four men and twenty-nine women and

⁷⁰ Ibid., 353-344.

⁷¹ "News," ElderSpirit Community, accessed May 3, 2013, <http://www.elderspirit.org/news.html>.

⁷² Ibid.

⁷³ Anne P. Glass, "Elder Co-Housing in the United States: Three Case Studies," *Built Environment* vol 38 no3 (2012): 354.

⁷⁴ Kathryn McCamant and Charles Durrett, *Creating Cohousing: Building Sustainable Communities*, (Canada: New Society Publishers, 2011), 250.

thirteen off-site members comprised of three men and ten women, totaling forty-six members, what the community believes is a manageable community size. An off-site member is defined as someone not physically living on site, but has all the privileges as an on-site resident. Due to the lack of available units, these members are on a wait list; in the meantime, they can fully participate in the community. The current age range of the community members is from fifty-seven to ninety-one years old.

ElderSpirit Community
“Goodness of Fit” Questionnaire

ElderSpirit Community is the name chosen by a group of older adults committed to spiritual growth, caring for one another, respect for the earth, and service to the larger community. The *ElderSpirit Community* is planning a cohousing neighborhood of mutual support in Abingdon, Virginia. This questionnaire is designed to help you decide if *ElderSpirit Community* might be a “good fit” for you and your interests. Read the following statements and note whether you agree or disagree. This is for your purposes only; please do not return the form.

	Agree	Neutral	Disagree
I respect other spiritual paths and do not hold mine as the only one.			
I have or would like to have a regular spiritual practice.			
I try to be as physically active as my health allows.			
I am interested in learning new things.			
I value a sense of community with others.			
I would like to participate in some group activities.			
I am willing to give some time to ESC work and responsibilities.			
I have a history of volunteer work and might like to continue.			
I would like to give and receive caring support as I age.			
I value the environment and act accordingly (recycling, etc.).			
I would like to further develop my gifts and talents and encourage others to develop theirs.			
I am open to change.			
I appreciate diversity in a community.			
I am willing to face the mysteries of aging and death.			

If you agree with most of these statements, you might be a good fit for membership in the *ElderSpirit Community*. For more information about *ElderSpirit Community*, or the cohousing neighborhood, please contact us at:

ElderSpirit Community
 Attn: Catherine Rumschlag
 192 Highland St.
 Abingdon, Virginia 24210
 (276) 619-5544
crumschlag@embarqmail.com

©2007 ElderSpirit Community, Inc.

With support from the Retirement Research Foundation.

Figure30: Good Fit Questionnaire⁷⁵

⁷⁵ “Goodness of Fit Questionnaire,” ElderSpirit Community, accessed May 2, 2013, <http://www.elderspirit.org/goodnessoffit.html>.

Residents of ElderSpirit Community, and those inquiring about the community, are from various regions throughout the United States. Interested parties are encouraged to take the “Good Fit” questionnaire to help them to determine if community living and lifestyle is conducive to their personalities. An exit survey conducted by the community revealed that the top three reasons why residents moved into the community in descending order were: 1) sense of community, 2) idea of mutual support, and 3) the spiritual component the community had to offer. Although many past residents believed that they would like to be a part of a community setting, their definition of what community is has turned out to be different than what they had experienced. Interested parties are encouraged to visit the community to familiarize themselves with cohousing living and to get to know the residents. All residents are required to be involved in and participate actively in committees, as well as attend the community’s monthly meetings.



Figure 31: ElderSpirit Community’s common house. The community’s outdoor activities are held in the outdoor plaza. The common house is located at the east end of the property and is within the line of sight to the private dwellings. Photo by Author

COMMON HOUSE AND SPIRIT HOUSE

An important part of community is the common house and spirit house. These two spaces are an integral part of building and maintaining community relations among its residents. Both buildings are located at the terminal ends of the complex and act as nodes for community gatherings. The community comes together twice-weekly for spiritual gathering followed by shared community dinners. These well-attended meals are prepared by teams of rotating cooks and clean-up crews. After dinner activities, such as poetry reading, music, and singing to name but a few, are provided by members of the community or guests.

The 2,000 square feet common house is comprised of two floors; the top floor consists of four rental apartments, two guest rooms with a shared bathroom, a library, and an art studio. The bottom floor consists of the community dining and multipurpose rooms, commercial kitchen, television room, office, laundry facility, workshop, and the community mailbox. The common house was designed to be ADA compliant, as seen by the wide hallway corridors, door handles, zero-thresholds, three feet wide doorways, extensive lighting, and an elevator for those who are unable to navigate the building's two interior stairways. Universal and ADA design features are essential components of senior housing residences as these features will allow for ease of mobility through the building. Currently, two of the members residing within the community are dependent on assistive devices. Heavy maintenance around the community complex is performed by a hired groundskeeper, and the interior spaces in the common house are cared for by hired help who also provide housekeeping services to individual residences.

Directly outside of the dining room, on the lower level of the building, is an expansive outdoor plaza used for community events and gatherings with a 22' x 24' labyrinth created by resident artist Margaret Gregg.⁷⁶

⁷⁶ Margaret Gregg, "Labyrinth at ElderSpirit Plaza features Gloves," *A! Magazine for the Arts*, June 12, 2011, accessed May 4, 2013, <http://www.artsmagazine.info/articles.php?view=detail&id=2011061220172941194>.



Figure 32: Labyrinth by Margaret Gregg⁷⁷

The octagonal Spirit House was the last building to be completed (2007) and was constructed from a building kit. The structure is for non-denominational use and the interior space is simply appointed to accommodate the gathering of groups in the open, non-fixed seating floor plan. Community wide groups such as the Quakers and Buddhists, along with the resident community, use the space frequently. Adhering to their core mission, diversity of belief is respected and accepted among the residents.

⁷⁷ "How it Came to be," ElderSpirit Community, accessed May 4, 2013, <http://www.elderspirit.org/labyrinthcard.html>.

Late Life Spirituality in the ElderSpirit Community® (ESC)

This Conceptual Model identifies facets of late-life spirituality valued by initiating members of the ElderSpirit Community at Trailview. As a reflective experience the Conceptual Model is evolving and will change with more experience and reflection. These facets have been categorized for ease in understanding; recognizing they weave a whole that is greater than can be described.

DIMENSION	Inner Work	Caring for Oneself	Mutual Support	Community Service	Reverence for Creation	Creative Life
ASPECTS	Seeking meaning in life Seeking Spirit in small and large experiences Willingness to face the mystery of death Freedom of religion Learning lessons from life	Physical health Mental health Kindness to self; Forgiveness of others. Taking oneself with lightness & laughter Connecting with family and friends Speaking your truth	Face- to- face relationships Shared Meals Celebrations Helping care for the ill and dying Respect for each other's history and traditions	Kindness toward others Compassion toward those in need Social awareness and action	Respectful relationship with nature Less emphasis on materialism/ consumerism Awareness of the Beauty of the Earth Caring for animals, trees and plants	Recognizing gifts & talents, your own and others. Affirming one's legacy to others Awareness of ancestors Openness to change Addressing "unlived" aspects of life
EXEMPLIFIED BY	Interactive relationship with a Higher Power Regular spiritual practice, i.e.: Yoga, Prayer, Meditation, Stillness, Tai Chi, Respecting the practices of others	Aerobic exercises Outdoor activities: Gardening, Walking, Biking Mental exercise: Reading, Puzzles, Games. Ability to ask for help when needed Noticing losses: physical, mental and social Allowing oneself to grieve the losses	Birthday/holiday celebrations Attention to the needs of caregivers Listening well; clearly expressing oneself Giving and receiving support Asking for help when needed Avoiding the need to "fix" others	Attention to challenges of aging Volunteer work Involvement with neighborhood Civic responsibilities Seeking a just and loving world	Simple lifestyle Consideration for the environment in decisions & actions Companion animals Less reliance on cars Recycling Organic gardening, use of local foods	Artistic activities Life long learning Personal story telling Responding to limitations that may accompany aging and/or illness Doing something new Pursuing dreams

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Figure 33: Late Life Spirituality Concept Model⁷⁸

⁷⁸ "Late Life Spirituality Concept Model," ElderSpirit Community, accessed May 1, 2013, http://www.elderspirit.org/Late_Life.html .



Figure 34: The Spirit House is located at the west end of the property. The community comes together twice weekly for spiritual gathering before their common meals.⁷⁹

⁷⁹ Photo by Author

ElderSpirit Community



Figure 35: View of the east parking lot



Figure 36: West Parking Lot



Figure 37: Duplex



Figure 38: Triplex



Figure 39: Centralized Pedestrian Pathway



Figure 40: Apartment Units



Figure 41: Pedestrian Bridge Access to Trail



Figure 42: Virginia Creeper Trail

ElderSpirit Community-Common House



Figure 43: Art Studio



Figure 44: Guest Room



Figure 45: Library



Figure 46: Workshop



Figure 47: Television Room



Figure 48: Commercial Kitchen



Figure 49: Dining Room



Figure 50: Multipurpose Room



Figure 51: Community Mailbox
Photos by Author



Figure 52: Community Board

LESSONS LEARNED

ElderSpirit Community is an alternative housing option for seniors who are looking for a community lifestyle in which to age. The forces that drive this community are the residents who are committed to the mission of ElderSpirit. The design of the community based on the traditional intergenerational cohousing model are applicable and functioning at best, while in other areas it challenges its user and is divisive at worst. The difference between these two models, intergenerational and senior cohousing, is that the first focuses on the family and children, while the later focuses on the elder and their needs.⁸⁰ Because of this situation, the design principles and approaches should already be incorporated to meet the foreseeable challenges of the aged without much modification to their interior and exterior spaces. ElderSpirit Community offers its residents a designed community using the cohousing principles. While cohousing designs offer opportunities that are conducive to community living and interaction, the participation of its residents is key to its success. ElderSpirit Community is more than just neighbors living together, but is a community living as members of an extended family.

⁸⁰ Charles Durrett, *The Senior Cohousing Handbook: A Community Approach to Independent Living*, (Canada: New Society Publisher, 2009), 31.

Chapter III Case Studies



Objectives

Franciscan Vistas Ewa

Marianists Center of Hawaii

Kupuna Senior Housing Project

Lessons Learned

OBJECTIVE

The three case studies, Franciscan Vistas Ewa, Marianist Center of Hawaii, and Kupuna Senior Housing Project were selected because they exemplified the faith-based organization's approach of community through designing, supporting, and living in these settings. These case studies exhibit three varied attempts to focus on the Catholic Church's perspective of caring for the poor and elderly. A common belief in community living links these three distinct entities in their attempt to accomplish similar goals.

The case studies were researched, categorized and analyzed based on several factors: Project History, Area History, Environmental Data, Demographic and Surrounding Area, Design Goals, Form and Function, Funding, and User Profile.

It was important to focus on projects that are located in Hawaii whose end users were the elderly living in some type of community setting. Although the analysis of these studies was based on the same criteria, they each in their own right also were analyzed for their primary goal of community and how they each accomplished it.

FRANCISCAN VISTAS EWA



Figure 53: Rendered Exterior Elevation⁸¹

Project Location	Ewa, Oahu
Architect	Alakea Design Group, LLC, Honolulu, Hawaii

Building Characteristics

Number of Units	150
Number of Stories	2
Context	Rural
Housing Type	Independent Senior
Building Parti	Courtyard
Unit Size	530 and 750 SF
Date of Completion	2011

Resident Characteristics

Age Range	62–95 Years Old
Average Age	78.5
Number of Residents	200+
Number of Men	Unavailable
Number of Women	Unavailable
Number of Couples	Unavailable
Number Requiring Assistive Devices	Unknown

PROJECT HISTORY

The conceptualization of this innovative project is the brainchild of the Hawaii branch of the Sisters of St. Francis of the Neumann Communities, whose main headquarters is located in Syracuse, New York. Their patron saint is St. Francis of Assisi, whose teaching is focused on seeking out and alleviating the suffering of others.⁸² Formulated from this organization came St. Francis Healthcare Systems of Hawaii, one of the largest providers of non-hospital care in the state whose, mission is to create healthy communities in the Spirit of Christ’s Healing Ministry.⁸³

⁸¹ “Construction Begins on St. Francis’ \$40 Million Senior Living Community in Ewa,” St. Francis Healthcare System of Hawaii, January 10, 2010, accessed March 19, 2013, <http://legacy.stfrancishawaii.org/Press/Pages/SeniorLivingCommunityinEwa.aspx>.

⁸² “Our Patron Saint,” St. Francis Healthcare System of Hawaii, accessed March 13, 2013, <http://www.stfrancishawaii.org/mission/our-patron-saint-2>.

⁸³ Ibid.

In the Hawaiian Islands, the Sisters have a long history in healthcare and are instrumental in the advancement and modernization of healthcare delivery. Because of this, the Sisters are keenly aware of the plight of the less fortunate, especially the elderly. Out of this emerged the recognition that there is a great need for housing that especially targets the less fortunate and elderly.



Figure 54: Franciscan Vistas Ewa is located on the island of Oahu.⁸⁴

⁸⁴ "Hawaii 2010 Census Counties Boundaries-Demographic Profiles," State of Hawaii, accessed April 21, 2013, <http://www.arcgis.com/explorer/?open=1f2b62edda8b4448839084d58277b594>.



Figure 55: The project is located in the district of Ewa Beach.⁸⁵



Figure 56: The site is located on Miula Street. The project is located one block from Ewa Villages, a historic district on the Hawaii State Register of Historic Places.⁸⁶

AREA HISTORY

Franciscan Vistas Ewa is located on the west side of the island of Oahu, in the district of Ewa Beach. The project’s physical address is 91-1471 Miula Street. The site is situated a block in from one of the area’s main thoroughfares, Renton Road. The neighborhood dates back to the early days of the sugar plantation where this once isolated and arid area was transformed due

⁸⁵ Ibid.

⁸⁶ Image from Google Earth.

to the visionary entrepreneurs, who formed the Ewa Sugar Company, Ltd. in 1890.⁸⁷ The two catalytic events that drove this were the successful drilling of artesian wells by James Campbell and the railway system owned by Benjamin Franklin Dillingham.⁸⁸ The area soon became a thriving town due to the newly arrived immigrant workers who tended the plantation.



Figure 57: Ewa Sugar Mill, 1893⁸⁹

Worker's housing was erected at first for the single men who were employed by the plantation, but later included family housing as well. During the period from 1890s to 1940s, 1200 residential homes were built and were segregated into villages according to the racial backgrounds of the workers.⁹⁰ The area consisted of a total of eight villages, each having its own architectural style. By 1940, Ewa Plantation land covered over 9,000 acres of sugar cane fields.⁹¹ The plantation systems played a significant role in shaping the cultural, economic, political, and

⁸⁷ Horng-Wei Chen, "Protecting Sense of Place: Historic Preservation in Ewa Villages," Wikispace.com, accessed March 13, 2013, http://willchen.wikispaces.com/file/view/Chen_AOC_12082011.pdf.

⁸⁸ *Ibid.*, 36.

⁸⁹ *Ibid.*, 38.

⁹⁰ *Ibid.*, 31.

⁹¹ *Ibid.*, 31.

level⁹⁸ and the dominant soil type is a combination of Lualualei series, fill land, and Ewa series soils. The annual temperature of the area can range from the high 80s in the summer to the low to mid-60s in the winter. The hottest month is August, while February is the coldest. The annual precipitation is 18.75 inches, with August being the driest at 0.48 inch and February the wettest at 3.05 inches.⁹⁹ The wind comes from the northeast and east northeast directions.

DEMOGRAPHIC AND SURROUNDING AREA

The 2010 United States Census Bureau , Census Designated Place (CDP) 86.17, reported Ewa Villages, with a total land area of 1.1 square miles and a population of 6,108 with 12.8% 65 years of age and older. 50.1% of the population is female and 59.5% are of Asian ancestry. The 2007-2011 American Community Survey reported the median value of owner-occupied housing units at \$423,200. The median household income during this same period was \$68,214 with 4.65 persons per household. 8.7% of this area's population lived below the poverty level.¹⁰⁰

This project is located on a quiet cul-de-sac surrounded by remnant buildings of the old plantation town. Access to the city and county of Honolulu's public transportation, The Bus, is located within walking distance. Renton Road, which is the area's main thoroughfare, runs east to west from Fort Weaver Road to Kapolei Parkway. Mature shower, banyan, and monkey pod trees are found shading pedestrian walkways and lining the road's medial strip. Along this route, there are three faith based communities: Immaculate Conception Catholic Church, Ewa Community Church, and Friendship Baptist Church. Ewa Mahiko Public Park, the United States Postal Office, Ewa Elementary School, Lanikila Baptist School, and Easter Seals of Hawaii are also located along this route. Shopping malls, medical services, financial institutions, entertainment, and dining venues can be found within a short distance from the project.

⁹⁸ "Floor Map: Water Level Elevation Mao (Beta), Floodmap, accessed March 13, 2013, <http://www.floodmap.net/>.

⁹⁹ "Ewa Villages Weather," IDcide, accessed March 13, 2013, <http://www.idcide.com/weather/hi/ewa-villages.htm>.

¹⁰⁰ "State and County Quick facts," United States Department of Commerce, accessed April 1 2013, <http://quickfacts.census.gov/qfd/states/15/1507485.html>.

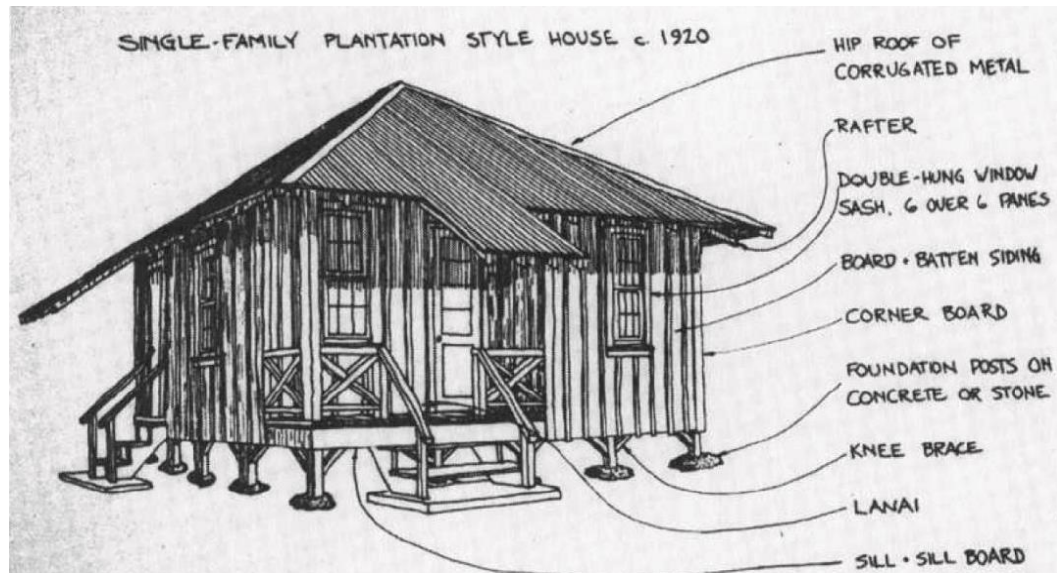


Figure 58: Drawing of HPSA Plantation Home¹⁰¹

DESIGN GOALS

The design of the project takes its cues from the vernacular architectural landscape of the surrounding plantation village. Board and batten, wood siding, lava rock, wide covered verandas, and double hung windows are incorporated into the design. The core philosophy of the Franciscan Vistas Ewa project was to build a housing project that could create opportunities for people to come together as a community, to live as a community, and to foster community. This goal is accomplished by centering the heart of the project around the hub of the community center. Within these spaces, residents can enjoy physical activities in the workout room, lap pool and participate in wellness programs. Other opportunities for connecting with other residents can be found at the on-site hair salon, learning and activity center, community center and kitchen, and meeting room. While amenities such as these may not be uncommon to other senior housing projects, they are however uncommon to low income projects.

¹⁰¹ Horng-Wei Chen, "Protecting Sense of Place: Historic Preservation in Ewa Villages," Wikispaces.com, accessed March 19, 2013, http://willchen.wikispaces.com/file/view/Chen_AOC_12082011.pdf.

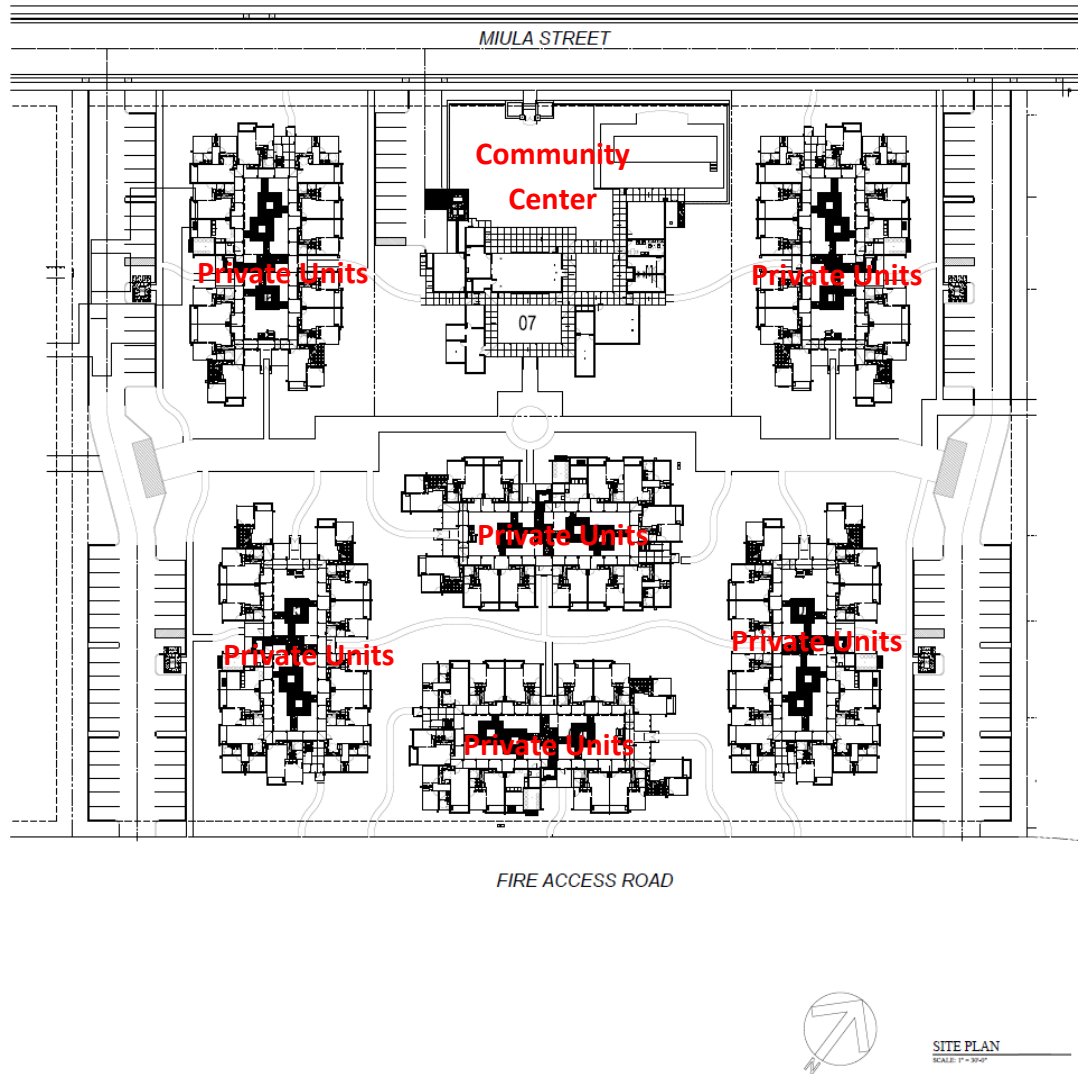


Figure 59: Franciscan Vistas Ewa Site Plan¹⁰²

¹⁰² Drawing courtesy of Alakea Design Group, LLC.



Figure 60: Site Map of Franciscan Vistas Ewa¹⁰³

¹⁰³ Image by Google Earth.



Figure 61: Aerial Site View¹⁰⁴



Figure 62: Community Center, Aerial View¹⁰⁵

¹⁰⁴ "Entry 315 Franciscan Vistas Ewa," Cadreas, accessed March 13, 2013, <http://cadreas.com/projects/480>.

¹⁰⁵ Ibid.

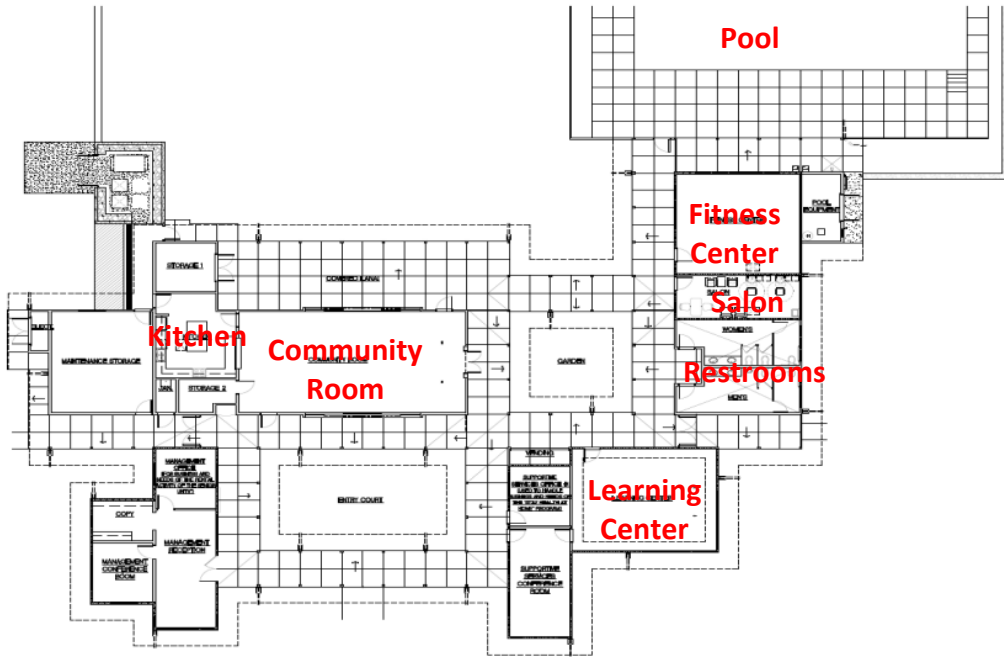


Figure 63: Community Center, Floor Plan¹⁰⁶



Figure 64: Community Pool¹⁰⁷

¹⁰⁶ Drawing courtesy of Alakea Design Group, LLC.

¹⁰⁷ "Entry 315 Franciscan Vistas Ewa," Cadreas, accessed April 13, 2013, <http://cadreas.com/projects/480>.



Figure 65: Covered lanai outside of the community dining room.¹⁰⁸

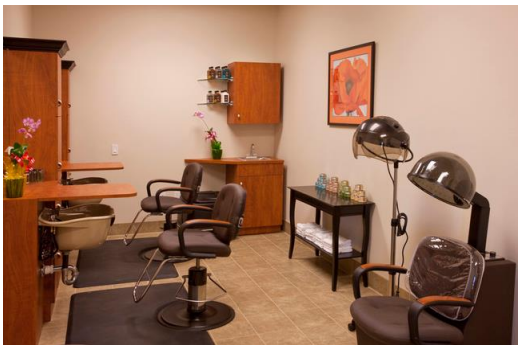


Figure 66: Hair Salon Center¹⁰⁹



Figure 67: Meeting Room¹¹⁰



Figure 68: Learning Center¹¹¹



Figure 69: Computer Area¹¹²

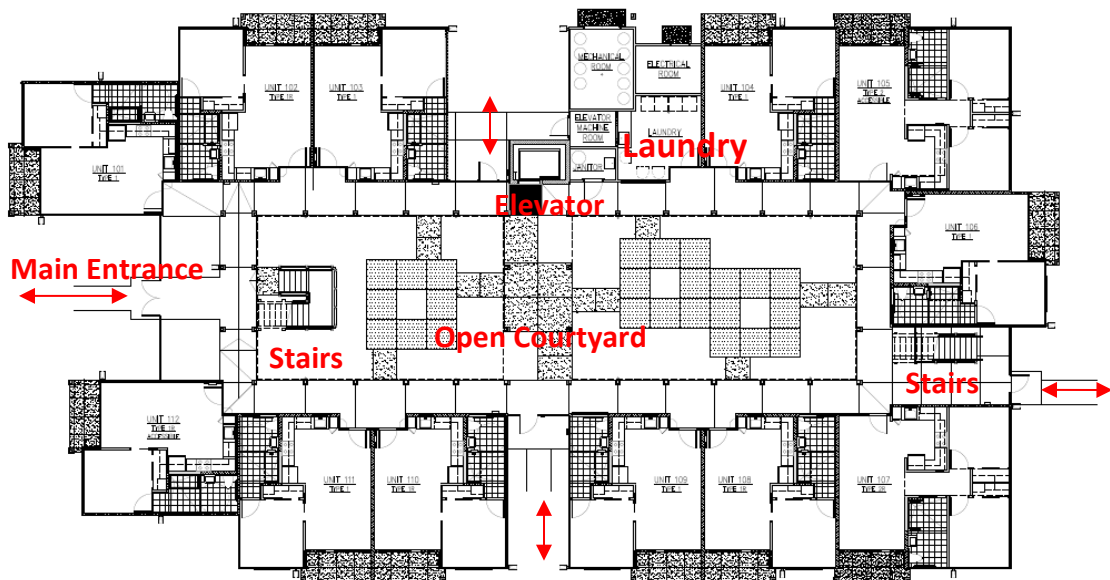
¹⁰⁸ Ibid.

¹⁰⁹ Ibid.

¹¹⁰ Ibid.

FORM AND FUNCTION

The Franciscan Vistas Ewa is comprised of 149 residential units and one caretaker unit, organized in six rectangular clusters, with each cluster consisting of twenty-five apartments stacked on two single loaded corridor floors with connecting walkways. Each of the apartment's front doors is orientated to face the outdoor courtyard located within each cluster. Orienting the front doors to face the courtyard serves to connect the residents living within each cluster. The courtyards, which are a reminder of St. Francis' love for nature, are purposefully placed throughout the project and serve a vital role within each cluster and throughout the complex. The courtyards are equipped with seating areas that offer opportunities for residents to gather, converse, and share while building community within each cluster. Plants tolerant to this dry environment, like palms, ferns, ti leaf, and plumeria are used to provide shade and to give the courtyard an island character.



① OVERALL FIRST FLOOR PLAN - BUILDING 3
SCALE: 1/8" = 1'-0"

Figure 70: Overall First Floor Plan¹¹³

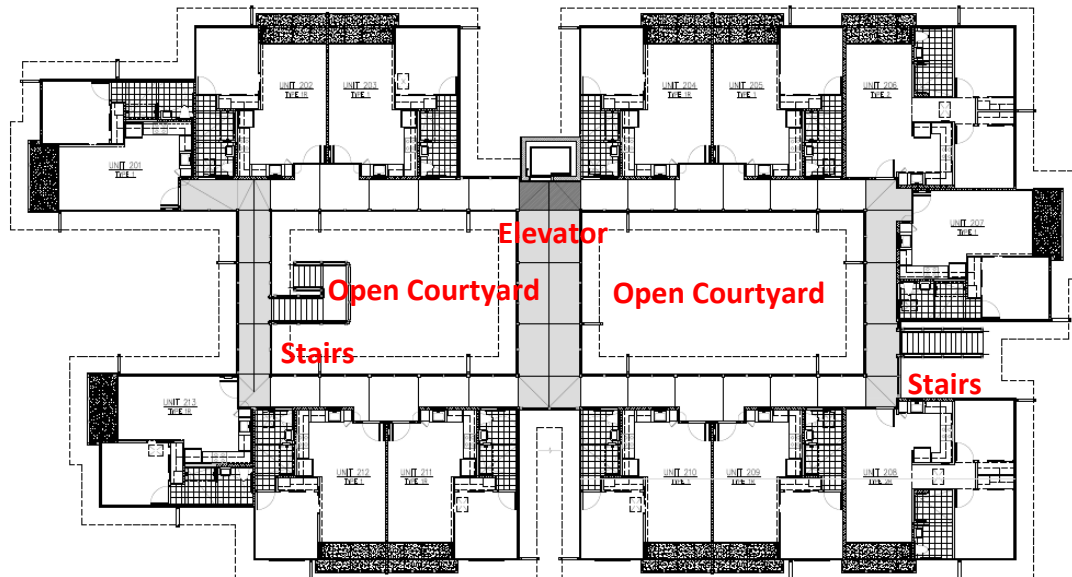
¹¹¹ Ibid.

¹¹² Ibid.

¹¹³ Drawing courtesy of Alakea Design Group, LLC.



Figure 71: Typical Cluster, Exterior View¹¹⁴



① OVERALL SECOND FLOOR PLAN - BLDG 3
SCALE: 1/8" = 1'-0"

Figure 72: Overall Second Floor Plan¹¹⁵

¹¹⁴ "Entry 315 Franciscan Vistas Ewa," Cadreas, accessed March 13, 2013, <http://cadreas.com/projects/480>.

¹¹⁵ Drawing courtesy of Alakea Design Group, LLC.



Figure 73: Typical Cluster Courtyard¹¹⁶



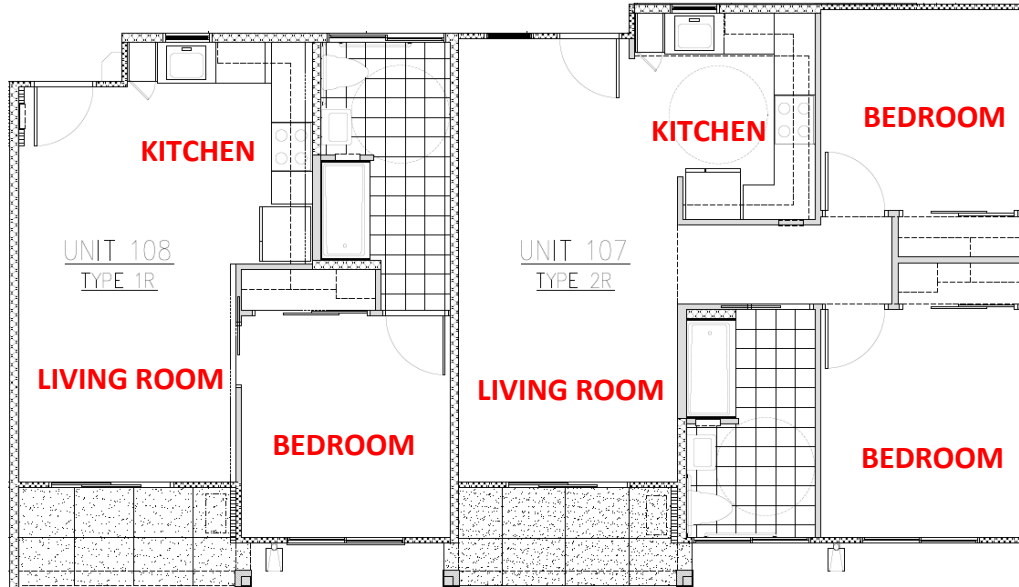
Figure 74: Mail Center and Parking¹¹⁷

Laundry facilities are deliberately located on the first floor of each cluster as opposed to within each apartment unit to create opportunities for engagement among the residents. Mail boxes for each cluster, located a short walking distance outside of the building, and perimeter parking spaces also provide opportunities for mingling among the residents. These opportunities for engagements, whether it is by chance or purpose, encourage the residents to come out of their

¹¹⁶ "Entry 315 Franciscan Vistas Ewa," Cadreas, accessed March 13, 2013, <http://cadreas.com/projects/480>.

¹¹⁷ Ibid.

apartments to participate in the daily activities of the center and not allow them to become sedentary, isolated or live completely apart from the community.



SCALE: 1/2" = 1'-0"

Figure 75: Residential Units, Floor Plans¹¹⁸



Figure 76: Living Room¹¹⁹



Figure 77: Kitchen¹²⁰

¹¹⁸ Drawing courtesy of Alakea Design Group, LLC.

¹¹⁹ "Entry 315 Franciscan Vistas Ewa," Cadreas, accessed May 5, 2013, <http://cadreas.com/projects/480>.

¹²⁰ Ibid.



Figure 78: Bedroom¹²¹



Figure79: Bathroom¹²²

Having a full understanding of their elderly residents' needs, ADA principles have been incorporated into the design of the project. The ground floor units in each cluster are equipped with roll-in showers, grab bars are found in all in bathroom facilities, and lavatories are wall mounted to provide wheelchair access. For ease of mobility for wheelchair-bound residents, zero thresholds are found at the entrances and throughout the units, as well as three feet wide doorways. ADA compliant cooking ranges with front knobs, lower countertops, cabinet pull hardware, and faucet levers are some of the features that can be found. For the security of the residents, each cluster has a gated entry. The site is level and walkways are gracious to accommodate ambulatory and wheelchair residents. An elevator is located in the middle of each cluster and stairways flank each end of the buildings.

¹²¹ Ibid.

¹²² Ibid.



Figure 80: Community Center, Interior View¹²³

Each residential unit is equipped with wall mounted air conditioning systems. To help mitigate sunshine, metal sun shades are mounted on the windows of the first floor units. Clearstory windows and ceiling fans are found in the community dining room. Photovoltaic systems are utilized to help reduce the energy cost of the community center and the common areas of each cluster.¹²⁴

FUNDING

Franciscan Vistas Ewa has been awarded federal and state tax credits, State Rental Housing Trust Funds, Hula Mae Mortgage Revenue Bonds, and RCAC, CDBG and HOME funding.¹²⁵ The 5,000 square foot community center was made possible by a grant from the Harry and Jeanette Weinberg Foundation. The project is compliant with both the Fair Housing Act and the American

¹²³ "Entry 315 Franciscan Vistas Ewa," Cadreas, accessed March 13, 2013, <http://cadreas.com/projects/480>.

¹²⁴ "Legacy: St. Francis Health –Hawaii Presents, Franciscan Vistas Ewa" Olelo Company Media, accessed March 13, 2013, http://olelo.granicus.com/MediaPlayer.php?view_id=19&clip_id=24103.

¹²⁵ Victoire Chochezi, "St. Francis to ease Hawaii senior housing pinch," Rural Community Assistance Corporation, accessed March 13, 2013, <http://www.rcac.org/pages/457>.

with Disability Act (ADA). The project's day to day operation is managed by Indigo Real Estate Services, Inc., a property management company based out of Mercer Island, Washington.¹²⁶ To address the needs of seniors, the Franciscan Sisters developed a program called "Stay Healthy at Home" in 2009 that helps the elderly to age in place and live independently for as long as possible. This affordable program focuses on preventative wellness by offering such services as: medication review, transportation, bathing and personal care, home health, health screening and education, financial and legal planning, shopping and chore services. This program is offered at the Franciscan Vistas Ewa with an on-site staff that is available to support its residents in an environment that will allow them to thrive independently and age with dignity.¹²⁷

USER PROFILE

The project consists of 126 one bedroom units and twenty three two bedroom units, which can accommodate up to three household members per unit. All residents must be sixty two years or older. The rental cost for the units are determined by the gross annual income of the applicants and are categorized into two levels: Tier I and Tier II.

ONE BEDROOM APARTMENTS:¹²⁸

Tier One: Rent is \$519 per month (6 homes)

Household Size Income Level Between:

One Person \$10,824 and \$21,630

Two Person \$10,824 and \$24,720

Tier Two: Rent is \$750 per Month (120 homes)

Household Size Income Level Between:

One Person \$17,880 and \$43,260

Two Person \$17,880 and \$49,440

¹²⁶ "Resources," Franciscan Vistas Ewa, accessed March 13, 2013, <http://franciscanvistasewa.com/resources.php>.

¹²⁷ Ibid.

¹²⁸ "Eligibility Requirements," Franciscan Vistas Ewa, accessed March 13, 2013, <http://franciscanvistasewa.com/pricing.php>.

TWO BEDROOM APARTMENTS:

Tier One: Rent is \$619 per month (Two homes)

Household Size Income Level Between:

One Person \$13,824 and \$21,630

Two Person \$13,824 and \$24,720

Three Person \$13,824 and \$27,810

Tier Two: Rent is \$885 per Month (Twenty one homes)

Household Size Income Level Between:

One Person \$21,240 and \$43,260

Two Person \$21,240 and \$49,440

Three Person \$21,240 and \$55,620

Included in the rental fee are trash, water, and sewer fees. Electrical, telephone and cable services not included.¹²⁹

Although no formal statistics have been initiated at the time of this writing, the public interest in the property is far-reaching, with the majority of residents coming from all parts of Oahu and the mainland United States. Currently, there are no available units in the property and there is a wait list for applicants. Openings occur when residents move away due to health issues which require the need for medical services offered at assisted living facilities. Relocation back to the mainland United States or moving in with family members are other contributing factors which cause vacancies to become available.

The design of Franciscan Vistas Ewa reflects sensitivity to its users, the senior population. The thoughtful layout of the complex invites social mingling and community building among the residents. Micro-communities can be formed within each of the clusters to allow for residents to get to know each other more closely due to the proximity of their residences. Opportunities for community engagement can also occur within the community center and along the footpaths that connect each cluster to the community node.

¹²⁹ Ibid.

INTERGENERATIONAL CENTER



Figure 81: Rendered Exterior Elevation¹³⁰

In February 2013, St. Francis Healthcare Systems of Hawaii opened their long awaited intergenerational center. The \$8 million facility is located across the street from Franciscan Vistas Ewa at 91-1758 Oohao Street. The center is 15,000 square feet and sits on 1.246 acres of level land.

The center can accommodate up to eighty-eight children ranging from ages three to six years old and up to fifty seniors.¹³¹ The goal of integrating these age groups is to share the knowledge and experience of the elderly, while at the same time the children can bring joy to them.¹³² The senior facility is 4,000 square feet, which includes an activity center, lounge and patio area. The center has two separate entrances for each group and shares a common outdoor courtyard. Cost of caring for the seniors at the center depends on the number of days one attends. The center has a minimum attendance requirement of three days per week.¹³³ Meals are included in the cost.

Five days a week – \$1,350 per month

Four days a week – \$1,070 per month

Three days a week – \$790 per month

¹³⁰ “Capital Campaigns,” St. Francis Hawaii, accessed May 2, 2013, <http://www.stfranchawaii.org/mission/foundation/special-campaigns>.

¹³¹ Kristen Consillio, “Old and Young to Mix at Preschool and Adult Day Care Center,” *Star-Advertiser*, February 28, 2013, accessed April 19, 2014, <http://www.staradvertiser.com/s?action=login&f=y&id=193760721>.

¹³² “Adult Day Care,” St. Francis Hawaii, accessed March 13, 2013, <http://www.stfranchawaii.org/services/franciscan-adult-day-center>.

¹³³ Ibid

Children attending the preschool must be three years of age, medically cleared by their physician, and completely toilet trained. Cost includes meals and varies depending on the amount of care needed.¹³⁴

Full Day - \$725 per month

School Day - \$635 per month

After Care - \$15 per day



Figure 82: Intergenerational Center, Entrance¹³⁵

¹³⁴ "Preschool," St. Francis Hawaii, accessed April 21, 2013, <http://www.stfrancishawaii.org/services/preschool-4>.

¹³⁵ "St. Francis Intergenerational Center," St. Francis Hawaii Healthcare System of Hawaii, accessed March 13, 2013, <http://www.facebook.com/photo.php?fbid=10151205288180946&set=a.10151205288080946.452975.279433225945&type=1&theater>.



Figure 83: East Exterior View¹³⁶

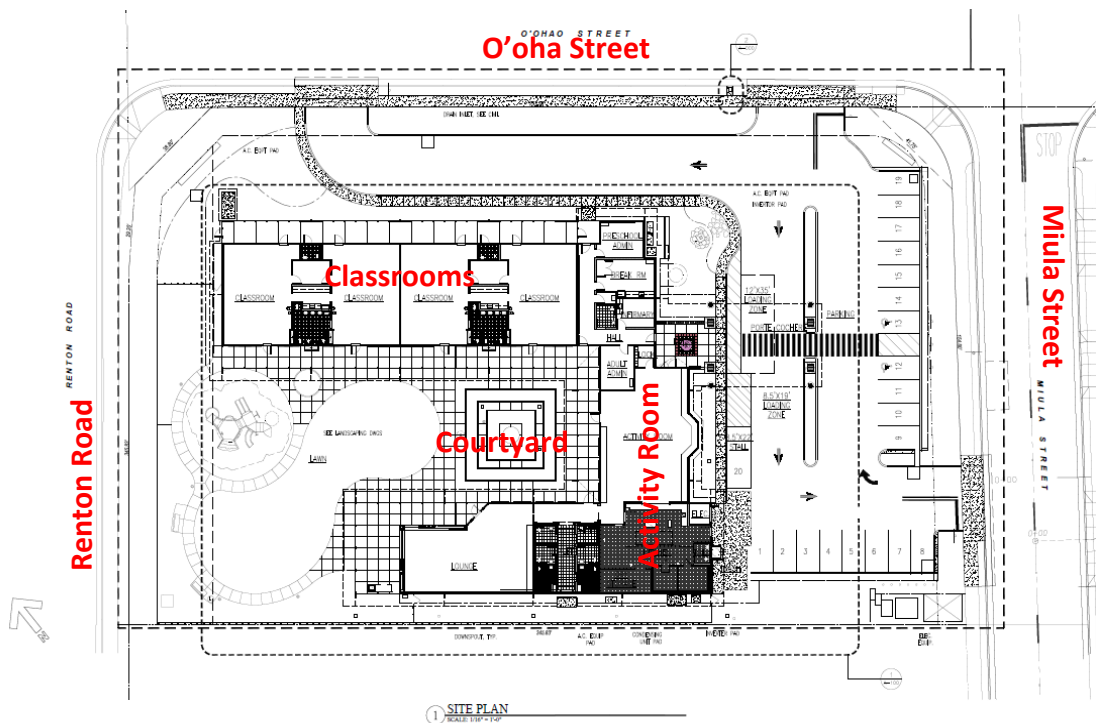


Figure 84: Intergenerational Site Plan¹³⁷

¹³⁶ "St. Francis Intergenerational Center," St. Francis Hawaii Healthcare System of Hawaii, accessed March 13, 2013, <http://www.facebook.com/photo.php?fbid=10151205290875946&set=a.10151205288080946.452975.279433225945&type=1&permPage=1>.

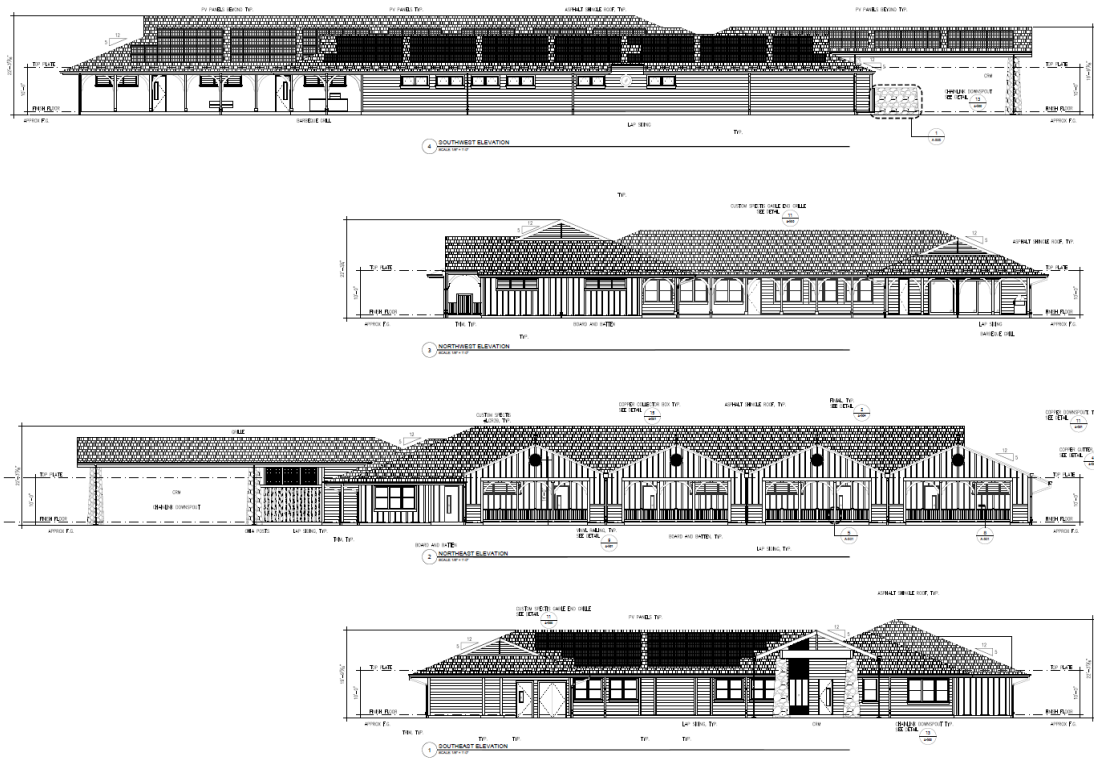


Figure 85: Exterior Elevations¹³⁸

The design of Franciscan Vistas Ewa reflects sensitivity to its users, the senior population. The thoughtful layout of the complex invites social mingling and community building among the residents. Micro-communities can be formed within each of the clusters to allow for residents to get to know each other more closely due to the proximity of their residences. Opportunities for community engagement can also occur within the community center and along the footpaths that connect each cluster to the community node.

¹³⁷ Drawings courtesy of Alakea Design Group, LLC.

¹³⁸ Ibid.

MARIANIST CENTER OF HAWAII



Figure 86: St. Louis School¹³⁹

Project Location	Honolulu, Oahu
Architect	Arthur Y. Mori and Associates (Marianist Hall) Honolulu, Hawaii
	Ushijima Architects, Inc. (Hale Malia) Honolulu, Hawaii

Building Characteristics		Resident Characteristics	
Number of Units	35	Age Range	33-89
Number of Stories	2	Median Age	61
Context	Urban	Number of Residents	23
Housing Type	Religious Community	Number of Men	23
Building Partil,	L	Number of Women	0
Unit Size	Varies	Number of Couples	0
Date of Completion	1990s, 2003	Number requiring Assistive Devices	1

¹³⁹ "St. Louis High School, Honolulu, Hawaii –Class of 1971 January 20, 2013," St. Louis School, accessed May 8, 2013, <https://www.facebook.com/photo.php?v=587589777922188&set=vb.111014298963&type=2&theater>.



Figure 87: Marianist Brothers, ca. 1891¹⁴⁰

PROJECT HISTORY

The Marianist Center of Hawaii is the home of the priests and brothers of the Marianist community, a Roman Catholic religious order. After the French Revolution, Blessed Father William Joseph Chaminade, together with the Venerable Adèle de Batz de Trenquelléon and the Venerable Marie Thérèse Charlotte de Lamourous, founded the Marianist Family.¹⁴¹ The Marianist Family is comprised of three sectors: the Society of Mary, the Daughters of Mary Immaculate, and the Lay Marianists.¹⁴²

Their method of rebuilding the Christian faith in Southern France after the war was through the formation of small faith communities of mutual support and Christian outreach that attracted many people.¹⁴³ Out of this, Father Chaminade founded the Society of Mary in 1817, whose patron saint is Mary, the mother of Jesus. The Marianist's belief of community is: "living, praying, and supporting one another in community enriches their faith and strengthens their ability to meet world challenges – especially problems associated with poverty and ignorance."¹⁴⁴ They also believe that all members are equal, and although they each have roles,

¹⁴⁰ "Family Online," Marianist, accessed April 20, 2013, <http://www.marianist.com/fo/fo154.htm>.

¹⁴¹ "Founder," Marianist, accessed April 15, 2013, <http://www.marianist.com/chaminade>.

¹⁴² *Ibid.*

¹⁴³ *Ibid.*

¹⁴⁴ "Society of Mary," Marianist, accessed April 15, 2013, http://www.marianist.com/?page_id=1884.

there are no ranks among them. Their community consists of members of equal discipleships, who work together to serve God.¹⁴⁵

The College of Ahuimanu was founded by the Catholic Mission of the Congregation of the Sacred Hearts fathers in 1846. As the school expanded it moved to Honolulu and changed its name to the St. Louis College.¹⁴⁶ At the request of the Bishop, eight Marianist brothers arrived in Hawaii in 1883 and eventually took over the helm of the school. In 1923, they moved to their present location and purchased 204 acres of land from Bishop Estates, of which thirty two acres was allotted for the school.¹⁴⁷ The campus was completed in the fall of 1928. In 1941, when WWII began, the military took over the campus and used it as a hospital. After the war the campus reverted back to the school and in 1948 the property was transferred to the Marianist Province of the Pacific. In 1955, the Marianists established St. Louis Junior College and renamed it Chaminade College when it became a four year co-educational college in 1957. The implementation of the graduate programs in 1977 brought about another name change to the college to what it is known today as Chaminade University of Honolulu.¹⁴⁸ As the schools expanded, the living facilities once occupied by the community were eventually taken over and used as classrooms, offices, and the student recreational lounge. The community eventually built two facilities: Marianist Hall in the 1980s and later in 2001 Kaminaka Hale, whose name was changed to Hale Malia.

¹⁴⁵ Ibid.

¹⁴⁶ "History," St. Louis Hawaii, accessed April 16, 2013, <http://www.saintlouishawaii.org/about/history>.

¹⁴⁷ Jerry Bommer, Linda M. Iwamoto, and Mackinnon Simpson, *A Half-Century on Kalaepohaku: Chaminade University 1955-2005* (Honolulu: Chaminade University, 2005), 8.

¹⁴⁸ "The Marianists at Chaminade," Chaminade University of Honolulu, accessed April 17, 2013, <http://www.chaminade.edu/marianists/>.

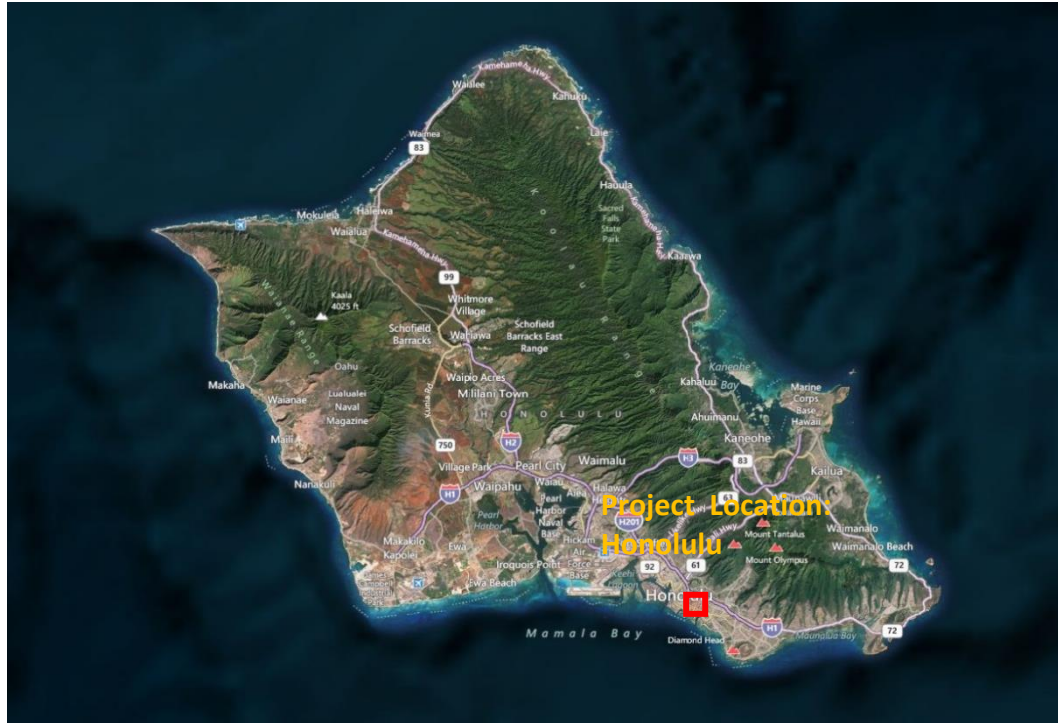


Figure 88: Marianist Center is located on the island of Oahu.¹⁴⁹

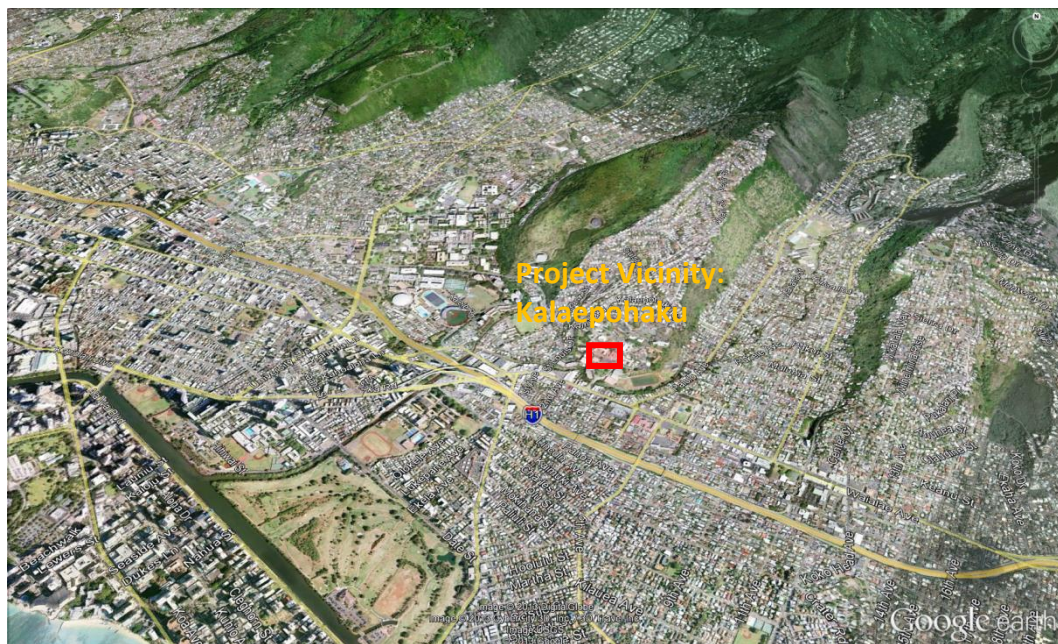


Figure 89: The project is located in the district of Honolulu.¹⁵⁰

¹⁴⁹ "2010 Census Population of Hawaii," State of Hawaii GIS Program, accessed April 21, 2013, <http://www.arcgis.com/explorer/?open=1f2b62edda8b4448839084d58277b594>.

¹⁵⁰ Image from Google Earth.



Figure 90: Marianist Center of Hawaii Outlined in Yellow¹⁵¹

¹⁵¹ "Parcel and Zoning Information," City and County of Honolulu, accessed April 16, 2013, <http://gis.hicentral.com/FastMaps/ParcelZoning/>.

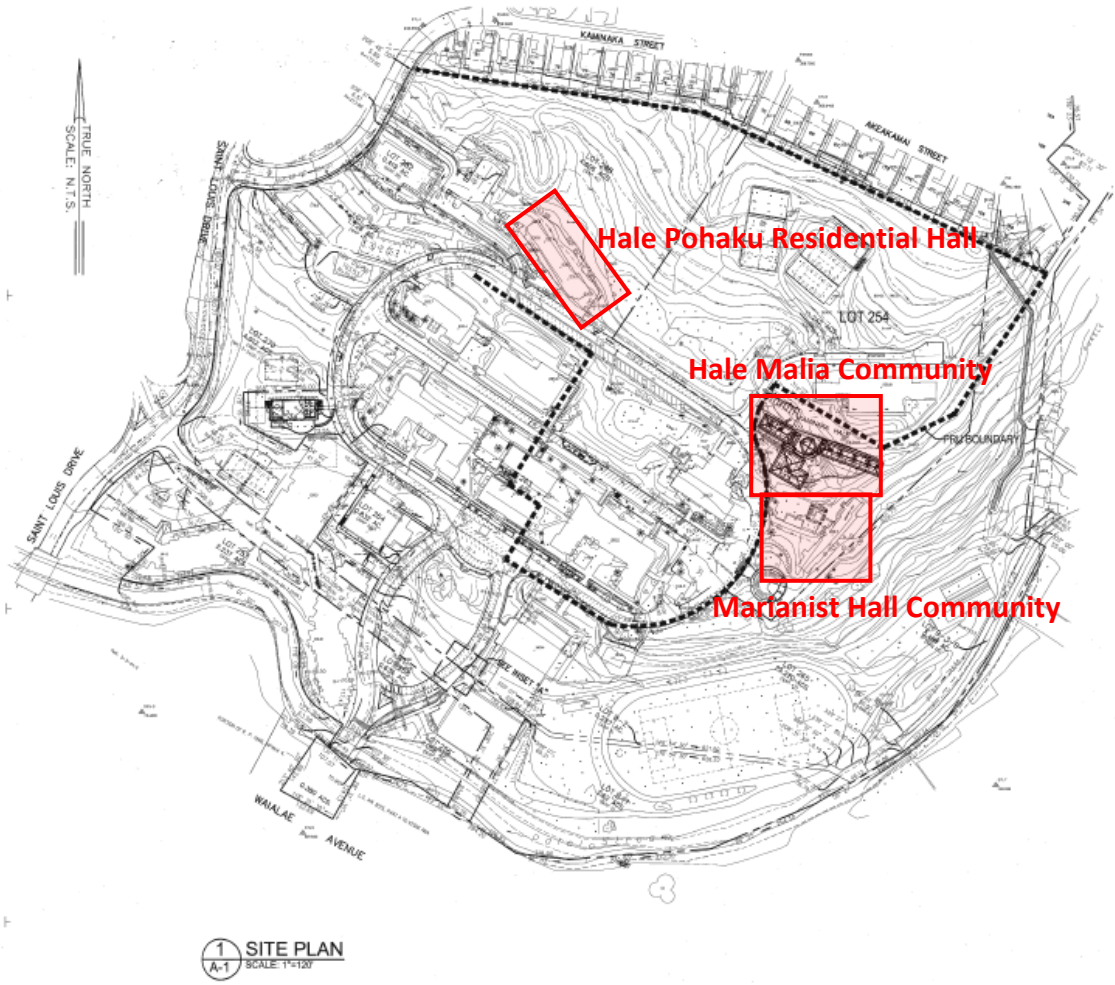


Figure 91: Site Plan¹⁵²

¹⁵² Drawing by Ushijima Architects, Inc.

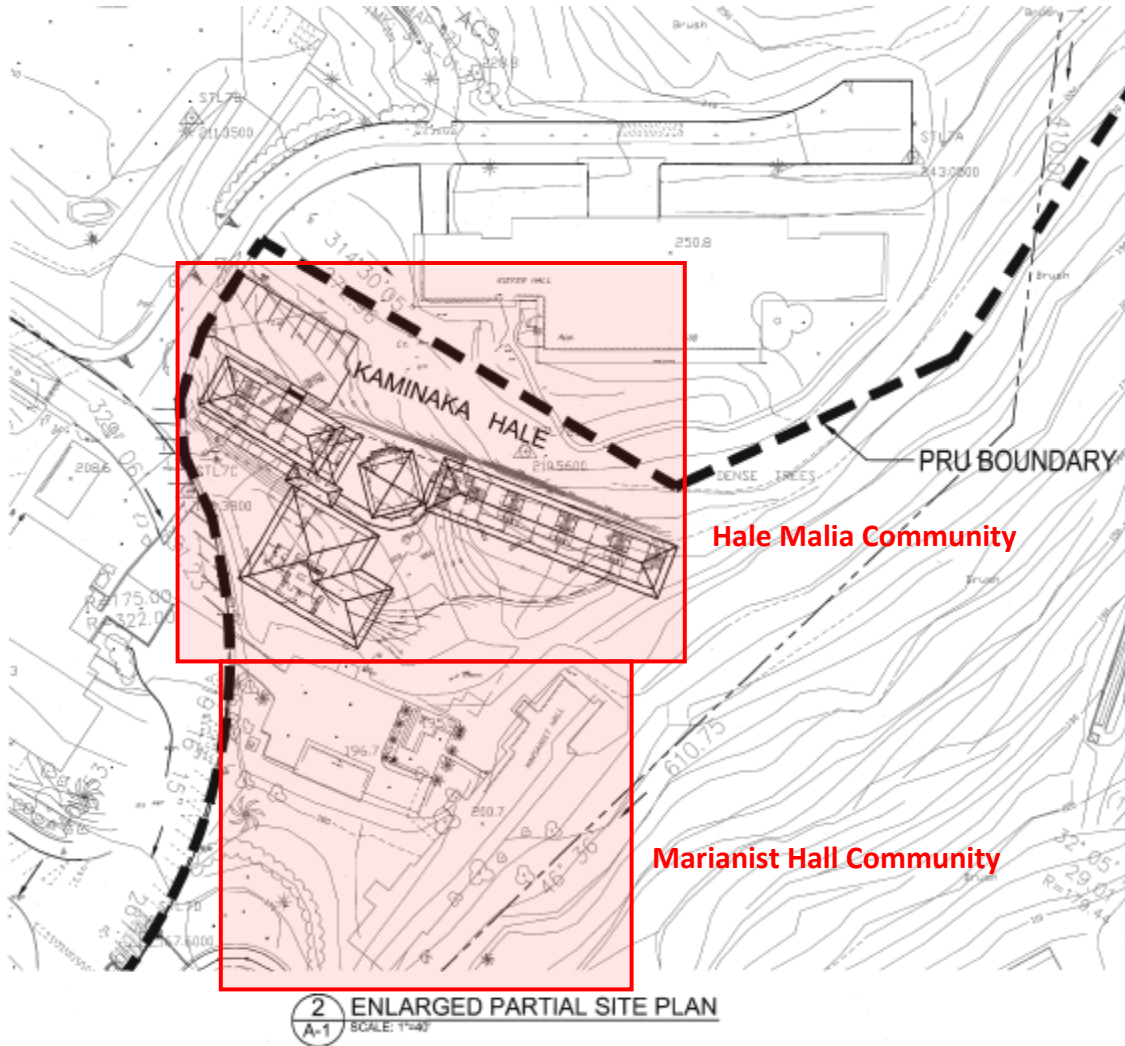


Figure 92: Enlarged Partial Site Plan¹⁵³

AREA HISTORY

Marianist Center of Hawaii is located on the east side of the island of Oahu. The project’s physical address is 3140 Waialae Avenue. The site, known as Kalaepohaku, which translates to “Stone Promontory,” lies at the base of Waahila Ridge and is contiguous to the Chaminade University of Honolulu and St. Louis School campuses. The schools’ frontage faces onto Waialae Avenue and serves as the area’s main transportation corridor for the surrounding neighborhoods of St. Louis Heights, Palolo Valley, and Kaimuki.

¹⁵³ Ibid.

Marianist Center of Hawaii is located in the neighborhood of Kaimuki, which means “ti oven” in reference to the ancient Hawaiian mythological people called menehunes, who cooked ti roots in the area.¹⁵⁴ In 1997, Waahila Ridge was listed on the National Trust for Historic Preservation as one of the eleven most endangered historic places.¹⁵⁵ Controversies on the use of the ridge erupted in the late 1990s through the early 2000s, when the island’s electrical company, Hawaiian Electric Company, planned to erect one hundred foot electrical towers carrying 138,000-volt power lines across the ridge.¹⁵⁶ Through strong opposition from not-for-profit groups and the grassroots efforts of the surrounding communities, the permit for the project was denied.¹⁵⁷

Marianist Center of Hawaii owns many of the surrounding acres at Kalaepohaku and the boundary of their land extends from along Waialae Avenue up along parts of St. Louis Heights Drive, through the bottom of St. Louis Heights’ subdivision and along the eastern edge of the hillside contiguous to Palolo valley. The two school campuses, Chaminade University of Honolulu and St. Louis School, each have a one hundred year lease with the Marianist Center of Hawaii. In addition, Marianist Center of Hawaii also owns the land on which the City Mill Company Limited-Kaimuki Branch sits. It is leased to the company. The TMK for the project site is 33001001.

ENVIRONMENTAL DATA

The total land parcels amount to about fifty seven acres, of which 11.24 acres are the project site. The parcel is zoned R-5, Boarding Facilities.¹⁵⁸ The setbacks are thirty feet minimum for front yard and fifteen feet minimum for side and rear yards. Height limit is thirty feet maximum. The project site is located on the eastern zone of Chaminade University’s campus. The site is irregular in shape with the frontage of Marianist Hall facing northwest. To take full advantage of

¹⁵⁴ “Kaimuki: A Brief History,” Historic Hawaii Foundation, accessed April 16, 2013, http://www.historichawaii.org/Historic_Sites/Oahu/O-Kaimuki.html.

¹⁵⁵ “11 Most Endangered Historic Places,” National Trust for Historic Preservation, accessed April 16, 2013, <http://www.preservationnation.org/issues/11-most-endangered/locations/waahila-ridge.html>.

¹⁵⁶ Rod Ohira, “Hawaiians Dispute HECO Wa’ahila Ridge Report,” *Honolulu Star Bulletin*, July 29, 1998, accessed April 16, 2013, <http://archives.starbulletin.com/98/07/29/news/story6.html>.

¹⁵⁷ “Span and Opposition to HECO’s 138 Kv Line on Wa’ahila Ridge,” Malama manoa, accessed April 16, 2013, <http://my.malamaomanoa.org/Default.aspx?pageId=214770>.

¹⁵⁸ “Parcel and Zoning Information,” City and County of Honolulu, accessed April 16, 2013, <http://gis.hicentral.com/FastMaps/ParcelZoning/>.

the spectacular view of Diamond Head and the ocean beyond Hale Malia faces southwest. The site is situated at the 200 feet elevation level.

DEMOGRAPHIC AND SURROUNDING AREA

The 2010 United States Census Bureau reported census tract twenty eight, St. Louis Heights, with a total population of 3,678. 21.9% of the area's population is comprised of persons 65 years of age and older. 51.6% of the population is female and residents of Asian ancestry are the predominant race.¹⁵⁹ The 2007-2011 American Community Survey reported the median value of owner-occupied housing units as \$731,300.¹⁶⁰ The median household income during this same period was \$77,865, with 2.67 persons per household. 5.9% of this area's population lived below the poverty level.¹⁶¹

The entrance to the campus is via a bridge that crosses Palolo Stream and it is here, at the entrance on Waialae Avenue, where public transportation routes run along. Surrounding the site is a combination of residential-mix use neighborhoods, businesses, medical services, public and private educational institutions, financial institutions, churches and outdoor parks. To the east of the project site are the districts of Palolo Valley and Kaimuki. These older neighborhoods are primarily residential, with a mix of newer upscale homes and older modest homes that date back to the early 1900s. West of the project site, in close proximity, lies the State of Hawaii's public institution for higher learning, the University of Hawaii Manoa campus, and the affluent neighborhood of Manoa. South of the site is the small eclectic neighborhood of Kapahulu, with its older homes, unique shops and eateries. Waikiki, a gathering place for visitors to the island, and the volcanic landmark of Diamond Head, are located about two miles from the site.

¹⁵⁹ "Hawaii Census Data," State of Hawaii, accessed April 22, 2013, http://hawaii.gov/dbedt/info/census/Census_2010/demographic/demo_profile_ct_Oahu/index.html.

¹⁶⁰ "Hawaii Census Data," State of Hawaii, accessed April 22, 2013, http://hawaii.gov/dbedt/info/census/acs/ACS2011/ACS2011_5_Year/index.html/document_view.

¹⁶¹ Ibid.



Figure 93: The project is located on Kalaepohaku Hillside on the eastern slope of Waahila Ridge.¹⁶²

The subdivision of St. Louis Heights is located north of the project site. Above the subdivision lies the State of Hawaii’s Waahila Ridge Recreational Area. St. Louis Heights subdivision lies on the ridge of Waahila and divides the neighborhoods of Manoa Valley and Palolo valley. In order to fund Newel Hall, the science building, eighty acres were sold and subdivided into four hundred residential lots. The subdivision was named St. Louis Heights, with some of its streets named after the original Marianist faculty members.¹⁶³

DESIGN GOALS

The design goals of the project were to build a center that would foster community lifestyle for the brothers of the Marianist Center of Hawaii, while meeting the challenges of Kalaepohaku’s rocky hillside site.

¹⁶² Image by Bing Maps.

¹⁶³ Don J. Hibbard, *Buildings of Hawaii* (United States: University of Virginia Press, 2011), 168-169.

FORM AND FUNCTION

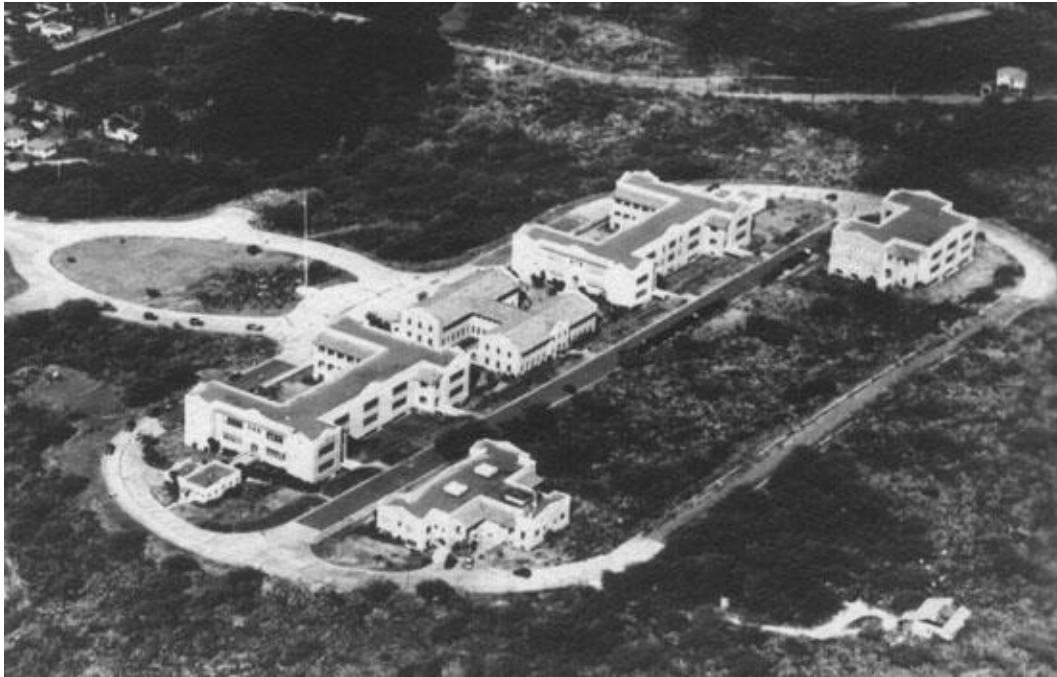


Figure 94: Aerial Site Plan¹⁶⁴

The original five buildings of the school, Freitas, Bertram, Henry, Eiben, and Newel Halls were built in the Spanish Mission Revival style, which was a popular choice for the Catholic Church of Hawaii at the time and conducive to the warm weather climate of the islands.¹⁶⁵ These two story structures were constructed of boulder concrete with some reinforcement, which sits on raised foundations and are covered with red clay tile roofs¹⁶⁶. Pent-roofs are used to cover the generous arcade walkways of each building. The buildings are “H” in form with expansive courtyards areas that allow for gathering.

¹⁶⁴ “Saint Louis School and Sacred Hearts Academy,” *Honolulu Magazine*, August 2008, accessed April 19, 2013, <http://www.honolulumagazine.com/Honolulu-Magazine/August-2008/Waiialae-Ave/Saint-Louis-School-and-Sacred-Hearts-Academy/>.

¹⁶⁵ Don J. Hibbard, *Buildings of Hawaii* (United States: University of Virginia Press, 2011), 169-170.

¹⁶⁶ *Ibid.*, 169.



Figure 95: Marianist Center of Hawaii¹⁶⁷

Marianist Center of Hawaii is comprised of Marianist Hall, Hale Malia, and the Mystic Rose Oratory. As the enrollment of the schools increased and the need for more space was needed, the residential housing for the community was relocated several times. The residential living quarters of Marianist Hall and Hale Malia are rectangular two-story, single loaded corridor complexes. Marianist Hall was constructed in the 1990s through the conversion of its lease hold land under the Regency Park condominium complex located at 3138 Waialae Avenue at the foothill of the Marianist Center of Hawaii's property.

Space within Marianist Hall consists of residential units private bathrooms and closet areas. The common area includes a commercial kitchen with an adjoining dining and living area, chapel, and office. A pedestrian bridge connects the second floor to the residents' semi-covered parking area. A laundry facility and storage area are located within the complex and egress stairways flank both ends and the middle of the structure.

¹⁶⁷ Image from Bing Maps.

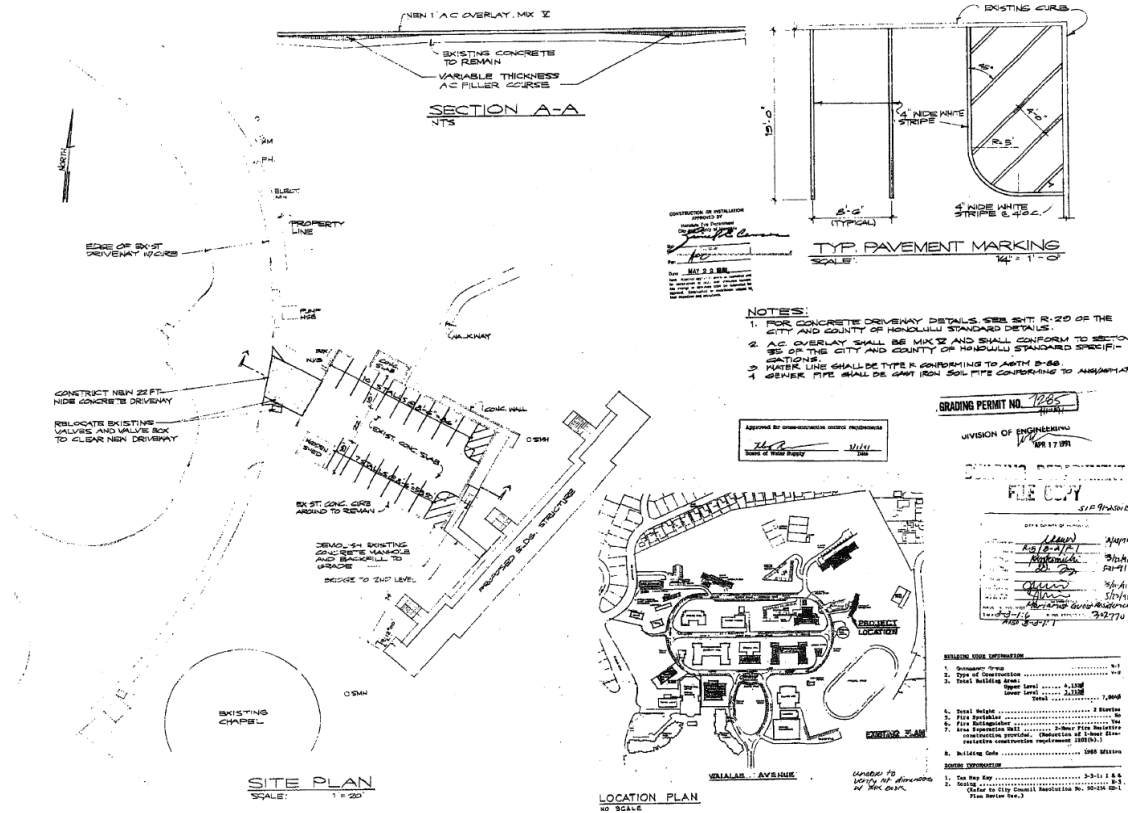


Figure 96: Marianist Hall, Site Plan¹⁶⁸

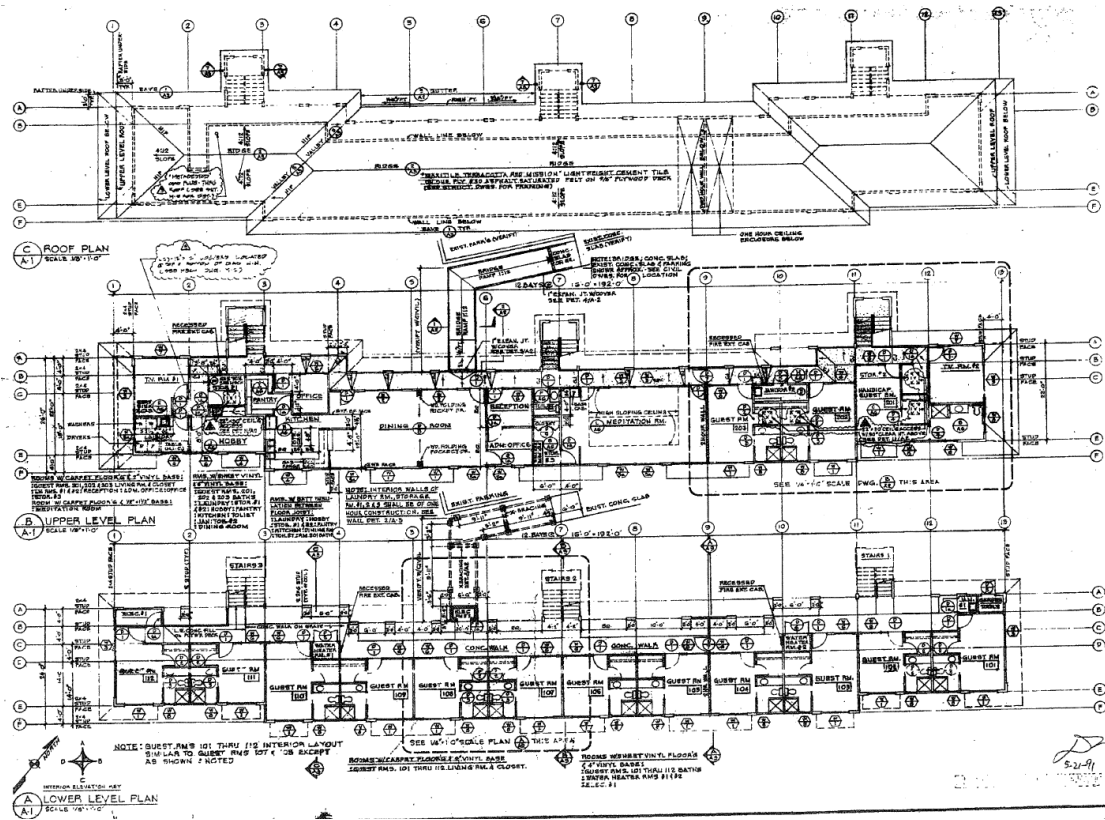


Figure 97: Marianist Hall, Floor Plans¹⁶⁹

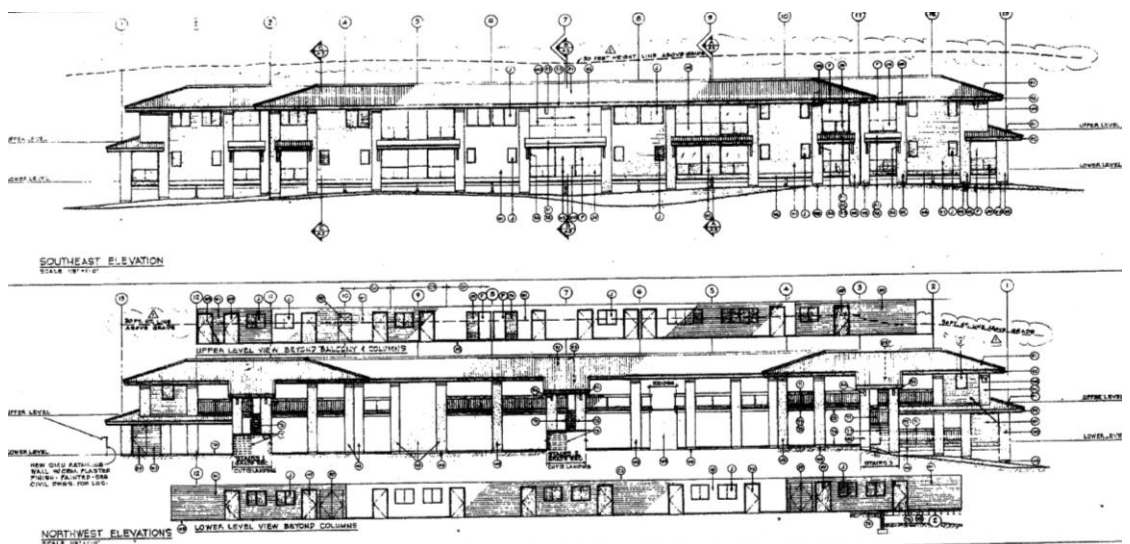


Figure 98: Marianist Hall, Elevations¹⁷⁰

¹⁶⁹ Ibid.

¹⁷⁰ Ibid.

Hale Malia was completed in 2003 and consists of four buildings. The ramp leading up to the complex passes the first wing, which is used for guest housing. Six apartment units are located in the building, three on each floor along with laundry and storage facilities located on the first floor. A centralized stairway connects the two floors, as well as the outdoor parking area located behind the complex that is reserved for residents and guests of the center. The apartment units range between 306-450 square feet, each with its own private bathroom and closet space. The covered entrance into Hale Malia is through a glass door that separates the outside from the rest of the complex.

Hale Maila's community chapel is located directly to the left of the entrance. The chapel has angled etched glass walls that allow for cross ventilation and visibility of the events within the structure. Opposite the chapel is the one-story, 3,404 square feet, L-shaped common house. Spaces within this structure include: living and dining rooms, commercial kitchen, television room, library, computer center, storage, pantry and an ADA accessible restroom. A generous 784 square feet outdoor gathering area directly outside of the living room adjoins the common house.

The apartment complex, consist of twelve residential units, is located beyond the chapel and a covered walkway connects the entrance into Hale Maila to the structure. The 300 square feet apartment units each have a private bathroom and closet space. An elevator is located next to the laundry and storage facilities that are located on each floor, and egress stairways are located at each end of the complex. Community gatherings happen within the generous indoor and outdoor spaces of the common house and exterior courtyard. Residents' private time is found within their respective units. Members accustomed to impromptu interaction, with other members, may find living in this horizontal apartment complex too isolating due to the shared common partition walls between each unit as opposed to a living in a community house where spontaneous interaction is more likely to transpire.

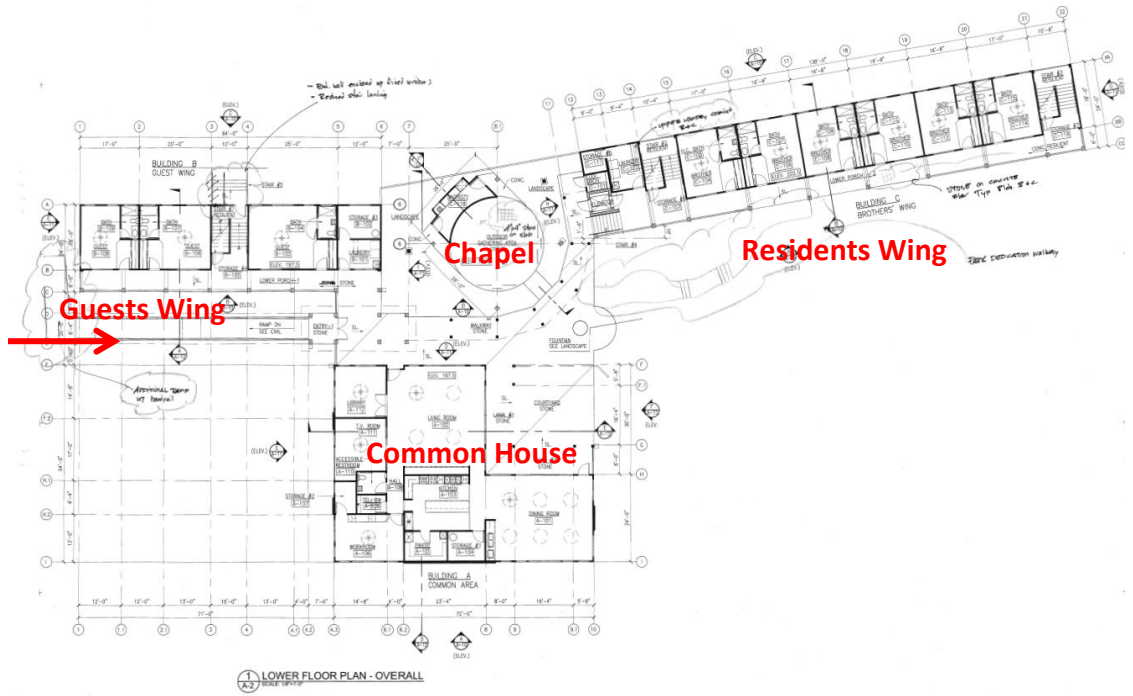


Figure 99: Hale Malia, Lower Floor Plan¹⁷¹

¹⁷¹ Drawing by Ushijima Architects, Inc.

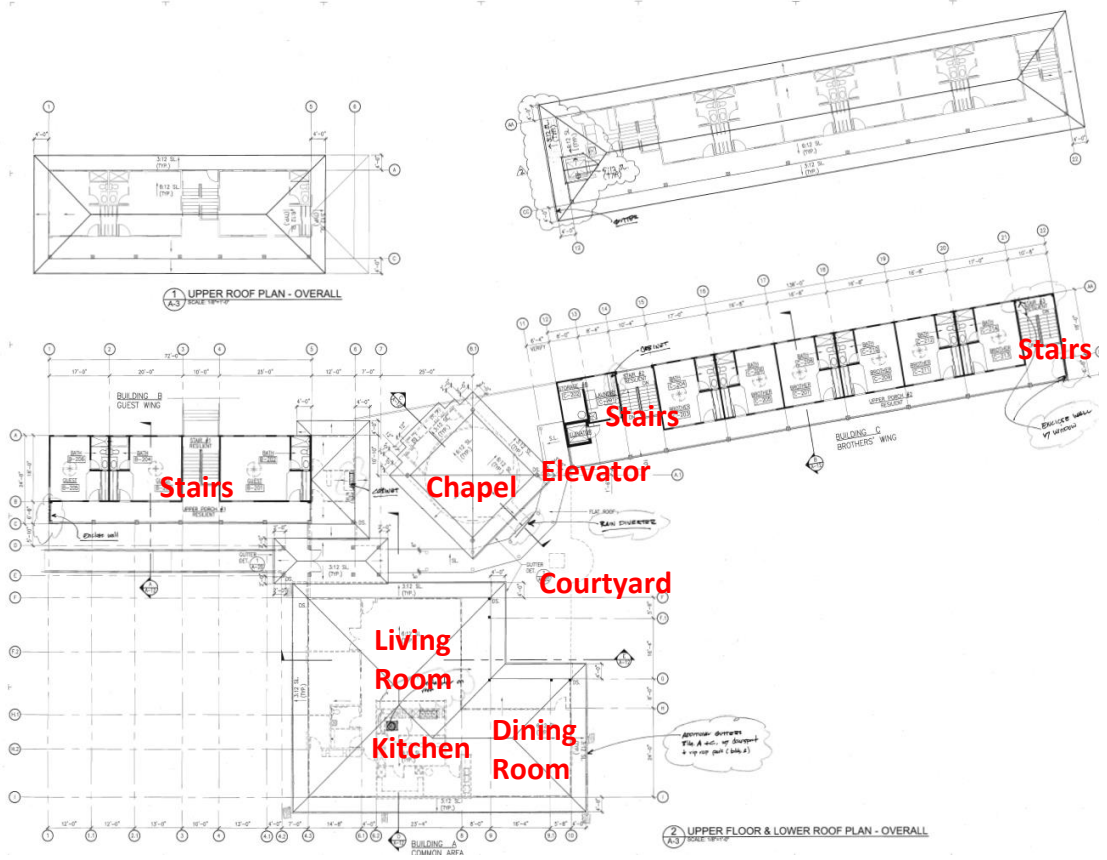


Figure 100: Upper Floor Plan and Lower Roof Plan¹⁷²

¹⁷² Ibid.

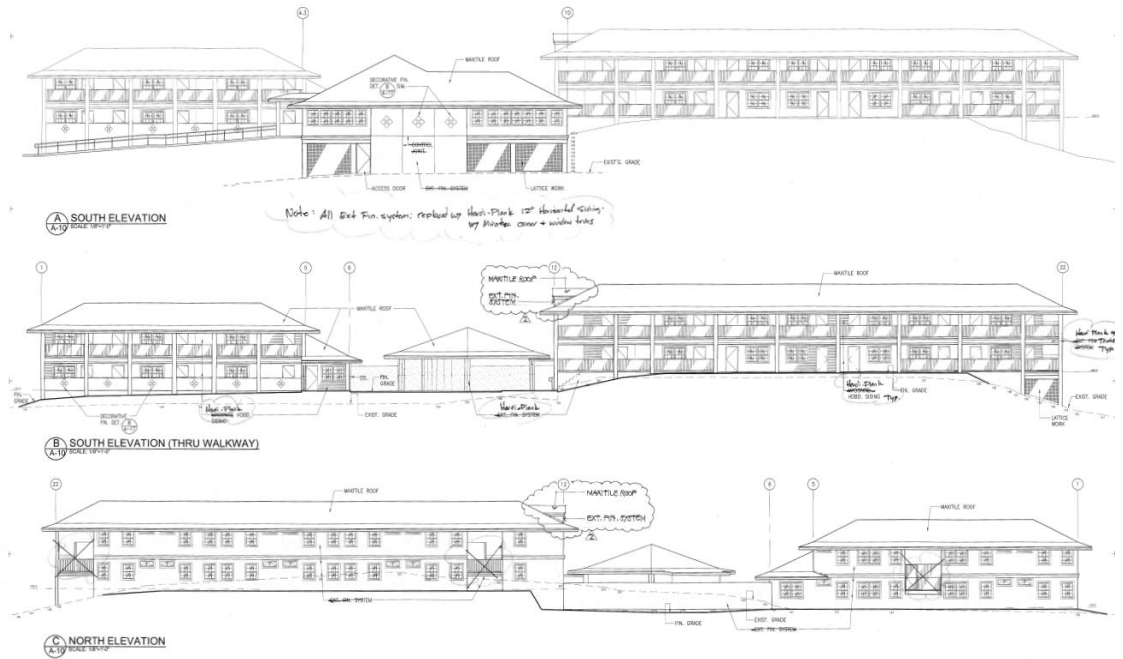


Figure 101: Hale Malia, Elevations¹⁷³

Figure 102: Hale Malia, Elevations¹⁷⁴

¹⁷³ Ibid.

¹⁷⁴ Ibid.

FUNDING

The Marianist Center of Hawaii is a not-for profit 501(c)(3) organization. The center is the corporate entity, which owns the land on which the Chaminade University and St. Louis School campuses are situated. Funding for capital improvements of projects that the community owns, namely, Hale Malia, Marianist Hall, and Mystical Rose Oratory, is accomplished through various different avenues such as land sales, lease hold payments, rental payments, and property exchange to name a few. When the Army occupied the campus during WWII, they paid \$90,000 rent annually, which aided in paying off the original school's construction debt.¹⁷⁵ The building of and capital improvements for the schools are handled individually by each entity and are not the responsibility of Marianist Center of Hawaii.

USER PROFILE

The Marianist Center of Hawaii currently is comprised of twenty two priests and brothers, whose ages range from thirty three to eighty nine. The community lives on campus at three different sites: Hale Pohaku, Hale Malia, and Marianist Hall, all of which are very distinct from one another. The fewest members live at Hale Pohaku Residence Hall, Chaminade University's co-ed residential student dormitory, located about 600 feet from the main Marianist Community Center. Members of this group are comprised of two brothers and one priest. Their end unit apartment, located on the third floor of this three story complex, was modified. To accommodate group living, an interior partition wall that separated the space was removed. The members who live here are involved in the school's drama program and keep different hours from the rest of the community due to the demands of the drama program and performance requirements, such as rehearsal and show times.

Hale Malia, a formation community, is comprised of interested members who want to become a Marianist and are required to live in the community as part of their discernment process. The community is also comprised of members of the Marianist community willing to act as mentors for those in formation. Members here are younger in age and are actively involved in work with the schools. Currently, there are ten members living in this complex: eight brothers and two priests. A cook prepares the group's daily dinner meals, except on weekends. No breakfast or

¹⁷⁵ Jerry Bommer, Linda M. Iwamoto, and Mackinnon Simpson, *A Half-Century on Kalaepohaku: Chaminade University 1955-2005* (Honolulu: Chaminade University, 2005), 11.

lunch meals are prepared for the group, at which time the members are on their own, except on Sunday, when one of the member prepares dinner for the group. The cleaning of the common house is done weekly by outside janitorial service. Individual rooms and shared common areas are the responsibility of the residents. Daily Morning Prayer begins at 6:15 AM for the members in this complex because some of the members are also involved at St. Louis School, which requires them to report on campus early. Because of their continued active role in the schools' communities, the complex is used for various school functions as well as community outreach programs. The community hosts events such as Pau Hana Fridays for faculty, ice cream socials for students, the Mackey Marianist Lecture Series, and the Marianist Family Retreat Program, to name a few.

The group living at Marianist Hall primarily consists of retired or semi-retired members. Currently there are nine members, seven brothers and two priests living in this complex, with their ages ranging between sixty-four to eighty-nine years of age. Most of the members in this group have relocated from their mainland province in Dayton, Ohio, and are older in age as compared to those living at Hale Pohaku and Hale Malia, with one member needing an ambulatory assistance of a walker. Breakfast is prepared Monday through Friday and housekeeping in designated areas is provided for the group by an elder housekeeper, who is a trained nurse and has been employed by the community for an extended length of time. A second cook comes in the afternoon to prepare dinner meals for the group seven days a week. Weekend breakfasts and daily lunches are taken individually by members. The group gathers together daily for 7 AM Morning Prayer and 5:20 PM Evening mass. As with the members of Hale Malia, each member of this group is responsible for his own room and his own laundry as well as having shared house chores such as trash collection, newspaper delivery, daily coffee preparation, chapel cleaning, and exterior yard work. In the past, as the community member's health declines, they are relocated back to San Antonio, where more medical assistance can be provided. Currently, daily medication management for one of the members is provided by his family members.

The members gather together as a community every Sunday for the 10 AM mass at the Mystical Rose Chapel, as well as for feast days, holidays, socials and some daily mass services.

Community living allows these members to share activities, hobbies, and interests with other members living in the community. This is especially important for many of them when their

own family members are not living in close proximity to them. Members of the Marianist community profess four vows: poverty, obedience, stability, and chastity. Because of their life of celibacy, they do not have families of their own. The community then becomes an important aspect of these members' lives, as it can act as a surrogate family. These facilities provide three different lifestyle options that allow for greater latitude for communal living in a religious community setting.

HALE POHAKU RESIDENCE HALL



Figure103: South Elevation¹⁷⁶



Figure104: North Elevation¹⁷⁷

¹⁷⁶ Image from Google Maps.

¹⁷⁷ Ibid.

MARIANIST HALL



Figure 105: West Elevation¹⁷⁸



Figure 106: Marianist Hall Parking Entrance¹⁷⁹

¹⁷⁸ *ibid.*

¹⁷⁹ *ibid.*



Figure 107: Foot Bridge



Figure 108: Residential Apartments



Figure 109: Outdoor Courtyard



Figure 110: View of Hale Malia



Figure 111: Living and Dining Room
Photos by Author



Figure 112: Chapel

HALE MALIA



Figure113: North Elevation¹⁸⁰



Figure 114: Guest Apartments



Figure 115: Entrance and Common House



Figure 116: Residential Apartments



Figure 117: Outdoor Courtyard

¹⁸⁰ Image from Google Maps.



Figure 118: Chapel



Figure 119: Living Room



Figure 120: Sitting Room



Figure 121: Television Room



Figure 122: Computer Room



Figure 123: Reading Room



Figure 124: Kitchen
Photos by Author



Figure 125: Dining Room

KUPUNA SENIOR HOUSING PROJECT



Figure 126: Moving of Kupuna Units¹⁸¹

Project Location Pahoia, Hawaii Island

Architect Unknown

Building Characteristics

Number of Units	20
Number of Stories	1
Context	Rural
Housing Type	Independent
Building Parti	Unknown
Unit Size	465 Sq Ft
Date of Completion	

Resident Characteristics

Average Age	Not Available
Age Range	Not Available
Number of Residents	Not Available
Number of Men	Not Available
Number of Women	Not Available
Number of Couples	Not Available
Number requiring Assistive Devices	Not Available

PROJECT HISTORY

1991 saw the beginning of the Care-A-Van outreach program, a social ministry endeavor under the Roman Catholic Diocese of Honolulu, to address the unsheltered homeless population on Hawaii Island.¹⁸² In collaboration with the County of Hawaii, which provided the land, Nasay Development Company, which built the \$225,000 structures, and Catholic Charities Hawaii which managed the project, an emergency shelter was built in Kawaihae and opened in 1992 to help families in need.

¹⁸¹ "Homes on the Move-The Kupuna Project!," Hope Services Hawaii, accessed May 2, 2013, http://www.hopeserviceshawaii.org/index.php/news/homes_on_the_move_the_kapuna_project.

¹⁸² Hunter Bishop, "Housing project for seniors blooms in Pahoia," *Hawaiitribune-herald.com*, September 06, 2012, accessed April 29, 2013, <http://hawaiitribune-herald.com/sections/news/local-news/housing-project-seniors-blooms-pahoia.html>.

When Na Kaulana Kauhale O Ulu Wini, a ninety six-unit rental and transitional low-income housing project, opened in 2011 in Kaloko, in West Hawaii Island, there was no need to retain the aged and dilapidated units in Kawaihae.¹⁸³ The units were slated to be demolished, but were salvaged to be reused as low-income senior housing in Pahoa, on Hawaii Island. In the early 2000s, the parish community of Sacred Hearts Catholic Church recognized the need for housing for this segment of the population and plans were made to address this issue. The project was halted due to a lack of funding.¹⁸⁴ With the use of grant funds, an inspection was done on these buildings in 2011 to determine the integrity of the structures for transport. The structures were then donated to Hope Services Inc., a not-for-profit entity of the Diocese of Honolulu, and with the help of the County of Hawaii the twenty salvageable units were moved from Kawaihae to their new home in Pahoa.

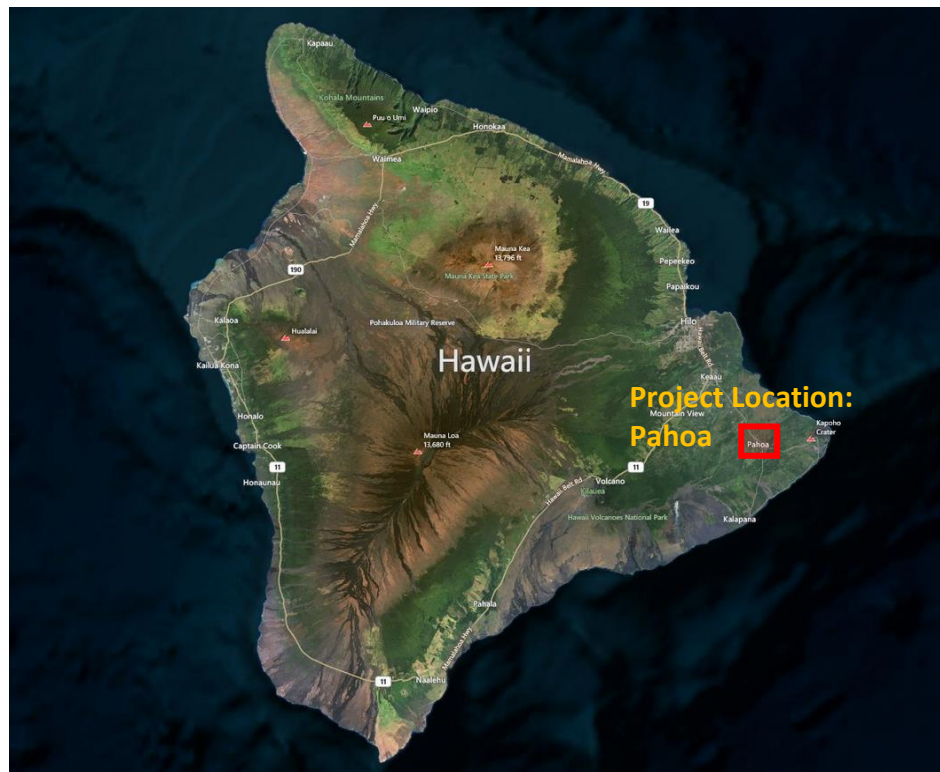


Figure 127: Project Island, Hawaii¹⁸⁵

¹⁸³ Ibid.

¹⁸⁴ Ibid.

¹⁸⁵ "2010 Race Population for Hawaii," State of Hawaii, accessed April 21, 2013, <http://www.arcgis.com/explorer/?open=1f2b62edda8b4448839084d58277b594>.



Figure 128: Vicinity Map of Pahoā¹⁸⁶

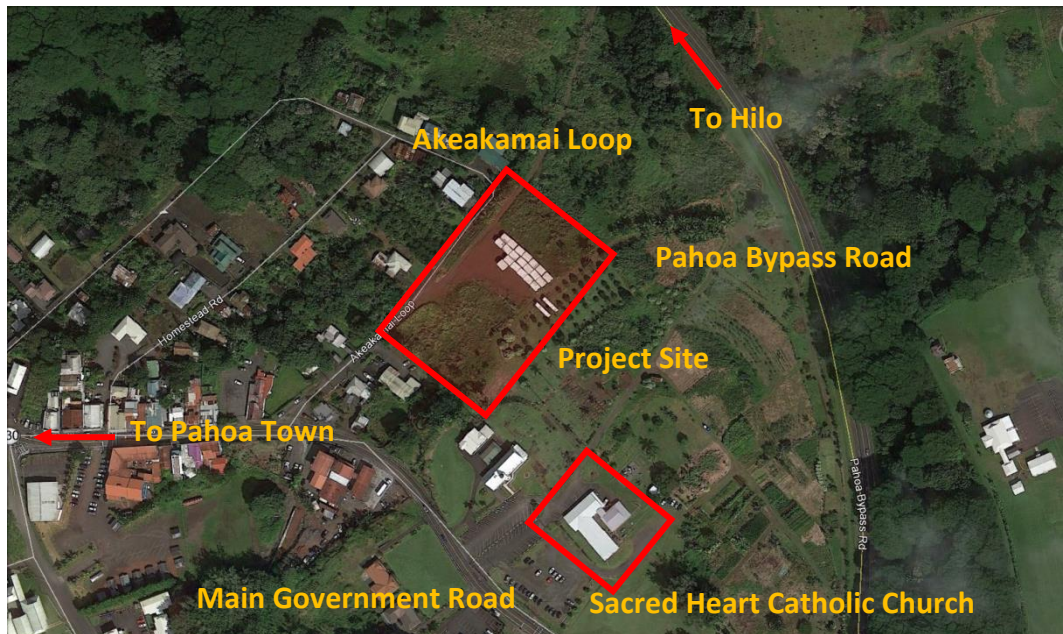


Figure 129: Kupuna Senior Housing Project is located on the property of Sacred Heart Catholic Church in Pahoā.¹⁸⁷

¹⁸⁶ Ibid.

¹⁸⁷ Image from Google Earth.



Figure 130: Akeakamai Loop and Main Government Road¹⁸⁸



Figure 131: Sacred Hearts Catholic Church Pahoa¹⁸⁹

¹⁸⁸ Ibid.

¹⁸⁹ Ibid.

AREA HISTORY

The Pahoia Kupuna Senior Housing Project is located on the east side of Hawaii Island in the district of Puna. The project site is contiguous to Sacred Heart Catholic Church-Pahoia, whose physical address is 15-3006 Government Main Road and is situated between two of the area's main thoroughfares, Government Main Road and Highway 130, also known as Pahoia By-Pass Road.

Prior to the arrival of the immigrant population in the 1880s, the area was a lush tropical rainforest, abundantly filled with tall ohia trees.¹⁹⁰ Due to the two large mountain ranges on the island, heavy clouds become trapped, creating rainy and humid weather conditions that transformed this barren lava region into a rich environment that produced the exceptional growing medium for these trees and other rainforest vegetation.¹⁹¹ The first foreign immigrants believed to have settled in this region were the Chinese, as they were the first to arrive in the Hawaiian Islands in 1852 as contract laborers for the sugar plantation on Kauai.¹⁹² By the 1870s, sugar plantations on Hawaii Island were in operation in other districts on the island, with Puna district being the last to start a plantation in the late 1890s.¹⁹³ Puna Sugar Company of Kapoho, which was incorporated in 1900, and Olaa Sugar Company, located 9 miles from Hilo town, which incorporated in 1899, became the largest sugar producers in Hawaii.¹⁹⁴ Prior to the introduction of sugar, coffee was the first major agricultural crop in the area. Coffee planting was started by Robert Rycroft, who began planting the crop in the Pohoiki region of Puna in 1891.¹⁹⁵ As many as 6,000 acres were owned and operated by 200 independent coffee planters and six corporations.¹⁹⁶ With the drop in coffee prices due to an increase in world supply, many farmers in Olaa and Pahoia switched to sugar cane as a means to make a living.¹⁹⁷ With the expansion and growth of the sugar plantations, the forests and coffee plants were cleared and the cleared areas were eventually used for the growing of sugar. The trees were

¹⁹⁰ Hiroo Sato, *Pahoia Yesterday* (Hilo: Hawaii Japanese Center, 2007), 5.

¹⁹¹ *Ibid.*, 6.

¹⁹² *Ibid.*, 10.

¹⁹³ *Ibid.*, 15.

¹⁹⁴ "Puna Sugar Company History," University of Hawaii at Manoa, accessed April 29, 2013, http://www2.hawaii.edu/~speccoll/p_puna.html.

¹⁹⁵ Hiroo Sato, *Pahoia Yesterday* (Hilo: Hawaii Japanese Center, 2007), 215.

¹⁹⁶ "Puna Sugar Company History," University of Hawaii at Manoa, accessed April 29, 2013, http://www2.hawaii.edu/~speccoll/p_puna.html.

¹⁹⁷ Hiroo Sato, *Pahoia Yesterday* (Hilo: Hawaii Japanese Center, 2007), 216.

gradually harvested to use as lumber for building material and also for railroad ties.¹⁹⁸ Since a mill was not built in Kapoho, all of its harvested cane was transported via railroad to be processed at the Olaa Sugar Company Mill.¹⁹⁹ Puna Sugar Company of Kapoho was eventually sold in 1905 at auction to Olaa Sugar Company.²⁰⁰

ENVIRONMENTAL DATA

The project site is owned by Sacred Hearts Catholic Church in Pahoā, a not-for-profit 501(c)(3) entity, which operates under the auspices of the Roman Catholic Church in the State of Hawaii. The TMK for the developed site is 1-5-006: 017. The project is sited to use 1.75 acres of the property's 8.256 acres.

DEMOGRAPHIC AND SURROUNDING AREA

The 2010 United States Census Bureau reported Pahoā with a population of 945 residents with 17.3% of persons 65 years of age and older. 48.8% of the population is female and 43.5% are of Asian ancestry.²⁰¹ The 2006-2010 American Community Survey 5-Year Estimates reported the median value of owner-occupied housing units as \$234,700.²⁰² The median household income for Pahoā was \$53,438, with three persons per household.²⁰³ 11.6% of this area's population lived below the poverty level.²⁰⁴

The project is located on the west side of Sacred Hearts Catholic Church Pahoā property, whose physical address is 15-3006 Government Main Road. A majority of the project site is on a relatively level lot, with the exception a sixteen feet elevation grade change located at the southeast portion of the property. The project entrance is located on the corner of Main Government Road and Akeakamai Loop, a quiet residential area lightly speckled with older

¹⁹⁸ Ibid., 5-6.

¹⁹⁹ Ibid., 14.

²⁰⁰ Ibid., 14.

²⁰¹ "Hawaii Census Data," State of Hawaii, accessed April 1, 2013, http://hawaii.gov/dbedt/info/census/Census_2010/demographic/demo_profile_cdp_NI/Pahoā.pdf/view?searchterm=pahoā.

²⁰² "Hawaii Census Data," State of Hawaii, accessed April 1, 2013, http://hawaii.gov/dbedt/info/census/acs/ACS2010/ACS2010_5_Year/acs_hi_2010_profiles_CDP_NI/view?searchterm=pahoā%20housing%20census%202010.

²⁰³ Ibid.

²⁰⁴ Ibid.

plantation style homes. Adjacent to the project site is an auto repair shop. At the corners to the street entrance is a barber and beauty shop, and restaurant. The heart of Pahoia town is within walking distance of the site.

Pahoia is the heart of the Puna district and in recent years the area has become the fastest growing district on Hawaii Island. 45% of the island's subdivided lots are located in Puna, although currently only 25% of these lots are occupied. Future planning is now in the works to help Pahoia maintain its rustic charm, while being open to future growth in the area.²⁰⁵ The remnants of the plantation's architectural era can be seen throughout the area in private residences as well as business establishments.

DESIGN GOALS

The design goals for the project are to develop an independent senior living community reusing the twenty structures that were transported from Kawaihae. All units are conforming to the Americans with Disabilities Act.



Figure 132: Typical Single Unit
Photo by Author

²⁰⁵ Mary Vorsino, "Pahoia Striving to Balance Progress and Preservation," *Star Advertiser*, April 28, 2013, accessed April 19, 2014, http://www.staradvertiser.com/specialprojects/2013/growing-pains/20130428_Pahoia_striving_to_balance_progress_and_preservation.html?id=204807311.



Figure 133: Typical Double Unit
Photo by Author

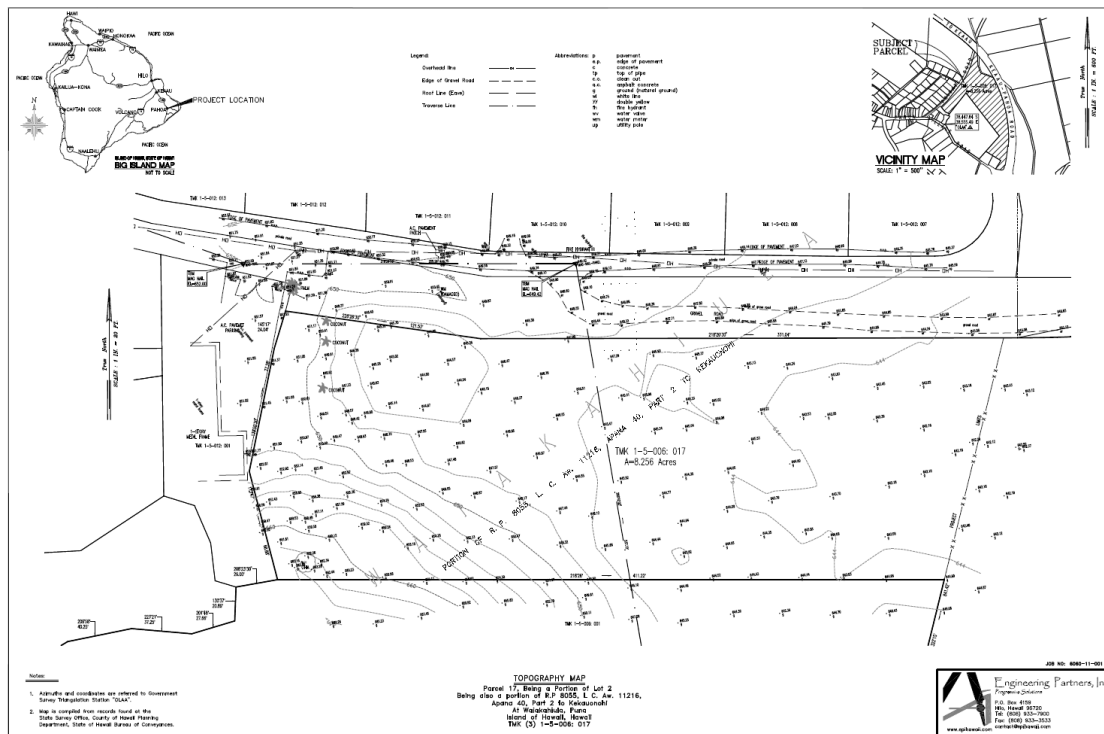


Figure 134: Topography Map of Site²⁰⁶

²⁰⁶ Drawing courtesy of Engineering Partners, Inc.

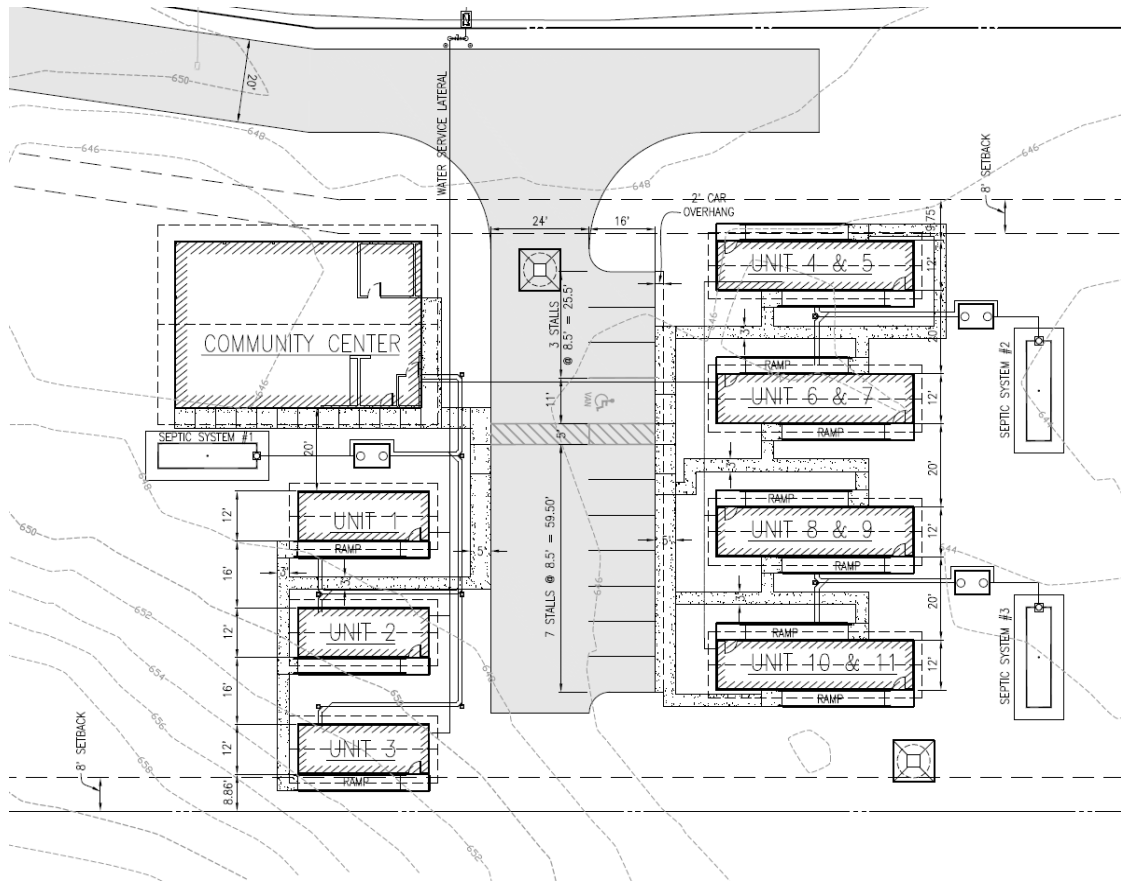


Figure 135: Enlarged Schematic Site Plan²⁰⁷

²⁰⁷ Ibid.

FORM AND FUNCTION

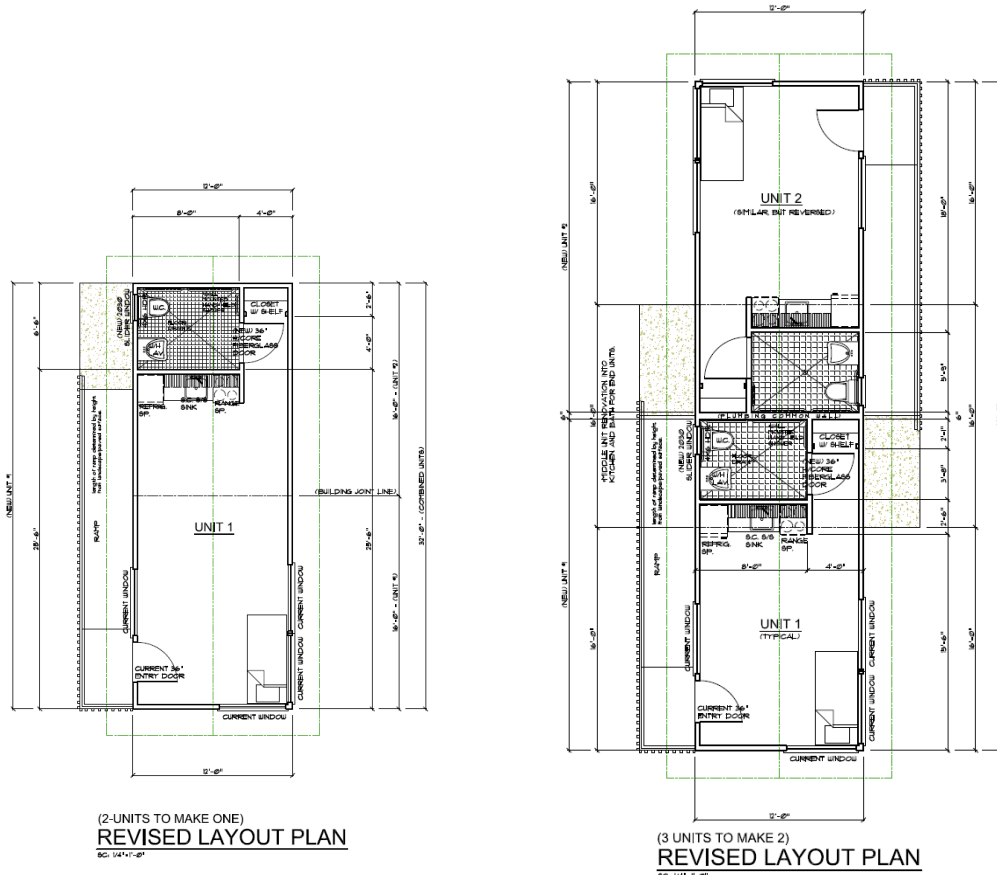


Figure 136: Single Unit Floor Plan²⁰⁸ Figure 137: Double Unit Floor Plan²⁰⁹

The original individual units are rectangular in form and measure 16'-3" by 12'-3". They are constructed of T1-11 plywood siding, with 4x4 posts, 4x8 girder beams and 2x8 floor joists. The roof is constructed of open trusses and 1/2 inch plywood sheathing with corrugated iron roofing. Value engineering was done to help reduce the cost of the project, resulting in clustering the units into duplexes and triplexes.

Eighteen of the original twenty 192 square feet units will be used and are laid out opposite one another, divided by a centralized parking area consisting of ten stalls and one ADA parking. The units share a common wall with its neighboring unit and each unit is equipped with a kitchenette, bathroom and living/sleep area. The clustered duplexes and triplexes have shared entrances with an accessible ramp leading up to the units.

²⁰⁸ Ibid.

²⁰⁹ Ibid.

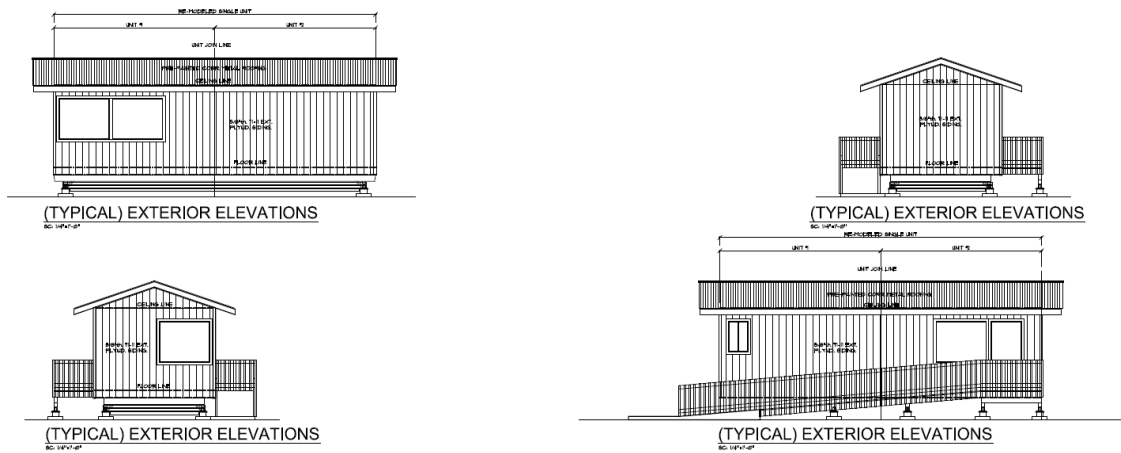


Figure 138: Typical Single Unit Exterior Elevations²¹⁰

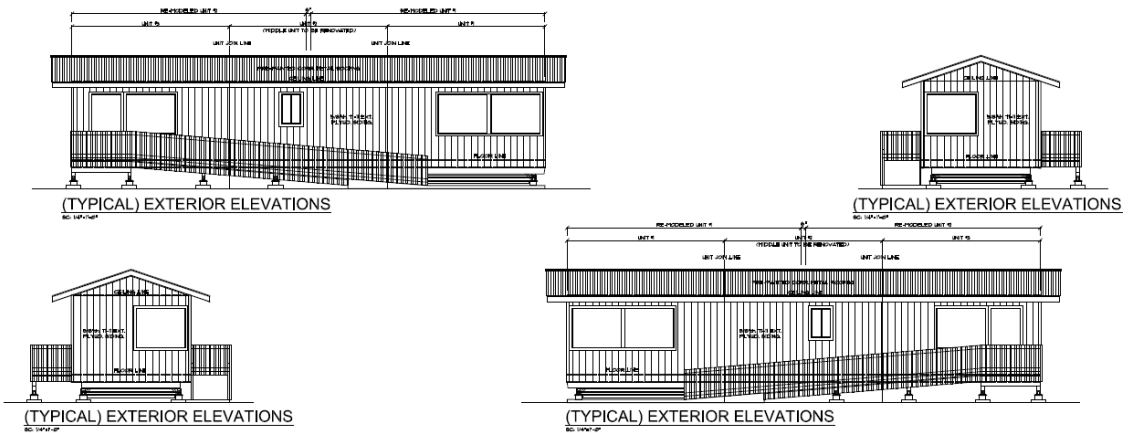


Figure 139: Typical Double Unit Exterior Elevations²¹¹

FUNDING

The funding information is not available at the time of this writing as the project is still in its permitting phase.

USER PROFILE

The targeted users for this project are low-income seniors. No user profile is available at the time of this writing.

²¹⁰ Ibid.

²¹¹ Ibid.

ONGOING ANALYSIS

Research will continue regarding the Kupuna Senior Housing Project case study. The current site could be utilized as the possible future site for the proposed senior cohousing community project with more analysis of the site, the Pahoia community, and the surrounding areas to be continued to assess the appropriateness of building this type of community here.



Figure 140: View of the site. Sacred Hearts Catholic Church is located in the upper right corner of the image.



Figure 141: The units were moved from Kawaihae to Pahoia and are staged on site as the project awaits permitting.

LESSONS LEARNED

The analysis of the three case studies, Franciscan Vistas Ewa, Marianist Center of Hawaii, and Kupuna Senior Housing Project brought forth design lessons that can aid in the design of senior cohousing in Hawaii. These lessons can be applied to optimize the design for community lifestyle.

FRANCISCAN VISTAS EWA

The layout of the design is conducive to building and maintaining community relationship.

The level site makes mobility around the complex easy.

The individual residential cluster size of twenty-five units is an ideal community; however, the total size of the project is too large for a cohousing community.

Outdoor spaces allow for impromptu gathering and socializing.

Personal storage spaces are minimal within the project.

Mailboxes act as community gathering nodes.

Perimeter parking provides opportunities for interpersonal engagements, but can also cause hardship for seniors who have mobility issues.

Amenities such as pool, hair salon, exercise facility and community center can negate the general population's stereotypical perspective of government subsidized low-income facilities.

MARIANIST CENTER OF HAWAII

The development of this hillside community can create challenges for older members of the community who have mobility issues. For such members, the site can be restricting and prohibitive, as members are unable to freely navigate the whole site without assistance.

The orientation of the buildings can allow for the privacy of the two communities. Residency is determined according to age and lifestyle needs. The orientation also acts as a physical division between the upper campus housing complex, Hale Malia, and the lower campus, Marianist Hall. Hale Malia's orientation takes full advantage of the view scape of the city.

Marianist Hall is oriented east-west, overlooking the valley below.

The separate living facility of Hale Pohaku is suited to the residents' work schedule, but it is not conducive to maintaining community relations among the residents in the other facilities.

If cost was not prohibitive, an outdoor extension of the private space would allow for residents to enjoy the outdoors during their private time.

KUPUNA SENIOR HOUSING PROJECT

The analysis of this project was not done at the time of this writing as the project has not been completed. On May 1, 2014, a telephone conversation was held with Mark Grant of Engineering Partners and the author, regarding the status of the project. According to Mr. Grant the project was held up due to an IWS variance, which was a long process, but the project has now been submitted for permitting.



Chapter IV Development Process

Development Process

Feasibility Phase

Information Phase

Study Group I: Conscious Raising

Study Group II: Participatory Design

Study Group III: Policy

Local Perspective

Cohousing Resources

DEVELOPMENT PROCESS

The development process of a senior cohousing community involves many people and many steps. According to Charles Durrett, in the infancy of these developments, cohousing communities took upwards of five to seven years before its residents could reap the fruits of their labor and move in to their new homes and community.²¹²

In the late 1980s and early 1990s, informational sessions about cohousing were held throughout the United States to garner interest within communities. Today, with the spread of cohousing communities, interested parties will find the development process quicker, easier, and more streamlined. This is primarily due to the abundance of resources available such as books and articles, cohousing web sites, national and regional conferences, and cohousing community tours. A listing of resources of the aforementioned is located at the end of this chapter. This chapter will discuss the process of developing a senior cohousing community. The subchapters are derived and organized from Charles Durrett's book titled *The Senior Cohousing Handbook: A Community Approach to Independent Living*.²¹³ The goal of this chapter is to introduce the process of developing these types of communities so interested parties will have a brief overview. For more in depth information on the process please consult the resource listing.

Henry Nielsen's Model of Developing Senior Cohousing Communities

A comprehensive model for the development of senior cohousing communities was created by Henry Nielsen in 1995, as shown in figure XX. This was developed to guide seniors in Denmark through the complex process of creating these types of communities.²¹⁴

Nielsen's goal in developing his model was to:²¹⁵

- Make senior cohousing an option for everyone (not only the strong-willed).
- Identify and solve key problems that seniors could encounter during the process.
- Enhance the social aspects of the process, which, in turn, foster strong and durable communities.

²¹² Charles Durrett, *The Senior Cohousing Handbook: A Community Approach to Independent Living* (Canada: New Society Publisher, 2009), 81.

²¹³

²¹⁴ *Ibid.*, 37.

²¹⁵ *Ibid.*, 38.

- Make it easier and more satisfactory for developers and municipalities to start and support new senior cohousing communities.
- Guide the process from start to finish.

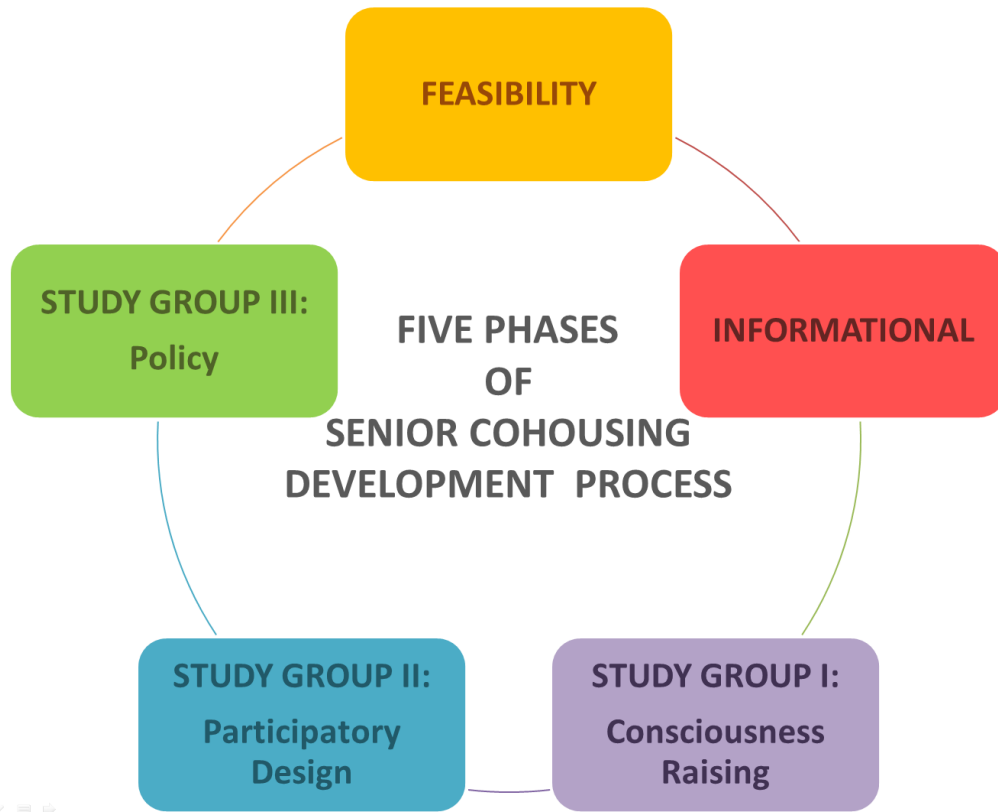


Figure 142: The five phases of senior cohousing development process were based on Henry Nielsen’s 1995 Danish Model. These five interlocking phases were developed to help seniors navigate the complexity of creating a senior cohousing community. Charles Durrett adapted the model for the United States market.²¹⁶

²¹⁶ Ibid., 82.

FEASIBILITY PHASE

The first phase of the development process of a senior cohousing community begins with addressing the feasibility of the project. The formation of a core group, site selection, and financing all occur during this first phase.²¹⁷ Because of the multiple complexities of topics that need to be addressed, such as the site selection, finance, zoning, membership, and budgeting, it is recommended that working with an advisor during this phase can be beneficial in helping the group understand the many components necessary in developing this type of senior housing project.

GETTING STARTED

There is a wealth of information about intergenerational cohousing. Although the development of cohousing communities for seniors is relatively new compared to its intergenerational counterpart, the information regarding these communities can be applicable to both types of communities. Being mindful that no two cohousing communities are identical, due primarily to the composition of its residents, the information listed is to provide a stepping stone to begin and to expand upon as one becomes seriously interested in pursuing this type of senior community.

CORE GROUP

The first step in the development process is finding interested parties wanting to live in a cohousing community. The initial seed to begin this process can start with as little as a couple of people who are interested in building this type of housing. The impetus for the creation for this type of community at ElderSpirit and Glacier Circle was the lifelong friendships of some of the members. Their desire to age together was the driving force in bringing these two communities to fruition.

Ways of generating interest in the general public include holding informational sessions and presentations about the proposed project. Announcements in the local newspaper, fliers posted around town and emails sent to friends are some of the ways to spread the word. The clearer the message the easier it will be to form a core group of individuals that will be serious about creating this type of community.

²¹⁷ Ibid., 46.

The main goal at this stage is to see if there is enough interest to create a core group that can move the project forward. Some communities partnered with an experienced developer in cohousing to help get the process started and to connect interested parties together.

To stay connected with its members, most communities create a web site, and are linked in to social media, such as Facebook, and Twitter. Individual members can join Coho/US, Cohousing Association of the United States, to find out more about cohousing communities and to search the directory for vacancy in existing cohousing communities.

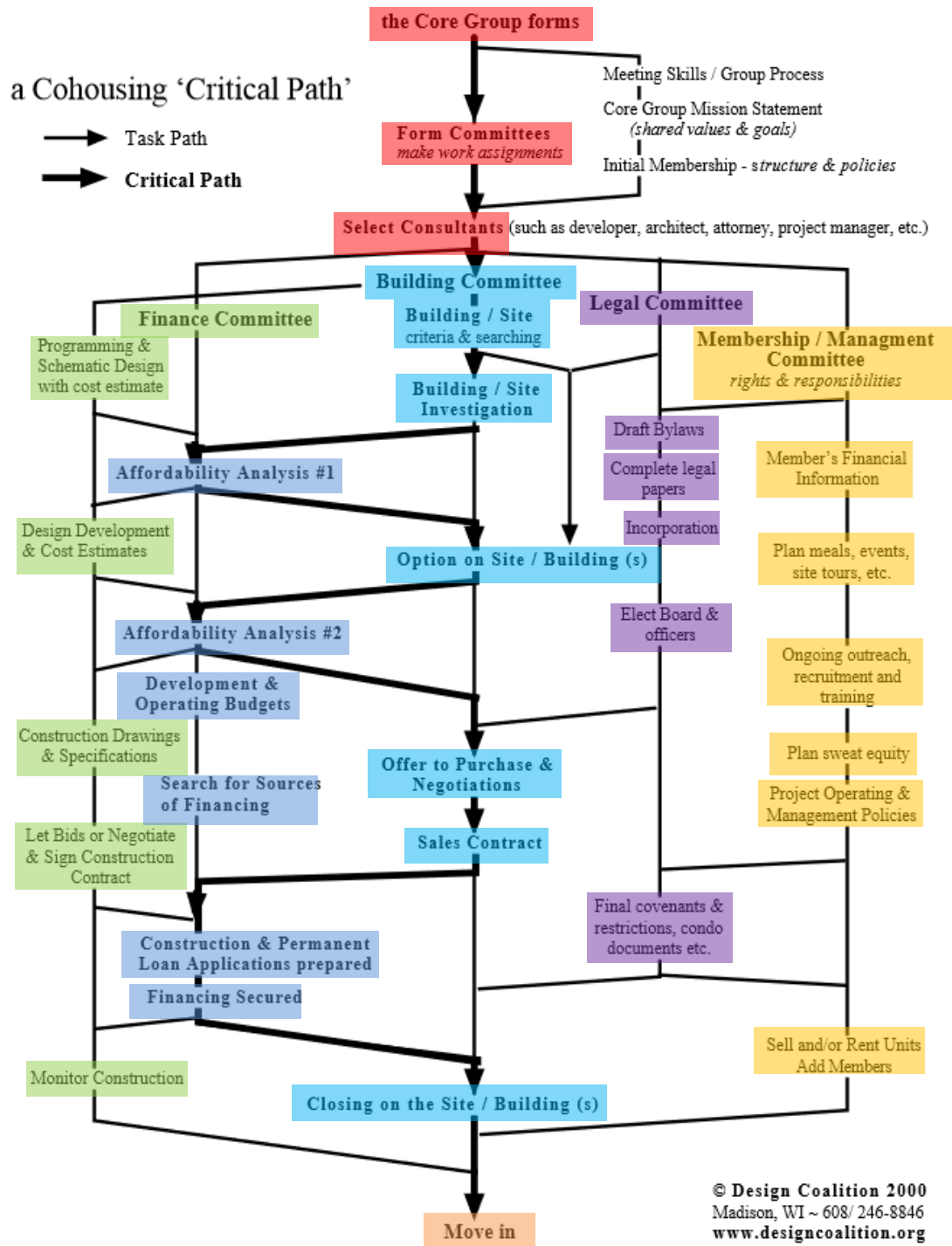


Figure 143: The Critical Path Flowchart was developed by Design Coalition. The flowchart can help people interested in forming a cohousing community. The flowchart illustrates and organizes the many tasks that are needed in the process of developing a cohousing community.²¹⁸

²¹⁸ "Cohousing Tool," Design Coalition, accessed February 12, 2014, <http://www.designcoalition.org/community/CohsgWkshops/cohsgtools/criticalpath.pdf>.

COMMUNITY SIZE

In Denmark, senior cohousing communities range in size from 15 to 25 households. Although the optimum community size is 20 households, it can vary depending on the economic needs of the community; 30 households is the upper limit for this type of community. It is recommended that communities larger than 30 households be split into two communities or single family homes.²¹⁹

These types of communities have on average 1.3 members per household.²²⁰ The Danes recommend keeping the community size less than 50 adults or 35 seniors. Numbers larger than these can make it difficult for the community to achieve consensus with its residents.²²¹ More importantly however, if the community is too large it can become impersonal, thus defeating the fundamental purpose of community engagement with its residents. Alternatively, if the community is too small, a diversity of actively engaging households will be lacking.²²² A small senior cohousing community can also pose a problem especially if the age range of its residents is too narrow. Residents aging together will require additional outside help with cleaning, maintenance, and upkeep of their personal residences and the common areas.

It is not unusual for communities to extend its membership to people living off site from the physical site. There are various reasons why these members are not physically living in the community. These include: lack of financial capital to purchase housing within the community, wait-listed for an opening in the community, desire to want to belong to the community, etc. As mentioned in Chapter 2, "*Senior Cohousing*," the community size at ElderSpirit is comprised of 36 residents living on site and 33 members living off-site.

AGE RANGE

The age range in senior cohousing communities is generally 55-69. Some communities have residents as young as 50 and an upper limit of 75. Communities will also cap the move-in age at 69 and stagger the age difference of their residents to avoid having all its members' age at the

²¹⁹ Charles Durrett, *The Senior Cohousing Handbook: A Community Approach to Independent Living* (Canada: New Society Publisher, 2009), 85.

²²⁰ *Ibid.*, 85.

²²¹ *Ibid.*, 29.

²²² *Ibid.*, 85.

same time. In Denmark, some established communities require that new residents be less than 60 years of age.

SITE SELECTION

Securing a site can be a daunting task. It is recommended that the group work with an experienced professional that can help in the site search to narrow down the selection. Some of the areas that a group will need to address is:

- Location: urban, suburban, or rural,
- Land cost
- Zoning requirements
- Infrastructure

The identification of a site can lead to more cohesiveness within the group as the site helps to bring the project to reality.²²³ See Chapter 7, “Site Selection,” for more information regarding this topic as it pertains to Hawaii.

²²³ *Ibid.*, 86-87.

INFORMATION PHASE

DEVELOPMENT APPROACH

The development of senior cohousing communities can be accomplished by three different models: community-led, partnering with an experienced cohousing developer, or speculative driven.²²⁴ It might be difficult finding a developer with cohousing experience in Hawaii as no development of this type, either intergenerational or senior, has been built to date.

Acting as the developer, the community assumes all the financial risks, capital acquisition, and the securing and guaranteeing of the financing for the site and project construction. If partnering with an experienced cohousing developer is not an option, then it is important to acquire a team of experienced professionals that can help to guide the community. Listed below are some of the key players that are needed for the development of the project. Although some of these roles may be found with the members of the community itself, caution should be exercised by making sure the scope of work and expectations are clearly discussed, defined, and agreed upon by the community and the persons involved. A resident-led model will result in a community that is uniquely their own.

PROFESSIONAL CONSULTANTS

- Development Consultants
- Civil Engineer
- Architect
- Landscape architect
- Interior Designer
- Marketing Professional
- Lawyer
- Accountant
- Mortgage Broker
- Appraiser

²²⁴ Jo Williams, "Predicting an American Future for Cohousing," *Futures*, 40 (2008): 268, accessed February 18, 2014, doi: [10.1016/j.futures.2007.08.022](https://doi.org/10.1016/j.futures.2007.08.022).

- Contractor/Builder

Partnering with an experienced cohousing developer can be a less intimidating approach for the group. Developers have the expertise and resources that can help to expedite the development process. Land acquisition may be easier to secure as developers may have the capital for such purchases that may otherwise be difficult for a small group. While partnering with a developer can help reduce the group’s risk, the resulting decrease in control over the project can result in a community unlike the one intended by future residents.

The speculative model releases the community from all financial risks and involvements in the creation of their community. These turnkey communities are no different than the traditional housing model that is seen across the United States, which does not encourage nor foster community cohesiveness among its residents.

Table 1
The development models

Model	Resident-led model	Partnership model	Speculative model
Description of model	Entire resident group involved with the development and design process, as well as community formation	Partnership approach— developers and residents work together at all stages of the process	Developer led. Developer deals with design, development and community formation
Community visioning	All residents involved	All residents involved	Developer
Recruitment	All residents involved	All residents involved with professional help	Developer
Legal structures and financing	Resident led with professional help	Developer led	Developer
Design Process	Resident led with professional help	Developer led with resident input	Developer
Community development	Resident led with professional help prior to living in community and throughout life of community	Resident led with professional help prior to living in community and throughout life of community	Resident led once living in community

Source: adapted from Davis, 2001 (unpublished).

Figure 144: The table above is from Professor Jo Williams’ research showing the different types of cohousing development models.²²⁵

²²⁵ Jo Williams, “Predicting an American Future for Cohousing,” *Futures*, 40 (2008): 268, accessed February 18, 2014, doi: [10.1016/j.futures.2007.08.022](https://doi.org/10.1016/j.futures.2007.08.022).

RETROFIT

Another development option that should be explored for those not having the financial capital required for a newly built community is to retrofit an existing structure. This option might make it more affordable for those who might otherwise be left out of a cohousing community as these types of communities have in the past been accessible only to those who are affluent.²²⁶ Repurposing existing properties might be a better value than the construction of new buildings. The addition of rental units in senior cohousing communities can also help to make these types of housing options more affordable to those less affluent. The mixed-income model of ElderSpirit Community, as described in Chapter 2, “*Senior Cohousing*,” should be explored to see how it could be incorporated into other communities of this type.

²²⁶ *Ibid.*, 272.

STUDY GROUP I: CONSCIOUSNESS RAISING

The goal of this phase is to educate seniors about aging successfully in place by addressing their current living situation and the possible challenges it holds. Aging in place can be accomplished when the right place is chosen.²²⁷ Senior cohousing could be an option for those wanting to age in a community setting along with other people in their own age range.

Here in Hawaii, aging in place has different meanings for everyone. Senior housing options in Hawaii include: Elderly Housing, Senior Apartments, Low-income Senior Housing, Retirement Residences, Retirement Communities, Assisted Living Residences, Continuing Care Retirement Communities, and nursing homes. These housing types vary depending on age, income level, and level of care. Other options available in Hawaii are: Ohana/ accessory dwellings, and multi-family living.

The timeline for Study Group I is usually 3 months with a different topic session discussed each week. The sessions are focused on aging and other related topic. Examples of the topics are listed below.²²⁸

- Session 1: Aging in Place/Aging in Community
- Session 2: Group Process: Working Together
- Session 3: The Reality of Getting Older
- Session 4: Co-care and Outside Care
- Session 5: Co-Healing: Staying Emotionally Healthy through Community
- Session 6: The Economics of Getting Older
- Session 7: Morality and Spirituality
- Session 8: Saging: What Do We Have to Offer the World?
- Session 9: Risk Taking
- Session 10: Fieldtrips: Looking at Cohousing Communities, Cohousing Designs, Assisted care, Shared Houses, etc.

²²⁷ Charles Durrett, *The Senior Cohousing Handbook: A Community Approach to Independent Living* (Canada: New Society Publisher, 2009), 99.

²²⁸ *Ibid.*, 102.

Table 4
Factors producing a sense of well-being amongst cohousers

Factors influencing well-being	Research findings	Research references
Well-being	Cohousers scored well against Maslow's "hierarchical needs"(physiological, safety, a feeling of belonging, self esteem and self-actualisation)	[5,7]
Social benefits	The benefits of living in cohousing include an increase in well-being resulting from increased opportunities for socializing, support, security, sharing chores, sharing expertise, living with people with similar interests, inter-dependent living. These benefits are built through a combination of social contact design and process (resident involvement in decision-making and community formation). Well-being generated through empowerment and ability to influence immediate environment and community decisions	[1,4,6-8]
Economic benefits	Ability to share daily living expense. Cohousers highlighted significant savings in daily expenditure as a result of sharing facilities, vehicles and goods. Financial security resulting from sharing of some costs within the community. Reportedly higher resale values	[1]
Health benefits	Sharing healthier meals within the community. Support networks for the less mobile/able within the community allowing them to live independently. Opportunities to socialise reported as being beneficial to mental well-being of residents	[1]

Source: adapted from [1].

Figure 145: Research finding by Professor Jo Williams, showing the factors that influence well-being in cohousers.²²⁹

²²⁹ Jo Williams, "Predicting an American Future for Cohousing," *Futures*, 40 (2008): 268, accessed February 18, 2014, doi: [10.1016/j.futures.2007.08.022](https://doi.org/10.1016/j.futures.2007.08.022).

STUDY GROUP II: PARTICIPATORY DESIGN

During this phase the community working with an architect and/or developer creates a design that includes the site, common house, and private residences. The timeline for this process is usually between three to five months.²³⁰ Careful and deliberate design implementations can enhance a community's connection with one another or if done poorly can result in a disconnected community.

The participatory process helps to solidify and strengthen the relationships of the members through their collaborative input and work during this process of creating their community. The biggest challenge during this phase is the balancing of the members' input. The goal during this phase is for the community to feel a sense of ownership through their input to create a design that will be best for the community as a whole. The amount of input should be enough to keep the project moving forward while being mindful of the timeline and budget. If the participatory process is not kept in check, project delays will result in higher cost and the potential burnout of the community members and the professional consultants involved in the project.²³¹

CREATING THE DESIGN PROGRAM

During this phase, with the collaborated efforts of its members, the community's goals, activities, spaces, and characteristics are explored, and discussed. It is through these collaborative efforts of clarifying the design program that the future residents can be ensured of obtaining the community's built environment's outcome.

The design program includes:²³²

- Site Program
- Common House Program
- Private House Program

In addition to these are:

- Design Closure Workshop
- Submission to the City for Preliminary Approval

²³⁰ Charles Durrett, *The Senior Cohousing Handbook: A Community Approach to Independent Living* (Canada: New Society Publisher, 2009), 137.

²³¹ *Ibid.*, 140.

²³² *Ibid.*, 140.

- Priority Workshop
- Design Development Workshop

STUDY GROUP III: POLICY

During this phase policies for the community are developed by the residents. These include common meals, pets, vacancies, and membership. As declining health becomes an issue for this population, residents planning ahead can help to lessen the concerns for their future care. The sharing of care for residents in the community can be addressed and boundaries established to help support one another in the event one's health status should change. While residents are not replacements for professional health care givers, they can provide non-medical tasks. Co-care tasks can include meal drop off, medication pick up, visitations, and grocery runs. At ElderSpirit Community, residents took turn sharing the task of daily walks when one of its residents was recovering from surgery.

LOCAL PERSPECTIVE

In the recent past, groups have attempted to form intergenerational cohousing communities in Hawaii but none to date has come to fruition.²³³ Hilo Cohousing on Hawaii Island formed in 2009. Their vision was to develop a community of 30 clustered homes to be located on 30 acres. The community began with a couple of key people, one of them having lived in an intergenerational cohousing community on the mainland. Although she was not a founding member and had moved into the community after it was built, she enjoyed her time there. She noted that the community had come together for dinner meals a couple of times a week and did some community gardening, but otherwise were not as engaged with one another as she had hoped.

The forming of Hilo Cohousing Community began with the solicitation of interested members on the internet. As more people became interested, members held monthly meetings and site visits to stay connected and build their relationships with one another. People interested in the community could follow their progress through the community's web page. Although community meetings had continued for several months, the community eventually disbanded, citing the difficulty of the collaboration process of building a cohousing community as the reason.

Honolulu Housing Hui L.L.C., located on Oahu, was the result of a group of young families residing at the University of Hawaii's Kauiohaloa Nui faculty housing located in Manoa Valley. The formation of the community in 2008 was due to an extensive but ultimately unsuccessful search to locate another community that was similar to theirs and within close proximity to the university.²³⁴

The members envisioned a community consisting between 8-24 families, dwelling sizes between 900-1300 square feet, and with shared indoor and outdoor common areas. They also envisioned a location within close proximity to the university campus because of their affiliation with the school, or close to public transportation at an affordable cost of \$500,000 per family.²³⁵

²³³ "Directory," Fellowship for Intentional Communities, accessed January 27, 2014, <http://directory.ic.org/records/cohousing.php>.

²³⁴ "Our Vision," Honolulu Housing Hui, accessed January 28, 2014, <http://www.honoluluhousinghui.org/wp-content/uploads/2010/08/vision.pdf>.

²³⁵ Ibid.

To connect with their members and to market their project, the community held monthly meetings, created a web page, and was linked in to the social media of Twitter and Facebook. They also had been featured in the *Honolulu Magazine* December 2011 edition²³⁶, and on Hawaii Public Radio.

In 2011 the community marketed a property in Honolulu located at 624 Pumehana Street as a possible site. The community's design team included Maui-based developer G.C. Pacific, DeForest Architects, Schemata Design and Collaborative Studio LLC. The unit sizes were marketed at 750 square feet for 2 bedrooms with 2 baths, 1000 square feet for 3 bedrooms with 1.5 baths, and 1200 square feet, for 3 bedrooms with 2 baths. All units included parking for 2 cars and were estimated to cost between \$400,000 to \$600,000.²³⁷ By the late 2012, information about the project ceased, and no new information was posted on their web page or on social media. According to Cathi Ho Schar, co-founder of Collaborative Studios LLC., the project was abandoned due to the lack of an affordable site to build the community.²³⁸ Although multiple attempts were made to contact the community's spokesperson, it was unsuccessful.

²³⁶ "Honolulu Real Estate," *Honolulu Magazine*, December 12, 2011, accessed January 29, 2014, <http://www.honolulumagazine.com/Honolulu-Magazine/Real-Estate/December-2011/Oahu-first-co-housing-initiative/>.

²³⁷ "The Latest News," Honolulu Housing Hui, accessed January 29, 2014, <http://www.honoluluhousinghui.org/>.

²³⁸ Interview with Cathi Ho Schar, January 30, 2014.



Figure 146: Honolulu Housing Hui cohousing conceptual design. The project was to be built at 624 Pumehana Street in Honolulu.²³⁹ The site is located about 1.9 miles away from the University of Hawaii Manoa campus.

²³⁹ "Fact Sheet," Hawaii Housing Hui, accessed February 18, 2014, <http://www.honoluluhousinghui.org/wp-content/uploads/2011/08/pumehana-info.pdf>.

COHOUSING RESOURCES

Suggested Books about Cohousing and Senior Cohousing

The Senior Cohousing Handbook: A Community Approach to Independent Living (Second Edition)

By Charles Durrett

Copyright 2009, Publisher New Society Publisher

The Cohousing Handbook: Building a Place for Community

By Chris and Kelly ScottHanson

Copyright 2005, New Society Publisher

Creating Cohousing: Building Sustainable Communities

By Kathryn McCamant and Charles Durrett

Copyright 2011, New Society Publisher

Collaborative Communities: Cohousing, Central Living, and Other New Forms of Housing with Shared Facilities

By Dorit Fromm

Copyright 1991, Publisher: Van Nostrand Reinhold

Articles

“Elder Cohousing in the United States: Three case studies.”

By Ann P. Glass, Ph.D.

Built Environment, Volume 38, Number 3, September 2012, pp. 345-363

“Elder Cohousing: A new option for retirement — or sooner!”²⁴⁰

By Sally Abrahms

AARP Bulletin, January 31, 2011

“Lessons Learned From a New Elder Cohousing Community”

By Ann P. Glass, Ph.D.

Journal of Housing for the Elderly, Volume 27, Issues 4, 2013

Conferences and Workshop

National Cohousing Conference

By Cohousing Association of the United States

Po Box 13254

Mill Creek, WA 98082

Contact: (812) 618-2646

WebSite: www.cohousing.org

²⁴⁰ “Home and Family,” AARP.org, accessed February 2, 2014, http://www.aarp.org/home-garden/housing/info-01-2011/elder_cohousing.1.html.

Regional Conference
By Cohousing Association of the United States
Po Box 13254
Mill Creek, WA 98082
Contact: (812) 618-2646
Web Site: www.cohousing.org

CoHousing Partners, LLC
241 Commercial Street
Nevada City, CA 95959
Contact: (530) 478-1970
WebSite: www.cohousingpartners.com

Elder Cohousing Network
By Abraham Paiss and Associates
1460 Quince Avenue #102
Boulder, CO 80304
Contact: (303) 413-8066
Email: Zev@AbrahamPaiss.com

Wonderland Hill Development Company
4676 Broadway
Boulder, Colorado 80304
Contact: (303) 449-3232
WebSite: www.whdc.com

Senior Cohousing Community Tours

ElderSpirit Community
125 ElderSpirit Communities
Abingdon, VA 24210
Contact: (276) 619-5544
WebSite: www.elderspirit.org

Silver Sage Village
4676 Broadway
Boulder, CO 80304
Contact: (303) 910-5782
WebSite: www.silversagevillage.com

Wolf Creek Lodge
800 Freeman Lane
Grass Valley, CA 95949-7741
Contact: (800) 558-3775
WebSite: www.wolfcreeklodge.org

Websites

The Cohousing Association of the United States

<http://www.cohousing.org/>

Fellowship for Intentional Community

<http://www.ic.org/>

Elder Cohousing and other Self Directed Intentional Communities

<http://www.geron.uga.edu/eic/resources.html>



Chapter V Cost Comparison

Cost Comparison

20-Unit Senior Cohousing Community

Single Family Home-New Development

Independent Senior Living Community

Continuing Care Retirement Communities (CCRC)

Assisted Living

Cost for Private Nursing Care and Supportive Services

Cost Comparison Chart

COST COMPARISON

Listed below is an estimated cost comparison of a 20-unit senior cohousing community as compared to other housing options for seniors on the island of Oahu. Although there are other types of housing options offered for seniors in Hawaii, which includes low-income housing, Adult Residential Care Home, Adult Foster Homes, and nursing homes, they were not included in this comparison.

The comparison also focused only on Oahu Island because the site selected for the proposed project is located here. Those listed below are targeted for middle to high income residents with financial means to either purchase or rent housing without financial assistance from local, state, or federal programs.

For more information regarding housing types and costs, please refer to the booklet titled "Oahu Housing Guide," compiled in collaboration by the City and County of Honolulu, Elderly Affairs Division and the Housing Assistance Program of Catholic Charities Hawaii.²⁴¹

20-UNIT SENIOR COHOUSING COMMUNITY

- **Site:** 91-2002 C Fort Weaver Road
Ewa Beach, Hawaii 96706
\$630,000 land value divided by 20 Units = \$31,500
- **Private Residence**
1,100 sq. ft. house multiply by \$250* per sq. ft. = \$275,000
- **Common House**
4,000 sq. ft. common house multiply by \$250 per sq. ft. = \$1,000,000
\$1,000,000 divided by 20 Units= \$50,000

Total Cost = \$356,500 per Unit

*According to an email to the author dated February 18, 2014, developer Joseph F. Blanco, noted the cost per square foot is an estimate and can vary depending on building type, size, structure height, site conditions, finishes, etc. Wood and CMU construction cost range \$225.00-\$325.00 per square foot.

²⁴¹ "The Oahu Housing Guide," City and County of Honolulu, accessed January 7, 2014, http://www.elderlyaffairs.com/Portals/AgencySite/docs/housing%20guide_long_2013sep.pdf.

SINGLE FAMILY HOME-NEW DEVELOPMENT

- Trades by Gentry Homes²⁴²

Ewa, Hawaii, 96706

Total Living Area 1,151 Sq. Ft.

Aheahe Plan 1 3 Bedroom, 2.5 Baths

Price Starting in the low \$400,000

INDEPENDENT SENIOR LIVING COMMUNITY

According to Assisted Living Federation of America (ALFA), an independent senior living community is:

Designed for seniors who require little or no assistance with the activities of daily living, independent living units provide services for residents such as housekeeping, laundry and meals. Residents of independent units may have some home health care services provided by in-house staff or an outside agency. These residents pay a rental rate or monthly fee.

Residential living setting for senior adults may or may not provide hospitality or supportive services. Under this living arrangement, the senior adult leads an independent lifestyle that requires minimal or no extra assistance. Generally referred to as elderly housing in the government-subsidized environment, independent living also includes rental assisted or market rate apartments or cottages where residents usually have complete choice in whether to participate in the community's services or programs.²⁴³

- Hawaii Kai Independent Senior Retirement Community²⁴⁴

428 Kawaihae Street, Honolulu, Hawaii 96825

Number of Units 370, 81 Assisted Living Units

Studio 392-541 Sq. Ft.

One Bedroom 527-810 Sq. Ft.

Two Bedrooms 854-1,120 Sq. Ft.

²⁴² "New Homes," Gentry Homes Limited, accessed January 6, 2014, <http://www.gentryhawaii.com/index.php?page=trades>.

²⁴³ "Long Term Care Options," Assisted Living Federation of America, accessed January 29, 2014, http://www.alfa.org/alfa/Senior_Living_Options.asp.

²⁴⁴ "The Oahu Housing Guide," City and County of Honolulu, accessed January 7, 2014, http://www.elderlyaffairs.com/Portals/AgencySite/docs/housing%20guide_long_2013sep.pdf.

Age Requirement	55 and Older
Monthly Rent	\$3,295-\$4,020 Studio \$4,395-\$5,120 One Bedroom \$5,495-\$6,220 Two Bedrooms
Assisted Living Fee	Starting at \$2,200 per Month

CONTINUING CARE RETIREMENT COMMUNITIES (CCRC)

According to Assisted Living Federation of America (ALFA), a continuing care retirement community is:

A community that offers several levels of assistance, including independent living, assisted living and nursing home care. It is different from other housing and care options for seniors because it usually provides a written agreement or long-term contract between the resident (frequently lasting the term of the resident's lifetime) and the community, which offers a continuum of housing, services and health care system, commonly all on one campus or site.

These CCRC communities offer housing, services, and nursing care, typically all in one location and are paid for through long term contracts with the residents. They are covered by state regulations in 38 states and are usually classified as an insurance model governed by the state department of insurance or another similar entity. Each part of the community may be subject to separate oversight. For example, housing could be regulated at the local level, assisted living regulated at the state level, and the nursing home part of the community governed by state and federal regulations.²⁴⁵

- 15 Craigsides²⁴⁶
15 Craigsides Place, Honolulu, Hawaii 96817

Number of Units	170
Studio	485 Sq. Ft.
1 Bedroom	690 Sq. Ft.
Age Requirement	62 and Over
Deposit	\$1000
Entrance Fee 1-Person	\$176,130+

²⁴⁵ "Long Term Care Options," Assisted Living Federation of America, accessed January 29, 2014, http://www.alfa.org/alfa/Senior_Living_Options.asp.

²⁴⁶ "The Oahu Housing Guide," City and County of Honolulu, accessed January 7, 2014, http://www.elderlyaffairs.com/Portals/AgencySite/docs/housing%20guide_long_2013sep.pdf.

2-Person	\$375,000 - \$455,000
Assets	1-Person Viable Assets \$450,000 (min) 2-Person Viable Assets \$650,000 (min)
Income Criteria	1 person - \$50,000 (min) 2 persons - \$60,000 (min)
Monthly Rent	\$2,924 Single-Studio ²⁴⁷ \$3,918 Single-One Bedroom \$5,469 Double-One Bedroom
Note	\$25.00/Hour Certified Nursing Assistant Up to 50% refundable

ASSISTED LIVING

As noted on their website:

The Assisted Living Federation of America defines assisted living as a long-term care option that combines housing, support services and health care, as needed. Assisted living is designed for individuals who require assistance with everyday activities such as meals, medication management or assistance, bathing, dressing and transportation. Some residents may have memory disorders including Alzheimer's, or they may need help with mobility, incontinence or other challenges. Residents are assessed upon move in, or any time there is a change in condition. The assessment is used to develop an Individualized Service Plan.²⁴⁸

- The Plaza at Punchbowl²⁴⁹

918 Lunalilo Street, Honolulu, Hawaii 96822

Number of Units	108 Total 20 designated as Assisted Living plus care units
Studio	277 Sq. Ft.
One Bedroom	415 Sq. Ft.

²⁴⁷ "Financial," 15 Craigsides, accessed January 19, 2014, <http://www.15craigsides.org/#!entrance-fees-monthly-charges>.

²⁴⁸ "Long Term Care Options," Assisted Living Federation of America, accessed January 18, 2014, http://www.alfa.org/alfa/Senior_Living_Options.asp.

²⁴⁹ "The Oahu Housing Guide," City and County of Honolulu, accessed January 7, 2014, http://www.elderlyaffairs.com/Portals/AgencySite/docs/housing%20guide_long_2013sep.pdf.

Two Bedrooms	833 Sq. Ft.
Age Requirement	None
Deposit	\$250 ²⁵⁰
Community Fee	\$3,500
Monthly Rent	\$4,988 Semi-Private ²⁵¹ \$6,615 Private

Assisted Living services may include:²⁵²

- Medication management program, administered by a licensed nurse
 - Incontinence care
 - Bathing
 - Dressing
 - Grooming
 - Hygiene
 - Special diets
 - Redirection & Reminding
 - Personal Laundry Service
 - Toileting
-

²⁵⁰ "Deposit Agreement," The Plaza, accessed February 18, 2014, <http://theplazaassistedliving.com/wp-content/uploads/2011/11/Deposit-Agreement.pdf>.

²⁵¹ "The Oahu Housing Guide," City and County of Honolulu, accessed February 18, 2014, http://www.elderlyaffairs.com/Portals/AgencySite/docs/housing%20guide_long_2013sep.pdf.

²⁵² "Assisted Living," The Plaza, accessed February 18, 2014, <http://theplazaassistedliving.com/assisted-living/>.

COST FOR PRIVATE NURSING CARE AND SUPPORTIVE SERVICES

In the event a resident may need the assistance of private nursing care or supportive care to assist them with their activities of daily living, ADL, a cost break down for these services are listed below.

ADL are routine activities that people performing daily without assistance to live independently. There are six basic ADLs: eating, bathing, dressing, toileting, transferring (walking) and continence. An individual's ability to perform ADLs is important for determining what type of care (e.g. nursing-home care or home care) the person may need.

The costs listing below are for services done within the home and do not reflect hospital or long term nursing care facilities, which usually is higher. In some circumstances, medical insurances, such as private, Medicare, Medicaid, long-term care insurance, etc., may cover certain types of services. These services may include home hospice care, home health care, physical therapy, chore services, etc.

Listed below are hourly rates for:

- Registered Nurse: \$29.00²⁵³
- Licensed Practical Nurse: \$20.00²⁵⁴
- Home Health Aide (Certified Nurse Assistant): \$25.00²⁵⁵
- Homemaker Services: \$24.00²⁵⁶

²⁵³ "Occupational Employment Statistics," U.S. Bureau of Labor Statistics, accessed February 18, 2014, <http://www.bls.gov/oes/current/oes291141.htm#st>.

²⁵⁴ Ibid.

²⁵⁵ "Hawaii State-Specific Data from the Genworth 2013 Cost of Care Survey," Genworth, accessed February 18, 2014, https://www.genworth.com/dam/Americas/US/PDFs/Consumer/corporate/Hawaii_gnw.pdf.

²⁵⁶ Ibid.

COST COMPARISON TABLE

Name	Honouliuli Senior Cohousing Community	Trades by Gentry	Hawaii Kai Independent Senior Community	15 Craigside	The Plaza at Punchbowl
Housing Type	Cohousing	Single Family Detached Home	Independent Senior Community	Continuing Care Retirement Community	Assisted Living
Age Requirement	55+	None	55+	62+	None
Purchase	Yes	Yes	No	No	No
Rental	–	–	Yes	Yes	Yes
Square Foot	1,100 Private Unit Plus 4,000 Common House	1,151	392-1,120	485-690	277-833
Purchase Cost	\$365,500	Low \$400,000	N/A	N/A	N/A
Rental Cost	N/A	N/A	\$3,295-\$6,220*	\$2,924-\$5,469*	\$4,988-\$6,615**

*Rental cost varies depending on the size of the unit

** Rental cost varies depending on level of privacy

Figure 147: Cost comparison table showing some of the current senior housing options in Hawaii.

Chapter VI Design Guidelines



Social Contact Design
Site Design
Senior Cohousing Design
Universal Design
Design for Assisted Living
Resources

The design guidelines for a senior cohousing community are based on the extensive research by the husband and wife architect team of Charles Durrett and Kathryn McCamant. Their book titled *Creating Cohousing: Building Sustainable Communities*, and Durrett's book titled *The Senior Cohousing Handbook*, are valuable resources for designing these types of communities. Many of the guidelines listed in this chapter are extractions from their work in these books.

The goal of any residential design is to allow for, and adapt to, the changing physical, mental, and social conditions of its occupants. Being cognizant of this, the design goal for seniors should be to permit them to age in place for as long as they choose to remain in their residence. In addition to the design guidelines of Durrett and McCamant, universal design principles, which are discussed further in this chapter, will allow for people regardless of their abilities to enjoy their quality of life in a safer, healthier, and more productive way of living.

As residents in senior cohousing communities age, their needs in their physical environment will change. Some residents may choose to remain in their home rather than move into an assisted living or nursing home facility. Some may also choose to remain at home until their end of life. With the help of friends, family members, social services and medical agencies available, remaining at home can be a viable option for the aged. Although senior cohousing communities are not medical facilities, they can implement design guidelines that will help their residents live a more comfortable life for as long as they desire to remain in their home and in these types of communities.

Victor Regnier, an architect and gerontologist, authored a book titled *Design for Assisted Living: Guidelines for Housing the Physically and Mentally Frail*. The guidelines listed in this book can be in addition to the cohousing guidelines and universal design guidelines mentioned previously. Implementing these design guidelines will ensure a senior cohousing community that will meet the current needs of its residents, but more importantly, it will ensure an environment that will be sensitive to the ever changing needs of its community members.

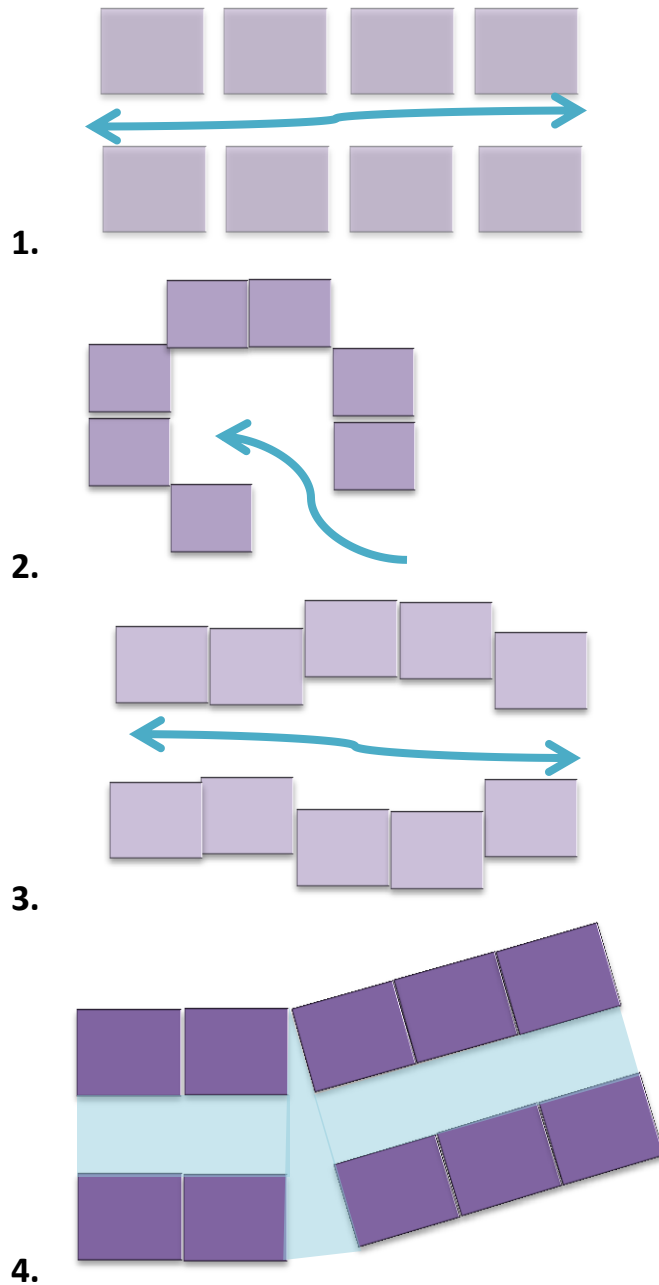


Figure 148: McCamant and Durrett, *Creating Cohousing; Building Sustainable Communities*. Different types of site plans: 1. Pedestrian Street; 2. Courtyard; 3. Combination of street and courtyard; 4. One building with glass covered street.²⁵⁷

²⁵⁷ Charles and Charles Durrett, *The Senior Cohousing Handbook: A Community Approach to Independent Living*, (Canada: New Society Publishers, 2009), 156.

SOCIAL CONTACT DESIGN

Cohousing is based on social contact design principles, which encourages opportunities for social interaction among its residents. These encounters, albeit casual or formal, can help to build and strengthen relationships that can result in a more cohesive community. Although the built environment for a senior cohousing, itself does not guarantee resident's interactions, if done correctly the design can enhance the residents' connections with one another.

The Social Contact Design Principles Include:²⁵⁸

- Provision of indoor and outdoor communal facilities;
- Good visibility into all communal spaces;
- Car parking outside the community or car-free communities;
- Gradual transitions between public and private space;
- Provision of semi-private outdoor spaces close to private units for socializing;
- Positioning of key facilities and access points on walkways.

²⁵⁸ Gilo Holtzman, "Introduction to Cohousing and the Australian Context," accessed April 13, 2014, <http://scev.org/sites/default/files/Cohousing-Gilo-Holtzman-2010.pdf>.

Table 2
Factors influencing strong social networks and social cohesion in cohousing

Factors creating strong social networks and social cohesion	Research findings	Research references
Social contact design	<p>Cohousing design (social contact design) positively impacts on social behaviour:</p> <ul style="list-style-type: none"> ● The centrality, size and existence of the common house influenced social interaction, participation, community support, unity and safety ● The division of space and circulatory systems in communities appeared to be the key design factors influencing social interaction ● Circulatory systems and surveillance opportunities created by design were the features most affecting security ● Densities and accessibility were the key design features influencing the strength of support networks in the community ● The common house was identified as being the key design feature encouraging both participation and unity within communities ● Opportunities for social interaction and safety were increased through social contact design whilst participatory, supportive behaviours and unity seemed to be independent of it ● Density (proximity) and layout; division of public and private space; the quality, type and functionality of communal spaces appear to be the key design factors influencing social interaction in cohousing ● Social (informal and formal) and personal characteristics appear to have a greater impact on social interaction than design ● Social, personal and design factors are inter-dependent. Social and personal factors can significantly enhance the positive impact of social contact design on social interaction 	[3–6]
Resident involvement in decision-making processes and operation	Informal and formal social factors and personal characteristics influence use of communal facilities and level of social interaction. In cohousing communities these factors operate together increasing social capital	[3,4,7,8]
Social structure: non-hierarchical structure; formalised social activities; common goals and norms within communities	<p>Informal and formal social factors and personal characteristics influence use of communal facilities and level of social interaction. In cohousing communities these factors operate together, increasing social capital</p> <p>Cohousing helps people to organise themselves as a residential group to overcome the alienation of modern neighbourhoods by building mutual support and sociable relations between households</p>	[3,7,8]

Source: adapted from [1].

Figure 149: Research findings regarding cohousing design by Dr. Jo Williams, Senior Lecturer at the Bartlett School of Planning, University of College London. Social contact design results in positive impacts of social behavior.²⁵⁹

²⁵⁹ Jo Williams, "Predicting an American Future for Cohousing," *Futures*, 40 (2008): 268, accessed February 18, 2014, doi: [10.1016/j.futures.2007.08.022](https://doi.org/10.1016/j.futures.2007.08.022).

SITE DESIGN

The following site design criteria are from Charles Durrett's book titled, *The Senior Cohousing Handbook: A Community Approach to Independent Living*:

General Site Design Criteria²⁶⁰

- Number of Units
- Site amenities to preserve (views, trees, and the like)
- Location of common facilities, residential buildings, open space
- Building type and form (two story, cluster, detaches, etc.)
- Building materials (general)
- Energy conservations (electric, gas, solar, wind, conservation, etc.)
- Accessibility considerations

Outdoor Areas:

- Parking(location, how much covered/uncovered)
- Car access on site (traffic-free, access to houses when necessary)
- Open space
- Shared amenities (sitting areas, gardens, etc.)
- Transition between private residences and common areas
- Private outdoor functions (sitting area, gardens, activity area, etc.)
- Fences, hedges, plantings
- Personalization

²⁶⁰ Charles Durrett, *The Senior Cohousing Handbook: A Community Approach to Independent Living*, (Canada: New Society Publisher, 2009), 154.

SENIOR COHOUSING DESIGN



Figure 150: Areas of consideration within a senior cohousing community. Careful placement of these areas can help to build and foster community interactions among its residents.

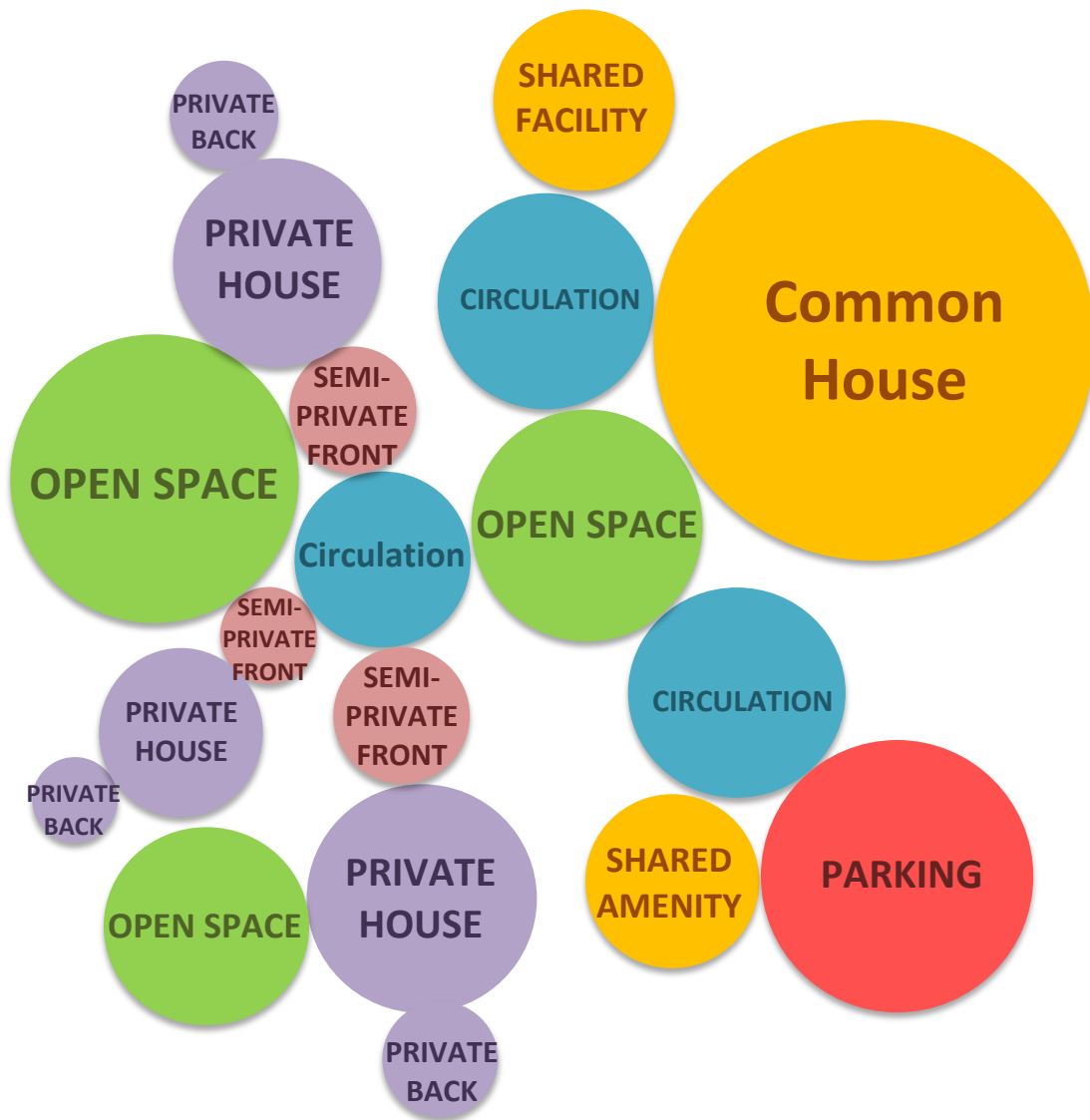


Figure 151: Bubble diagram of space adjacencies within senior cohousing community. The goal of senior cohousing design is to create communal areas that will afford opportunities for residents to interact with one another while at the same time creating private areas for residents to find retreat for solace and quiet time.

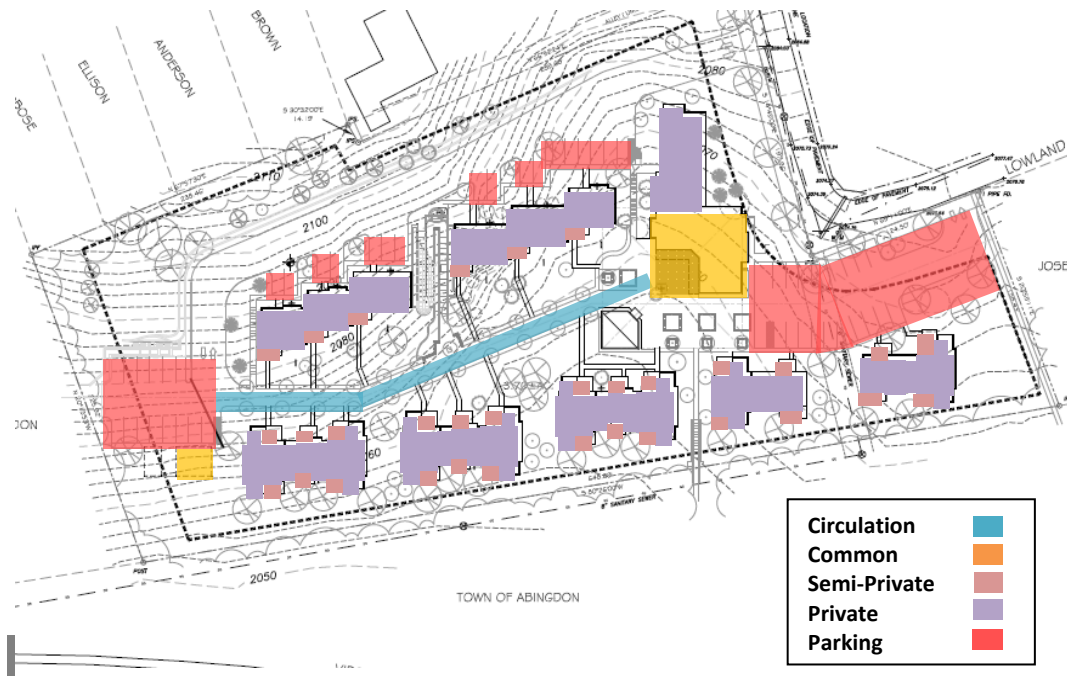


Figure 152.²⁶¹ Site plan mapping of the space adjacencies at ElderSpirit, a senior cohousing community. The private residential units are all facing the centralized pedestrian path. Parking is located at opposite ends of the property and is also located at the front of the upper level apartment units. The spirit house and common house are anchored at each end of the site.

²⁶¹ Drawing Courtesy of The Highlands Group, P.C., Architecture, Land Planning, and Interiors

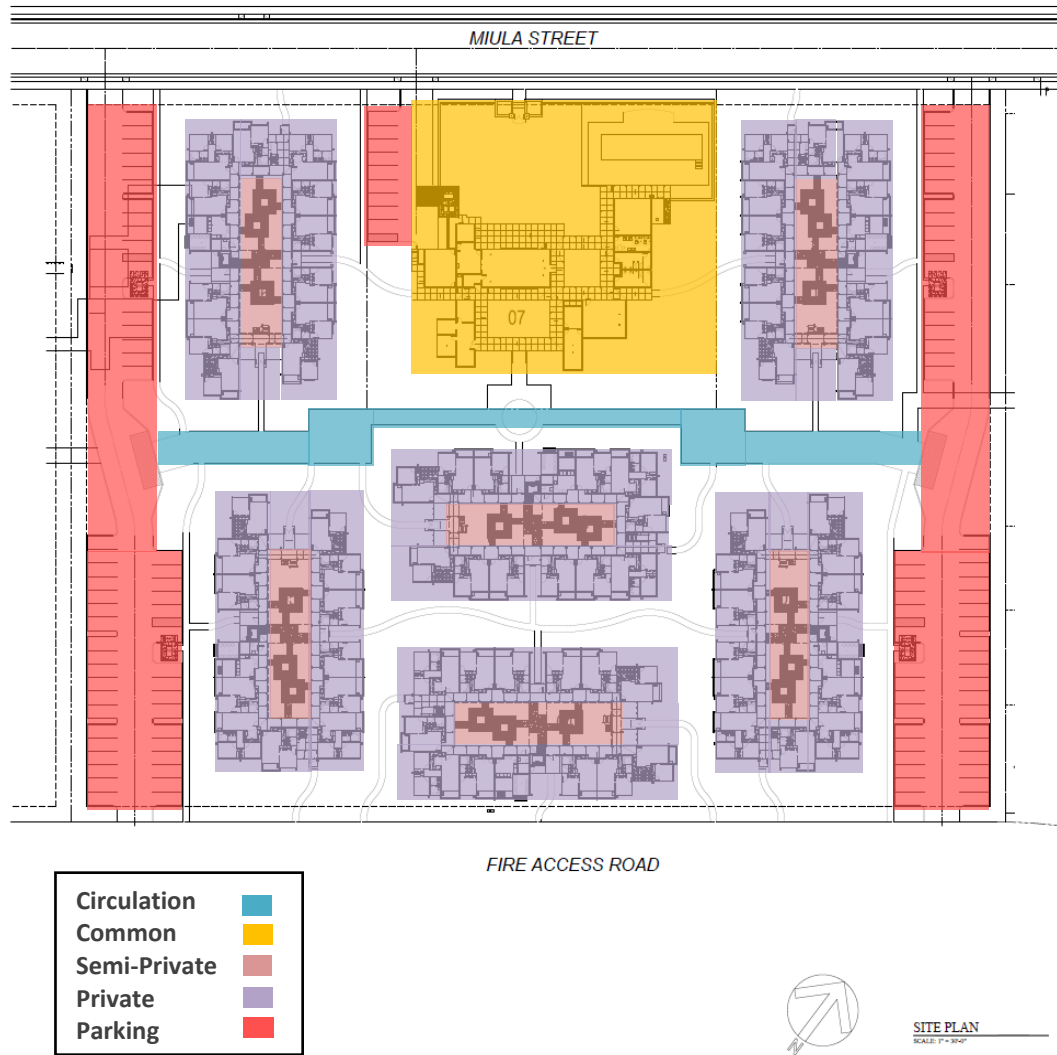


Figure153:²⁶² Site plan mapping of Franciscan Vistas Ewa, an independent senior community. The six low rise residential units are clustered around the community center. Semi-private interior courtyards are within each cluster unit. Parking is located at the periphery of the site connected by a centralized pedestrian path.

²⁶² Drawing Courtesy of Alakea Design Group, LLC



Figure 154:²⁶³ Site plan mapping of Oak Creek Community, a senior cohousing community located in Stillwater, Oklahoma. The community consists of 24 individually owned homes built on 7.5 acres. The homes range in size from 702 square feet to 1190 square feet, with a common house of 3,800 square feet. The community worked with architects McCamant and Durrett to plan and design their community.

²⁶³ "Facts about Oak Creek Cohousing," Stillwater Senior Cohousing, accessed: April 4, 2014, http://www.stillwaterseniorcohousing.com/yahoo_site_admin/assets/images/Site_plan_no_floorplans_bigg.214160827.jpg.



The following are guidelines from McCamant and Durrett regarding the common house:

The common house should be visible from each residence or from the outside of each residence

Site permitting, the common house should be located equidistance from all dwelling units.

The location of common house should be placed such that residents will pass it daily.

Common terrace should face dwelling units and should accommodate everyone for dinner.

Guest rooms in the common house should be large enough to accommodate extended families or professional caregiver(s).

The kitchen should be commercial grade with a large dining room to accommodate the community mealtimes.

Depending on the community's desires, other areas in the common house can include: sitting room, laundry facility, mail center, workshop, office, library, computer center, arts and crafts room, multi-purpose room, etc.

Other shared facilities/amenities include: garden shed, car wash area, garbage receptacle, pool, etc.



Figure 155: The two-story common house main entrance is oriented to the pedestrian path.



Figure156: Residents gather at the plaza outside of the common house.²⁶⁴

²⁶⁴ "Photo Gallery," University of Georgia Institute of Gerontology, accessed: April 13, 2014, <http://frostgiantpostcardstudios.blogspot.com/2012/06/elderspirit-brave-old-world.html>.



The following are guidelines from McCamant and Durrett regarding semi-private areas:

Semi-private areas act as transitions between public and private spaces.

Front yards and porches are regarded as semi-private spaces.

Front porches should be at least 7 feet deep and 9 feet wide.

Distance between the front door and the path should be between 10' to 12'.

Distance between houses, front door to front door, should be between 26' to 40'.

Create direct access between dwellings and garden patio.

Avoid corridors, extra doors, and level changes.

Landscape and low fences are used for demarcation of spaces.



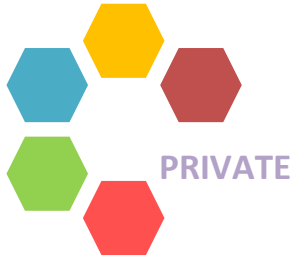
Figure 157: This front porch is used for relaxing and as gathering space.²⁶⁵



Figure 158: Low colorful plantings are used to line the entrance pathway to this home.²⁶⁶

²⁶⁵ "Photo Gallery," University of Georgia Institute of Gerontology, accessed: April 13, 2014, <http://www.geron.uga.edu/eic/images/ESC/MAY%202010%20699.jpg>.

²⁶⁶ "Photo Gallery," University of Georgia Institute of Gerontology, accessed: April 13, 2014, <http://www.geron.uga.edu/eic/images/ESC/MOSTLY%20ESC%202009%20079.jpg>.



The following are guidelines from McCamant and Durrett regarding the private areas:

Housing types include: studio, one bedroom, multiple bedrooms.

Dwellings can be single-story, two-story, low rise.

Dwellings can be clustered, attached, or detached.

Resident dwellings are between 800-900 square feet, although it can be larger depending on the community's desire.

Open floor plan with kitchen, dining and living room.

Spaces should be flexible to accommodate for future addition.

Kitchen oriented to the common side of the house.

Kitchen window and sinks should face the pedestrian path.

Front door should face the pedestrian path.

Living room and bedroom should face the rear of the house.

Backyard sheds should be built to the back of the house.

Backyards and back porches are regarded as private spaces.



Figure 159: Shown here is a typical single story attached residential units.



Figure 160: This back porch is an outside oasis for private time and outdoor entertainment.²⁶⁷

²⁶⁷ "Photo Gallery," University of Georgia Institute of Gerontology, accessed: April 13, 2014, <http://www.geron.uga.edu/eic/images/ESC/MOSTLY%20ESC%202009%20076.jpg>.



PARKING

The following are guidelines from McCamant and Durrett regarding parking areas:

Parking should be located at the periphery of the site and centrally located to the development.

Cars may drive to an individual's house but should not park there at all times.

The community may have multiple designated areas.

Parking may be located close to or next to residence for ease of accessibility for residents with mobility issues.



Figure 161: One of two peripheral parking areas. This parking is located near the common house, which makes loading and unloading of groceries an easier task for its residents. dwelling.



Figure 162: This handicap parking stall is located directly in front of these units. Parking for residents with mobility issues can be located within close proximity of their



The following are guidelines from McCamant and Durrett regarding open spaces:

Cluster housing to preserve open spaces.

Create nodes for gathering such as picnic tables, sitting areas, community gardens, etc.

Ensure accessibility to outdoor spaces to accommodate varying degrees of mobility.

Allow for multiple seating areas throughout the site.



Figure 163: The community garden offers opportunities for residents to work together towards a common purpose.²⁶⁸



Figure 164: A walking trail abuts the site for easy access for residents to take advantage of its natural beauty while exercising.

²⁶⁸ "Photo Gallery," University of Georgia Institute of Gerontology, accessed: April 13, 2014, <http://www.geron.uga.edu/eic/images/ESC/MAY%202010%20731.jpg>.



The following are guidelines from McCamant and Durrett regarding circulation within a cohousing community:

Circulation paths are pedestrian oriented.

Circulation path can serve as the organizational element of the buildings.

Path can be organized along a spine or plaza/courtyard.

Path or courtyard connecting individual homes should be centralized.

Limit the number of access into and within the community to encourage residents' encounters.

Create gathering nodes along pathways.

Create nodes associated with every 5-9 houses.

Pedestrian paths should be between 12-18 feet wide.



Figure 165: The centralized pedestrian path connects the private units to the public walk-way. The common house is at the terminal end of the path.²⁷⁰



Figure 166: This path connects the community to the park and walking trail.²⁶⁹

²⁶⁹ "Photo Gallery," University of Georgia Institute of Gerontology, accessed: April 13, 2014, <http://www.geron.uga.edu/eic/images/ESC/MAY%202010%20700.jpg>.

²⁷⁰ "Photo Gallery," University of Georgia Institute of Gerontology, accessed: April 13, 2014, <http://www.geron.uga.edu/eic/images/ESC/MAY%202010%20716.jpg>.

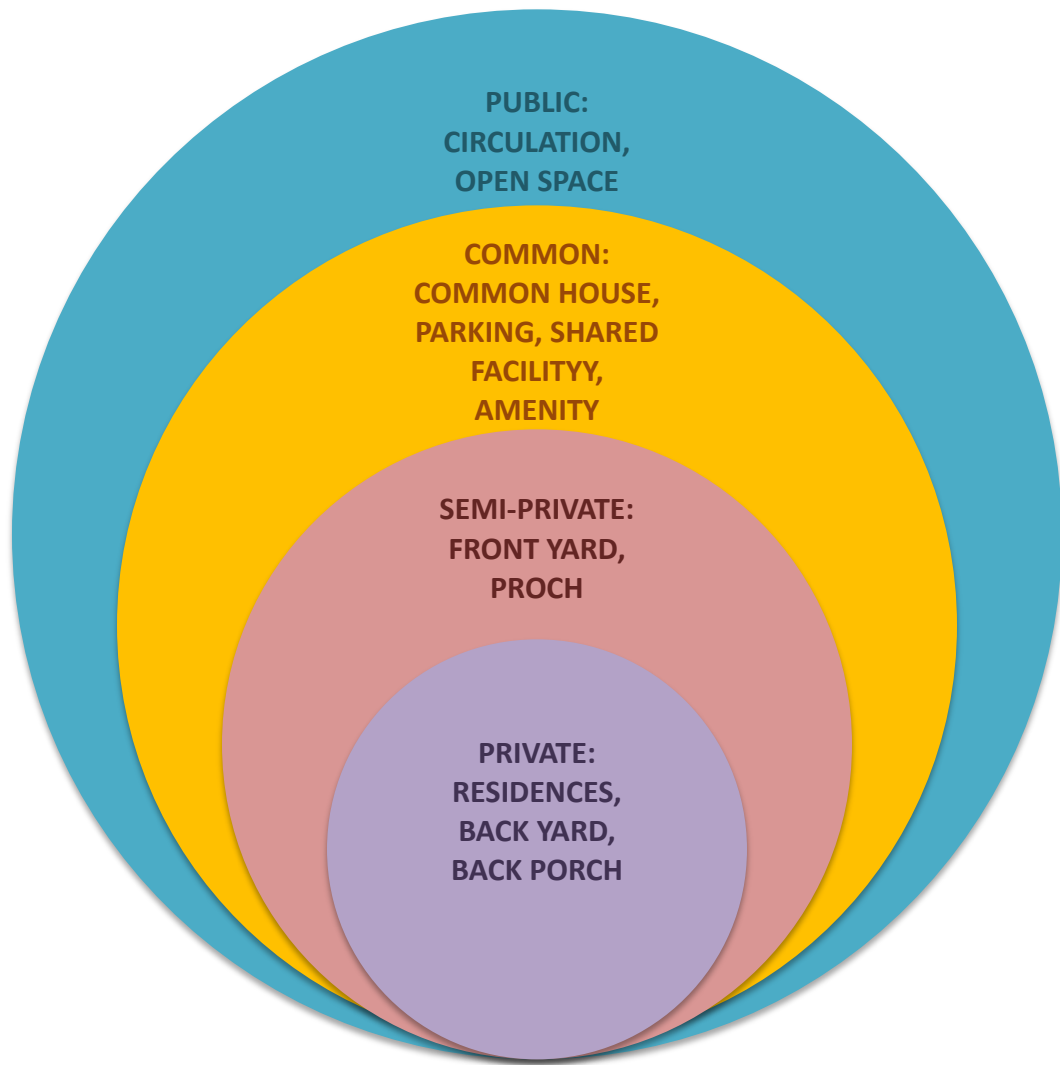
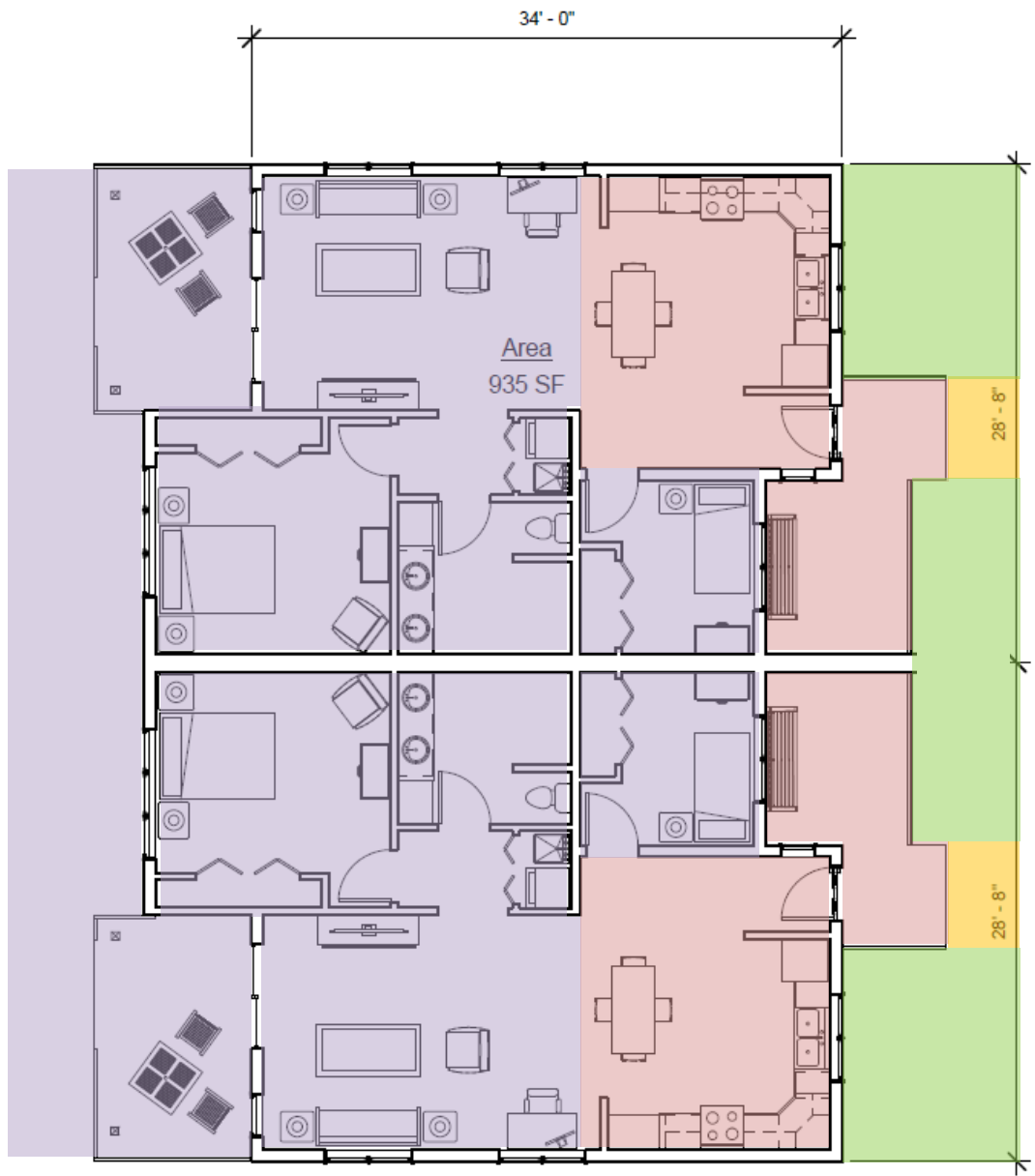


Figure 167: The diagram above shows the four different zones of privacy within a cohousing community: private, semi-private, common, and public. Listed are the appropriate areas within each zone.



Private ← ————— → Public

Figure 168: Floor Plan illustrating the increase of privacy from the front to the back of a residential dwelling as indicated by the purple zone. The transition of space begins at the front yard that separates pedestrian path from the private dwelling.

UNIVERSAL DESIGN

The term Universal Design was coined by Ron Mace, the founder of The Center for Universal Design at North Carolina State University. It describes the concept of designing products and environments to be attractive and usable by everyone to the greatest extent possible, regardless of age or ability.²⁷¹

Universal design differs from accessible design in that although accessible design features are a part of universal design, it goes beyond just the minimum standards of accessible design. Universal design benefits all people, not just those with disabilities.²⁷² Universal design is: inclusive, preventative, ergonomic and efficient, attractive, and transgenerational.²⁷³ A universal design home may take up a larger footprint because of the provisions that are needed to accommodate the ease of access around, into, and within a dwelling, such as wider doorways, wide passageways, and 5-foot diameter clear turning areas. By incorporating universal design into a senior cohousing community, it will allow for the adaptability of features that may not at the current time be needed but readily adaptable when the need arises.

UNIVERSAL DESIGN PRINCIPLES²⁷⁴

1. Equitable Use

The design is useful and marketable to people with diverse abilities.

2. Flexibility in Use.

The design accommodates a wide range of individual preferences and abilities.

3. Simple and Intuitive Use.

Use of the design is easy to understand, regardless of the user's experience, knowledge, language skills, or current concentration level.

4. Perceptible Information.

The design communicates necessary information effectively to the user, regardless of ambient conditions or the user's sensory abilities.

²⁷¹ RSMears, *Universal Design Ideas for Style, Comfort and Safety*, (United States: Reed Construction Data, 2007), 6.

²⁷² *Ibid.*, 7.

²⁷³ *Ibid.*, 10-11.

²⁷⁴ *Ibid.*, 13.

5. Tolerance for Error.

The design minimizes hazards and the adverse consequences of accidental or unintended actions.

6. Low Physical Effort.

The design can be used efficiently and comfortably, with a minimum of fatigue.

7. Size and Space for Approach and Use.

Appropriate size and space is provided for approach, reach, manipulation, and use, regardless of the user's body size, posture, or mobility.

The following 20 essential Universal Design guidelines are from the book written by Wendy A. Jordon, titled *Universal Design for the Home*.²⁷⁵

At least one home entry that has no steps

Flat or very low thresholds at the doorways

An open plan with wide-doorways, halls, and passageways

At least a 5-foot diameter clear turning space in rooms

A plan that accommodates one-story living now, or can adapt easily for this later

If the house has more than one story, stairs that are low and deep, with handrails on both sides; if possible include an elevator or the space for one

Light switches lower than standard and electrical outlets higher than standard, so they are easy for all to reach

Easy-grip, faucet, and drawer hardware, such as lever, C-shape, and D-shape handles

Appliances designed and places for convenient use from a standing or seated position

Controls for appliances, heating, air-conditioning, and other equipment that are easy to reach, see, understand, and operate

Plenty of lighting throughout the house, including natural light, ambient lighting, and task lighting

Easy-to-operate windows, such as casements, awnings, and remote control units

Generous counters in the kitchen, bathroom, and wherever a tabletop would be handy

Work surfaces at various heights that are accessible for various users, standing or seated

²⁷⁵ Wendy A. Jordon, *Universal Design for the Home*, (Singapore: Quarry Books, 2008), 11.

A roomy shower with a wide entry and an easy-to-negotiate threshold
Chair-height toilets
Grab bars or other handholds in the bathroom and elsewhere
Reachable storage, including low cabinets, full extension drawers, open shelves, and adjustable shelves and rods
Smooth, firm, slip-resistant floorings
Low-maintenance systems, materials, and finishes

Other recommendations by author Wendy A. Jordon:

Entrances

36-inch wide doorways
Pocket doors
Lighted entry
3-foot high railing
Garage floor sloped for drainage away from at-grade entry
Lever door handles

Kitchen

Multiple counter heights-30, 34, 36, and 42 inches
Knee room under sinks, cooktops, some counters
Side-by-side or French door refrigerator/freezer
Oven with open hinged door
Raised dishwasher
Smooth, induction cooktop
Rocker light switches
Accessible height cabinets, with 9-inch toe-kick space
Pull down shelves
Lazy Susan corner storage

Appliance

Cooktop: maximum 34 inches above floor
Dishwasher raised to align top rack with countertop
Refrigerator door occupying space starting at 1 ½ feet above the floor

Bathroom

Elongated toilet
Adjustable handheld shower spray
Shower bench
Curbless roll-in shower
Visual cues in floor, and counters

Outdoor

Walkway lighting
Smooth paving
Ramps to entries
Handrails for steep entries
Protective edging on path borders
Raised planter boxes
Low-maintenance plantings

According to author Wendy A. Jordon, the following recommendations from are based off of national standards such as American National Standards Institute (ANSI), Americans with Disabilities Act (ADA) Standards for Accessible Design (ADAAG), the Uniform Federal Accessible Standards ((UFAS) and the Fair Housing Accessibility Guidelines (FHAG). The standards listed below are recommendations and may vary from one universal design practitioner to another. Please consult any local or state code that may pertain to your project.²⁷⁶

Commode

Seat 17 to 19 inches above floor, though some standard heights may be better for some
18 to 36 inches clearance at front and side

Countertop and work surfaces

Height: 28 to 34 inches, up to 42 inches for tall people
Width: minimum 30 inches
Depth: maximum 27 inches
Knee clearance for seated users: 27 inches high, at least 17 inches deep, at least 30 inches wide
Toe clearance under base cabinets: 9 inches high, at least 6 inches deep, at least 30 inches wide

Doorways

²⁷⁶ Ibid., 188-189.

Width: Clearance of at least 32 to 34 inches with door open, a 34-inch wide door provides a 32 inch clearance; a 36-inch wide door provides a 34-inch clearance
Threshold: 0.25 inch to 0.5 inch height; 0.75 inch for exterior sliding doors.

Electric outlets

Heights: 15 inches above floor

Floor space, general

Minimum 5-foot diameter clearance, turning space in every room and turning area

Grab Bars

Width: 1.25 inch to 1.5 inch diameter
Clearance from wall: 1.5 inches

Hallways

Width: 36 inches

Hardware

36 to 48 inches above floor

Kitchen floor space

Pass-through with turning space at each end: minimum 40 inches wide
U-shaped kitchen: minimum 60 inches wide
Clear floor space at each workstation: minimum 30 by 48 inches

Light switches, climate control

General height: maximum 48 inches above floor, a few inches lower if cabinets or counter limits access

Shower

Minimum: 3-by-3 feet, though this does not allow room for a seat or for moving around; preferably 42 by 60 inches

Sinks

Height of front edge: maximum 34 inches
Depth of faucet: maximum 17 inches
Clearance underneath: minimum 27 inches high, 30 inches wide, maximum 17 inches deep, including 8 inches to under-sink pipes
Sink depth: maximum 6 ½ inches

Storage

Shelf height for accessibility by seated user: maximum 40 to 48 inches

Washer and dryer

Front loading with door opening between 15 and 34 inches above the floor,
recommended minimum circulation space in front the machine: 30 by 48 inches

Windows

Maximum still height for access and views: 36 inches

DESIGN FOR ASSISTED LIVING

Listed in Victor Regnier's book titled *Design for Assisted Living: Guidelines for Housing the Physically and Mentally Frail*, are 100 critical design considerations for an assisted living facility. As mentioned previously, senior cohousing communities are not medical facilities, and residents living in these communities are not medical patients. What residents in senior cohousing communities share with residents and patients in these types of facilities are the challenges within their built environment as they age. Incorporating some of the design guidelines can help to alleviate some of these challenges by creating environments that are supportive to the aging process. Although the guidelines listed in the book are valuable, they are too numerous to mention in this paper. The guidelines listed will focus on Chapter 4, Neighborhood and Site Issues, and Chapter 5, Outdoor Landscape.

The following guidelines for Neighborhood and Site Issues are from Chapter 4 in *Design for Assisted Living: Guidelines for Housing the Physically and Mentally Frail* by Victor Regnier²⁷⁷:

NEIGHBORHOOD AND SITE ISSUES

1 - A Site Within a Community's Cognitive Map

Selecting a good site for an assisted living project is one of the most important decisions a provider can make in ensuring the project's success.

Mental Map Image

An excellent site is often one that people already know well enough to form a mental picture. It is within the "cognitive map" of residents living in the surrounding community. It is a site that, by virtue of its physical relationship to other salient landmarks, is easy to identify and recall.

Community Connection

The best sites are not isolated but share a physical or associative connection with compatible community land uses. Some of these land uses include churches, day-care centers for children, retail stores and other shops, community parks, and elementary schools. When an assisted living building is part of a community, it is often associated with those land uses in a positive way . . .

²⁷⁷ Victor Regnier, "Neighborhood and Site Issues," in *Design for Assisted Living: Guidelines for Housing the Physically and Mentally Frail*, (Canada: John Wiley and Sons, Inc., 2002), 54-65.

Proximity to Older Residents of Family Members

Family members want to live nearby so that they can easily visit. Older residents often feel more comfortable when an assisted living building is located near their home or within a neighborhood they know well. Having an adequate number of older people or convenient access to family members within the community is necessary for the success of a project.

Visible Connection to the Street

Once a site is selected, the building's placement and orientation should optimize visibility from the street. The ability to identify the entry from the street reduces ambiguity and makes the building less mysterious and easier to comprehend. A walkway that links the building entry to the public sidewalk is a symbolic welcoming gesture. On a well-designed site, the building's entry is neither too close to nor too far away from the street.

Friendly Inviting Appearance from the Street

An assisted living home should look friendly and be residential in character. Good curbside presence has as much to do with trees, flowers, shrubs, ground cover, grass, and other plant materials as it does with the architecture of the building, the building should exude street friendliness, making the windshield analyst curious about what lies inside.

Safety from Crime and Adverse Traffic

Site placement and building organization should mitigate any external threats from noise and adverse traffic. Safety from crime may require a surrounding fence or higher lighting levels in parking areas and public sidewalks. Most sponsors deal with security concerns by creating a single main entry to the building.

2 - Reconciling Topography with Building Configuration

Ramp and stair combination: Stairs are often easier for an older frail person to navigate, but a ramp is necessary for a wheel chair-dependent resident. Both should be available to overcome substantial change in grade.

Site shape and topography are two of the most important factors in establishing the layout or organization of a building. Because so many older frail residents utilize canes, walkers, or wheelchairs to get around, flat, walkable surfaces are ideal. However a good site location with a challenging topographic condition is often much better to work with than a poorly located site that is flat.

Elevators and a Compact Site Configuration

A multistory building circulation plan should rely on both elevators and a compact building configuration. Corridors should be no longer than 100 feet.

Exterior Site Conditions

Developing a flat, walkable pathway around the outside of the building is necessary to promote walking as a form of exercise. If a walkway is not available, it should be created. A pathway that has only ramps can be restrictive. Whenever possible, ramps should be planned in conjunction with stair . . .

Ramps in Corridors

The designer should avoid the use of ramps within the building. Residents using canes and walker lose their balance, and residents in wheelchairs can easily lose control...

3 - Saving Trees and Other Significant Landscape Features

Older trees often give a building a timeless quality, making it appear as if the building has existed for many years.

Access to Existing Landscape

A tree survey should be commissioned on a wooded site where there is a possibility of saving trees, although one needs to be realistic because some trees cannot be salvaged. A building configuration can also take direction from the placement of mature landscape elements. Open or enclosed courtyards are particularly well suited to the use of trees for shade or visual interests. Units with views through tree branches or toward a cluster of trees are often deemed more valuable because of the view.

6 - Capturing Views

Porches with active off-site views are often popular: Porches provide shade control, reduce the scale of the building, control breezes, and are convenient to the inside of the building.

Because many older residents typically spend more time indoors than outside, views of surrounding neighborhoods often take on greater significance. Two types of view are available for planning purposes. One is an *active view*-often toward a city-that overlooks the sidewalks, the streets, and the activity at the front entry. The other is a *passive view* of a garden, lawn, trees, a park, a lake, or a nearby creek.

Contrasting Active and Passive Views

Buildings often have both an active and a passive view available from different sides. Each view has its own character and rhythm, and residents benefit from access to both. Views of the streets are hard, energetic, active, noisy, ever-changing, and stimulating. The garden provides a passive green landscape that is soft, soothing, subdued slower in pace, and relaxing. Each view has its pros and cons. Activity begets stimulation and noise, while the passive landscape is often subdued—at times boring. Common spaces like porches and overlooks are better suited for active views, while the dining room benefits from the relaxed view of a lush, multicolored garden. Views from various common spaces should embrace the full range of view possibilities.

Near and Far Views

Views can be intimate, intermediate, or long distance.

The Overlook Perch

One of the best views is one that captures both the neighborhood and the city. These views stir the imagination and lift the spirit. Units perched on an upper floor take full advantage of the surrounding environment. Views from glazed condition spaces are often more popular with older frail people than views from an open balcony, where drafty breezes and concerns about safety can cause a problem. Residents like a porch with sides that protect it from the wind, especially when it has access to both shade and sun to complement the climatic conditions of the day.

7 - Places for Parking

Locating places for parking is always controversial. Car drives love to park as close as they can to the front door, but no one enjoys views that are occluded by a sea of parked cars.

Parking Lot Should Be Low Key and Landscaped

. . . Placing trees in the parking lot not only breaks up the view with landscape materials but also helps to reduce heat in the summer by providing shade and transpiration . . .

11 - Lighting at Night

Lighting prominent landscape and garden features is one of the best ways to deal aesthetically with lighting at night. Elements like trees, hedges, garden areas, trellis structures, and gazebos located in the landscapes are often visible from the street as well as from residents' units. In contrast to lighting the building, landscape effect lighting gives everyone something to look at after the sun goes down. Indirect lighting on porches and light emanating from interior windows gives the building a glow that is attractive from the street. This always preferable to commercial lighting aimed at the building.

Walkway and Parking Lot Lighting at Night

Sidewalks that link the parking lot with the front entry should be well lighted at night for security purposes... Parking lot lighting at night should be at least 0.5 foot-candles throughout . . . Pathway lighting around the site is handy for those who might want to take a walk after dinner, especially in the winter, when the sun goes down early.

12 - Creating Courtyards to capture Views and Ensure Privacy

. . . Outdoor courtyards accessible from common rooms are particularly attractive in group housing arrangements for older people. Seeing into spaces that are landscapes and outfitted with comfortable furniture makes these spaces more attractive and inviting.

The following guidelines for The Outdoor Landscape are from Chapter 5 in *Design for Assisted Living: Guidelines for Housing the Physically and Mentally Frail* by Victor Regnier²⁷⁸

THE OUTDOOR LANDSCAPE

15 - Gardening Is Relatively Easy to Pursue Successfully

The vast majority of older people have had experience with gardening, either as a hobby, as a pastime, or simply as a homeowner. Thus, it is an activity that begins with previous experience and broad-based acceptance. Even though gardening is often carried out alone, it is an activity that can stimulate interaction with others. There is something about nurturing plant materials that is attractive to many older women. It is an activity that provides continuity in their lives from past to present. It also provides a way to interact with the natural ecology of the surrounding environment.

Resident Gardens

Raised gardens allow plant materials to be accessible to people in wheelchairs and also allow residents to gardens without having to bend over. When raised 16 to 24 inches, gardens are closer to the eyes and the nose, making it easier for older people to sense and appreciated the plant materials. At the end of the growing season, resident gardens can look scruffy. They need to be managed as part of an activities program. Some residents may not use them because the work required is strenuous. Given their

²⁷⁸ Victor Regnier, "Outdoor Landscape," in *Design for Assisted Living: Guidelines for Housing the Physically and Mentally Frail*, (Canada: John Wiley and Sons, Inc., 2002), 43-53.

popularity and broad-based appeal, gardening programs should always be explored with residents in dementia and assisted living.

Practical Use of Gardening

Some northern European projects have large resident gardens. This is especially true of projects located in small towns and in the countryside. These gardens are popular because they support a hobby or a pattern of activity that has been present for a lifetime. In these gardens, food is grown that can be prepared in the kitchen and served to other residents... Growing food provides one of the best opportunities to express self-sufficiency, allowing residents to feel engaged in the cycle of life.

Gardening is Relatively Easy to Pursue Successfully

In Scandinavia, there is a strong desire to spend time outdoors in the summer. Gardening is a relatively easy activity to manage and provides a compelling reason for residents to spend time outside. Some plants, like flowers and tomatoes, do not require a highly developed green thumb. Gardening does not involve a major investment in time or money. Resident garden installations can vary in scale from a few pots to a large, raised planting bed surrounded by a fence, often with access to a water source and a small potting shed. The process of nurturing a garden is intrinsically satisfying to many people.

16 - Shade Control

Most older people are interested in going outside on the nicest days. These are often days when the sun is brightest. When sitting outdoors, they want the option to sit in areas that offer sun, shade, partial shade. Shade is particularly attractive in mid-summer, near the end of the day, or when the temperature is highest.

Shade Pavilions in the Landscape

Structures like gazebos, umbrellas, and garden trellises are interesting places to experience shade, as well as interesting objects that can be seen from indoors. A trellis provides partial shade, which allows an individual to select a location with both sun and shade . . .

Shade Structures Attached to the Building

Awnings are perhaps the most common shade structure. These are easy to attach to a building and, if large enough, they can provide shade inside as well as outside. The Dutch have a tradition of using colorful, retractable awning on their buildings. Those used for housing of the elderly are often controlled by a motor with a switch located inside the dwelling units. Trellis shade structures attached to buildings can be designed as an extension of the fascia. When arranged this way, they appear more substantial. Over time, plant materials can be trained or shade cloth can be attached to a trellis to create a partial shade condition. If flowering plants are used, they may attract bees ad

insects. Air flow and breezes are also an important consideration. Many residents find drafts unpleasant, which is why outdoor spaces next to the building are preferable. In addition to controlling airflow by using the mass of the building, they allow residents to be near entrance and exit doors. When all else fails, umbrella tables often work well. They are moveable and can be adjusted to conform to sun angles. A major problem of concern is their tendency to be overturned by wind gusts.

17 - Accessorizing the Exterior

Like the interior of a building, outdoor “rooms” can benefit from accessories. Objects designed to be placed in a garden can have an aesthetic or functional rationale. Rain gauges, thermometers, bird feeders, and wind sculptures serve a purpose as well as providing visual interest. Often the most interesting items are found in the local hardware antique, or lawn and garden store. These are common items associated with residential settings. Their presence often reinforces the atmosphere of the place as a residential environment.

Objects that are Compatible with Plant Materials

Objects placed in a garden can create contrast with plant materials. The object when combined with plant materials generates much more interest than it does alone. Familiar objects such as farm plows, antiques, cast stone figurines, wind sculptures, pots, and native stone can also connect residents with the past... Utilizing local stone for rock placements in the garden provides another way to connect residents with the landscape. Objects can also be kinetic. They can move with the wind or they can attract birds and butterflies. Fountains and pool of water are very attractive to a range of wildlife. However, the noise of flowing water sometimes stimulates the urge to urinate in people with incontinence. Deep pools of water can sometimes pose a safety hazard. However, stones can be used to fill deeper pools, thus alleviating concerns about accidental drowning.

20 - The Healing Therapeutic Garden

A number of recently published books have touted the therapeutic benefits of gardens (Cooper-Marcus and Barnes, 1999; Cooper-Marcus and Francis, 1998; Tyson, 1998). There is empirical evidence (Ulrich, 1984, 1995) that exposure to garden views reduces the convalescence period of acute-care hospital patients. Others believe that the use of gardens for mental exercise like directed imagery in cancer therapy can have a positive impact on the effectiveness of various therapies. In addition, walking for physical exercise is clearly beneficial.

Attributes of the Healing Gardens

Clare Cooper-Marcus (1999) identify nine attributes of an effective healing garden:
Homelike imagery
Places for privacy
Settings that stimulate mental alertness

Opportunities for social exchange
Places for family members to gather
A large enough area for outside activities
Comfortable seating
A feeling of security
Accessibility to the handicapped
A garden that addresses all nine of these criteria is likely to be successful.

21 - Selecting Appropriate Plant Materials: Color, Texture, Aroma, and Variety

Adding color, texture, and a variety to the palette of plant materials gives the site design a unique and memorable look. Nowhere is it more important than the front door. More people (guest and residents) will see the landscape located here than at any other space on the site. Older residents have difficulty bending over, and given their poor eyesight and reduced sense of smell, flowers located near the ground are harder to appreciate. Elevating these materials through raised beds or pots enhances their color and aroma. Raising plant materials gets them closer to a resident's face; thus, eyes, nose, and fingers can more easily sense their beauty.

Adding Variety and Interest

A variety of plant types and species makes for a more stimulating landscape design. . .

23 - Attracting Wildlife: Animals, Insects, and Birds

Attracting wildlife is an inexpensive way of making the landscape more lively while maintaining the character and intimacy of a residential backyard. The aim is to create a garden similar to one you would experience in your own home. Some of the interesting locations to view wildlife are near windows and porches, where residents can easily see activities.

Birds

Birds are the most sought – after wildlife species. They are friendly and very interesting to watch, especially in the winter. Bird feeders, bird baths, and bird houses are relatively easy to place and fascinating to watch.

24 - A playground for Children

Integrating the activities of preschool children with elder care has been a successful strategy for decades. There are numerous examples in the United States, especially in larger continuing care retirement communities, where facilities often provide day care for the children of staff as an employment incentive. In general, older residents enjoy watching children play. Small children are good at providing unconditional love and affection, which is very attractive to many older residents. The success of this strategy lies in how the two groups are mixed. There are two very different types of caregiving situations that require staff with different skill sets.

Changing the Image of Assisted Living in the Community

The most common complaint is that the noise or commotion upsets an agitated resident but, when managed properly, the presence of children is magical. It can redefine the purpose of the building in the community. Instead of a place for older people to live out their last years, it can be conceptualized as a place where both older people and children are taken care of. The difference is sometimes subtle, but it helps break down the notion that the facility is only an old people's home.

More Modest Strategies

In most assisted living building, it is not possible to create a fully functioning children's playground, yet grandchildren of residents should feel welcomed. Even something as modest as a swing and slide provides the message that children are welcomed. It should be located near the building rather than on the edge of the site or on the other side of the parking lot. A remote location is often too far away for residents to participate and can become an "attractive nuisance" if it is located too close to traffic.

25 - A Looped Walking Pathway

One of the best ways to encourage residents to walk for exercise is to create a pathway around the perimeter of the building that starts and ends at the front entrance. If more exercise is desired, residents can do consecutive laps. The width of the pathway should be at least 5 feet, and it should have a nonglare surface. Dark gray and light brown concrete is the best solution. Blacktop is an acceptable material if it is prepared and laid properly. Darker colors will also subside into the green landscape of the lawn. Occasionally, decomposed granite is utilized around the base of the trees, where water penetration and root disturbance are issues. However, in order to avoid erosion, the area needs to be carefully edge with wood or metal.

Plan for Benches and Rest Areas

In order for residents to feel comfortable walking, they need to have a place to sit, rest, and recharge every 100 - 125 feet. Benches should be positioned to take advantage of interesting views and should be at least 5 feet wide. Residents often walk with friends or caregiver, and both need a place to sit down. Benches should be resilient and should have arm rests on both sides to make it easy to sit down and stand up. Teak is a popular material for bench construction. Benches should be placed on and secured to the pavement. Residents who have difficulty with ambulation often prefer to see the next bench before starting to walk again. This assures them that there is a predictable location where they can rest next.

Benches and landscape Treatment

Landscaping around each bench location can be the basis for a very effective planning and planting strategy around the perimeter of the site. Because each bench is likely to attract residents, this landscaping approach places plant materials in areas that are

heavily utilized. Some of these benches should provide diversions like views, wildlife feeders, accessories, or unique plant materials. When exposed to sun, these settings should have an adjacent tree or trellis to provide shade.

26 - The Barbecue Plaza

A large outside space of 300 to 500 SF should be available to social events. Holidays like Memorial Day, July 4th, and Labor Day are often planned as days for barbecues or picnics to which family members are invited. The most flexible outdoor spaces usually extend from a major common space like a living room or dining room. However, a 2 - to 5 - foot landscape buffer should be considered between the interior room and the pavement. This will ensure that the view from the inside is of colorful plant materials rather than a stark concrete slab. The terrace should be sized to accommodate up to half of the resident population.

Logistics and Arrangements

The patio space should accommodate food service and should be easily expanded for special events. A storage area is useful for extra chairs, a barbecue grill, and an audio system for announcements and music. Power should be available, and night lighting should be sufficient. Part of the plaza should be shaded, and the floor should be made of a darker nonglare material.

SUSTAINABLE DESIGN

There are numerous environmental benefits of living in a cohousing community. Although not discussed in this paper, sustainable design and practices should be incorporated into the design of these communities.

RESOURCES

Assisted Living

Assisted Living Federation of America (ALFA)
1650 King Street, Suite 602
Alexandria, Virginia, 22314
Phone: (703) 894-1805
Web Site: <http://www.alfa.org/alfa/default.asp>

Facility Guidelines Institute (FGI)
350 N. Saint Paul St., Suite 100
Dallas, TX 75201

Web Site: <http://www.fgiguideines.org/>

Recommended Book

Design for Assisted Living
By Victor Regnier, FAIA
Copyright 2002, John Wiley and Sons Inc.

Design Details for Health, Second Edition
By Cynthia A. Leibrock and Debra Harris
Copy Right 2011, John Wiley and Sons Inc.

Humanistic Design of Assisted Living
By John P. Marsden
Copy Right 2005, John Hopkins University Press

Cohousing

The Cohousing Association of the United States
P O Box 13254
Mill Creek, WA 98082
Phone: (812) 618-2646 or (812) 681-COHO
Web Site: <http://www.cohousing.org/>

Senior Cohousing
241 B Commercial Street
Nevada City, CA 95959
Phone: (530) 265-9980
Web Site: <http://www.seniorcohousing.com/>

Recommended Books

Creating Cohousing: Building Sustainable Communities

By Kathryn McCamant and Charles Durrett

Copy Right 2011, New Society Publishers

The Senior Cohousing Handbook: A Community Approach to Independent Living

Charles Durrett

Copy Right 2009, New Society Publisher

Design for Aging

The American Institute of Architects

AIA Knowledge Net

Design for Aging

Web Site: <http://network.aia.org/designforaging/home/>

Recommended Books

Architecture for an Aging Population

International Association of Homes and Services for the Aging (IAHSA)

Copy Right 2014, IMAGES Publishing

Design for Aging Series

Web Site: <http://network.aia.org/DesignforAging/Home/DesignforAgingReview/>

Gardening

West Virginia University, Center for Excellence in Disabilities

959 Hartman Run Road

Morgantown, WV 26505

Phone: (304) 293-4692

Toll Free: (888) 829-9426

TTY: (800) 518-1448

Web Site: <http://cedwvu.org/about/>

<http://greenthumbs.cedwvu.org/factsheets/accessorize.php>

Ohio State University Extension

2021 Coffey Road, Columbus, Ohio 43210-1086

Phone: (614) 292-6181

Web Site: <http://ohioline.osu.edu/index.html>

<http://ohioline.osu.edu/hyg-fact/1000/1642.html>

Recommended Books

The Role of the Outdoors in Residential Environments for Aging
By Susan Rodiek & Benjamin Schwarz
Copyright 2005, Haworth Press

Virginia Tech
Department of Horticulture
301 Saunders Hall (0327)
490 West Campus Dr.
Blacksburg, VA 24061
Phone: (540) 231-5451
Web Site: horticulture@vt.edu
Horticultural Therapy Related Books <http://www.hort.vt.edu/HUMAN/HTbooks.html>

Universal Design

The Center for Universal Design
North Carolina State University
The Center for Universal Design
Campus Box 8613
Raleigh, NC 27695-8613
Phone: (919) 513-0825
Web Site: <http://www.ncsu.edu/ncsu/design/cud/>

Universal Design and Green Home Survey Checklist
University of Iowa Clinical Law Programs
By Leonard A. Sandler
Copy Right 2009
Contact: leonard-sandler@uiowa.edu
<http://www.homemods.org/resources/PDF/UDGreenHomeChecklist061609-FINAL.pdf>

Recommended Books

Beautiful Universal Design: A Visual Guide
By Cynthia A. Leibrock and James Evan Terry
Copy Right 1999, John Wiley and Sons Inc.

Universal Design for the Home
By Wendy A. Jordan
Copy Right 2008, Quarry Books



Chapter VII Site Selection

Process

Sites

Palolo valley, Oahu

Downtown, Oahu

Honouliuli, Oahu

Kalaheo, Kauai

Hilo, Hawaii Island

Analysis

Methodology

Results

Comparative Analysis of Sites

Selection

Conclusion

PROCESS

The site selection process for a possible senior cohousing community in Hawaii was initiated with a conversation with Marlene DeCosta, director of the Office of Land Assets Management for the Roman Catholic Diocese of Hawaii. Although the organization is a medium size land owner in the State of Hawaii, many of these properties are connected to parishes, cemeteries, or schools. Other properties are located on challenging terrains and are at great distance from vital public and social service infrastructures such as public transportation, medical services, and goods and services. Discussion with Mrs. De Costa regarding the proximity to the above mentioned parameters resulted in a list of five possible sites of a senior cohousing community. Some of these sites are urban in context and although they are located within close proximity of vital social supportive infrastructures, they may not be the optimal choice for this type of community. Other sites are located on the neighboring islands, but while these sites are within populated areas of the island; they face their own set of challenges.

SITES

Research was conducted on the five sites to determine the most optimal setting for a senior cohousing community.

Three sites are located on Oahu Island:

1. 2117 Palolo Avenue, Honolulu
TMK: 1-3-4-006-002
2. 250 Vineyard Street, Honolulu
TMK: 1-2-1-018-049
3. 91-2002 C Old Fort Weaver Rd, Ewa
TMK: 1-9-1-017-092

One site is located on Kauai Island:

4. Kaumualii Highway, Kalaheo
TMK: 4-2-3-004-012

One site is located on Hawaii Island:

5. Haihai Street, Hilo
TMK: 3-2-4-002-073

PALOLO VALLEY, OAHU

Palolo Valley is located in the City and County of Honolulu's Primary Urban Center.²⁷⁹ Palolo is in the Kona moku, one of the six ancient Hawaiian land divisions on the island of Oahu.²⁸⁰ The name in Hawaiian means clay or mud.²⁸¹ The valley is nestled between the western slope of Wilhelmina Rise and the eastern slope of Waahila Ridge. The surrounding neighborhoods are: Kaimuki, Kapahulu, St. Louis Heights, Moiliili, and Manoa. In the past the neighborhood was stricken with violence occurring around the public housing projects in the valley. These events gave the valley a negative reputation throughout the state, but with huge community efforts from area residents, the community is now a safer place to live.²⁸² Because of the desirable location of the valley, an influx of new residents in recent years has brought about the building of bigger homes in the community.

The valley has two primary entrances: Palolo Avenue and 10th Avenue, which are accessed from the area's main thoroughfare, Waiālae Avenue. Businesses, food establishments, retail shops, and bus routes are all found along this busy transportation corridor that services the valley and its neighboring communities. Traveling into the valley on Palolo Avenue, the site is located about 1.3 miles in. The physical address is 2117 Palolo Avenue. The community of Palolo Valley is predominately comprised of single family residential dwellings with small family businesses scattered throughout the valley. Palolo Chinese Home, a long term senior care facility and Mu-Ryang-Sa Buddhist Temple, are also located here. The valley has two public schools, Palolo Elementary School and Jarrett Middle school. Ke Kula Kaiapuni O Anuenue, Hawaii State Department of Education's K-12 Hawaiian Language Immersion School is also located in the valley.²⁸³

²⁷⁹ "Development/Sustainable Communities Plan," City and County of Honolulu, accessed November 11, 2013, <http://www.honoluluodpp.org/Planning/DevelopmentSustainableCommunitiesPlans.aspx>.

²⁸⁰ "Traditions of Oahu: Stories of and Ancient Island," Kapiolani Community College, accessed November 11, 2013, <http://apdl.kcc.hawaii.edu/oahu/graphics/konaahupuuaa.gif>.

²⁸¹ "Hawaiian electronic Library" Ulukau, accessed November 11, 2013, <http://wehewehe.org/gsd12.85/cgi-bin/hdict?a=q&r=1&hs=1&m=-1&o=-1&e=p-11000-00---off-0hdict--00-1---0-10-0---0---0direct-10-ED--4-----0-1lpm--11-haw-Zz-1---Zz-1-home---00-3-1-00-0--4---0-0-11-00-OutfZz-8-00&q=palolo&j=pm&af=1&fqf=ED>.

²⁸² Michael Tsai, "Lucky they live Palolo," *The Honolulu Advertiser*, May 16, 2004, accessed November 11, 2013, <http://the.honoluluadvertiser.com/article/2004/May/16/ln/ln03a.html>.

²⁸³ "Hawaii School Guide," New Distinction Corp., accessed November 11, 2013, <http://www.hawaiischoolguide.com/public-schools/Anuenue>.

The half-acre site was the former home of St. Patrick Church's Food Pantry and Outreach. The two story CMU-wooden structure on the site is in disrepair. The site is minimally landscaped with some matured plantings that are located mainly in the front of the property. The site and its nearby surrounding area is relatively level except for the steep cross street of Kiwila Street that intersects Palolo Avenue and 10th Avenue. The #6 Palolo Valley public bus line runs throughout the valley with a bus stop located directly in front of the property.

The site is adjacent to the corner low-rise apartment complex and laundry center. Located to the rear of the property is Palolo Valley Homes, which is comprised of 63 low-income apartment complexes that is owned and operated by Mutual Housing Association of Hawaii. Located about a quarter mile south from the site is Palolo District Park, which has amenities such as a swimming pool, tennis courts, a baseball field, and a multipurpose gymnasium.

PROS

Urban Setting

Close to nearby recreational facilities

Area has lots of traffic signals and crossings due to nearby schools

On public bus line

Sidewalks throughout the community

Level site and surrounding areas

CONS

Land Value Cost

Size of Lot

Limited building type design

Distance to shopping

Distance to health services



Figure 170: The site is located in the neighborhood of Palolo Valley located about 5 miles east of downtown Honolulu.²⁸⁶

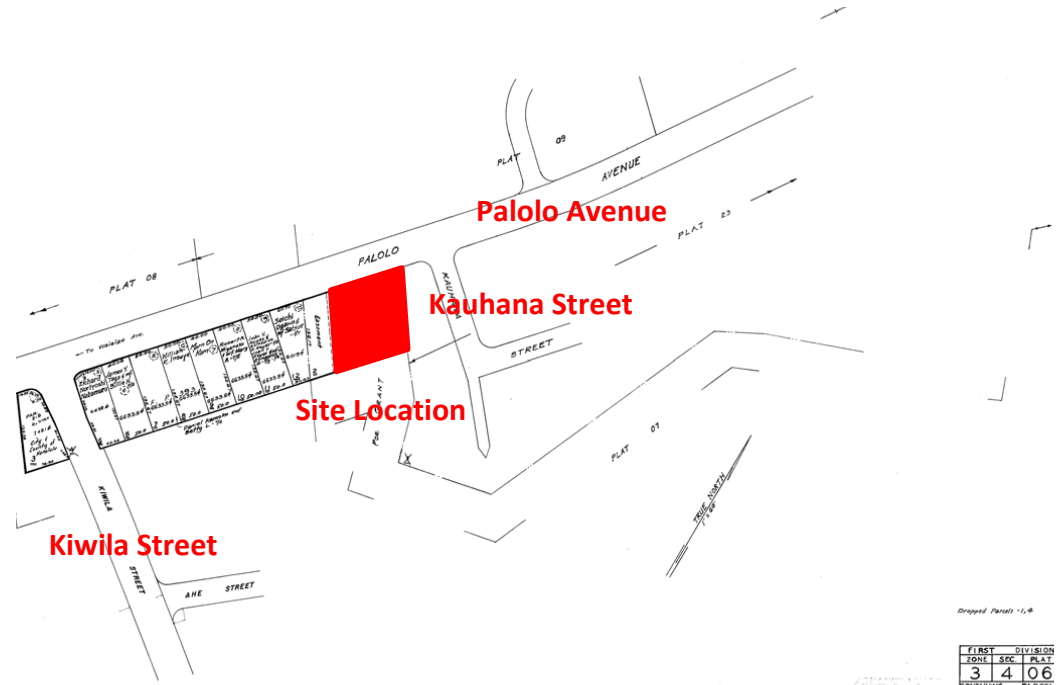


Figure 171: Tax Map Key showing the 0.5168 parcel. The site is located between Kahana Street, to the north, and Kiwila Street, to the south.²⁸⁷

²⁸⁶ Ibid

²⁸⁷ "Parcel and Zoning," City and County of Honolulu, accessed November 11, 2013, http://gisftp.hicentral.com/Taxmaps_pdf/Zone3/images/O34006.PDF.

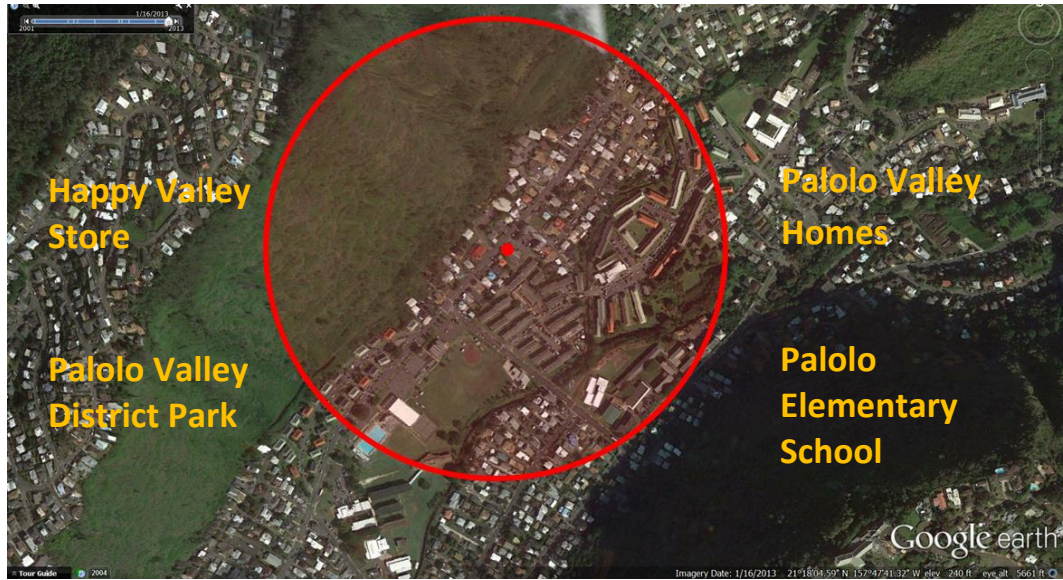


Figure 172: This is an aerial view showing a quarter mile radius of the surrounding area around the site noted by the red dot. Palolo District Park can be seen at the lower left of the image. The area is primarily an older residential neighborhood consisting of single family detached homes.²⁸⁸



Figure 173: North view on Palolo Avenue. Palolo Valley has two entrances, Palolo Avenue and 10th Avenue. The avenue is U-shaped and runs 3.7 miles long. The area surrounding the front of the property is fairly level and easily walkable.

Photo by Author

²⁸⁸ Image by Google Earth



Figure174: South view on Palolo Avenue. The community has sidewalks and curb cuts making it easy for those pushing strollers and in wheelchairs or using walkers to navigate the streets within the area.
Photo by Author



Figure 175: Fronting the property site is the eastern slope of Waahila Ridge. Residential homes line the mountain side directly across the project site.
Photo by Author



Figure 176: The western slope of Wilhelmina Rise lies directly to the rear of the property. Palolo Valley Homes housing complex is located at the back of the site. Photo by Author



Figure177: Adjacent to the rear of the project site is Palolo Valley Homes. The housing complex consists of 63 2-story low income apartment buildings. There are 306 rental units within the complex. Photo by Author



Figure 178: The site is located near Palolo Elementary School, one of three public schools in the area. School Speed Limit Crossing signals, such as the one above, crosswalks, and light stops can be found along Palolo Avenue and 10th Avenue. Photo by Author



Figure 179: At the corner, adjacent to the project site, is a low rise apartment complex with a laundry center located on street level. Pedestrian crossing signs and curb cuts are found at this intersection of Kauhana Street and Palolo Avenue. Photo by Author



**Figure 180: New Valley Store, a mini convenient store, located at 2119 Kauhana Street, is 0.06 miles north from the site.
Photo by Author**



**Figure 181: A covered bus stop is located directly in front of the site. The City and County of Honolulu's #9S, Palolo Valley Shuttle bus line services the valley. Passengers can transfer on to other bus lines located on Waialae Avenue at the entrance of the valley.
Photo by Author**



Figure 182: Palolo District Park is located less than a quarter mile south from the site. Accessibility for the elderly using assistive devices is an issue within some areas of the park's complex.
Photo by Author



Figure 183: Palolo District Park is equipped with a tennis court, swimming pool, playing field, basketball courts, and volleyball courts. The park also has a multi-purpose gymnasium where there the Palolo Valley Seniors, a senior club, meets every Tuesday morning.
Photo by Author



**Figure 184: Palolo's McDonald Restaurant is a favorite neighborhood gathering spot for the area's elderly. The restaurant is located at the entrance of the valley at the corner of Waialae Avenue and Palolo Avenue.
Photo by Author**

DOWNTOWN, OAHU

Downtown Honolulu is located in the City and County of Honolulu's Primary Urban Center.²⁹⁰ The site is in the Kona moku, district on the island of Oahu. The area is rich in cultural history and at one time was the seat of the Hawaiian Kingdom. The area was the vineyard of Don Francisco de Paula Marin, a Spaniard and confidant of early Hawaiian monarchy, for which the street is named.²⁹¹ The nearby Chinatown, Hawaii Capital and Punchbowl areas are designated as a special zoning district according to the City and County of Honolulu's land use ordinances.²⁹² The downtown area is the hub for the city and county, state and federal agencies and offices and is also the financial and legislative district of the state. The surrounding neighborhoods are: Punchbowl, Liliha, Palama, and Kakaako. In the past, some of the downtown areas, especially those adjacent to Chinatown, were home to bars, pool halls and prostitution brothels. Although efforts have been made to revitalize the area, some of these establishments still remain. The revitalization that helped to clean up the areas around the site includes: Chinatown, the Theater District, Downtown proper, and the Capitol District, changed its composition and now it has become an eclectic district of restaurants, art galleries, and small businesses, while remaining the center of the state's commerce.

The site is located one block south of Vineyard Boulevard, a busy 8 lane thoroughfare that serves as a primary transportation corridor. The site's physical address is 250 Old Vineyard Street. To the east of the site is Punchbowl Street, one of the main access streets into the state capitol area. Queen Emma Street, which runs parallel to Punchbowl, is a secondary access into and out of downtown and is located west of the site. The site is located one block north of the business and legislative districts. The state's largest non-profit medical facility, Queen's Medical Center, is located within walking distance of the site. Located on Queen Emma Street are two

²⁹⁰ "Development/Sustainable Communities Plan," City and County of Honolulu, accessed November 9, 2013, <http://www.honoluludpp.org/Planning/DevelopmentSustainableCommunitiesPlans.aspx>.

²⁹¹ "Bulletin - University of Hawaii, Agricultural Experiment Station," Google, accessed November 11, 2013, http://books.google.com/books?id=kvNFAQAAIAAJ&pg=RA2-PR22&lpq=RA2-PR22&dq=Don+Francisco+de+Paula+Marin+vineyard+street&source=bl&ots=7-5dIRbACE&sig=vnu0PVrX1SfzQZLSynJpGG_BMEY&hl=en&sa=X&ei=PpiSUqS4J4bzoASQ_oFo&ved=0CFoQ6AEwCA#v=onepage&q=Don%20Francisco%20de%20Paula%20Marin%20vineyard%20street&f=false.

²⁹² "Zoning Special Districts," City and County of Honolulu, accessed November 24, 2013, http://gis.hicentral.com/DataDictionary/ZONING_SPECIAL_DISTRICT.htm#coverage.

public schools, Central Middle School and Royal Elementary School, and also the private school campus of St. Andrew's Schools.

The one acre site is divided into two parcels; the east parcel is currently vacant with remnants of a former gasoline station. Located on the west parcel is a two-story concrete structure that was the former location of Catholic Charities of Hawaii, and is now the home of Family Programs Hawaii. The site and the surrounding area is relatively level, making the neighborhood easily walkable. The #4 and #6 public bus lines service the area with stops located on Queen Emma Street and on Vineyard Boulevard.

The street on which the site is located currently is comprised of the state's 32 unit low income two-story apartment complex, the Royal Queen Emma a mixed-use condominium complex, Hawaii School's Federal Credit Union, and a mixed-use apartment complex. The State of Hawaii's Vineyard Street Parking Garage structure is located at the terminal end of the street. Directly across the site is a vacant lot owned by the Queen's Medical Center. The closest park is Queen Emma Square. Although this little park is shaded and equipped with benches, it is not accessible for people with assistive devices. The nearest recreational facility is located 0.2 miles at the Nuuanu YMCA. Annual membership at the facility for those 65 years and older is \$47.00²⁹³

PROS

Urban Setting

Close to supermarket and pharmacy

Close to health care services

Close to museum

Close to restaurants and eateries

Short distances to public bus line

Level site and surrounding areas

Area has lots of traffic signals and cross walks due to nearby school

Sidewalks with curb cuts throughout the neighborhood

CONS

²⁹³ "Membership," YMCA of Honolulu, accessed November 16, 2013, http://www.ymcahonolulu.org/membership/about_membership.

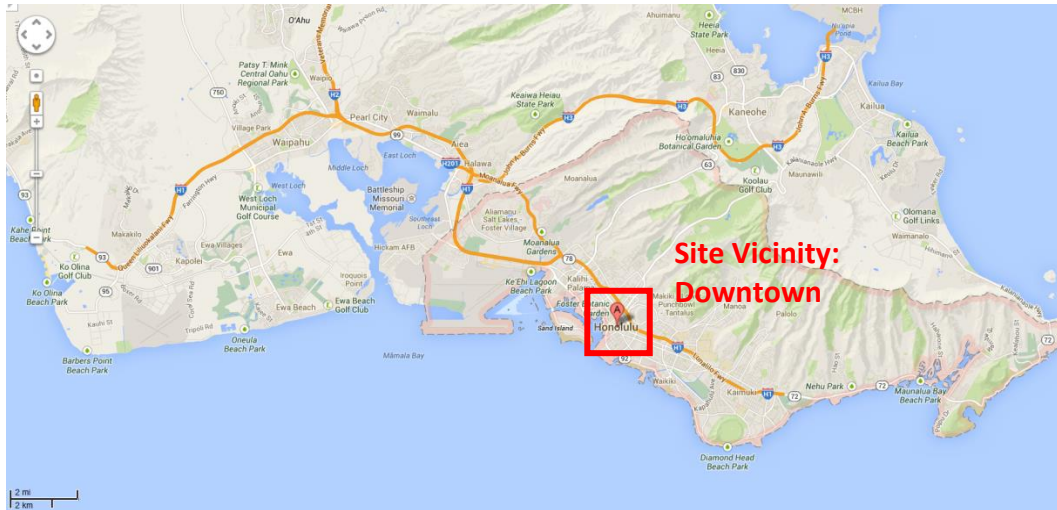


Figure 187: The site is located in the heart of the Downtown Honolulu district. It is located one block north from the Hawaii State Capital building.²⁹⁶

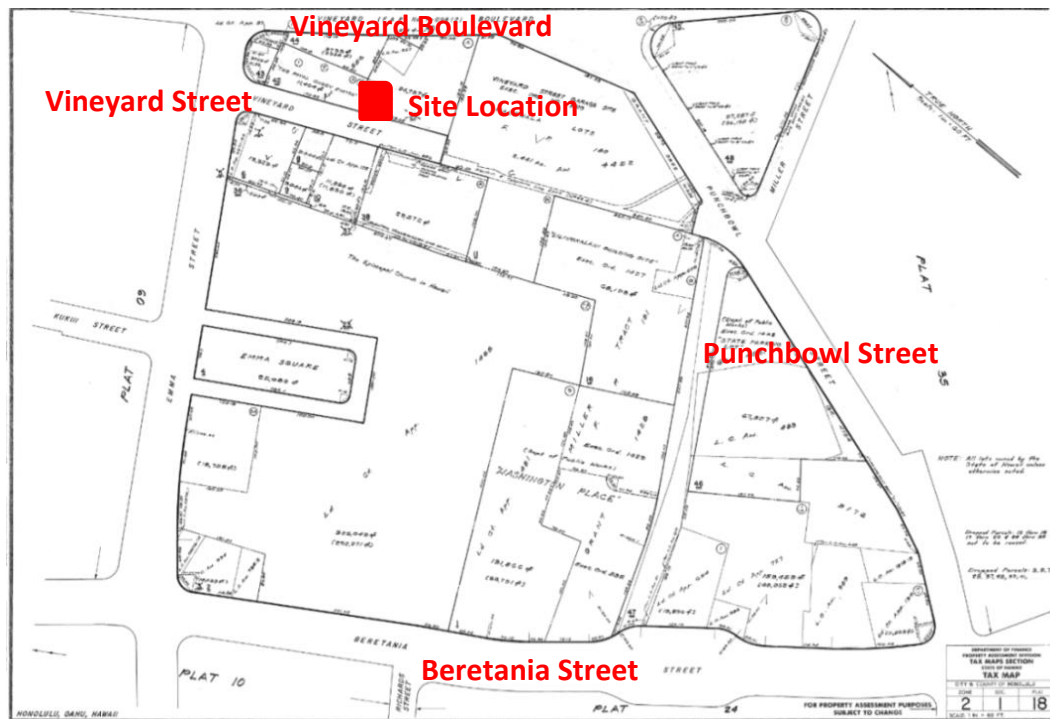


Figure 188: Tax Key Map showing the 0.5638 acre parcel. The site is located in a cul-de-sac. Punchbowl Street, Queen Emma Street, and Vineyard Boulevard are the cross streets surrounding the site.²⁹⁷

²⁹⁶ Ibid

²⁹⁷ "Parcel and Zoning," City and County of Honolulu, accessed November 11, 2013, http://gisftp.hicentral.com/Taxmaps_pdf/Zone2/images/O21018.PDF.

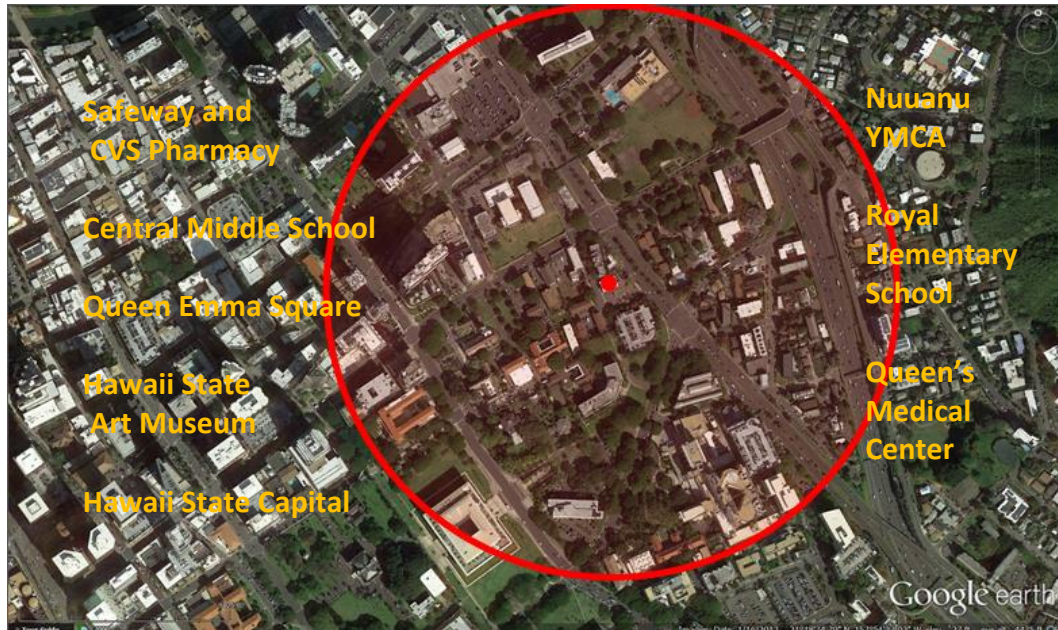


Figure 189: This is an aerial view showing a quarter mile radius of the surrounding area around the site noted by the red dot. The site is located one block in from South Vineyard Boulevard, a busy main thoroughfare that runs east to west. Queen's Medical Center, an acute medical facility, is located to at the lower right of the image.²⁹⁸



Figure 190: East View on Vineyard Street. The site is located one block from Punchbowl Street where Queen's Medical Center is located. The surrounding area is home of many of the State of Hawaii and City and County of Honolulu's office buildings. The State Capital is located one block south from the site. Photo by Author

²⁹⁸ Image by Google Earth



Figure 191: West View on Vineyard Street. The site is located on a quiet cul-de-sac street located in downtown Honolulu. The immediate area is surrounded by low rise apartments complexes and small businesses.
Photo by Author



Figure 192: The east end of the site is currently vacant. The parking structure for the State of Hawaii is located at the terminal end of the street and can be seen to the right of the image.
Photo by Author



**Figure 193: Located at the west end of the site is a two-story concrete structure, formerly the home of the Hawaii branch of Catholic Charities. Family Programs Hawaii currently occupies the building.
Photo by Author**



**Figure 194: Directly across from the project site is a vacant lot. The skyline of Downtown Honolulu can be seen in the nearby distance. Although the area has adequate lighting at night, the area has seen an increase of homeless people due to its close proximity to downtown.
Photo by Author**



**Figure 195: The Royal Queen Emma condominium is located adjacent to the site. This 7-story mixed-use residential and business complex has 24 units.
Photo by Author**



Figure 196: The site's closest acute medical facility is Queen's Medical Center. The walking path shown here connects the site to Punchbowl Street, where the facility is located across the street.
Photo by Author



Figure 197: Queen Emma Square is located less than a quarter mile from the site. Although park benches and stone walls for sitting are located along the perimeter of the park, there are no accessible entrances for the elderly who are dependent on assistive devices to enter.
Photo by Author



Figure 198: Central Middle School, a public school and National Historic landmark, is located on Queen Emma Street is within close proximity of the site.²⁹⁹
Photo by Author



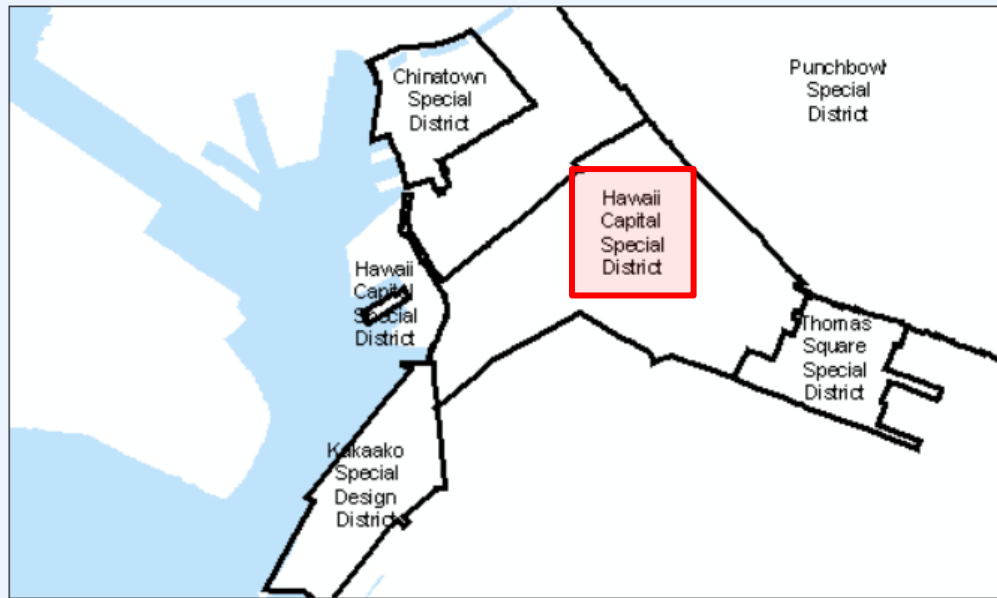
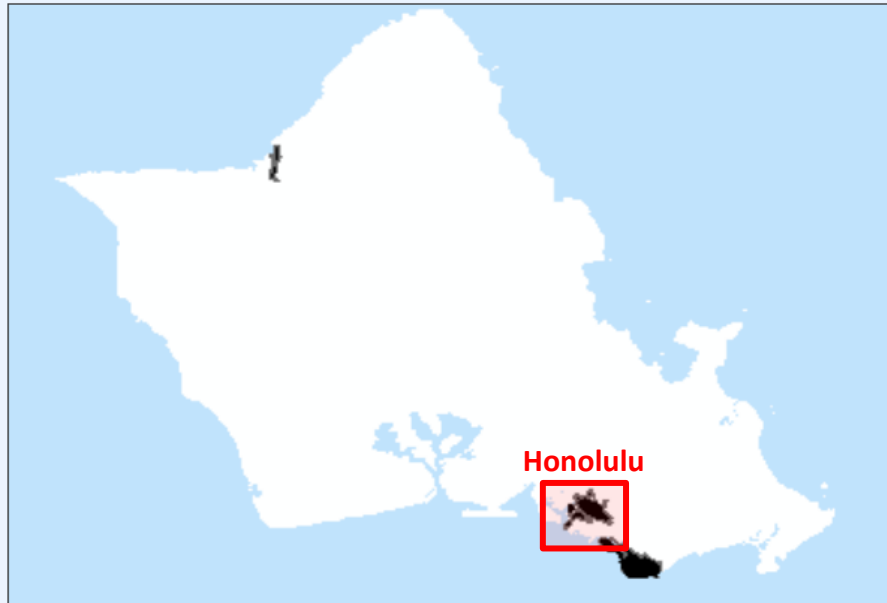
Figure 199: A covered bus stop is located on Queen Emma Street, half a block from the project site. The City and County of Honolulu's #4 and #6 bus lines service the area. Passengers can transfer to other bus lines that are located on South Beretania and South King Street. Kamamalu Neighborhood Park is seen on the upper left of the image.
Photo by Author

²⁹⁹ "About Us," Central Middle School Honolulu, accessed November 17, 2013, <https://sites.google.com/site/centralmiddleschoolhonolulu/about-us>.



Figure 200: Vineyard Boulevard, which runs parallel to Vineyard Street, is located one block north from the site. Although the intersections are well marked with crosswalks, traffic crossing signals, and curb cuts, this roadway, which is comprised of eight traffic lanes, might pose a challenge to a segment the elderly population with mobility issues.
Photo by Author

COVERAGE:



Zoning Special Districts

Figure 201: This is a map showing the City and County of Honolulu special district zoning areas. The site is located in the Hawaii Capital Special District.³⁰⁰

³⁰⁰ "Zoning Special Districts," City and County of Honolulu, accessed November 24, 2013, http://gis.hicentral.com/DataDictionary/ZONING_SPECIAL_DISTRICT.htm#coverage.

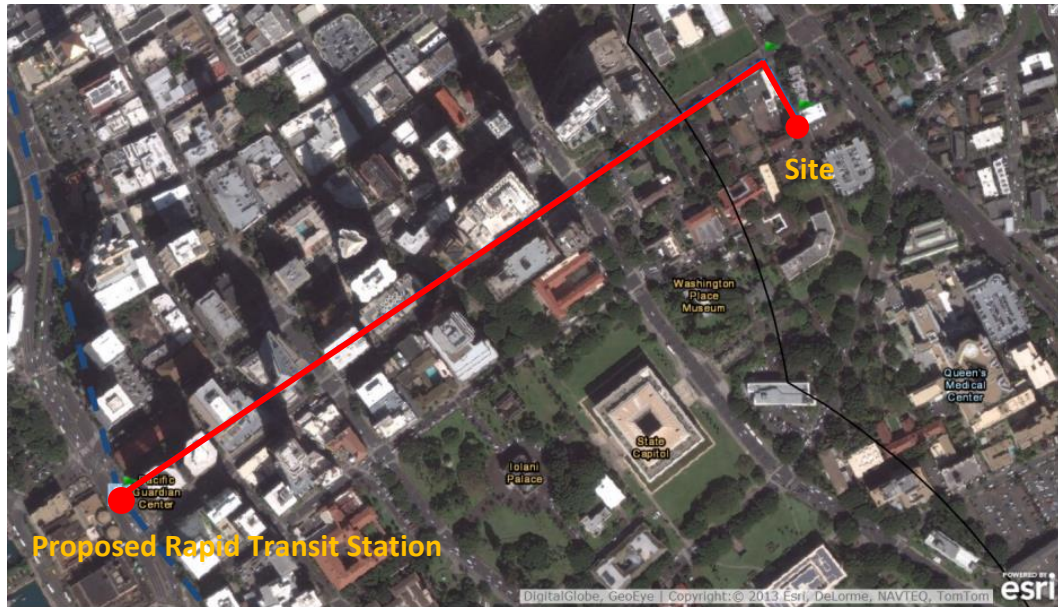


Figure 202: The proposed Honolulu Rapid Transit Station at the Pacific Guardian Tower, located on Alakea Street and Ala Moana Boulevard, is about 0.6 miles from the project site.³⁰¹

³⁰¹ "TOD: State Parcels near Rail Stations," Esri, accessed November 13, 2013, <http://histategis.maps.arcgis.com/apps/OnePane/basicviewer/index.html?appid=46b1076195af4d72b435a4d45f50ffaa>.

HONOULIULI, OAHU

Honouliuli is located in the City and County of Honolulu's Ewa region.³⁰² The area is the largest ahupuaa in the moku (district) of Ewa.³⁰³ Honouliuli has several meanings: "dark water," "dark bay" or "blue harbor" due to the waters of Pearl Harbor.³⁰⁴ The site is located west of West Loch, Pearl Harbor, and east of the University of Hawaii West Oahu Campus. The surrounding neighborhoods are: Waipahu, Kunia, Ewa Beach, Kapolei, and Makakilo. The area north of the project site is the World War II U.S Army's internment camp that was built to hold 3,000 people during the war.³⁰⁵

The site is located on Old Fort Weaver Road. The two primary accesses are the busy 8 lane Fort Weaver Road, the main thoroughfare into the Ewa area, which is located a short distance south of the site, and Farrington Highway, to the north. The physical address is 91-2002 C Old Fort Weaver Road. The vacant 3 acre site is contiguous to the former Kahua Nursery's 20 acre site, which is now a vacant parcel that the Roman Catholic Diocese of Hawaii owns. The site abuts West Loch Golf Course, a City and County of Honolulu's municipal course to the rear of the property. Across the street from the site is agricultural farm land that is currently leased to Fat Law's Farm Inc., producer and supplier of fresh herbs and vegetables. Old Fort Weaver Road is predominately comprised of older single family homes, small businesses, and farm land. To the north of the site, at the junction of the Old Fort Weaver Road and Farrington Highway, is Kahi Mohala, a not for profit behavioral health hospital. To the south of the site, below Fort Weaver Road, lies West Loch Fairways, a single family and townhome community built in the late 1980s by Gentry Homes.

D.R. Horton-Schuler Homes LLC, one of the largest home builders in America, owns 1300 acres directly across from the site. The company plans to build Hooplili, a walkable, mixed-use, sustainable community that integrates small farm, community gardens, and home gardens. The

³⁰² "Development/ Sustainable Communities Plan," City and County of Honolulu, accessed November 9, 2013, <http://www.honoluludpp.org/Planning/DevelopmentSustainableCommunitiesPlans.aspx>.

³⁰³ "Final Archaeological Inventory Survey of Construction Phase for the Honolulu High-Capacity Transit Corridor Project, Honouliuli, Hō'ae'ae, Waikele, Waipi'o, Waiawa, and Manana Ahupua'a, 'Ewa District, Island of O'ahu TMK: [1] 9-1, 9-4, 9-6, 9-7 (Various Plats and Parcels)," City and County of Honolulu, accessed November 17, 2013, <http://www.honolulutrnsit.org/media/50597/20111206-aisp-wofh-sec3.pdf>.

³⁰⁴ Ibid

³⁰⁵ "The Internment Camp in West Oahu's Backyard," University of Hawaii System, accessed November 17, 2013, <http://www.hawaii.edu/malamalama/2011/10/honouliuli/>.

first phase of the project is slated to begin in early 2015, with the project taking 20 years to complete.³⁰⁶ With the anticipated development of Hoopili's 11,750 homes, the Honolulu Rapid Transit system will be constructing a rail station in the community. Ewa and the neighboring community of Kapolei have seen an exponential growth in the recent past. This past summer, a revised version of the Ewa Development Plan was passed to aid in the development plans of the area.³⁰⁷

The area's closest recreational park is Asing Community Park, located about 2 miles south from the site. The facility is not accessible for the elderly using assistive devices. The #44 public bus line services the area with a bus stop located a short distance from the site.

PROS

Rural Setting

Close to supermarket and pharmacy

Close to health services

On public bus line

Level site and surrounding areas

Hoopili development to be built across the street

Close to Honolulu's Rapid Transit Hoopili station

CONS

Distance to retail shopping

No nearby public recreational facility

Close to major transportation corridor

Currently the area has no sidewalks

³⁰⁶ Duane Shimogawa, "D.R. Horton expects to start construction on Hoopili in 2015," *American City Business Journals*, July 2, 2013, accessed November 19, 2013, <http://www.bizjournals.com/pacific/news/2013/07/02/dr-horton-expects-to-start.html>.

³⁰⁷ "Bill 65 (2012), CD1," City and County of Honolulu, accessed November 19, 2013, <http://www4.honolulu.gov/docushare/dsweb/Get/Document-130877/BILL065%2812%29.htm>.

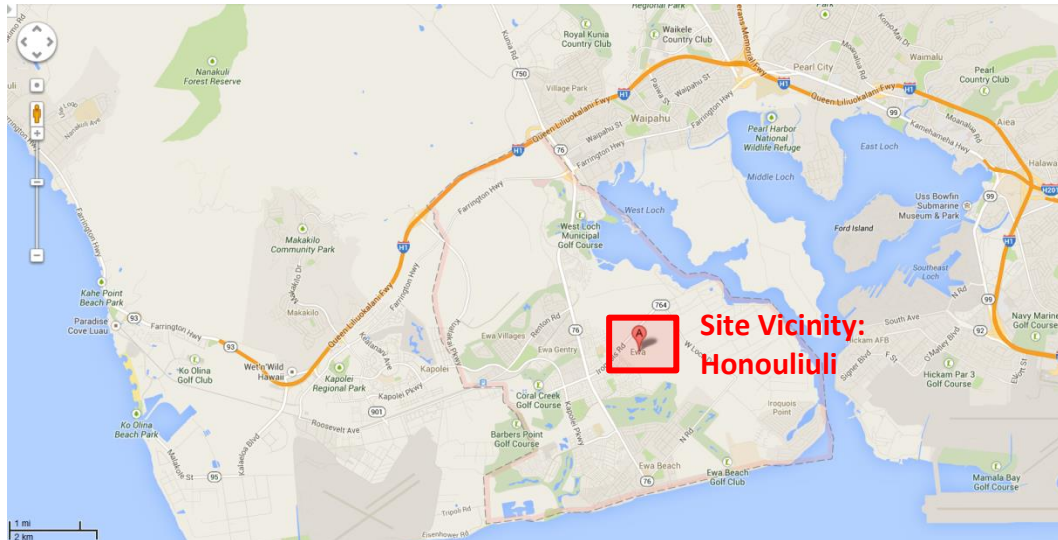


Figure 204: The site is located in the neighborhood of Honouliuli located about 18 miles west from downtown Honolulu.³¹⁰

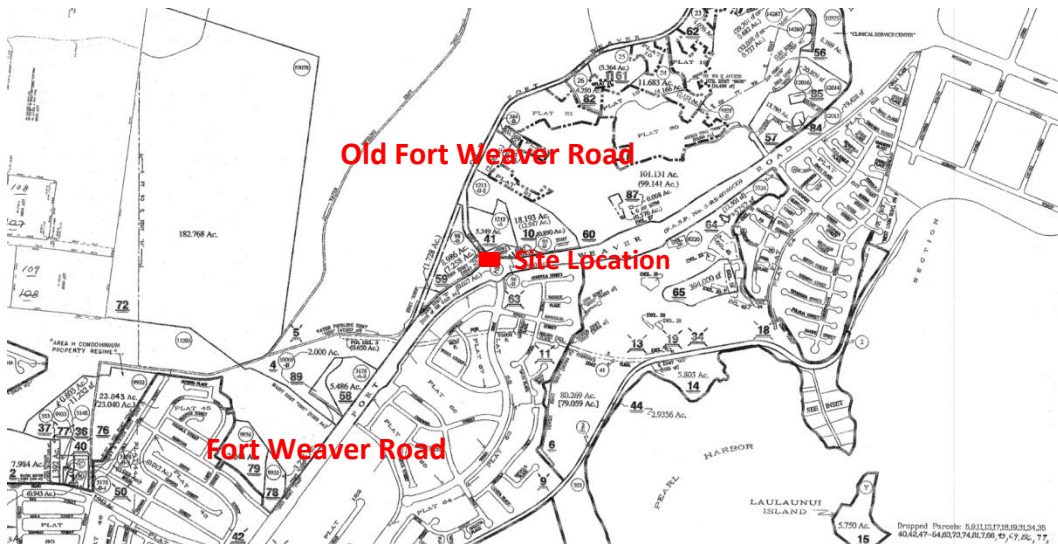


Figure 205: Tax Key Map showing the 3.389 acre parcel. The site is located on Old Fort Weaver Road. South of the site is Fort Weaver Road, a major transportation corridor into the Ewa area. North of the site is Farrington Highway, not shown on this image.³¹¹

³¹⁰ Ibid

³¹¹ "Parcel and Zoning," City and County of Honolulu, accessed November 19, 2013, http://gisftp.hicentral.com/Taxmaps_pdf/Zone9/images/O91017.PDF.



Figure 206: This is an aerial view showing a quarter mile radius of the surrounding area around the site noted by the red dot. The area is primarily an older residential neighborhood consisting of single family detached homes. The site is located on Old Fort Weaver Road, currently a two lane road that intersects Fort Weaver Road and Farrington Highway. West Loch Municipal Golf Course abuts the site to the east.³¹²



Figure 207: North bound on Old Fort Weaver Road, the site is located on the right. The site is contiguous to a 20 acre parcel, which is also owned by the Catholic Diocese of Hawaii.
Photo by Author

³¹² Image by Google Earth



**Figure 208: The surrounding area is lined with older residential single family detached homes and small businesses. The future development of D.R. Horton-Schuler Division's Hoopili community is located to the left of the image.
Photo by Author**



**Figure 209: South bound on Old Fort Weaver Road. In the past, the road served as the main entrance into Ewa town and the surrounding area.
Photo by Author**



**Figure 210: Directly across the street from the site is Fat Law’s Farm, a family owned farm that supplies basil and herbs to the local and global markets. The land is currently zoned as AG-1, restricted agricultural, and is owned by D.R. Horton-Schuler Homes LLC.
Photo by Author**



**Figure 211: Old Fort Weaver Road intersects with Fort Weaver Road, the main vehicular artery into Ewa and the surrounding areas. Although this busy eight lane intersection is equipped with curb cuts, crosswalks, and traffic lights, it may be a challenge for the segment of the elderly population with mobility issues.
Photo by Author**



**Figure 212: This image shows the entrance to project site. This 3.389 acreage is zoned R-5, residential, and is contiguous to 20 acres owned by the Catholic Diocese of Hawaii.
Photo by Author**

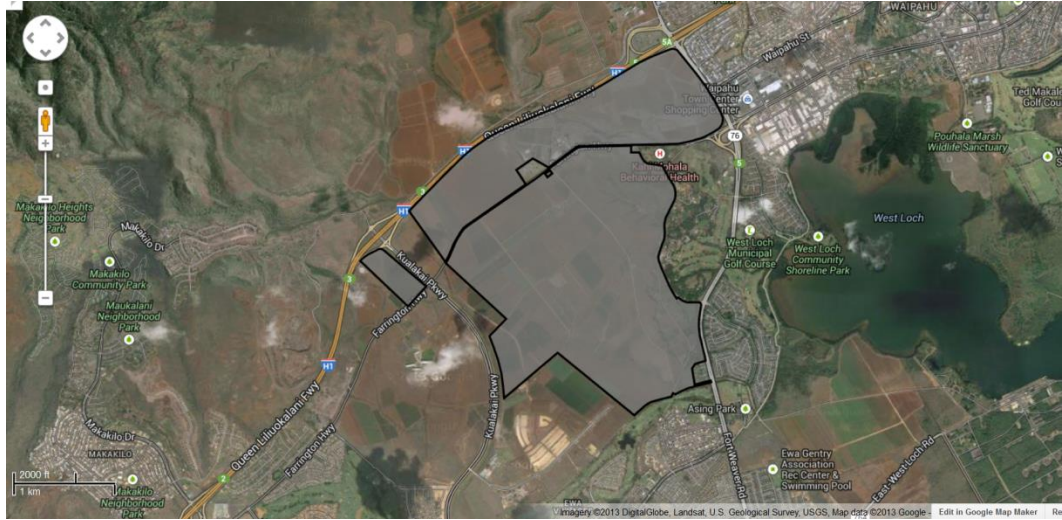


Figure 213: The gray shaded areas are owned by D.R. Horton-Schuler Homes LLC. The area will be the future planned development community of Hoopili and the Honolulu Rapid Transit Hoopili station.³¹³

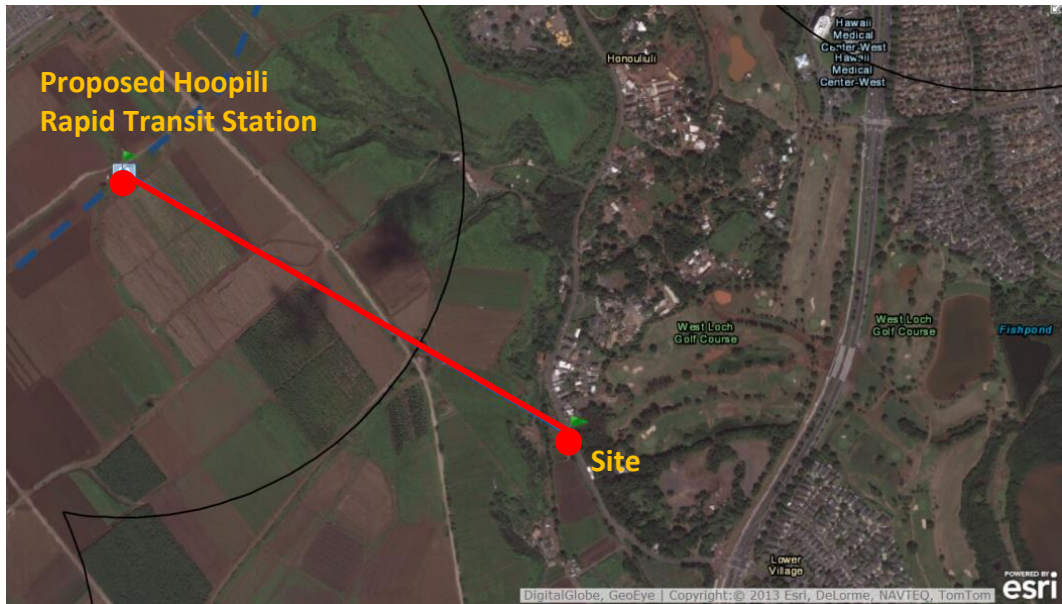


Figure 214: The proposed Honolulu Rapid Transit Hoopili Station is located about 0.8 miles north-west from the project site.³¹⁴

³¹³ “Map of Hoopili Project Area,” Save Oahu Farmlands, accessed November 19, 2013, <http://www.stophoopili.com/map-of-hoopili-project-area.html>.

³¹⁴ “TOD: State Parcels near Rail Stations,” Esri, accessed November 13, 2013, <http://histategis.maps.arcgis.com/apps/OnePane/basicviewer/index.html?appid=46b1076195af4d72b435a4d45f50ffaa>.

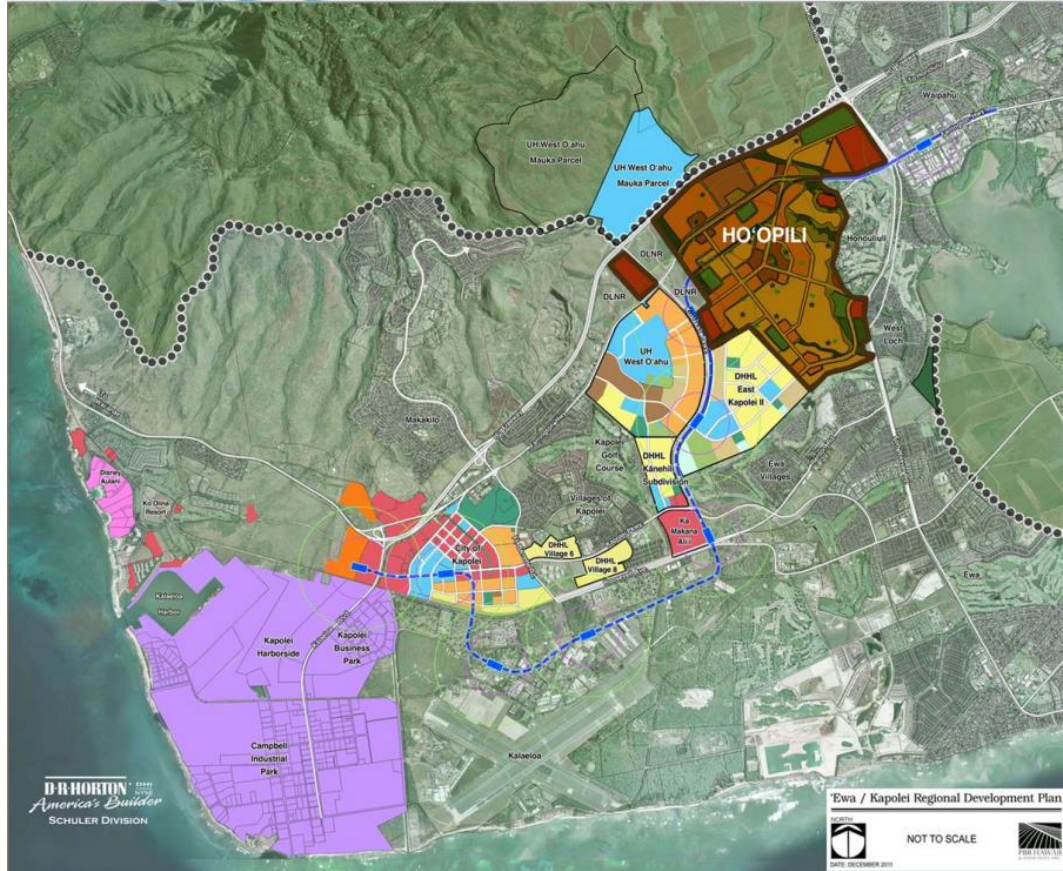


Figure 215: The Honolulu City Council approved the newly updated Ewa redevelopment plan. The plan provides development guidelines for the area.³¹⁵

³¹⁵ "Map," D. R. Horton, Inc., accessed November 21, 2013, <http://www.hoopilioahu.com/thoughtful-planning/>.

KALAHEO, KAUAI

Kalaheo is located in the southern part of Kauai Island, the fourth largest island in Hawaii. The town borders the neighboring areas of Lawai to the east and Eleele to the west. The site is located on Hawaii Route 50, known as Kaumualii Highway, and is adjacent to The Church of Jesus Christ- Latter Day Saint. The immediate surrounding area is comprised primarily of older plantation style homes. Small businesses are located in the heart of Kalaheo, about a quarter mile from the site.

West Kauai Clinic, a non-urgent care center, is staffed with internist, pediatrician, and family medicine practitioners who service the community. For more serious medical conditions, patients will need to be seen in the hospitals that are located some distance away from the site. The town is equipped with a gas station, eateries and restaurants, small convenience stores, a pharmacy, houses of worship, and a United States Postal office. For other goods and service, residents will need to travel to other parts of the island, such as to Poipu, Lihue, and Kapaa.

The 33 mile Hawaii Route 50, which passes directly in front of the site, is a busy undivided 2 lane road that extends from Lihue to the western end of the island, near Pacific Missile Range Facility in Barking Sands. The roadway is without sidewalks and lacks crosswalks and traffic signals. To navigate the roadways, pedestrians are faced with walking along the roadway that separates them from the oncoming vehicular traffic by the painted white lines.

The vacant 3 acre site is rolling and hilly and can be challenging for those with assistive devices. Although the town of Kalaheo is located a short distance from the site, the path of travel can be difficult due to the steep terrain of the area, making walking highly challenging and dangerous for the elderly.

PROS

Rural setting

Land value

On public bus line

CONS

Site is on a steep grade

Distance to supermarket



Figure 217: The site is in the town of Kalaheo, located about 12.6 miles northeast from Lihue, the island’s second largest town, and 22.2 miles from Kapaa, the island’s largest town.³¹⁸

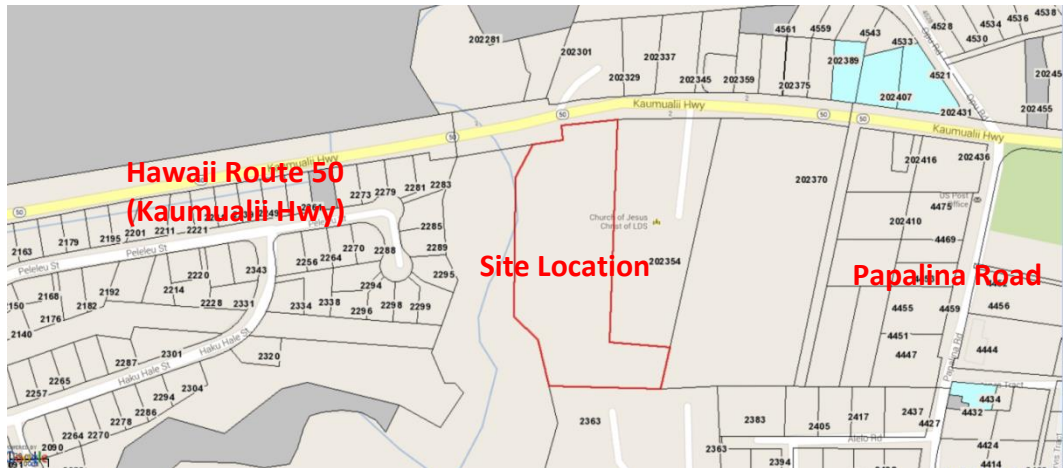


Figure 218: Tax Key Map showing the 3.55 acre parcel is highlighted in red. The site is located on Hawaii Route 50, a 33-mile 2 lane roadway that stretches from Lihue on the east to Pacific Missile Range Facility to the west.³¹⁹

³¹⁸ Ibid

³¹⁹ “Kauai County Parcel Maps,” County of Kauai, accessed November 21, 2013, http://qpublic9.qpublic.net/qpmap4/map.php?county=hi_kauai&parcel=%27230040120000%27&extent=-17759141+2501939+-17758496+2503049&layers=parcels+parcel_sales+gstreets+streetnum.

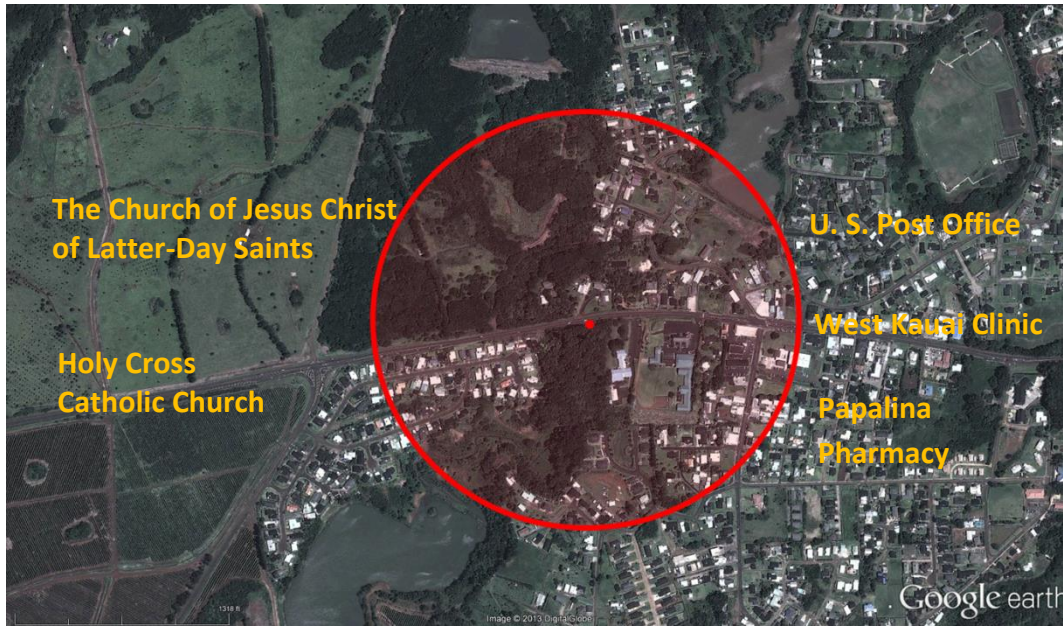


Figure 219: This is an aerial view showing a quarter mile radius of the surrounding area around the site noted by the red dot. The area is primarily an older residential neighborhood consisting of single family detached homes. Located within the quarter mile radius from the site are small businesses and services.³²⁰



Figure 220: East bound on Kaumualii Highway. The town of Kalaheo is located at the top of this image. The guard rails shown here are due the steep ravine located on the site.
Photo by Author

³²⁰ Image by Google Earth



**Figure 221: West Bound on Kaumualii Highway. Fronting the site there are no sidewalks or crosswalks. The white painted marking on the road separates pedestrian right of way from vehicular right of way.
Photo by Author**



**Figure 222: The vacant site is located on the bottom of a steep hill. The entrance to the site is covered with overgrown vegetation.
Photo by Author**



**Figure 223: Adjacent to the site is The Church of Jesus Christ of Latter-Day Saints, one of several houses of worship located in the area.
Photo by Author**



**Figure 224: A school crossing sign is located next to Holy Cross Catholic Church, which is adjacent to The Church of Jesus Christ of Latter-Day Saints. The area is primarily an older single family residential neighborhood. Located further up the road are small convenient stores, West Kauai Clinic, Papalina Pharmacy, the U.S. Post Office, restaurants and gas stations.
Photo by Author**

HILO, HAWAII ISLAND

The town of Hilo is located in the northeastern part of Hawaii Island, the largest of the main islands of Hawaii. The district of Hilo, where the town is located, lies between the Puna district to the south, and Hamakua Coast to the north. The area has the highest population on the island, and is the seat of the County of Hawaii. The surrounding neighborhoods are: Waiakea Homestead, Waiakea Uka, and Panaewa. The town, which was built around the area's crescent-shaped bay, sustained major damages from two tsunamis that hit the town in the 1900s.

The site, which is on Haihai Street, is located at the southern edge of Hilo town. The vacant 19 acre parcel is located adjacent to the Hilo Municipal Golf Course. The area is comprised primarily of older single family residential homes. Haihai Street, a busy rolling 2 lane road that services the area, intersects Kilauea Avenue to the east and Kupulau Road to the west. Along Haihai Street and most of the neighborhoods surrounding the site there are no sidewalks for the elderly to safely walk on. The closest public park is Ainaloa Park, which is located about 1.8 miles from the site.

The county's public bus system traverses along Haihai Street and residents can be picked up along the roadside. Because the site is surrounded primarily by residential housing, goods and service, and medical care are not within close proximity of the site. The closest supermarket and pharmacy are located at Puainako Town Center, located about 1.8 miles away. The walkability of the community is less than desirable for the elderly, especially those with mobility issues. The steep grade of Haihai Street can be challenging for some and the lack of sidewalks can be dangerous for all.

PROS

Rural setting

Land value

On public bus line

CONS

Site is on an incline

Distance to supermarket

Distance to retail shopping

Distance to health care facilities

No nearby public recreational facility, except the municipal golf course

Close to roadway

Lack of sidewalks around the site

PROJECT INFORMATION³²¹

LOCATION: Hilo, Hawaii Island

TMK: 3-2-4-002-073

PHYSICAL ADDRESS: Haihai Street

ACRES: 16.38 + 3

LAND VALUE: \$1,199,000

ZONING: RS10



Figure 225: The site is located on the northeastern part of the island of Hawaii.³²²

³²¹ "Real Property Tax Office," Hawaii County, accessed November 21, 2013, http://qpublic9.qpublic.net/hi_hawaii_display.php?county=hi_hawaii&KEY=240020730000.

³²² Image by Google Earth



Figure 228: This is an aerial view showing a quarter mile radius of the surrounding area around the site noted by the red dot. The area is primarily an older residential neighborhood consisting of single family detached homes. Hilo Municipal Golf Course is adjacent to the site³²⁵



Figure 229: Haihai Street intersects with Kilauea Avenue and Kupulau Road. The street is 2.5 miles long and runs in an east-west direction. The closest crosswalk is 1.6 miles from the site and is located at the corner of Ainaloa Drive and Haihai Street.³²⁶

³²⁵ Image by Google Earth

³²⁶ Image by Google Maps



Figure 230: East Bound on Haihai Street. Waiakea Homestead is located directly across the street from the site.
Photo by Author



Figure 231: West bound on Haihai Street. Haihai Street is a 2 lane road that runs directly in front of the site. The pedestrian right of way has no sidewalk and is separated only by the white painted marking. The street is on an incline.
Photo by Author



**Figure 232: At the corner of Haihai Street and Hauoli Street, which is directly across the street from the site, there are no crosswalks.
Photo by Author**

ANALYSIS

In senior cohousing communities, the site plan plays an integral part in the success of these communities. This is due to the configuration of the built environment and how it encourages, supports and fosters interaction with the members within the community. On a wider perspective, the selection of the site is imperative for the engagement of these senior residents within a larger context than just the cohousing community site. Residents living in this proposed cohousing community are unlike those living in nursing home facilities where the majority of the residents have significant degrees of functional and cognitive impairment that has resulted in the decompensation of vital organ systems such as cardiac, respiratory, and neurological systems. The residents' mobility outside of a nursing home facility is largely dependent on others. Residents living in a senior cohousing community may have fewer physical and mental challenges, and because of this, they tend to be more engaged within the broader community than their nursing home counterparts. Although these residents may not experience the degree of severity of these impairments as those residing in nursing home facilities, they may nevertheless have experienced difficulties in other areas, such as hearing, sight, depth perception, and arthritic conditions, to name but a few.³²⁷ Dependency on automobiles and the sprawl of the built environment can make it difficult to carry out the daily necessities of life as one ages. Negotiating behind the wheel of an automobile can become dangerous due to the deterioration of one's physical and/or mental status. Communities where seniors can navigate and traverse safely without the dependency of the automobile can help to liberate them from the burden of driving while enabling them to continue their independence. Communities that are sensitive and supportive of their senior population can offer environments where these members can feel a part of a greater collective group. ElderSpirit Community, a senior cohousing community located in Abingdon, Virginia, is a vibrant senior community. The residents who live in this community are independent, mobile, and full of life. Community gatherings in the adjoining park, trailblazing along the nearby walking path, participation in art and music festivals in the town and enrollment in adult classes at the College for Older Adults are activities all located within close proximity of this senior cohousing community. The surrounding environment where senior cohousing communities are developed

³²⁷ Pauline S. Abbott et al, *Re-creating Neighborhoods for Successful Aging* (Baltimore: Health Professions Press, 2009), 164.

should be analyzed to find the optimal site for seniors to be engaged in, participate in, and live in as active members of a greater community. The residents of ElderSpirit are active participants in community service throughout the town of Abingdon and are involved in 30 organizations in the wider community, which includes Hospice, Meals on Wheels, Barter Theater and Washington County Library, to name but a few. They are also involved in 5 area churches. Their outreach community roles include: storytelling, tutoring, teaching, financial management, web design, research, cleaning, and spiritual direction among others.

In Hawaii we use the endearing term of “kupuna” when we reference our elders. The University of Hawaii Kapiolani Community College’s Kupuna Education Center notes that “in ancient times kupunas were our teachers and the caregivers for the young. Through their life experience they were held in honor and respected and were the family and community leaders.” Kupunas are the connection to the past, and are a source of “experience, knowledge, guidance, strength, and inspiration to the next generation. Kupunas show how rich a resource they are and why they should be tapped to contribute to the betterment of Hawaii, for they truly represent one of Hawaii’s fastest growing natural resources.”³²⁸

The goal of this analysis was to locate a community that would support, enhance, and foster seniors living in a cohousing community in Hawaii to be active members of a larger community.

AREAS OF ANALYSIS

The site analysis was done using the non-profit organization AARP, formerly known as the American Association for Retired Person, *Livable Communities: An Evaluation Guide*.³²⁹ The five sites were analyzed in seven areas:

CARING COMMUNITY

A livable community is a caring community.³³⁰ The access to community service programs for seniors can aid in their ability to continue to live independently. The areas of Caring Community analysis focused on:

³²⁸ “Kupuna Education Center,” Kapiolani Community College, accessed November 10, 2013, <http://kupunaeducation.com/index.html>.

³²⁹ “Livable Communities: An Evaluation Guide-2005,” AARP, accessed November 10, 2013, http://assets.aarp.org/rgcenter/il/d18311_communities.pdf.

³³⁰ *Ibid.*, 134.

- 1) Types of Programs
- 2) Availability

GOODS AND SERVICES

The convenience of goods and services is important to seniors especially for those who no longer drive. Access to these vital areas allows seniors to continue to be independent. The areas of Goods and Services analysis focused on:

- 1) Access
- 2) Proximity
- 3) Home Delivery

HEALTH SERVICES

Health issues are primary concerns for seniors. The availability, access, and proximity to health care facilities and pharmaceutical retail outlets can be a challenge to seniors who do not have access to an automobile or for those who no longer drive. The areas of Health Services analysis focused on:

- Access
- Proximity
- Home Delivery

RECREATION AND CULTURAL ACTIVITIES

The enhancement to aging can be complemented through recreational and cultural activities. Keeping seniors physically and mentally stimulated can aid in their continuum of independence.

The areas of Recreation and Cultural Activities analysis focused on:

- 1) Community Recreational Resources
- 2) Senior Centers
- 3) Libraries

SAFETY AND SECURITY

The feeling of safety is one of the most important concerns for seniors. Although sidewalks and pathways may be well maintained, if the community does not feel safe, then these passageways

will not be utilized by the aged population. The areas of Safety and Security analysis focused on:

Police

Neighborhood Watch

Night Lighting

TRANSPORTATION

For seniors who cannot or choose not to drive their automobiles, other forms of transportation are needed to afford them access to vital resources such as health care and goods and services so they may continue to be independent. The areas of the Transportation analysis focused on:

1) Access to Public Transportation

2) Routes

3) Quality of Bus Stops

4) Other forms of transportation

WALKABILITY

As people begin to age, driving can become a challenge as their physical and mental states deteriorate. The reliance on well-maintained sidewalks for the elderly is vital for this age group to remain independent and active while continuing to interact with others within their community. The areas of the walkability analysis focused on:

Sidewalks

Maintenance

Crossings

Safety

OTHER AREAS OF CONSIDERATION

Other areas that were taken into consideration are:

Location

Setting

Land Value

Median Housing Cost

METHODOLOGY

Several methodologies were used to aid in analyzing and to understand the sites and the surrounding areas where they are located. These included site visits to each of the sites, canvassing the surrounding areas of the sites, interviewing the applicable county police and public transportation departments, and researching public records such as the U.S. Census reports, the Department of Planning and Permitting, and the Department of Parks and Recreation for each of the applicable counties within the State of Hawaii. Mapping was derived from using Google Earth, Google Maps, and the U.S. Census report to determine the location and distance to key services such as health services, goods and services, parks and recreation, police, and public transportation routes. Maps from the U.S. Census report also aided to visualize the greater community of which the site is a part.

RESULTS

ANALYSIS FOR A SENIOR FRIENDLY COMMUNITY					
GENERAL INFORMATION <small>331 332 333</small>	PALOLO	HONOLULU	HONOULIULI	KALAHEO	HILO
Island	Oahu	Oahu	Oahu	Kauai	Hawaii
Address	2117 Palolo Avenue	250 Vineyard Street	91-2002 C Old Fort Weaver Road	Kaunualii Highway	Haihai Street
Tax Map Key	1-3-4-006-002	1-2-1-018-049	1-9-1-017-092	4-2-3-004-012	3-2-4-002-073
Acres	0.5168	0.5683	3.389	3.584	19.38
Land Value	\$1,209,800	\$3,277,100	\$620,000	\$337,800	\$1,199,000
Zoning	R-5	A-2/BMX-4	R-5	R-4	RS10
Location Setting	Urban	Urban	Rural	Rural	Rural
CENSUS BUREAU INFORMATION ³³⁴	PALOLO	HONOLULU	HONOULIULI	KALAHEO	HILO
Zip Code	96816	96813	96706	96741	96720
Tract	1100	4100	8614	407	20701
Population	3,862	4,504	8,232	8,403	4,507
Median age	35.9	40.5	32.3	41.3	46.1
Resident 62 years and older	1,300	1,564	1,305	2,863	2,421

³³¹ "Department of Planning and Permitting," City and County of Honolulu, accessed November 19, 2013, <http://www.honolulu.gov/dpp/>.

³³² "Real Property Tax Office," Hawaii County, accessed November 20, 2013, http://qpublic9.qpublic.net/hi_hawaii_search.php.

³³³ "Kauai County Parcel Maps," County of Kauai, accessed November 21, 2013, <http://egov.kauai.gov/Click2GovBP/>.

³³⁴ "United States Census Bureau, American Quick Facts," United States Department of Commerce, accessed November 23, 2013, <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

Mean household income	\$66,583	\$52,910	\$85,031	\$73,684	\$69,420
Median value of owner-occupied housing units, 2007-2011	\$781,400	\$323,400	\$423,000	\$692,400	\$317,000
Average household size	3.4	1.94	3.23	2.87	2.58
CARING COMMUNITY	PALOLO	HONOLULU	HONOULIULI	KALAHEO	HILO
Does the community offer intergenerational programs?	Yes	Yes	Yes	Yes	Yes
Is there a hotline to report abuse or neglect of an elderly person?	Yes	Yes	Yes	Yes	Yes
Does the community have meals-on wheels program?	Yes	Yes	Yes	Yes	Yes
Are there legal services program for seniors on the island?	Yes	Yes	Yes	Yes	YES
GOODS AND SERVICES ³³⁵	PALOLO	HONOLULU	HONOULIULI	KALAHEO	HILO
Does the community have a grocery store within a safe walking distance (1/4 mile) from the site?	Yes	Yes	No	No	No
Nearest supermarket	Times Supermarket Kaimuki	Safeway Pali	Don Quijote Waipahu	Sueoka Store Koloa	KTA Super Stores Puainako

³³⁵ Google Earth

Distance to the nearest supermarket store	1.3 Miles	0.2 Miles	1.6 Miles	4.2 Miles	1.4 Miles
Is the store on a bus line?	Yes	Yes	Yes	No	Yes
Does the grocery/supermarket offer home delivery service?	No	No	No	No	No
Distance to the nearest shopping mall?	1.8 Miles	5.0 Miles	6.1 Miles	9.8 Miles	2.2 Miles
Is the mall indoor or outdoor?	Indoor	Outdoor	Indoor	Outdoor	Indoor
Distance to nearest banking institution	1.3 Miles	0.3 Miles	1.2 Miles	4.1 miles	1.4 Miles
Distance to nearest postal service	1.8 Miles	0.5 Miles	1.4 Miles	0.2 Miles	3.6 Miles
HEALTH SERVICES 336	PALOLO	HONOLULU	HONOULIULI	KALAHEO	HILO
Nearest acute care facility	Queen's Medical Center, Honolulu	Queen's Medical Center, Honolulu	Queen's Medical Center, Ewa	West Kauai Medical Center	Hilo Medical Center
Distance to nearest acute care facility	3.6 Miles	0.3 Miles	0.8 Miles	9.7 Miles	5.4 Miles
Is the acute care facility located on a bus line?	Yes	Yes	Yes	No	No
Distance to nearest urgent care facility	2.5 Miles	0.3 Miles	2.7 Miles	4.1 Miles	1.4 Miles
Is the urgent care facility located on a bus line?	Yes	Yes	Yes	No	No

³³⁶ Google Earth

Nearest drugstore or pharmacy	Times Supermarket Kaimuki	CVS Pharmacy Pali	CVS Pharmacy Waipahu	Papalina Pharmacy	KTA Super Stores Puainako
Distance to nearest drugstore/pharmacy	1.3 Miles	0.3 Miles	0.8 Miles	0.3 Miles	1.4 Miles
Is the drugstore/pharmacy located on a bus line?	Yes	Yes	Yes	No	No
Does the drugstore/pharmacy offer home delivery service?	No	No	No	No	No
RECREATION AND CULTURAL ACTIVITIES^{337, 338, 339}	PALOLO	HONOLULU	HONOULIULI	KALAHEO	HILO
Nearest Park	Palolo Valley District Park	Queen Emma Square	Asing Community Park	Kalawai Park	Ainaloa Park
Distance to Nearest Park	0.2 miles	0.2 miles	2.1 miles	0.7 Miles	1.8 Miles
Is the park accessible to older people	Yes	No	Yes	No	No
Does the park have sidewalks and benches?	Yes	Yes	No	No	No
Is the park well lit at night?	Yes	No	Yes	No	No

³³⁷ "Parks and Recreation," City and County of Honolulu, accessed November 26, 2013, <http://www1.honolulu.gov/parks/>.

³³⁸ "Department of Parks and Recreation," County of Hawaii, accessed November 26, 2013, <http://www.hawaiicounty.gov/parks-and-recreation/>.

³³⁹ "Parks and Recreation," County of Kauai, accessed November 26, 2013, <http://www.kauai.gov/default.aspx?tabid=515>.

Is there a community public swimming pool?	Yes	No	No	No	No
Is there a public golf course with golf carts located in the community?	No	No	Yes	Yes	Yes
Is there a community tennis court?	Yes	No	Yes	Yes	No
Does the community have a dedicated senior center?	No	No	No	No	No
Does the community have a senior center or recreation center with activities for seniors?	Yes	No	Yes	Yes	Yes
Is there a mall or other indoor facility that offers indoor walking exercise?	Yes	No	No	No	Yes
Nearest Public Library	Kaimuki Public Library	Hawaii State Library	Waipahu Public Library	Koloa Public Library	Hilo Public Library
Distance to the nearest public library	1.9 Miles	0.7 Miles	2.8 Miles	5.3 Miles	4.2 Miles
SAFETY AND SECURITY^{340, 341, 342}	PALOLO	HONOLULU	HONOULIULI	KALAHEO	HILO
Police patrol district	District 7	District 1	District 8	Waimea District	South Hilo District

³⁴⁰ "Honolulu Police Department," City and County of Honolulu, accessed November 25, 2013, <http://www.honolulu.gov/>.

³⁴¹ "Hawaii Police Department," Hawaii County, accessed November 25, 2013, <http://www.hawaiipolice.com/>.

³⁴² "Kauai Police Department," County of Kauai, accessed November 25, 2013, <http://www.kauai.gov/default.aspx?tabid=298>.

Nearest police station	Alapai Main Headquarters	Alapai Main Headquarters	Kapolei Station	Koloa Substation	Hilo Station
Distance to the nearest police station	4.7 Miles	0.8 Miles	5.25 Miles	4.8 Miles	2.9 Miles
Does the community have a neighborhood watch	Yes	No	No	No	No
Do the streets in the area have adequate lighting at night?	Yes	Yes	No	No	No
TRANSPORTATION 343 344 345	PALOLO	HONOLULU	HONOULIULI	KALAHEO	HILO
Is the project located on a bus line?	Yes	Yes	Yes	Yes	Yes
Bus routes serving the community	#9S Palolo Valley	#4 Nuuanu-Dowset and #6 Ala Moana Center	#44 Ewa Villages/Ewa Beach	Koloa Shuttle	Waiakea Uka
Distance of nearest bus stop	Front of Site	0.06 Miles	0.10 Miles	N/A	N/A
Are bus stops shaded?	Yes	Yes	No	No	No
Do bus stops have seats?	Yes	Yes	No	No	No
Is there a senior rate for bus rides?	Yes	Yes	Yes	Yes	Yes
Is rail transit available in the area?	No	No	Yes	No	No

³⁴³ "Department of Transportation Services," City and County of Honolulu, accessed November 27, 2013, <http://www1.honolulu.gov/dts/>.

³⁴⁴ "Mass Transit," County of Hawaii, accessed November 27, 2013, <http://heleonbus.org/>.

³⁴⁵ "Transportation Agency," County of Kauai, accessed November 28, 2013, <http://www.kauai.gov/Government/Departments/TransportationAgency/tabid/58/Default.aspx>.

Is taxi service available in the area?	Yes	Yes	Yes	Yes	Yes
Is Handivan service available in the area?	Yes	Yes	Yes	Yes	Yes
WALKABILITY	PALOLO	HONOLULU	HONOULIULI	KALAHEO	HILO
Are there sidewalks throughout the community?	Yes	Yes	No	No	No
Are the sidewalks maintained?	Yes	Yes	N/A	N/A	N/A
Are there curb-cuts at intersections?	Yes	Yes	Yes	No	No
Distance to the nearest intersection	0.02 Miles	0.05 Miles	0.16 Miles	0.15 Miles	1.52 Miles
Are there traffic signals at pedestrian crossings?	No	Yes	Yes	No	No
Do long streets have mid-block crossings?	No	Yes	No	No	No
Do all crosswalks have curb-cuts?	Yes	Yes	Yes	No	No
Are there resting places for pedestrians along the sidewalks?	No	No	No	No	No
Is the path of travel from the site: level, incline, or decline?	Level	Level	Level	Incline and Decline	Incline and Decline

SELECTION

The intention of this chapter's research was to determine the optimal site that would be supportive of a senior cohousing community in Hawaii. The research looked into communities that would enhance the aging process of seniors by offering ways in which this segment of the population could be engaged in the wider community rather than just the cohousing community itself. The research looked at the physical and social service infrastructures already in place in the communities where the five sites are located. Although the outcome of some communities was better than others, no one community was able to attain a perfect score. Each of the communities researched can improve itself to make it a friendlier place for seniors to live. After careful evaluation of the data, a selection was made based on several key findings. These included land cost, physical infrastructure, and social infrastructure.

NEIGHBOR ISLAND COMMUNITIES

The land values at the Kalaheo and Hilo sites are \$337,800 and \$1,199,000 respectively. At first observation they looked promising. However, upon further analysis, the sites were deemed to be less than optimal. The main negative consideration was the lack of sidewalks throughout these communities. The close proximity of the roadways immediately fronting the sites were the deciding factor in both cases. The margins of the roadways, at times only 3 feet wide are divided only by a white painted line, separated the vehicular right of way from the pedestrian's right of way. These roadway markings are not adequate pathways for seniors to travel outside of their cohousing community.

Another negative factor that was taken into consideration was that the paths of travel to these two sites are located on steep and hilly terrains. A steep grade can be challenging for some people, regardless of age, but coupled with mobility issues and reliance on assistive devices; this could pose a significant problem for some seniors. Although rectifying these issues could be achieved by other forms of transportation such as driving, public transportation, or carpooling, the physical challenges of these sites still remains.

These solutions, although viable, do not foster physical and mental health through exercise but continue to encourage our dependency on the automobile. This can become a challenge as one

ages and can no longer drive.³⁴⁶ A walkable community can enhance the aging process by encouraging seniors to connect with others in their community through brief encounters and interactions.³⁴⁷

URBAN SETTING

The Palolo Valley and Downtown Honolulu sites are both located in an urban setting. One of the main reasons for not considering these sites was their high land value, \$1,209,800 and \$3,277,100 respectively. Due to the size of the site, 0.5168 and 0.5683 respectively, the design of these communities will be limited to that of a low rise building complex. Collective houses, as these cohousing communities are called, were built in Kobe, Japan after the 1995 Great Hanshin Earthquake to address the needs of the elderly earthquake survivors.³⁴⁸ With a good design, a small site should not be a limiting factor for a cohousing community. Clustered housing that increases density can be beneficial to the quality of life for seniors.³⁴⁹

Palolo Valley as a community has many accommodations suitable for the senior population but because of the close proximity to Palolo Valley Homes housing complex, the location may not be suitable for all seniors who might not feel comfortable living in this area. Because the site is embedded in a primarily residential community, access to goods and services and health care is not within close proximity of the site.

The Downtown Honolulu site is within walking distance of health care facilities, recreational and cultural activities, goods and services, and public transportation. In spite of these accommodations, some seniors may not experience a sense of home living in the heart of Honolulu's busy urban core.

³⁴⁶ Pauline S. Abbott et al, *Re-creating Neighborhoods for Successful Aging* (Baltimore: Health Professions Press, 2009), 164.

³⁴⁷ Ibid 165

³⁴⁸ Asako Murakami, "Lessons from post-quake living: Collective houses pushed for seniors living alone," *The Japan Times Ltd.*, October 1, 2000, accessed November 25, 2013, www.japantimes.co.jp/news/2000/10/01/national/collective-houses-pushed-for-seniors-living-alone/#.UbGU_fm1F8F.

³⁴⁹ Charles Durrett, *The Senior Cohousing Handbook: A Community Approach to Independent Living* (Canada: New Society Publisher, 2009), 155.

RURAL SETTING

The Honolulu site is located in a rural setting. According to the City and County of Honolulu Department of Planning and Permitting Property Report, the land value of the 3.389 acre parcel is \$620,000. Currently, the surrounding area of the site is residential and agricultural, but in the not too distant future, this area will change with the development of the new community of Hoopili. The close proximity of this new community was the deciding factor in selecting this site for the proposed design of a senior cohousing community in Hawaii. The possible expansion of Old Fort Weaver Road due to the new development of Hoopili, the vistas of West Loch Municipal Golf Course that is located to the rear of the site will give the residents of this community a quiet retreat.

The new development will build the infrastructures needed to support this growing area. The vision of this new community is to provide residents of Hoopili and those living in the nearby surrounding communities the opportunity to enjoy a lifestyle of being engaged in activities around the community. Once developed, restaurants, shopping, parks and recreation will be within walking distance of the new Hoopili rapid transit station. Along with the transit station, public bus lines are planned to make the community easily accessible and within walking distance of these activities.³⁵⁰



Figure 233: An artist's rendering of Hoopili's community park. The new development is at the gateway to Ewa. The surrounding communities of Hoopili includes: Kapolei, Ewa, Ewa Beach, Ewa Villages, Honouliuli, Kalaeloa, Kunia, Makakilo, Waipahu, and West Loch.³⁵¹

³⁵⁰ "Create a Center and Heart of the Community," D.R. Horton, Inc., accessed November 27, 2013, <http://www.hoopilioahu.com/thoughtful-planning/>.

³⁵¹ "The Future," D.R. Horton, Inc., accessed January 24, 2014, <http://www.hoopilioahu.com/the-future/>.

The new campus of Queen’s Medical Center-West Oahu, formerly St. Francis Medical Center West, will be operational in early 2014 and is located only a little more than a quarter mile from the site. The newly built campus of the University of Hawaii-West Oahu, a four-year degree institution, is located on the Honolulu Rail Transit route a short distance away from the site. The Ewa communities and the surrounding areas will continue to grow. The newly adopted Ewa redevelopment plan will aid in guiding the rapidly growing communities of the Ewa region, hopefully making these communities and the surrounding areas more senior friendly.



Figure 234: St. Francis Medical Center-West, a 140 bed acute medical facility opened in the early 1990s, is located about a quarter mile from the site.³⁵² The center fell into bankruptcy and was acquired by Queen’s Health Systems in 2012. The newly renovated Queen’s Medical Center-West Oahu campus is slated to open in early 2014.³⁵³

³⁵² “St. Francis Medical Center West, Master Plan and Hospital,” RBB Architects Inc., accessed January 23, 2014, [http://www.rbbinc.com/Projects/SFMC Master Plan And Hospital.htm](http://www.rbbinc.com/Projects/SFMC_Master_Plan_And_Hospital.htm).

³⁵³ “The Queen’s Medical Center-West Oahu,” The Queen’s Medical Center, accessed January 24, 2014, <http://queensmedicalcenter.org/queen-s-medical-center-west-oahu>.



Figure 235: The University of Hawaii-West Oahu campus opened in 2012 to serve residents living in the leeward area of Oahu. The campus, which offers four year bachelor's degrees, is located 3 miles west from the site.³⁵⁴

PROS

Rural Setting

Close to supermarket and pharmacy

Close to health services

On public bus line

Gradually sloping site and level surrounding areas

Hoopili development to be built across the street

Close to Honolulu Rapid Transit's Hoopili station

Close to Queen's Medical Center-West Oahu campus

Close to University of Hawaii West-Oahu campus

CONS

Distance to retail shopping

No nearby public recreational facility

Close to major transportation corridor

Currently the area has no sidewalks

³⁵⁴ "About UHWO," University of Hawaii, accessed January 24, 2014, <http://www.uhwo.hawaii.edu/>.

CONCLUSION

Senior cohousing communities that are connected to a wider community will allow seniors to live a more productive life as they age. Communities that are well planned to support the increasing numbers of seniors will benefit from their participation because through their life experiences they have a wealth of knowledge that can be tapped and shared.

As seen through this chapter's research, some communities in Hawaii are limited because they lack the proper infrastructures such as sidewalks and safe pathways of travel. These limit seniors whose walking engages them with their community. Although there are viable options to accommodate for this such as public transportation and other means of transport, these options make seniors dependent on others to transport them to their destination. The access and distance to social infrastructure in these communities has also been found to be a challenge for this population as well. By implementing some corrective actions in older communities or by the thoughtful planning of newer ones, the optimal sites for senior cohousing communities in Hawaii could then be found within diverse settings across Hawaii. Although this thesis is not about community planning, the consequences of these decisions impacts the success with which all residents living within its limits can benefit. The AARP Livable Community Survey can aid in improving communities for the betterment of all its residents, especially the elderly.

A goal of communities should be to support its senior population in ways that will allow them to continue to live their lives as independently as possible.



Chapter VIII Collaboration

Franciscan Vistas Ewa

Goal

Community Collaboration

Methodology

Results and Analysis

Area of Concern

Community Walkthrough

Perspective

Conclusion

FRANCISCAN VISTAS EWA

Franciscan Vistas Ewa is an independent low-income senior community located in Ewa Beach, Hawaii. The facility has 149 one and two bedroom apartment units ranging from 530 square feet and 750 square feet respectively. Residents began moving into the facility in early 2011, and the facility was formally dedicated on July 12, 2011. Residents at the facility must be 62 years and older with household incomes no more than 60 percent of Honolulu's median annual income, or \$41,760 for a single person or \$47,700 for a family of two.³⁵⁵

³⁵⁵ Andrew Gomes, "Senior Housing Finally Opens," *Star Advertiser*, December 27, 2010, accessed March 20, 2014, http://www.staradvertiser.com/business/20101227_senior_housing_finally_opens.html.

GOAL

The idea for this chapter was initiated during DArch I, through discussion and input of the committee members with the goal of involving seniors. The goal to involve seniors was to get their perspective of living in a community setting with other residents of their age. Although Franciscan Vistas Ewa is not a senior cohousing community, as no such community of this type has been established in Hawaii as of this writing, it was felt that this senior community could still bring valuable insight of living in a community setting in Hawaii. The researcher's knowledge and experience of senior cohousing is based on a site visit to ElderSpirit Community, which is located in Virginia, the second senior cohousing community to be built and the first mixed-income senior cohousing community of its kind in the United States. The researcher felt that although the targeted population group is the same, which are the seniors, she theorized that people live differently in Hawaii as compared to their counterparts living in the continental United States. These differences include weather, lifestyle, location, population demographic, values, etc.

The focus here was to look closely at the facility's built environment to determine what area or areas foster community interaction, thereby creating a more cohesive community among its residents, and if there are any area or areas that are significant for senior residents living in Hawaii. Their input would be incorporated into the design of the proposed senior cohousing community, which is also located in Ewa Beach, Hawaii. The findings in this chapter were the result of a long and arduous process that took into account: logistics, survey questions, targeted senior population group, meetings with University of Hawaii Anthropologist Professor Jonathan Padwe regarding ethnography, readings on ethnography, obtaining approval from the University's Human Studies Program, obtaining certification of CITI training, finding interested senior participants, scheduling, obtaining a meeting facility, etc.

COMMUNITY COLLABORATION

The design of the proposed senior cohousing community located in Ewa Beach, Hawaii was the outcome of a group meeting comprised of 9 senior residents living at Franciscan Vistas Ewa. The meeting was held at 10 a.m. on March 12, 2014 in one of the classrooms at the Catholic parish of Immaculate Conception Church. The church, where several of the group members worship, is located at 91-1298 Renton Road, 0.25 miles away from Franciscan Vistas Ewa. A community walk-through was led by two of the long time female residents. The weather in Ewa Beach on the day of the walk through was scattered clouds with temperatures in the low 80s and east-northeasterly winds of 10 miles per hour.³⁵⁶ The total meeting time was 4 hours.

Michel W. Dalton, OFM.CAP, pastor at the church, was enlisted to inquire within the congregation if any members living at the senior community would be interested in participating in the meeting. The initial proposed meeting site was to have been held at the Franciscan Vistas Ewa community's dining room, but after conversation with the Service Coordinator, who handles all scheduling at the facility; it was decided that it would be best to relocate the meeting to the church.

³⁵⁶ "Weather," Weather Underground, Inc., accessed March 21, 2014, http://www.wunderground.com/history/airport/PHJR/2014/3/12/DailyHistory.html?req_city=Ewa+Beach&req_state=HI&req_statename=Hawaii.

METHODOLOGY

Agenda for Community Collaboration with Residents living at Franciscan Vistas Ewa

1. Introductions
 - a. Researcher
 - b. Members
2. Project Introduction
 - a. Senior Cohousing Community
 - b. Why Franciscan Vistas Ewa?
 - c. What is Community?
 - d. Goals
3. Consent and Survey Questions
4. Group Discussion
5. Lunch
6. Community Walk Through
 - a. Photography
 - I. Areas that foster community
 - II. Areas that do not foster community
 - III. Areas of improvement

**Consent Form
For Seniors Living in Community**

Agreement to Participate in
Senior Housing Community Survey

Norma Hara
Primary Researcher
223-8884

This research project is being conducted as a component of a dissertation for a doctoral degree in architecture. The purpose of the project is to determine if people aged 55 years and older living in Hawaii would consider living in a senior cohousing community. You are being asked to participate because you are currently living in a senior housing community.

Participation in the project will consist of filling out a form on background information about yourself, and a short interview with the researcher. Interview questions will focus on what motivated you to choose such a community and what are your likes and dislikes about community living. Data from the interview will be summarized into broad categories; no personal identifying information will be included with the results. The completion of the form containing background data should not take more than 5 minutes. The group discussion will last no longer than 1 hour. Approximately 12 people will participate in the study.

The researcher believes there is little or no risk to participating in this research project.

The results from this project will help all those interested in senior housing community living, to better understand if there is a need in the senior population for a senior cohousing community in Hawaii.

As compensation for time spent participating in the research project, you will receive a \$10.00 gift card from Safeway.

Research data will be confidential to the extent allowed by law. Agencies with research oversight, such as the UH Committee on Human Studies, have the authority to review research data. All research records will be stored in a locked file in the primary researcher's office for the duration of the research project. All research materials will be destroyed upon completion of the project.

Participation in this research project is completely voluntary. You are free to withdraw from participation at any time during the duration of the project with no penalty, or loss of benefit to which you would otherwise be entitled.

If you have any questions regarding this research project, please contact the researcher, Norma Hara, at 223-8884.

If you have any questions regarding your rights as a research participant, please contact the UH Committee on Human Studies at (808) 956-5007 or uhirb@hawaii.edu

Copy to Participant

Consent Form

Participant:

I have read and understand the above information, and agree to participate in this research project.

Name (Printed)

Signature

Date

Photography Consent

I am over the age of 18 and by signing below I agree to have my photograph taken and used as part of the research for the architectural doctorate thesis by prepared by Norma Hara.

Signature

Date

**Survey Questions
For Seniors Living at Franciscan Vistas Ewa**

What is the main reason you chose to live at Franciscan Vistas Ewa?

How long have you lived here?

Have you ever lived in a community setting before?

If yes, when and where

Has the overall experience of living here been: Positive Negative

Do you participate in any community activities at Franciscan Vistas Ewa?

If yes, please list the activities.

- a)
- b)
- c)
- d)

How often do you participate in these community activities?

Always Frequently Sometimes Never

What area or areas on the property foster community interaction?

What area or areas on the property do not foster community interaction?

Is there any community area you would like to add to this facility?

Is there any community area you would like to remove from this facility?

RESULTS AND ANALYSIS

PROFILE OF RESPONDENTS

Number of Participants	Male	Female
9	2	7

Ages	Male	Female
69		1
72		1
75		1
76		1
77		1
78	1	
79		1
83	1	1

Question 1: What is the main reason you chose to live at Franciscan Vistas Ewa?

Number of Participants Who Responded
9

Categories	Responses	Gender
Family member played a part in the decision	1	1 Female
Family in Area	1	1 Male
Change in living situation	2	2 Female
Rent	3	1 Male, 2 Female

Independent Living	1	1 Female
Facility	2	2 Female
Other	1	1 Female

Respondents Answers

“Qualify to live there.”

“My daughter is selling her place.”

“St. Francis Sisters.”

“Brand new building/reasonable rent”

“My daughter whom I was living with is moving to Las Vegas and selling her house. When I came here, I liked what I saw.”

“Low monthly rent”

“Wanted to live by myself”

“Daughter’s choice”

“Our daughter lives in Ewa Beach and wanted my wife and me to live close by”

Analysis:

Nine participants responded to question one. Three participants, one male and two female chose FVE because of the rent. Two female respondents chose FVE because of the facility. Another two female respondents chose FVE because their living situation had changed. Other reasons given were the close proximity to family members, family wanted the respondent to move to FVE, independent living, and the center’s affiliation with the St. Francis sisters.

Question 2: How long have you lived here?

Number of Responses	Years and Months
1	3 Months
1	5 Months
1	2 Years and 4 Months
4	3 Years

1	3 Years 6 Months
1	4 Years

Analysis:

Nine participants responded to question two: Two female respondents live at FVE less than six months. One male respondent lives at FVE less than three years. One male and five female respondents live at FVE three years and longer. Six of the participants have been living at the facility since it first opened.

Question 3: Have you ever lived in a community setting before?

Number of Responses	Yes	No
9	1	8

If yes, when and where

“Kapolei, Hawaii; Delmar, New York; and Feura Bush, New York”

Analysis:

Nine participants responded to question three. Eight of the nine participants did not have previous experience living in a community setting. Some of the participants lived with family members before moving to FVE. Some of the participants lived alone. One female lived in a senior housing community setting on Oahu prior to moving to FVE.

During the group discussion, although many of the participants have not lived in a senior community, they have adjusted or are adjusting to this type of living situation. Several of the participants have noted that it had taken them a while to adjust but have enjoyed the process of learning to live in community and have felt that by pushing themselves out of their comfort level they have grown in areas that they are proud of.

Question 4: Has the overall experience of living here been: Positive Negative

Number of Responses	Did Not Respond	Positive	Negative
8	1	8	1

Analysis:

Eight participants responded to question four. One male and six females responded “positive.” One female chose not to respond. One male responded both “positive” and “negative.” During the group discussion although many of the participants had noted on their survey as having positive experiences, many had shared other experiences that were less than positive. They shared their concern about being managed by the facility’s management company. This might have been due to the fact that many of these participants have never lived in a community setting prior to moving to FVE.

The participants felt that it was in their duty to help themselves as well as those living around them. Many of the residents have medical conditions that challenge them on a daily basis. One resident shared his experience about how his neighborly gestures of taking one of his neighbors to the doctor and later hospital was met with stern objections by the management personnel citing possible liability issues for him and/or the facility.

Another resident shared that the facility allows thirty days per year for overnight guest visitations. She recently had open heart surgery and family members came to her assistance during recovery period, thus, using up the entire allowable overnight visitation days for the whole year.

Another resident shared that previous management did not allow residents to use door mats, which they believed would eliminate the possibility of accidental falls. No pets were allowed by the previous management company but this rule has changed due to the many service dogs that are required to help with its resident population. The afterthought of a community garden is due to the management’s policy of prohibiting personal planting outside of the residential dwellings.

The participants understand that rules and policies need to be in place for their safety but if left to their ways they would like to have some input and be able to have discussions about them.

Question 5: Do you participate in any community activities at Franciscan Vistas Ewa?

Number of Responses	Yes	No
9	6	3

Gender of Those Who Participate in Activities at the Center	Male	Female
	1	5

If yes, please list the activities.

Activities	Responses	Gender
Weekly Rosary	2	2 Female
Weekly Bible Study	1	1 Female
Weekly Shopping Trips	2	2 Female
Weekly Quilting Class	1	1 Female
Monthly Potluck – Birthday Celebration	2	1 Male, 1 Female
Group Outing – Sightseeing, Mall, etc.	1	1 Female
Mahjong Card	1	1 Female
Discussion Group	1	1 Female
Bingo	2	2 Female
Volunteer at the Pre-school	1	1 Female

Analysis:

Nine participants responded to question five. One male and five female responded “yes,” they participate in community activities at FVE. One male and 2 female responded “no,” they do not participate in community activities at FVE. The male participant that responded “no,” has lived at FVE for three years. Both females who responded “no,” have lived at FVE for 3 months and 5 months.

Of those who responded, two female participants listed four activities they are involved in at the center. One female participant listed three activities, one of which she is the head of and the other activity she teaches. One male and three female listed one activity each.

During the group discussion, participants shared that although the center provides many activities that would allow opportunities for residents to come together, they are not well attended. Some of the reasons suggested for the lack of attendance could include scheduling conflicts, the types of activities offered, or personal conflict with other residents that may prevent them from getting involved in these community activities.

Question 6: How often do you participate in these community activities?

Always Frequently Sometimes Never

Number of Responses	Always	Frequently	Sometimes	Never
9	4	2	0	0

Analysis:

Nine participants responded to question six. One male and three female responded “always.” Two females responded “frequently.” One female replied “not as often,” one female replied “I have not since I just moved here,” and one male did not respond to the question.

Question 7: What area or areas on the property foster community interaction?

Number of Responses	Did Not Respond
6	3

Area	Responses
Laundry Room	2
Community Center	6
Mailbox Location	1

Analysis:

Six participants responded to question seven. The respondents consisted of one male and five females. All six of the respondents considered the community center the area that fosters community interaction, followed by the laundry room and the mailbox location.

Question 8: What area or areas on the property do not foster community interaction?

Number of Responses	Did Not Respond
3	6

Area	Responses
Laundry Room	1
None or Not Applicable	2

Analysis:

Three participants responded to question eight. All three respondents were females. Only one participant named the area on the property that did not foster community interaction, while the other two responded as none or not applicable.

Question 9: Is there any community area you would like to add to this facility?

Number of Responses	Did Not Respond
5	4

Area	Responses
Chapel	2
Laundry	2
Storage	1

Analysis:

Five participants responded to question nine. All of those who responded were females. During the group discussion one participant was very vocal about the lack of storage space in her apartment. Although this did not directly relate to a community area, she suggested that private storage within dwellings and community storage spaces should be thoroughly and thoughtfully considered. Although many of the seniors have downsized from their previous living situation, for some, they still own a significant amount of personal belongings. For these individuals, the lack of storage space posed a challenge for them.

Another suggestion is the addition of more washers and dryers as the building units currently have two of each, which is to serve twenty five residential dwellings. Another concern that was brought up by the respondents was the type of washers and dryers. Because of certain health issues such as open heart surgery, arthritis, and back pain, front loading laundering machines were difficult to use as these participants found it difficult to bend and would have much preferred if at least one of the machines was top loading.

A couple of the female participants would have liked to see the addition of a chapel or designated quiet area to be used for praying, meditation, and reflecting. The reason why one of these two female participants chose to live at this center was due to the center's affiliation with the St. Francis sisters. She also participates in the rosary and bible study at the center.

During the group discussion, it was noted that the male residents did not have a place for them to do male oriented activities such as woodworking or other activities that they would have done in the past. Although there are areas for women to congregate to do activities such as knitting and sewing, they felt that the men were left out because these activities were primarily geared towards women.

Question 10: Is there any community area you would like to remove from this facility?

Number of Responses	Did Not Respond
7	2

Area or Areas	Responses
----------------------	------------------

None or Not Applicable	7
------------------------	---

Analysis:

Seven participants responded to question ten. The two participants that did not respond were females. When the group was asked this question during discussion they concurred that there were no areas that they would like to remove from the facility.

AREA OF CONCERN

One of the major areas of concern among these residents is security. One resident did not like living in “prison.” She did not like the courtyard design of the residential building units as she felt it was not conducive to building community. Franciscan Vistas Ewa has 6 building units comprised of 25 residential apartments units each. Of the nine residents who participated in the survey, four of them live in the same building while another 3 live in another building. Due to the high number of resident turnover, some buildings have a less cohesive community. The participant commented that while the design is meant to keep residents safe, they do not allow for interaction amongst other residents living in other buildings. She would have much preferred a design that was open to allow for these interactions to take place. She and other residents also commented about the openness of the property that allows for strangers with questionable motives to access the property. One of the male participants shared his experience with an encounter he had with a youth carrying a backpack on the property and informed him that he would call the police if he continued to trespass. The female participant would prefer that the whole property was gated with a limited and secured access point of entry.

COMMUNITY WALKTHROUGH

SITE DESIGN

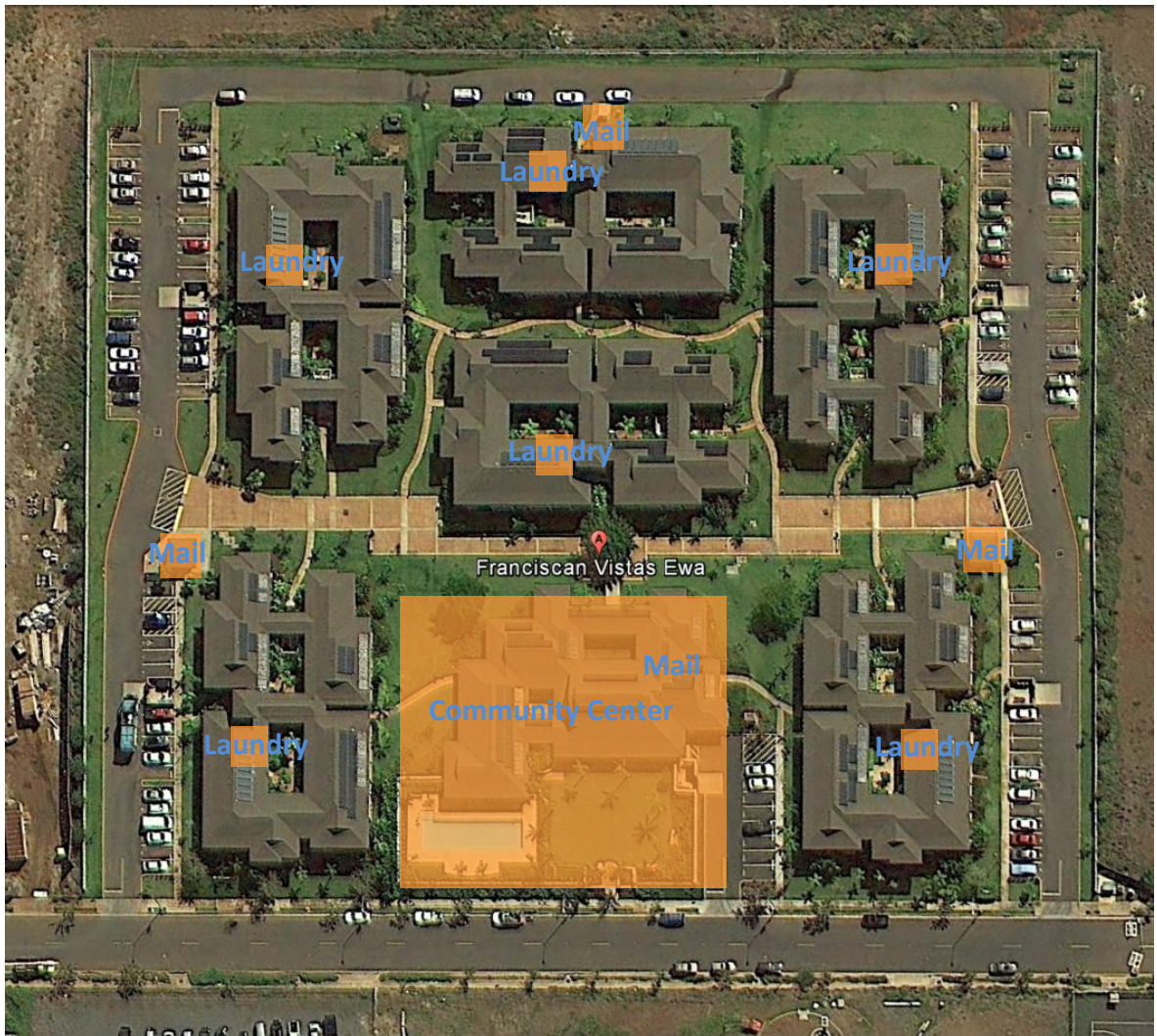


Figure 236: Residents at Franciscan Vistas Ewa believe that the community center is an area that fosters community interaction. Other areas that foster community were the mail box location and the laundry facility within each building unit. Residents also expressed concerns about the whole property not being totally secured.³⁵⁷

³⁵⁷ Image from Google Earth

AREAS THAT FOSTER COMMUNITY



Figure 237: Many of the survey participants noted that the community center, which houses a fitness center, swimming pool, hair salon, learning center, dining room, and conference room is an area that fosters community at the facility.³⁵⁸



Figure 238: Another area that fosters community is the laundry facility. Each building unit has one laundry facility that serves 25 apartment units.
Photo by Author

³⁵⁸ "Find an Apartment," Cort Business Services, Inc., accessed March 21, 2014, <http://www.apartmentsearch.com/apartments/hawaii/ewa-beach/franciscan-vista-ewa>.



Figure 239: There are several community mail centers located at throughout the property. The one shown here is located at the back of the property.³⁵⁹

³⁵⁹ Image by Michel W. Dalton

OUTDOOR ACTIVITIES



Figure 240: Many residents enjoy walking within the community and use the round about as markers. The nearly level grade makes walking the property easy, especially for residents who dependent on assistive devices.

Photo by Author



Figure 241: View of the community pool. The heated pool is utilized by residents and their guests. The pool is located adjacent to the exercise room. One resident commented because of her problem with her incontinence, she does not use the pool.

Photo by Author



Figure 242: The two community gardens are located at the back of the property. The gardens began when residents started their own gardens outside of their apartment units, which was not allowed by the facility's management company.³⁶⁰

³⁶⁰ Image by Michel W. Dalton

INDOOR ACTIVITES



Figure 243: The community's learning center is a multipurpose room that allows residents to lounge in an air conditioned space. The room serves as a reading room, meeting area and is equipped with computers for the residents' use. A favorite community pastime is puzzle making.

Photo by Author

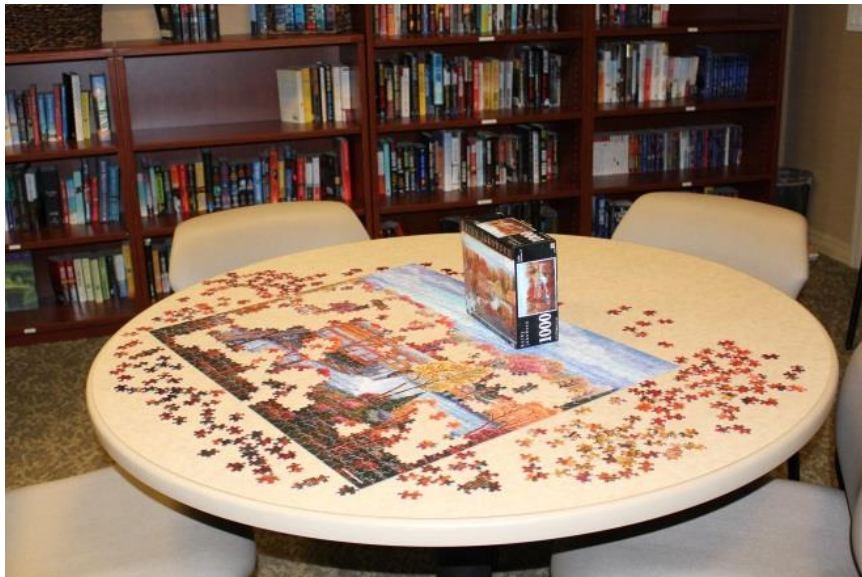


Figure 244: The book case lined wall is seen in this image. Informal seating areas can be found throughout the room. The image above is one of the seating areas used for puzzle making.

Photo by Author

SECURITY



Figure 245: Coded key lock shown above is found on all gates at all entrance points into the residential building units. Some residents feel a false sense of security as strangers are inadvertently allowed into the interior courtyard areas of the building.

Photo by Author



Figure 246: Seniors have found that the two features in this image have made their life easier. 1) The shelf serves as a resting place for bags, groceries and other items before bringing it into the home. 2) The entrance door locks are keyed to prevent inadvertent lockouts by residents.

Photo by Author

SECURITY



Figure 247: One female resident pointed out this access pathway into the community that is used by strangers. Although the six residential building units are secured, the property itself is open to the public.
Photo by Author



Figure 248: Second floor residents feel safer than those living on the first floor. one female resident commented that on warm nights, she sleeps with her patio door open.
Photo by Author



Figure 249: The image above shows one of the three vehicular entrances on the property. This entrance serves the community center and administrative office. The entrances are open to the public, which is a concern for some of the residents. People who do not live at the center have been found sleeping in their cars at night on the property.³⁶¹

³⁶¹ Image by Michel W. Dalton

STORAGE



Figure 250: Storage was a concern for some residents. The residential apartment units had only one closet per bedroom. Since there is no built-in linen closet provided in the apartment units, this resident uses plastic storage bins and detached wall cabinets for storage.

Photo by Author



Figure 251: This resident uses storage bin shelving for her personal belongings. The only storage in this apartment unit is a built-in closet in her bedroom.

Photo by Author

OUTDOOR SPACE



Figure 252: Personal outdoor gardening is prohibited by the facilities management company. Two community garden areas have been designated for planting. This resident has potted plants decorating her second floor patio.
Photo by Author



Figure 253: Wheelchair accessible apartment units are located on the first floor. As people age, their visual depth perception changes, which can make it difficult to judge distances. Concerns for wheelchair bound residents have been expressed as the patio does not have physical cues to aid these residents from falling off their patio.

Photo by Author

LAUNDRY FACILITY



Figure 254: This is an image of a typical sitting area in the laundry facility. There are no private laundry machines in the residential apartments units. All laundry is done in the community laundry area located on the first floor of each building. Photo by Author



Figure 255: Residents expressed a preference for top loading machines. A resident who recently had heart surgery, and another resident with back pain, noted their difficulty in doing laundry. Residents also requested additional machines to be added as these machines services the 25 apartments units in the building. Photo by Author

SEATING



Figure 256: Community Center Bench



Figure 257: Residential Interior Courtyard



Figure 258: Community Center Interior Courtyard



Figure 259: Seating on Pedestrian Pathway

The images above show the various seating areas that can be found around the community.
Photos by Author

PERSPECTIVE

The participation of these nine senior residents who live at Franciscan Vistas Ewa has brought an invaluable and insightful perspective of what it is like to live in a senior community in Hawaii. Many of the participants were asked if money was not an issue would they choose 1) to live in their own private home 2) live with family, or 3) live in a senior community. Several of them chose to remain in a senior community setting. They commented that they enjoyed the commonality of living among other residents within their own age range. Some also commented that living at the center was an adjustment for them as they have never lived in a setting like this before.

One female participant commented that she would prefer to live in her own home because it would not restrict overnight visitations of family members and friends. Another female participant commented on the comfort of knowing that the center has an affiliation with St. Francis Healthcare, which provides blood pressure checks to residents and other healthcare services.

Participants commented that although some of the residents still drive, many of them do not own a car. The respondents that do own a car commented that they have volunteered to take their neighbors to their medical visits and to offsite outings. Catholic Charities Hawaii, provide weekly transportation to stores around the area for residents living at the center. Respondents commented that they are pleased with the location of the facility as it is close to public transportation that allows them to be connected to a wider community outside of their own.

As the researcher walked through the community she encountered four other persons, not including her guides, at various locations within the center: one in the community dining room, one in the learning center, one in the interior courtyard of the building unit, and one walking into the community center. Although workers at the center were cutting the lawn with their mowers, the center was very quiet and the only noise came from the mowers. The walkthrough was done at 1 pm and lasted an hour.

Fr. Dalton, who lives 0.25 miles away from the facility, frequently walks through the facility while walking his dog. He is also at the facility when a resident request for him to bless their apartment. During his visits at the facility, he has commented that he sees very few residents outside of their apartments no matter the time of day. Some of the residents have

grandchildren whom they babysit at the center or have grandchildren who come to visit them. During the time of this walkthrough, no children were seen or heard on the premise.

At the end of each month, the community celebrates birthdays for all of its residents who were born that month. The property management provides the entrée meal for the celebration and the community is welcome to join in and share their potluck contribution. One of the female participants of the survey sews all the leis for the birthday residents each month. Outside from this, there are no other routine community meals that are shared by all the residents.

The design of the facility democratizes low-income senior housing by offering amenities to its residents in a facility that articulates the contextual history of the area. While it is a beautiful center, the researcher noted many areas within the center not being utilized. This could be due to the time of day the walk through took place, but one of the resident guides also commented on the quietness of the center as being a normal way of life. Another reason for the quietness could be due to residents working during the day. The service coordinator for the center was contacted to determine the number of residents who are still working. This number was not released due to their policy on resident's privacy.

In cohousing communities, the access into and within the community is limited. This intentional limitation is to increase the chances of encounters among neighbors. At Franciscan Vistas Ewa there are three vehicular entrance points while the residential building entry points vary. Some buildings have as many as four points of entries while other buildings have two to three. The number of entries may be due to building code regulations, which is necessary, but it may hamper the development of community building, and engagement if residents do not have the opportunities to encounter one another.



Figure 260: The pedestrian pathway bisects the property. The pathway connects the east and west perimeter parking lots and the residential building units.³⁶²

³⁶² Image by Michel W. Dalton

CONCLUSION

Many of the survey participants enjoy living in a senior community setting. The researcher noted the fundamental difference of this community as compared to cohousing communities, is the lack of community participation beyond a passive participatory role. The building of a community needs to take place prior to the time a resident moves in and needs to offer continued opportunities for residents to feel and take ownership in their living environment. Some of the residents at ElderSpirit Community were members of the core group that worked together to build their community. When other residents moved in, they are given the opportunity to participate in the community. During her visit, the researcher was invited to join the community for community prayer at the Spirit House followed by the community dinner, which is held twice a week. Members of the community were assigned the task of planning the meal, cooking the meal, and cleaning up after the meal. These activities help to foster, build and solidify community interactions and connections among its residents. While this may be difficult for Franciscan Vistas Ewa's senior community to achieve, due to the size of the community, 149 residential units, a smaller community such as those of cohousing can strive to include involvement from all of its members.

As mentioned in the previous paragraph, the design of the facility is beautiful. But in spite of this, it has not fostered a vibrant and active senior community. The heart and soul of a community is the social connection among its members. No matter how well intended and how beautifully designed a community is, if the social connections are lacking, then all that is left is the shell of the built environment. This is the real difference between a senior cohousing community and other options available to seniors currently in Hawaii.

During the group discussion, some of the participant's eyes lit up as the researcher introduced and explained what a senior cohousing community is. The participants in this survey commented that they are excited to see the evolution of housing options offered today for Hawaii seniors and look forward to the proposed senior cohousing community of the future. They also commented that they were pleased to participate in the survey especially if the outcome could improve the lives of other seniors. They look forward to seeing the survey results and expressed their interest in following this project to completion.

Chapter IX Design Model



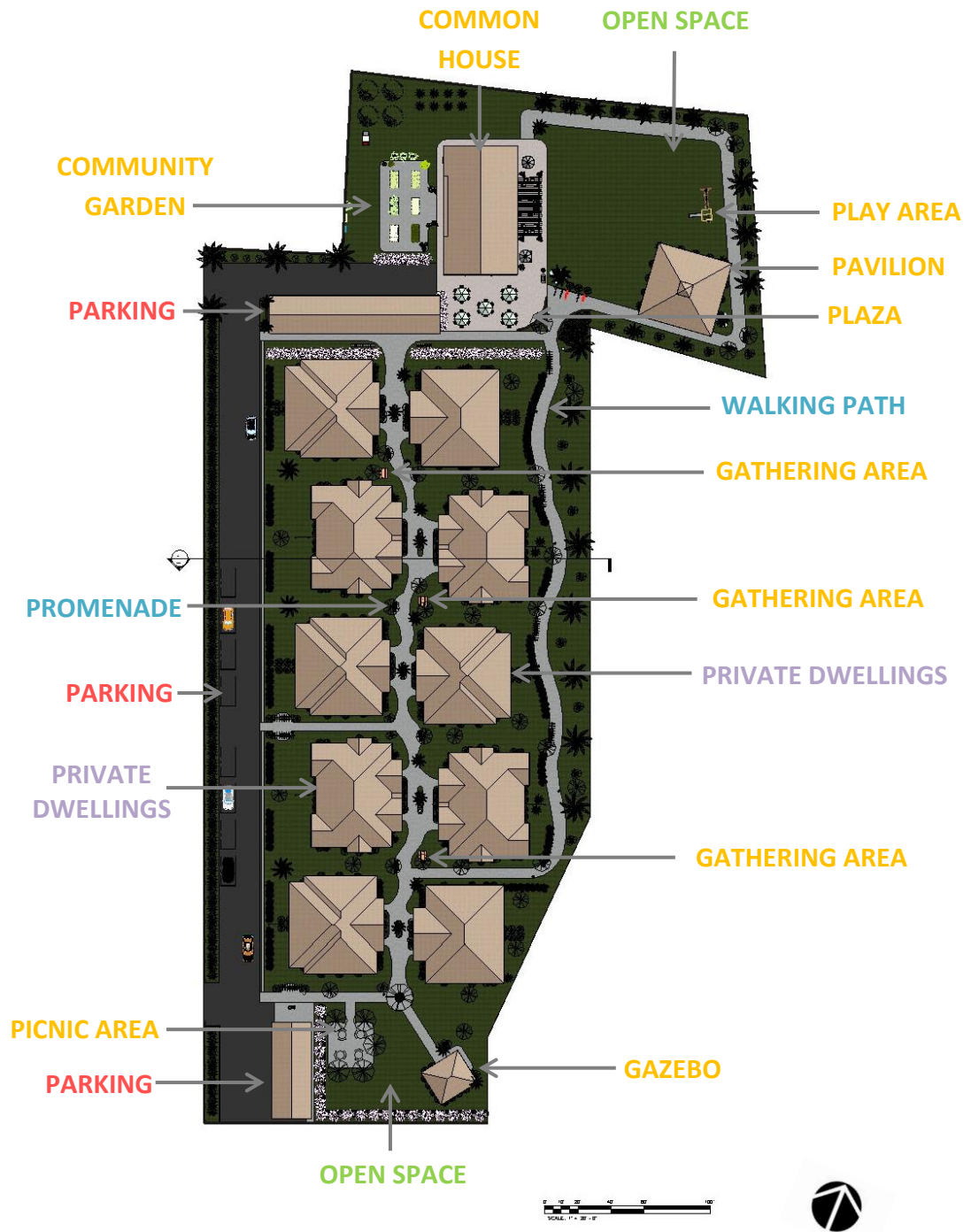


Fort Weaver Road



Ke aluala Village a Senior Cohousing Community
Site Plan





Ke aluala Village a Senior Cohousing Community
Site Plan



Old Fort Weaver Road

Figure 263: Southwest Aerial Perspective



West Loch Municipal Golf Course

Figure 264: Northeast Aerial Perspective

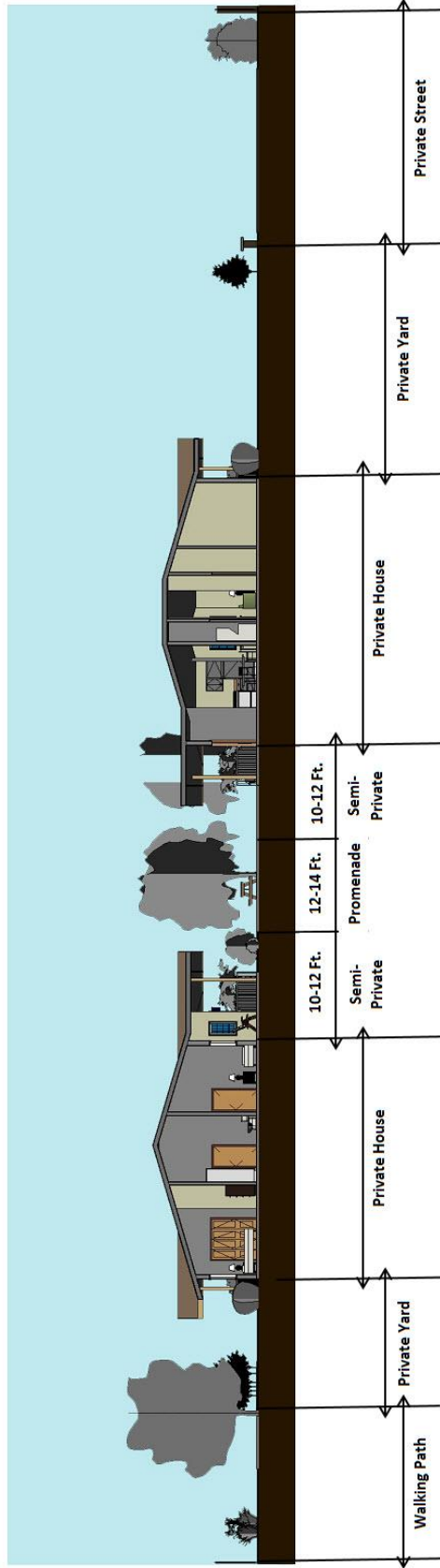


Figure 265: Site Plan Section



Figure 266: Approach into Ke alaula Village from Old Fort Weaver Road



Figure 267: Community Garden



Figure 268: Common House Plaza



Figure 269: Pavilion and Play Area



Figure 270: Private Dwellings, South View along Promenade



Figure 271: Private Dwellings, North View along Promenade



Figure 272: Gazebo and Picnic Area



Figure 273: Perimeter Walking Path, North View



Figure 274: Rest Area on Perimeter Walking Path



Figure 275: Common House Plaza from Perimeter Walking Path

Chapter X Summary



The goal of this project is to introduce the people of Hawaii to a new alternative housing option for its senior population. Hawaii, along with the rest of the country, will feel the impact of our growing elderly population. By 2030, Hawaii's elderly population is expected to increase significantly with the retirement of the baby boomer generation. The current available housing options for seniors in Hawaii are limited. These include residential options such as single family homes, multigenerational housing, and residential care homes. Commercial facilities include assisted living, continuing care retirement communities, and long term care nursing facilities.

The impetus of this project, although I did not know it at the time, began with the author's own experience of caring for an aged parent. Although the author has had many years of experience working within the medical profession, and whose spouse is a physician, it did not make it any easier to address the growing concerns of caring of an aged family member. The author's father eventually expired at a long term care facility. Although the care he received was attentive, supportive, and compassionate, he would have preferred to pass away at home where he felt most comfortable, surrounded by the things that were familiar to him and people that he loved and who cherished him.

Although this paper is not about end of life options for the elderly, these topics as well as other topics that people face as they age are part of the multidisciplinary conversation of aging. Architecture, in itself is a multidisciplinary field, whose contribution to this important conversation can be of great help in finding solutions to the growing concern of housing for our elderly in Hawaii.

Cohousing, which began in Demark in the 1960s, can be an alternative senior housing option in Hawaii. Cohousing originated as intergenerational communities that addressed the growing changes of the traditional family unit. With the increasing number of women entering the labor force after the war, the current available housing options were not conducive to the changing family dynamics of the country. The idea, which began with architect Jan Gudmand-Hoyer and his friends, recognized the need for a contemporized housing model that would allow people to enjoy a better quality of life by sharing resources and facilities to enhance their busy lives. Cohousing is based primarily on the advantages of economics of scale rather than a shared religious, political, cultural, or racial commonality.

Cohousing is distinct from other types of community living. Cohousing, which is based on 6 distinct components is what defines and separates it from other types of communal or

intentional living. These include 1) the participatory process of residents in the organization, planning, and designing of their community. 2) Neighborhood design that encourages and supports community engagements. 3) The sharing of extensive common facilities that are used by the residents to supplement their private areas. 4) Cohousing communities are managed by its residents using a 5) non-hierarchical decision making structure. 6) The community is not an income generating source for its residents and all residents have their own primary source of income. These defining markers help to create, foster and solidify the relationships of members in the community.

Hawaii is no stranger to community living. Community living could be found in the lifestyle of the native Hawaiian people. Community living was also a way of life in the camps and villages of the immigrant sugar and pineapple plantation workers. Cluster and courtyard homes built in the early 1900s have their roots in community living as family members live within close proximity of one another.

In Hawaii, the spirit of aloha is ingrained in the very being of people living in this island state and their definition of ohana, family, extends beyond their biological makeup. As noted in the survey in Chapter 8, "Collaboration," the seniors at Franciscan Vistas Ewa practice this extension of caring for their neighbors and those living around them. At ElderSpirit Community, they go beyond this by incorporating mutual care of each other as two of the values of their community. As recognized by Jan Gudmand-Hoyer several decades ago, a demographic change is upon us and there is a need to contemporize the current senior housing market.

The future trend in senior cohousing communities is the concept of mutual support, as noted in an article written by Prof. Anne P. Glass, PhD., Assistant Director for the Institute of Gerontology at the University of Georgia.³⁶³ Senior cohousing can offer seniors the security of aging in a supportive community setting. As more senior cohousing communities are built, this new trend of mutual care can play a significant role in the lives of its residents.

Mutual care and support has been the motivational component for residents in the early pioneering senior cohousing communities of Glacier Circle and ElderSpirit Community. Members concerned with how they would live in their aging years looked for other options than what were currently available and proactively sought housing alternatives that would be a good

³⁶³ Anne P. Glass, "Aging in a Community of Mutual Support: The Emergence of an Elder Intentional Cohousing Community in the United States," *Journal of Housing for the Elderly*, 23 (2009): 283-303.

fit. Their current housing situation did not afford them the opportunity to care for themselves or their aging spouse in an environment that was supportive with other people facing the same issues of aging. This sense of loneliness and fear became a major factor of why they decided to build a cohousing community that would address these concerns.³⁶⁴

A testament to the belief in caring for one another was included in their communities' mission and value statements. Part of the mission statement of Glacier Circle is "to create and maintain a small cooperative-style housing community of seniors who share some expenses, skills and visions in mutual support and friendship."³⁶⁵ This is similarly reflected in two of the ElderSpirit Community's values: 1) Mutual Support which states, "Members develop face-to-face relationships through which they offer and receive support. They express their needs and convictions, listen to each other and strive to act responsibly, considering their and the good of others." 2) And in regards to the Mutual Assistance value, it states, "sharing of goods and services is the norm in the ElderSpirit cohousing community. When members have needs beyond the individual and family group, they are encouraged to make their needs known." Community meetings and common meals provide opportunities for open discussion, sharing and mutual assistance.³⁶⁶

As stated earlier in this paper, cohousing is not a replacement for senior facilities that can better support and offer a higher level of care for residents that may need these types of services. The need of these services may be due to memory loss, such as Alzheimer, dementia, Parkinson or other medical or psychological conditions that require more care than a senior cohousing community can or wants to provide. Conversation within senior cohousing communities about end of life care issues should also be addressed and discussed openly within the community. The psychological knowledge and physical presence of members living in a senior cohousing community can bring an added sense of security, and decrease levels of fear from loneliness and isolation.

One of the fundamental principles of cohousing communities is the participatory component. The participatory process engages members in the interaction of developing, financing, and building their community, and through this process relationships with other members of the

³⁶⁴ Anne P. Glass, "Elder Co-Housing in the United States: Three Case Studies," *Built Environment* vol 38 no3 (2012): 347-348.

³⁶⁵ Durrett, Charles, *The Senior Cohousing Handbook: A Community Approach to Independent Living* (Canada: New Society Publisher, 2009), 206.

³⁶⁶ *Ibid.*, 206.

community are formed. The participatory component continues long after the physical structure is built. Ongoing decisions need to be made by members of the community. Commitment and trust is established among members as they work together towards a common goal, their community.³⁶⁷ The cooperative activities of meal preparation, cooking, clean up and ground maintenance can build, foster and strengthen the relationships among its members.

Another fundamental principle of cohousing that seniors welcome is their ability for self-management and self-governance. The freedom to collaborate with other members in the community working towards consensus decision making may at time be a difficult process, but is the preferred alternative than to give up their freedom to a management entity. These concerns were voiced by members at Franciscan Vistas Ewa and the “burning soul” resident at ElderSpirit Community. Another benefit of resident management is the outcome of collaboration. Working with other members in the community can help to solidify relationships. Members will also feel a sense of usefulness, and purposefulness while contributing to their community in a collaborative manner.

Cohousing allows members to choose a community where they would like to live and with whom. Members like those in Glacier Circle and ElderSpirit Community had already established life long bonds with some of the other members in the community. The focus of mutual support at the ElderSpirit Community resulted from the ease of members feeling comfortable with one another. These “fictive kin,” a term described by Professor Glass as members outside of family which one has close relationship to, would be the first to be called upon for assistance when needs arise.³⁶⁸

Unlike the mainland, which affords people to relocate in other areas across the continent, Hawaii has its own unique challenges of being far away from other land masses. In Hawaii, family plays an important part in the lives of its residents. The dependence of family and friends is a natural occurrence; however, many seniors still feel a sense of loneliness and isolation. Although family may be close by as opposed to their counterparts living in the continental United States, the cost of living in Hawaii is higher than most of the other states. Because of

³⁶⁷ Pauline S. Abbott et al, *Re-creating Neighborhoods for Successful Aging* (Baltimore: Health Professions Press, 2009), 147-148.

³⁶⁸ Anne P. Glass, “Aging in a Community of Mutual Support: The Emergence of an Elder Intentional Cohousing Community in the United States,” *Journal of Housing for the Elderly*, 23 (2009): 299.

this, family members may need to work outside the home with some having multiple employments and therefore may not be as readily available to the needs of their elder family members. In senior cohousing, relationships that are created can be a welcoming addition to its residents' already existing family.

Community, as the author has found through this project's research, is created through the building of relationships. Although the built environment plays a significant role in creating, fostering, and solidifying relationships, it is the people and their desire of wanting to develop relationships that are the driving force and the heart of any community. Of these two components, the built environment and the people, it is the latter that is more significant. This can be seen in the two communities of ElderSpirit Community and Franciscan Vistas Ewa. Although the design of both of these communities offers opportunities for residents to create relationships with one another, the members at ElderSpirit Community have a more cohesive community. This can be attributed to the size of the communities, with ElderSpirit being the smaller of the two. The other is the commitment of ElderSpirits Community to their mission and value of living in a community setting.

So where do we go from here? On a local level, education of senior cohousing communities needs to be done. The audience must also include not just the general public, but people on the state and county level working in the areas of zoning, planning, permitting and other areas of the built environments must also be included in the education of these types of communities. The scope of this paper did not focus on each of the four counties of Hawaii's Department of Planning and Permitting, although this should be the obvious first hurdle for senior cohousing communities to be built.

These offices and departments will play a vital role in the process of developing senior cohousing communities within the State. Since senior cohousing communities have never been built in Hawaii, state and local officials will need to be educated on what these communities are and the benefits it can bring to seniors living in these types of communities. Misconception and misinformation of these types of communities will need to be addressed so those in positions that can help interested parties in creating cohousing communities for seniors will have a better understanding to be able to support these endeavors.

Another hurdle to overcome is Hawaii's perspective on how we as a state view our elderly population. The elderly can still be contributing members of our diverse society with many

more years of active participation that can benefit communities throughout the state. The elderly do not wish to be warehoused but want to be part of an engaging, welcoming, safe, and respectful greater community. Greater integration of these members can be accomplished with better infrastructure and support services that will allow the elderly to have freedom of mobility to access and be engaged in a wider community than just their physical site. In the real world, such as shopping malls, movie theaters, restaurants, libraries, etc., people from all walks of life are brought together and integrated. This should be a goal that the state can aspire to in truly making this island state the land of aloha.

This project began by looking at the Catholic Church in Hawaii and their perspective of community. Three case studies were chosen and analyzed on different parameters that were unique to those communities with the common thread of community creation, design and living. The five sites selected to be analyzed in Chapter 4 are owned by this entity as well. The development of senior cohousing communities can be a product of the church. Or, they can partner with other not for profit organizations that can act as an intermediary in the ownership and development of these types of communities.

As seen and discussed in this paper, there is a rapidly growing elderly population in Hawaii that will need alternative housing options other than what is currently available. Senior cohousing communities have been successful in Denmark since the 1980s. Although senior cohousing communities are relatively new in the United States, its intergenerational counterpart has been around since the early 1990s. These senior cohousing communities have brought a new form of housing to the elderly population and through the defining characteristics of cohousing have given seniors a role as contributing members of a community. The stereotypical perception of the elderly is that they are in their sunset years. In Hawaii, this perception can be changed with the development of these types of communities. Ke alaula Village is the proposed name of the senior cohousing community in Honouliuli. Ke alaula, which is the dawning or bright road,³⁶⁹ is where a new beginning of senior living can take place as a contemporized solution based on the familiar model of community lifestyle. The benefits of living in these types of settings makes senior cohousing communities a viable alternative housing solution for Hawaii's elderly.

³⁶⁹Maud W. Makeson, *Hawaiian Astronomical Concepts*, accessed May 2, 2014, http://pvs.kcc.hawaii.edu/pdfs/Hawaiian_astronomy_1.pdf.

The realization of this project from research to a livable senior community will need to be championed further with the help of a larger entity than just the author herself. Organizations such as the local chapter of the AARP, Department of Hawaiian Homelands (DHHL), U. S. Department of Housing and Urban Development (HUD), Hawaii Community Development Authority (HCDA), the Catholic Diocese of Honolulu, and other parties interested in improving the quality of life for Hawaii's seniors can take this project to the next level.

The City and County of Honolulu and Hawaii AARP, along with other entities in the community are currently working to implement a plan that will make Honolulu an internationally recognized Age-Friendly City. Discussions have just begun in areas of improving and optimizing outdoor spaces, transportation, housing, communication and social environment, civic participation and employment, and community support and health services, in accordance to the World Health Organization's Global Network of Age-Friendly Cities and Communities standards. This platform can be the starting point of introducing this project to a greater audience whose goal is to improve the lives of the elderly population in Hawaii.

The author has seen the first-hand benefits of seniors living in a cohousing community, like that of ElderSpirit. The timeliness of this project can be a solution to the current concern of housing Hawaii's growing elderly population through the replication of these types of communities. The time for collaboration to begin this dialogue is now. Senior cohousing community can be an alternative housing solution for Hawaii's elderly.

APPENDIX

COHOUSING RESOURCE-DOWNLOAD FORMS

The following information was created by Design Coalition, an architectural firm located in Madison, Wisconsin. Please visit their web site www.designcoalition.org for additional cohousing worksheets, design, and planning aids. Although the forms listed were created for intergenerational cohousing communities, much of the information is still applicable to senior cohousing communities and can be adapted for this target population group.

Predesign Program Outline³⁷⁰

Program Criteria³⁷¹

Household Worksheet-Preliminary Programing³⁷²

Common House Preliminary Program³⁷³

³⁷⁰ "Download," Design Coalition, accessed: April 13, 2014,
<http://designcoalition.org/community/CohsgWkshops/cohsgtools/programoutline.pdf>.

³⁷¹ "Download," Design Coalition, accessed: April 13, 2014,
<http://www.designcoalition.org/community/CohsgWkshops/cohsgtools/programcriteria.pdf>.

³⁷² "Download," Design Coalition, accessed: April 13, 2014,
<http://www.designcoalition.org/community/CohsgWkshops/cohsgtools/HHWsht.pdf>.

³⁷³ "Download," Design Coalition, accessed: April 13, 2014,
<http://designcoalition.org/community/CohsgWkshops/cohsgtools/chprogram.pdf>.

The Design Process: Pre-design Program Outline

Note: This handout was created for a cohousing design workshop presented by Design Coalition in 1992

The following is intended as a checklist for making a co-housing pre-design program. In addition, a full development program would address social characteristics (types of households, diversity, income etc.); financial realities and budgeting; and a development time line.

A. Common Facilities

1. **Common House**

- a. Relationship and priority of functions
 - Relationship to dwellings and site features/outdoor space
 - Special needs—children, disabled, elderly
 - Natural light and acoustics
 - Building materials
 - Energy/environmental/healthy-building issues
 - Future needs

b. **Examples of potential spaces/uses:**

- Dining room (no. of people, size, furnishings, multi-purpose uses etc.)
- Kitchen (size, equipment, no. of people working etc.)
- Storage/Storeroom(s) (food, equipment, materials, tools)
- Children's room/child care program
- Office
- Workshop (equipment)
- Bathroom(s)
- Teen room
- Craft shop (equipment)
- Laundry (expected use, appliances, seating, folding area)
- Guest room(s)
- Library
- Music Room (acoustics, privacy)
- Recycling center
- Courtyard/deck/porch
- Grocery store
- Recreation/exercise room
- Quiet sitting area
- TV/Media room

2. **Other Areas/detached structures**

- Shop/shed/garage buildings
- Guest cottage
- Gazebo/garden structures
- Dumpster enclosure
- Greenhouse
- Glassed-in street

3. **Site**

- Overall layout / positive outdoor space / public-private continuum
- Transition to surrounding neighborhood
- Roads (where, occasional access to dwellings, service & emergency issues)
- Walks (how paved, different kinds)
- Parking (where, how much, if paved and/or covered)

Courtyard (relation to common house and circulation, formal aspects)
Children's needs (thru-out site, play areas)
Area to be landscaped (trees, hedges, turf, shrubs, groundcover)
Area to be left natural
Gardens (individual, common, vegetable, flower)
Water (pond, stream, fountain etc.)
Other amenities, preserved or created (benches, groves, sacred space, gateway, etc.)

B. Dwelling Units

1. General

a. Size ranges and distribution

(studio, 1, 2, 3-bedroom, shared living units, 1 or 2-story etc.)

Cost ranges

Relation to public circulation ("soft edge" at transition, private outdoor space)

Internal orientation/characteristics

- adult-children bedroom separation
- zones of public to private
- interior flexibility
- etc.

Energy efficiency issues

Natural light / acoustics

Materials selection

Future addition/connections between units

Sweat-equity

b. Unit Type A

Size and description

Living/Dining

Kitchen

Bedrooms

Bathroom

Storage

Private outdoor space

c. Unit Type B

Size and description

Living/Dining

Kitchen

Bedrooms

Bathroom

Storage

Private outdoor space

d. Unit Type C

and so on...

Program Criteria

for preliminary planning purposes

Note: This handout was created for a cohousing design workshop presented by Design Coalition in 19923

Dwelling Units

- **Total number of units to be built:**

- **Unit Massing:**

How are units to be clustered? As rowhouses; if so, as one or two-story? As duplexes? 4-plexes? Multi-unit "apartment" style? Will some units be clustered differently than others? (For example, you might say "All the Studios and 1-Beds will be in apartment house(s); 2/3 of the other units will be in two-story rowhouses, and 1/3 as wheelchair accessible one-story duplexes".

- **Unit Mix:**

<u>Unit type</u>	<u>number</u>	<u>Size range</u>	<u># of Bathrooms</u>
Studio units	_____	_____ to _____ sq.ft.	_____
1-Bedroom units	_____	_____ to _____ sq.ft.	_____
2-Bedroom units	_____	_____ to _____ sq.ft.	_____
3-Bedroom units	_____	_____ to _____ sq.ft.	_____
4-Bedroom units	_____	_____ to _____ sq.ft.	_____
Other unit type (describe)	_____	_____ to _____ sq.ft.	_____

- **Quantify three other factors** which affect the project cost:

- Laundry facilities type, e.g. whether private, common or semi-common (multiple laundry areas, each shared by a duster of several households)
- Storage type--amount located in individual units vs. clustered storage cubicles (for example, this may affect whether basements are required)
- General quality of construction, expressed as a cost per square foot estimate. An attempt should be made to quantify the extra cost of energy efficient construction, cost savings via sweat equity, extent of site improvements, and so on.

Common House

- List of spaces, with assigned square footages
- One or two story, and provisions for wheelchair accessibility, e.g. elevator, ramp or lift
- General quality of construction, expressed as a cost per square foot estimate. An attempt should be made to quantify the extra cost of energy efficient or 'green' construction, cost savings via sweat equity, extent of site improvements, and so on.

Other

- Other elements of the project not included above *if they have a cost implication.*

Program Criteria

courtesy of Design Coalition Inc., Madison, WI 608-246-8846 www.designcoalition.org

Household Worksheet for preliminary Programming

Name of household _____

Please fill out this Worksheet as part of the feasibility-phase programming. This questionnaire is intended only to answer very basic questions about dwelling unit sizes; much more detail comes later.

• Preferences

Prefer

Don't want

Don't mind

- First Floor unit only
- Second Floor unit only
- First and Second Floor (townhouse)
- Basement
- Separate House

If adequate storage, protection from tornadoes, workshop, laundry and mechanical space were provided some other way, would you still need a basement? Yes No

• Living Space

Measure the place you're **currently** living, and record the square footages below. Please read **Measuring Tips** (below) before starting, so everyone records their information the same way. Enter zero if your place does not include a particular room type.

For the **New Unit** column, try to imagine how your needs will change, for example, in regards to workrooms, guest accommodations, and storage. Don't feel you have to "second guess" the questionnaire (for example: "We *could* live with less space, but where I live now has such a lousy layout...") Assume that your new cohousing dwelling will be well-planned, comfortable, with natural light, adequate storage and so on.

<u>Space</u>	<u>Current Square Footage</u>	<u>New Unit Square Footage</u>	<u>Comments</u>
Living Room	_____ ft ²	_____ ft ²	If more appropriate to how your place is laid out, combine all or some of these spaces
Dining Room	_____ ft ²	_____ ft ²	
Kitchen	_____ ft ²	_____ ft ²	
Family room	_____ ft ²	_____ ft ²	
Bathroom 1	_____ ft ²	_____ ft ²	
Bathroom 2	_____ ft ²	_____ ft ²	
Bathroom 3	_____ ft ²	_____ ft ²	
Bedroom 1	_____ ft ²	_____ ft ²	Include clothes closets with bedroom square footage, if the closet is in bedroom
Bedroom 2	_____ ft ²	_____ ft ²	
Bedroom 3	_____ ft ²	_____ ft ²	
Bedroom 4	_____ ft ²	_____ ft ²	
Bedroom 5	_____ ft ²	_____ ft ²	
Foyer/Vestibule	_____ ft ²	_____ ft ²	

Stairway _____ ft² _____ ft²
 Corridor _____ ft² _____ ft²
 Other (describe) _____ ft² _____ ft²
 Other (describe) _____ ft² _____ ft²
 Other (describe) _____ ft² _____ ft²
 Other (describe) _____ ft² _____ ft²
 Storage, in-house _____ ft² _____ ft²

Count one stairwell area for each floor served; write the total. See **Measuring Tips**

___ Workshop ___ Den ___ Office
 ___ Sewing/Workroom ___ Laundry
 ___ Utility

Include just the floor area or "footprint" of the spaces used for storage, even if there are shelves or racks with more storage above the floor. Include storage in an attic, furnace or utility room, etc.

Don't forget *de facto* storage, like a corridor or nook that has collected stored stuff. **Do not** include either upper or lower kitchen cabinets—this space is counted with the kitchen. **Do** include a separate pantry here if you did not include it with the kitchen.

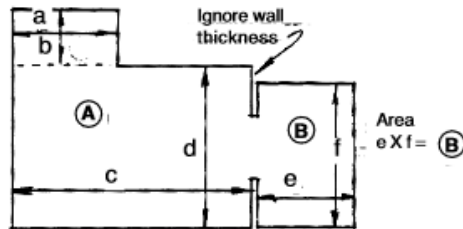
Total Square Feet _____

Net interior

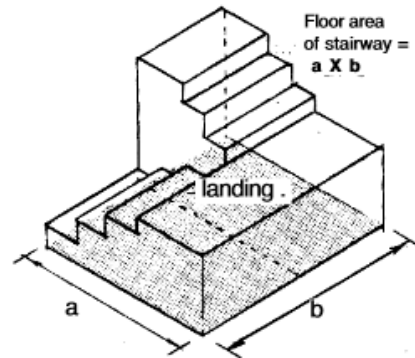
	Current	New
• Exterior		
Outside living	_____ ft ²	_____ ft ²
Storage, non in-house	_____ ft ²	_____ ft ²

Include here **built** semi-outdoor space such as covered porches, screened porches, balconies *that you use as living space*. **Do not** include yard, driveway, patio, garden or deck space. Include on-site garage or shed

• **Measuring Tips:**



- measure to inside surface of walls
- for irregularly shaped rooms, divide into smaller rectangles and add areas together
 example: $(a \times b) + (c \times d) = A$
- if you wish, round dimensions to nearest foot



For you/your household, please describe your current needs regarding:

Indoor storage for example:

hanging clothes (lineal feet of closet) _____ boxed clothes/other boxes (number) _____
camping gear (approximate volume, cu.ft.) _____ luggage (number of pieces) _____
holiday decorations (number of boxes) _____ bicycles (number) _____
craft/hobby materials (approx, volume, cu.ft.) _____ books (lineal feet of shelf space) _____
sports equipment (approximate volume, cu.ft.) _____ files (number of drawers of boxes) _____

Other:

I expect my storage needs to: **increase** _____ % **decrease** _____ % **remain about the same** _____

Outdoor storage (assuming that the major grounds keeping equipment as mower, rototillers, snow removal machines, etc. are owned in common):

camping gear (approximate volume, cu.ft.) _____ bicycles (number) _____
craft/hobby materials (approx, volume, cu.ft.) _____ boats (number, size)) _____
yard equipment (approximate volume, cu.ft.) _____ canoes (number) _____

Other:

I expect my storage needs to: **increase** _____ % **decrease** _____ % **remain about the same** _____

Parking (number of vehicles)

car _____ van/truck _____ motorcycle _____ boat _____ RV _____ trailer _____

Regular personal exercise equipment:

treadmill rowing machine stepper weight bench/weights

Other:

Pets:

OK in my unit OK in common areas
Not OK in my unit Not OK in common areas

Please describe type, number & size of your pets, if any.

If you wish,, describe any preferences / aversions / allergies vis-a-vis pets.

Physical limitations:

wheelchair accessible / barrier-free unit
Other accommodations for physical challenges (visual, auditory, mobility, etc.)

Outdoor gardening / landscaping interests. I want:

a vegetable garden of my own a flower garden of my own
a shared vegetable garden a shared flower garden
to tend an orchard to tend a landscape
to NOT have to tend anything...

walking paths on our site special / sacred outdoor spaces
outdoor sitting places outdoor eating places

I prefer:

“a natural and rough landscape” “a tended and clipped landscape”

Other:

Miscellaneous important concerns / needs /opportunities:

“clean” craft room(s) / studio(s) “dirty” craft room(s) / studio(s)
woodworking shop metal shop vehicle repair space bicycle repair space
greenhouse potting/gardening shed raised (wheelchair accessible) gardening

sauna(s) hot tub(s) common private
music space(s) teen space(s) children’s / child care space(s)

children’s play equipment indoor outdoor
adult play (horseshoes? croquet? etc... specify) _____

outdoor clothes drying areas storage for bulk food(s)

energy-efficient design & construction low-toxin construction
“green” design & construction solar energy

Other:

Common House Preliminary Program

This sample preliminary 'design program' shows a format for recording space-planning decisions and communicating these to your designer. It is intended to establish a feasibility-phase budget only.

	<u>20 Units</u> 44 people	<u>30 Units</u> 66 people	<u>Comments</u> Population assumed at 2.2 person/unit
Entry w/Coats/Mailbox/Messages	150 ft ²	180 ft ²	
Dining/Open area	616	924	@ 14 ft ² /person, incl.table & chair stacks
Multipurpose/Overflow Area	300	400	Adjacent to dining; for extra diners, TV& VCR, exercise area, small meetings, etc., with folding wall
Kitchen (including storage & serving)	350	500	
Toiletrrooms (2)	200	200	Women: 2 WC's+lav; Men: WC+urinal+lav
2 Guestrooms w/ closets & bath	300	300	Bath is shared
Laundry	64	64	For kitchen/dining & guest laundry
Library/Quiet space	240	320	
Receiving/Recycling area	80	120	Indoor portion of ft ² listed here
Children's space	200	300	(Not intended for licensed daily care)
Teen space	250	350	
Storage/Janitorial	100	150	Holiday decorations, supplies, etc.
Hobby space/Workshop	200	300	Identify equipment & use
Root cellar	84	112	Has dirt floor...
<i>"Buy and Sell" Store</i>	<i>100</i>	<i>150</i>	<i>Desirable if site is far from shopping</i>
<i>Fireplace or stove w/ wood storage</i>	<i>32</i>	<i>32</i>	<i>Adjacent to Dining/Library space...</i>
<i>Solarium</i>	<i>48</i>	<i>64</i>	<i>Adjacent to other space</i>
<i>Office</i>	<i>100</i>	<i>100</i>	<i>For community management tasks</i>
<i>Third guestroom w/ closet</i>	<i>100</i>	<i>100</i>	<i>Shares the same bath ad the other two</i>
Total Net Square Footage	<u>3,134</u>	<u>4,220</u>	(Figures in italics not included)
multiply by Grossing Factor:	1.35	1.35	Wall thickness, circulation, mechanical
Total Building Square Footage	4,231	5,697	
<i>Other possible elements:</i>			
Deck/Screen porch	240 (24)	400 (40)	() = # of users @ 10 ft ² /each
Hot tub w/ deck surround	150 (6)	200 (10)	Indoor or outdoor () = # of users
Sauna	48 (6)	80 (8)	Indoor or outdoor () = # of users

Other common exterior facilities to be estimated separately: Parking lot(s), paths, roadways(s), storage shed (for yard tools, deck chairs, etc.), greenhouse...

Common House Design Program

Cohousing Tools ~ courtesy of Design Coalition Madison, WI 608/246-8846 www.designcoalition.org

ACCESSIBILITY RESOURCE-PUBLICATION

The following information is a publication created by the State of Hawaii Department of Health, Disability and Communication Access Board (DCAB). Please visit their web site www.hawaii.gov/health/dcab for more information.

MODIFYING YOUR HOME FOR ACCESSIBILITY



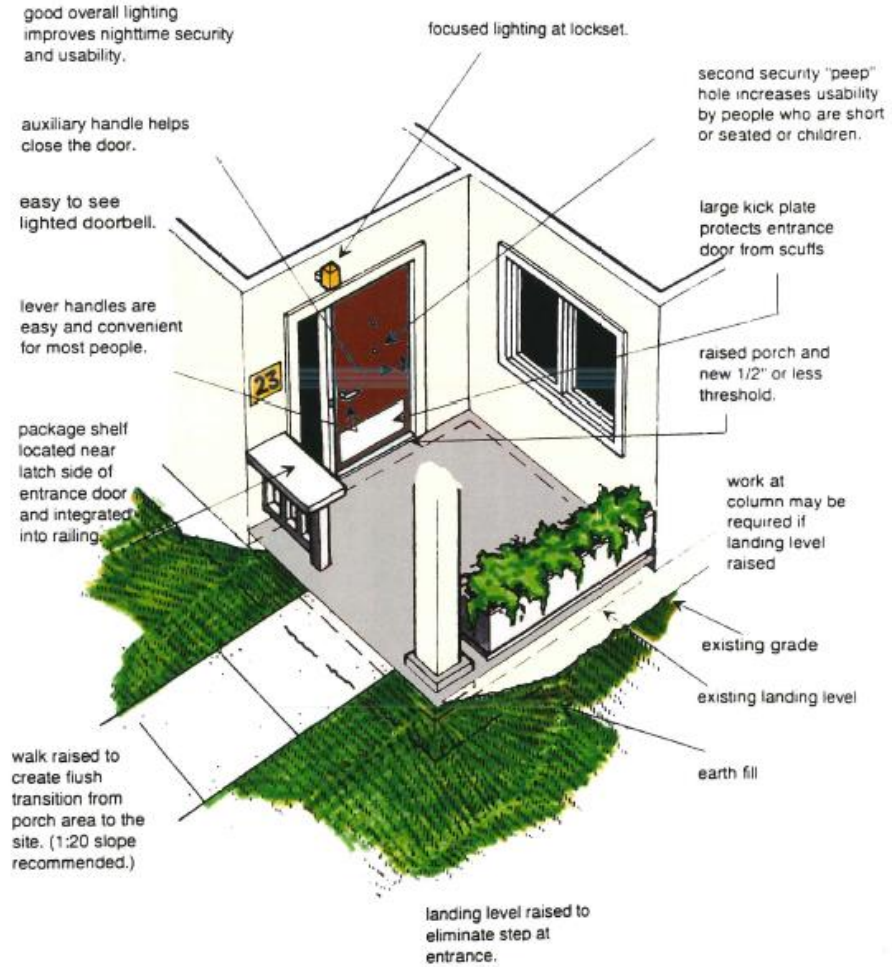
DISABILITY AND COMMUNICATION ACCESS BOARD (DCAB)

919 Ala Moana Blvd., Room 101 • Honolulu, Hawaii 96814

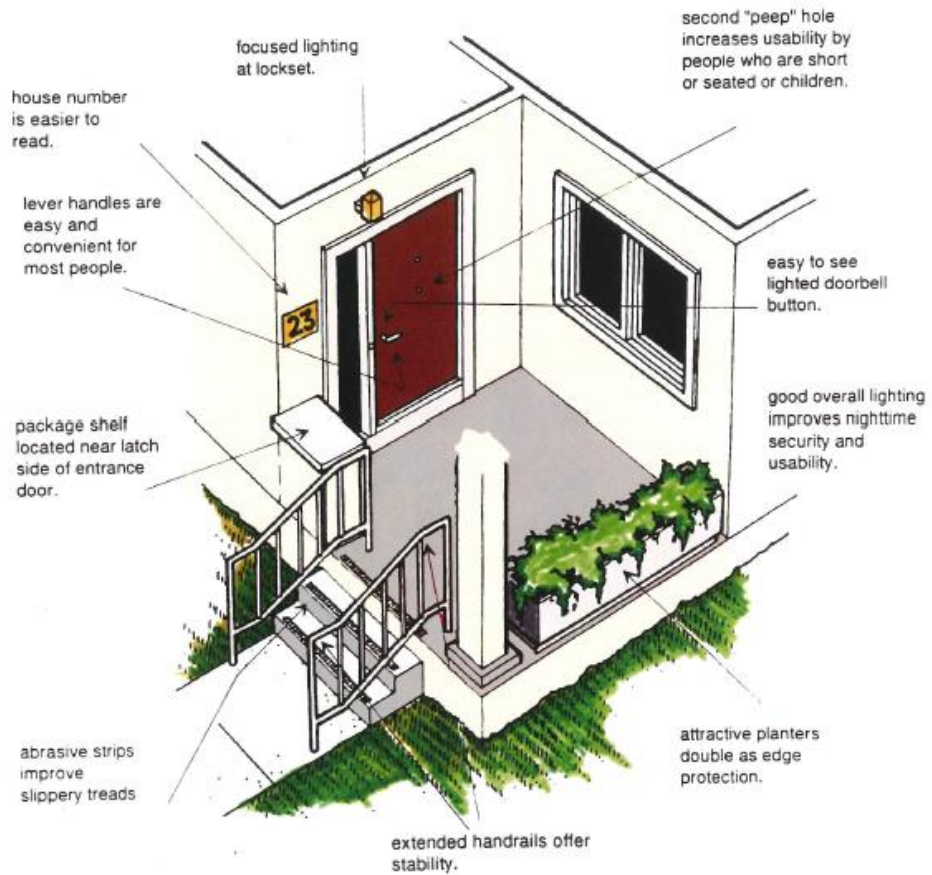
Oahu: (808) 586-8121 (Voice/TTY) • (808) 586-8129 (Fax)

E-mail: dcab@doh.hawaii.gov • Web Site: www.hawaii.gov/health/dcab

Remodeled Entrance (with stairs removed)



Remodeled Entrance (when stairs remain)



Replacing or Installing Entire Entrances



**Earth Cut
and Fill**

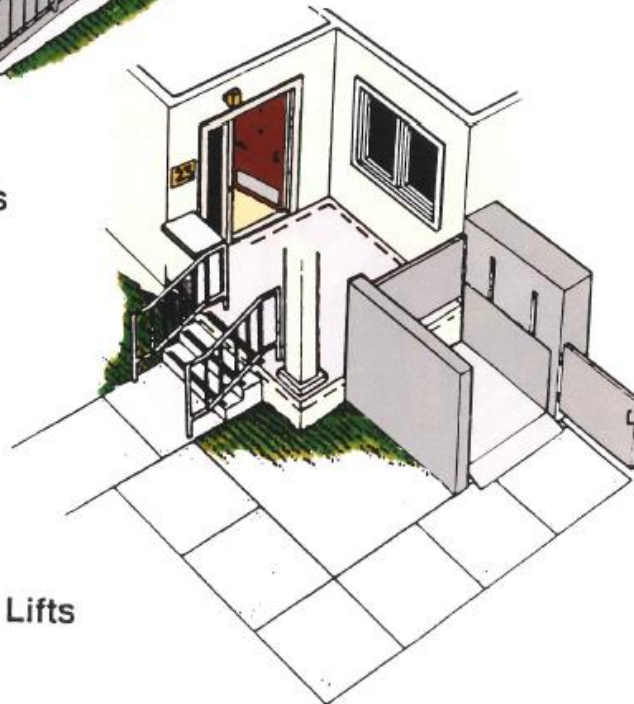


**Earth Berm
and Bridges**

Replacing or Installing Entire Entrances

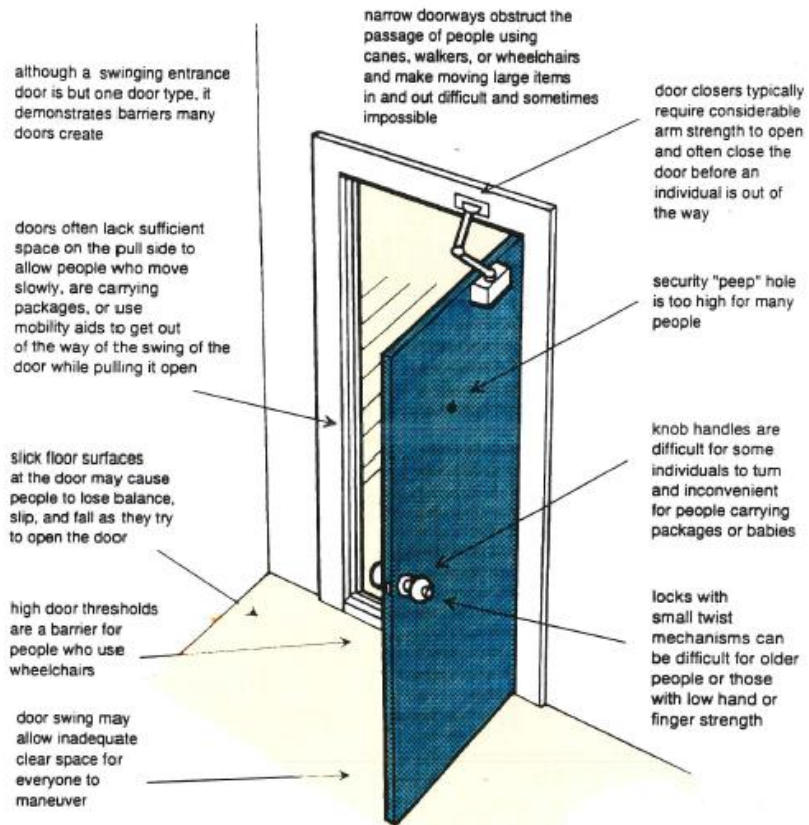


Ramps

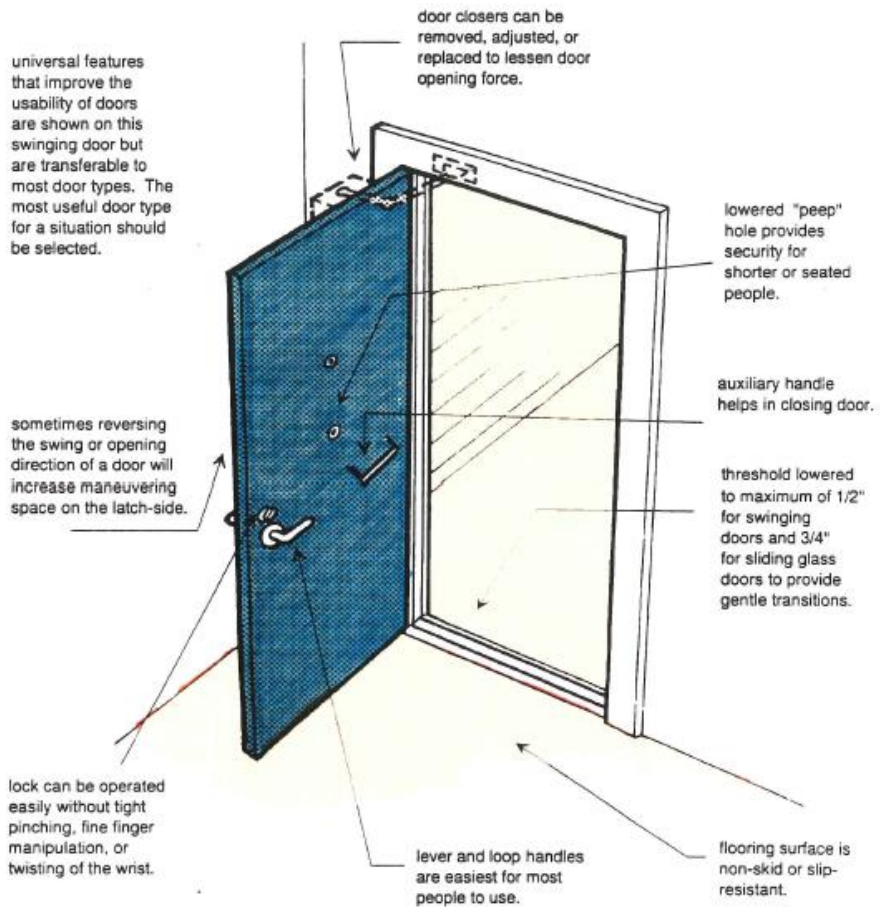


Lifts

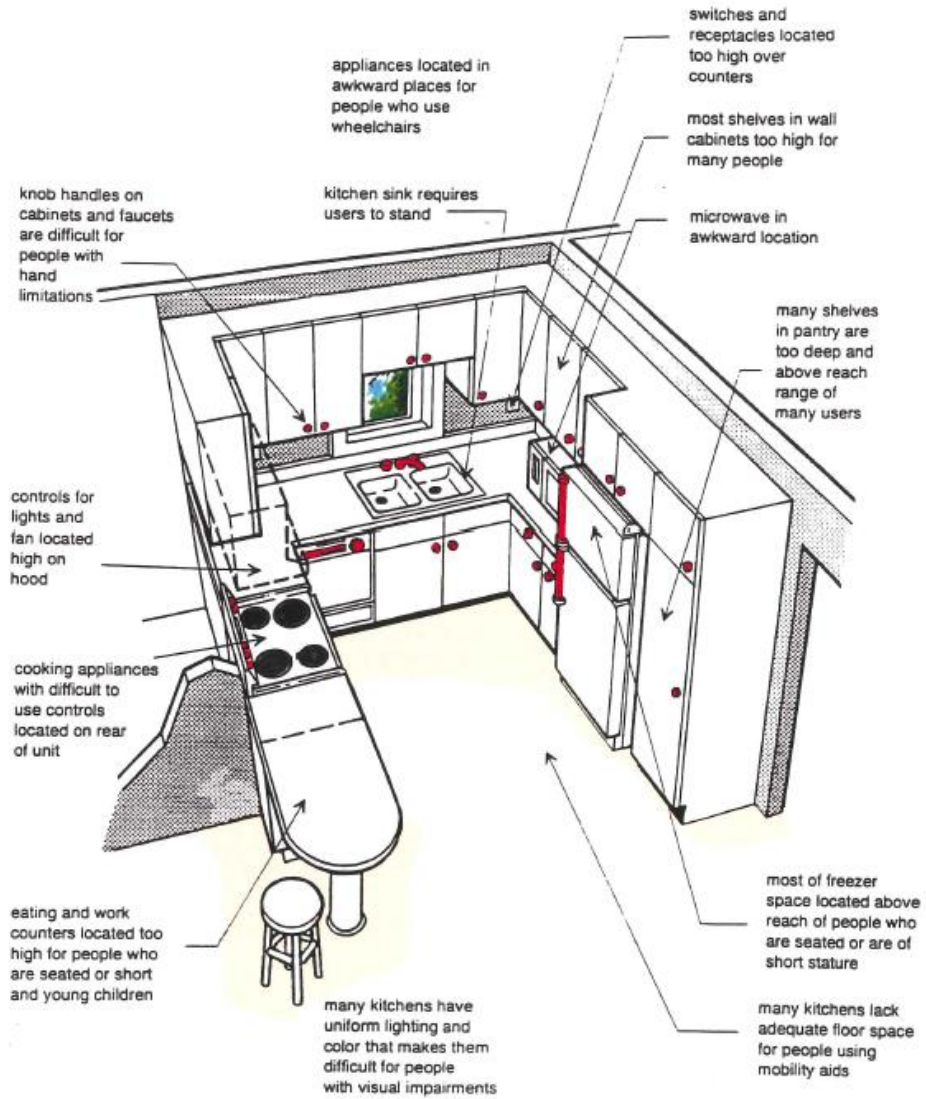
Common Barriers At Doors



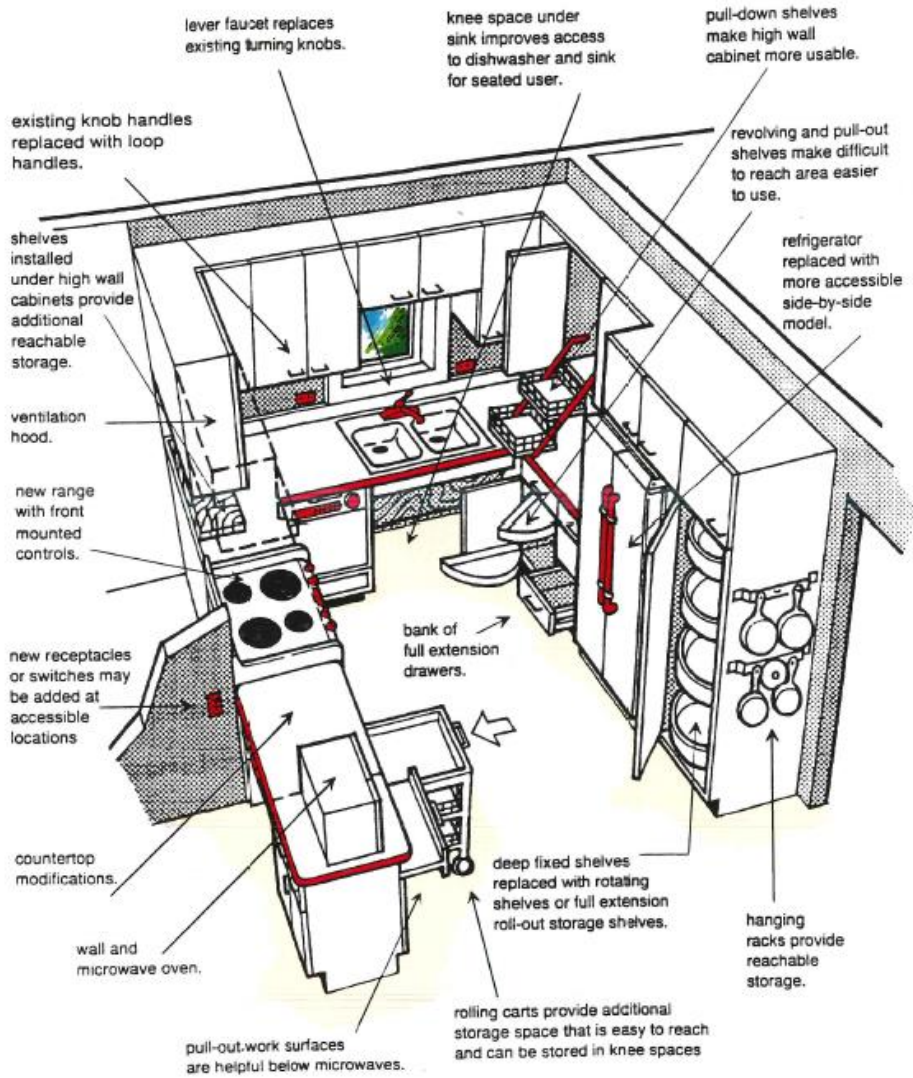
Remodeled Doors



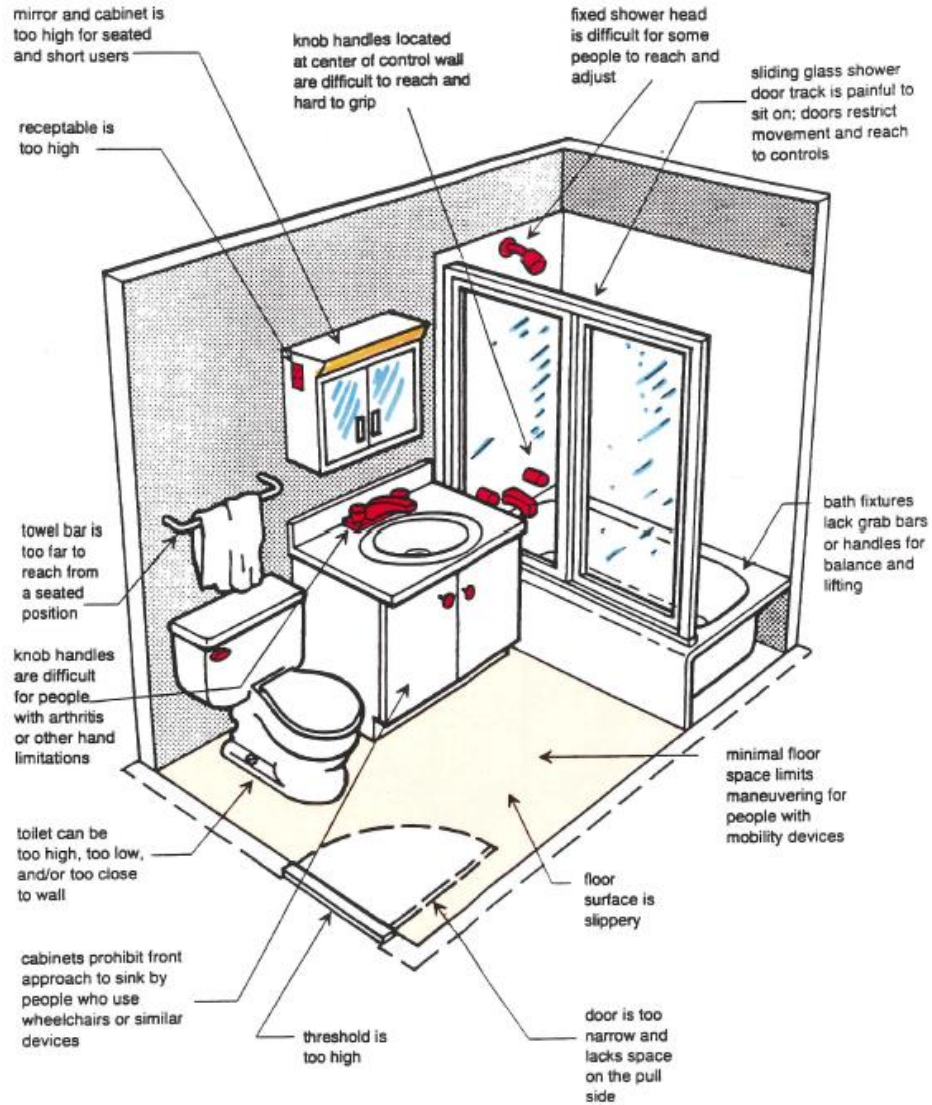
Common Barriers in Kitchens



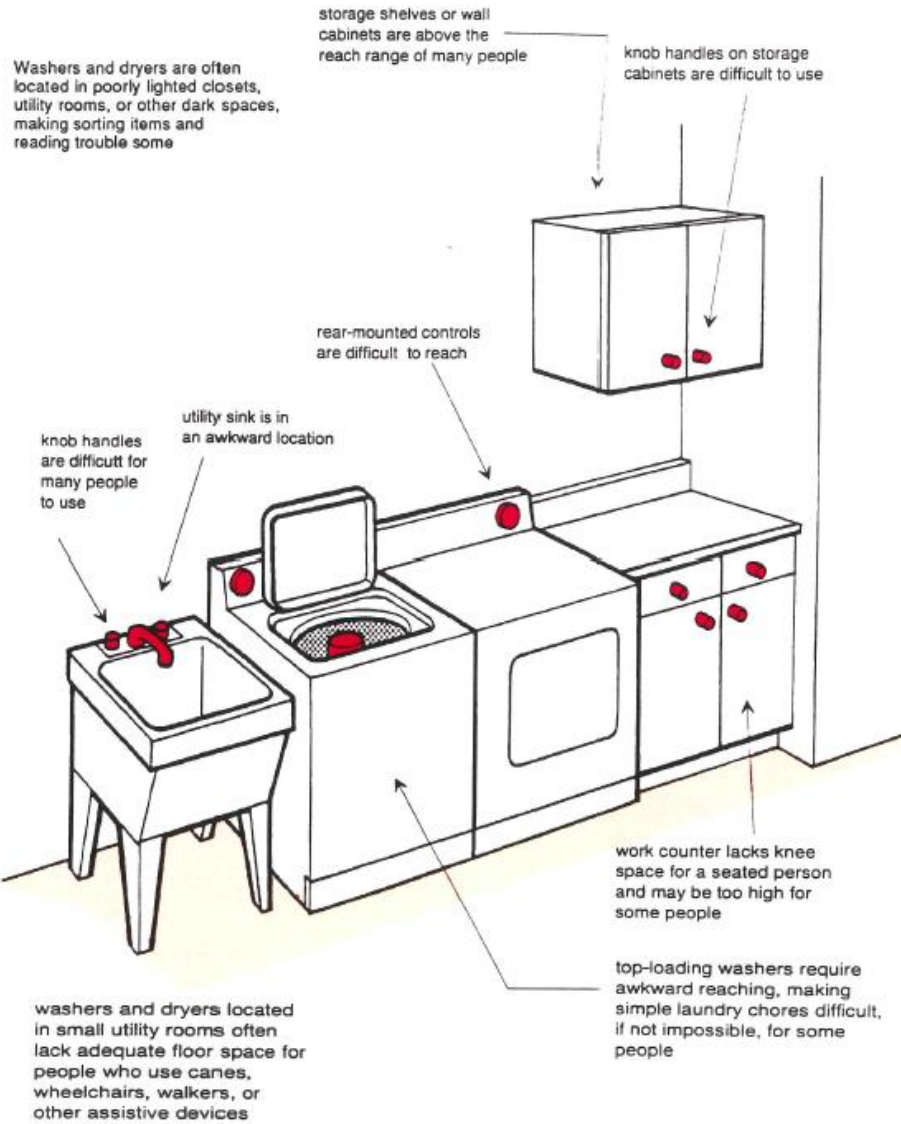
Remodeled Kitchen



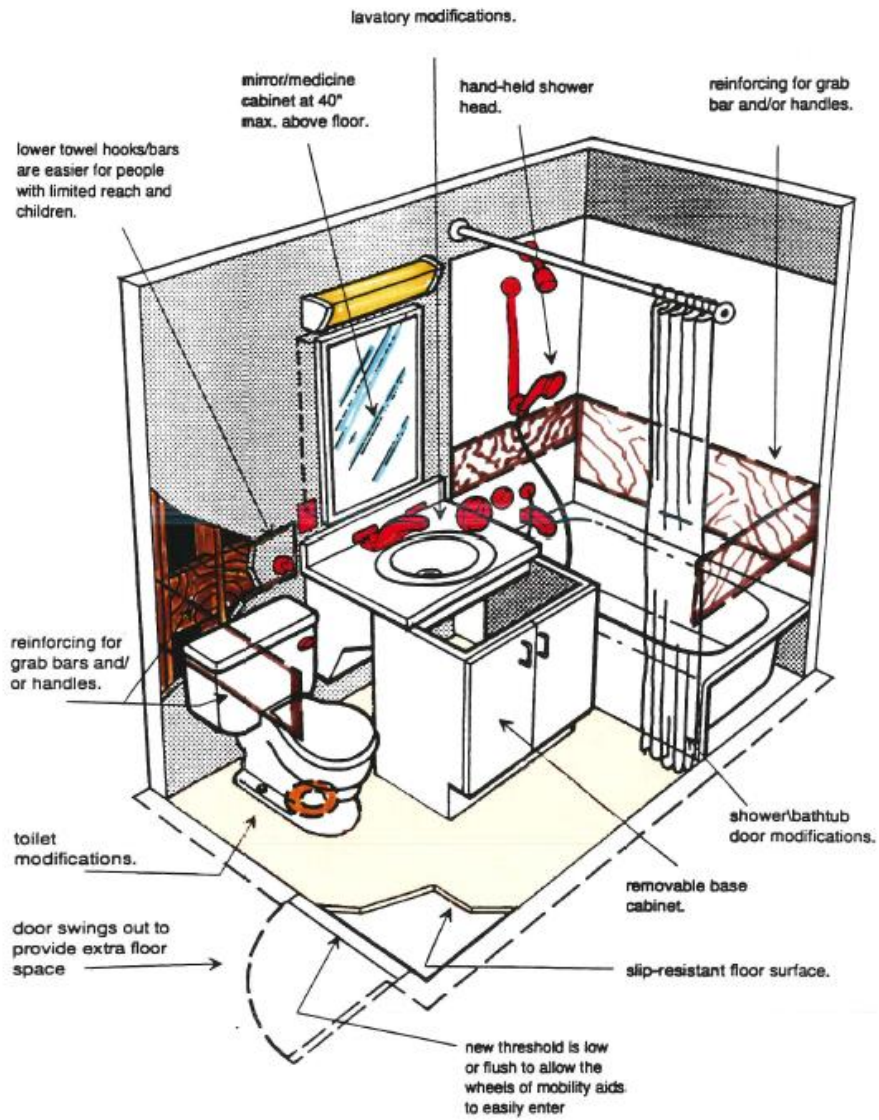
Common Barriers in Bathrooms



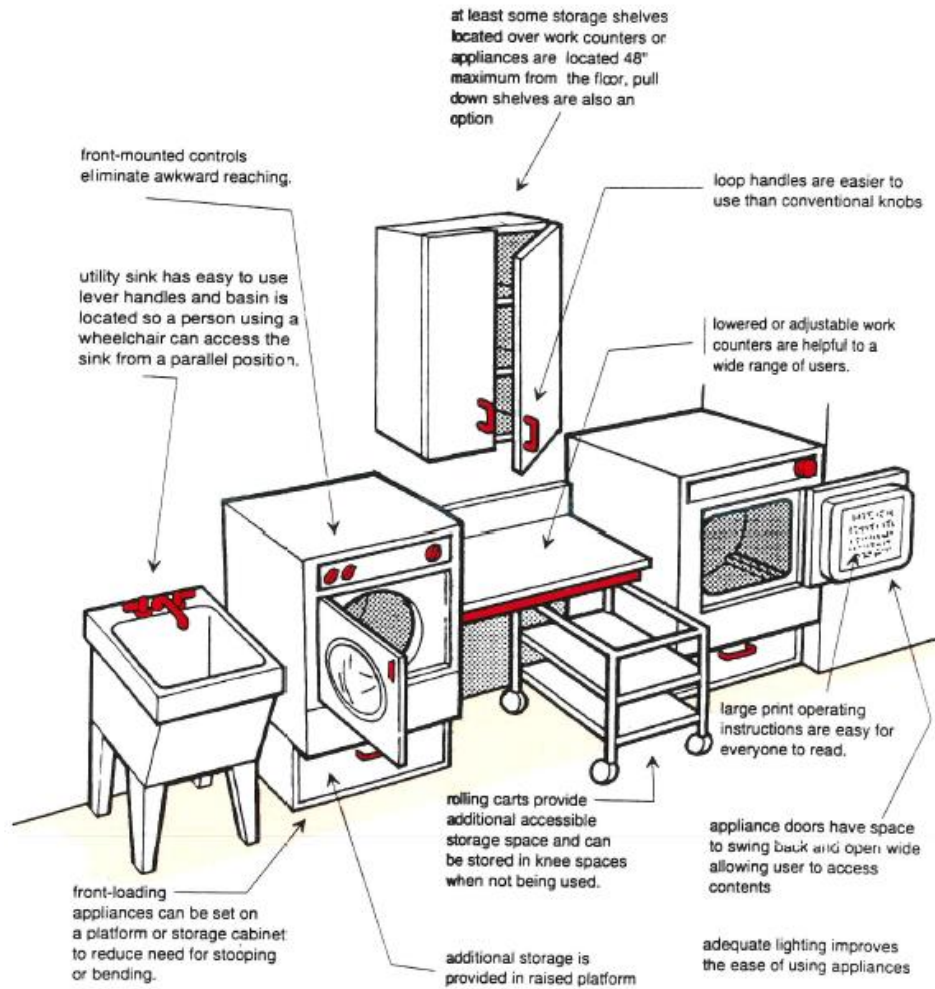
Common Barriers in Laundry Areas



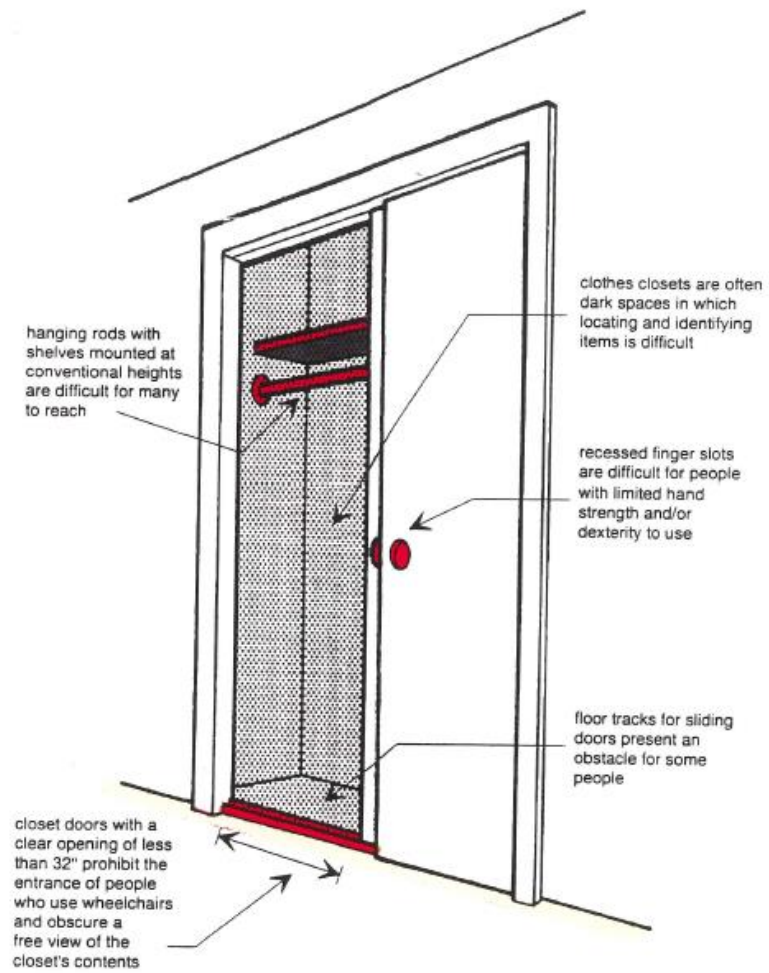
Remodeled Bathroom



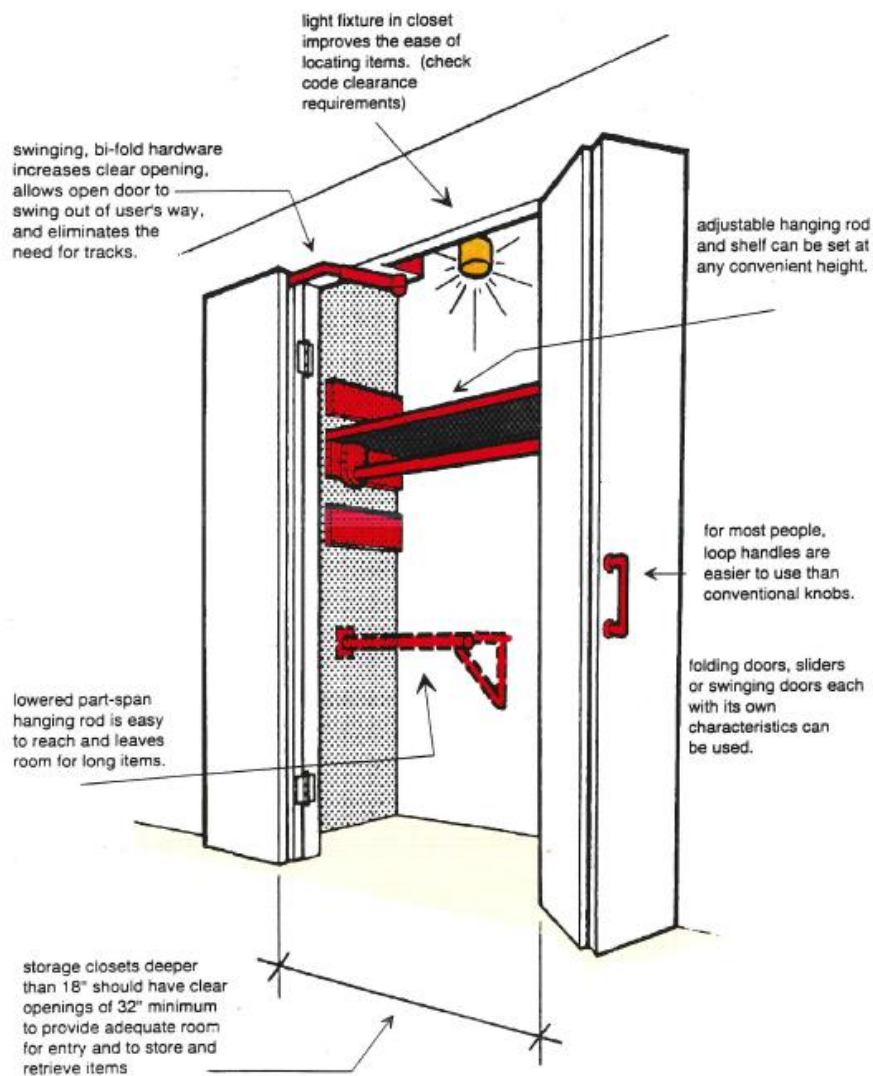
Remodeled Laundry Area



Common Barriers in Closets



Remodeled Closet



RESOURCES

Catholic Charities Hawaii

Clarence T. C. Ching Campus
1822 Keeaumoku Street
Honolulu, HI 96822

Help Line

Oahu: (808) 521-4357
Hawaii: (808) 935-4673
Maui: (808) 873-4673
Kauai: (808) 241-4673
Web Site: www.catholiccharitieshawaii.org

Child and Family Services

Corporate Office

91-1841 Ft. Weaver Road
Ewa Beach, HI 96706
Phone: (808) 681-3500
Web Site: www.childandfamilyservice.org

Executive Office on Aging

No.1 Capitol District
250 South Hotel Street, Suite 406
Honolulu, Hawaii 96813-2831
Phone: (808) 586-0100
FAX: (808) 586-0185
Email: eoah@doh.hawaii.gov Website: www.hawaiiadrc.org

Hawaii County

Kahi Malama - A Place of Caring
Aging & Disability Resource Center
1055 Kinoole Street
Hilo, HI 96720
Phone: Hilo - (808) 961-8626 ♦ Kona - (808) 323-4390
FAX: (808) 961-8603
Email: hcoa@hawaiiantel.net Website: www.hcoahawaii.org

Honolulu County

Elderly Affairs Division
Standard Finance Building
715 South King Street, Suite 200
Honolulu, HI 96813
Phone: (808) 768-7700
FAX: (808) 527-6895
Email online via website - Website: www.elderlyaffairs.com

Kauai County

Kauai Agency on Elderly Affairs
Piikoi Building
4444 Rice Street, Suite 330
Lihue, HI 96766
Phone: (808) 241-4470
FAX: (808) 241-5113
Email: elderlyaffairs@kauai.gov Website: www.kauaiadrc.org

Maui County

Maui County Office on Aging
2200 Main Street, Suite 547
Wailuku, HI 96793
Phone: Maui - (808) 270-7774 ♦ Molokai - (808) 553-5241 ♦ Lanai - (808) 565-7114
FAX: (808) 270-7935
Email: aging@mauicounty.gov Website: www.mauicountyadrc.org

City and County of Honolulu, Department of Planning and Permitting
650 South King Street
Honolulu, HI 96813
Phone: (808) 768-8220
Website: www.honoluluodpp.org

Kauai County Planning Department
4444 Rice Street., Ste A473
Lihue, HI 96766
Phone: (808) 241-4050
Website: <http://www.kauai.gov/default.aspx?tabid=61>

University of Hawaii, Center on Aging

University of Hawaii, Mānoa
1960 East West Road
Bio Medical Sciences T-705B
Honolulu, HI 96822
Phone: (808) 956-5001
Email: [uhcoa \[at\] hawaii.edu](mailto:uhcoa@hawaii.edu)
Website: <http://www.hawaii.edu/aging/index.html>

University of Hawaii Elder Law Program

2515 Dole Street
Honolulu, HI 96822
Phone: 956-6544
Website: <http://www.hawaii.edu/uhelp/>

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***INTERGENERATIONAL INTEGRATION:
HOUSING FOR THE ELDERLY IN HAWAII***

D. ARCH THESIS PROJECT BY NORMA HARA

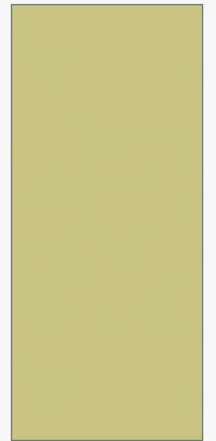


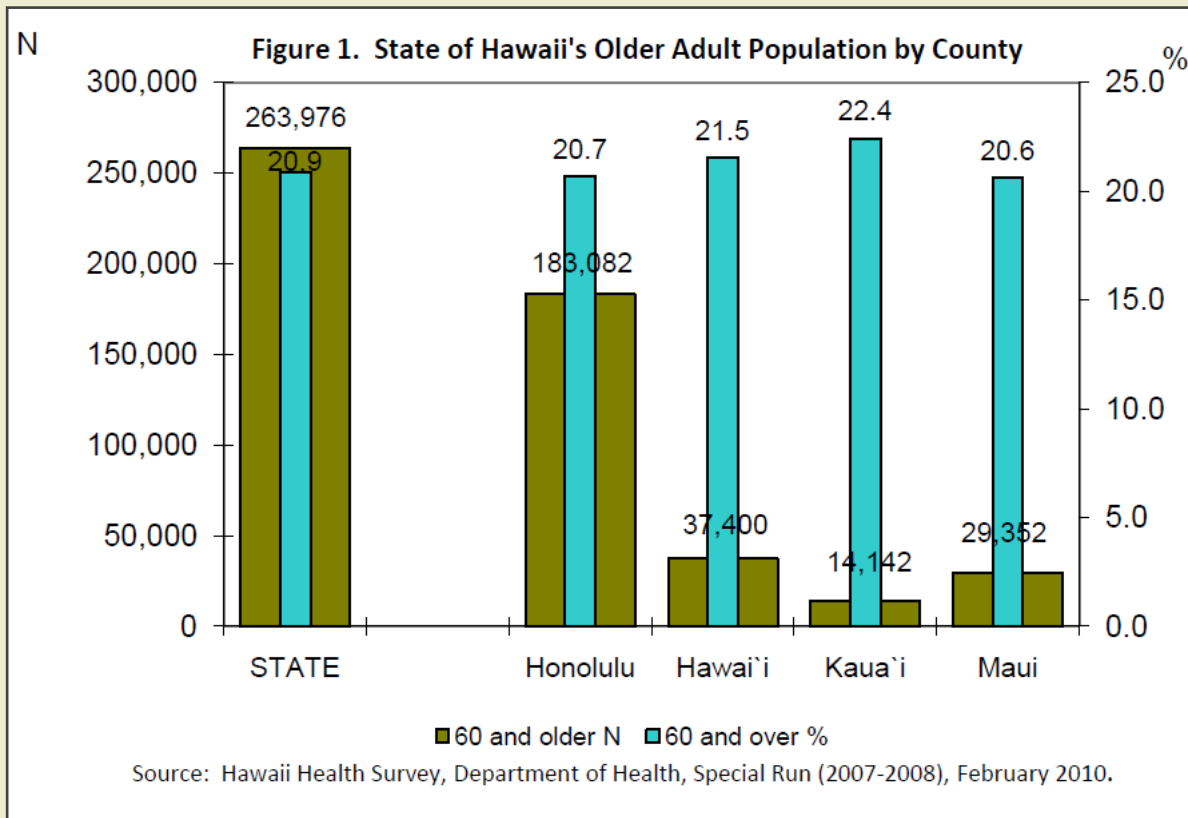
Table 3. Hawaii State Total Resident Population (60+, 85+), 1980-2035

Age Group	1980	1990	2000	2010	2020	2025	2030	2035
(Population in 1000s)								
Total 60+	115.67	174.05	207.00	277.40	373.65	415.67	448.71	474.59
% Total Pop.	11.9%	15.6%	17.1%	21.4%	26.1%	27.9%	29.0%	29.7%
# Change from 1980		58.38	91.33	161.73	257.98	300.00	333.04	358.92
% Change from 1980		50.5%	79.0%	139.8%	223.0%	259.4%	287.9%	310.3%
Total 85+	5.69	10.22	17.56	30.24	42.76	45.37	54.61	71.55
% Total Pop.	0.6%	0.9%	1.5%	2.3%	3.0%	3.0%	3.5%	4.5%
# Change from 1980		4.53	11.87	24.55	37.07	39.68	48.92	65.86
% Change from 1980		79.6%	208.6%	431.5%	651.5%	697.4%	859.8%	1157.5%
Total Pop.	968.50	1113.49	1211.48	1299.57	1432.54	1492.25	1547.46	1598.68
# Change from 1980		144.99	242.98	331.07	464.04	523.75	578.96	630.18
% Change from 1980		15.0%	25.1%	34.2%	47.9%	54.1%	59.8%	65.1%

Source: Hawaii Department of Business, Economic Development and Tourism, DBEDT 2035 Series (July 2009) - Years 2020 and above are projections. Years 2000-2010 (60+ and 85+) – U.S. Census bureau.

HAWAI'I STATE TOTAL POPULATION

1980-2035



OLDER ADULT POPULATION BY COUNTY

Adult Population by Ethnic Categories

Caucasians (white) make up the largest ethnic adult population (18 and over) in Hawaii (292,441 individuals or 30.1%) as shown in Tables 5 and 6. Japanese make up the second largest ethnic adult population (207,631 or 21.3%). However, after age 75, Japanese become the largest ethnic adult population (35,662 or 38.0%) and Caucasians become the second largest (32,268 or 34.4%).

Table 5. Adult Population by Ethnic Categories

STATE	All Adults	Selected Age Groups			
		18-54	55-59	60-74	>75
White	292,441	158,935	35,909	65,329	32,268
Native Hawn/Part	182,846	138,024	13,860	22,506	8,456
Filipino	122,364	92,987	7,196	17,105	5,076
Japanese	207,631	103,642	24,495	43,832	35,662
Other Race	167,750	118,302	15,887	21,293	12,268
Total	973,032	611,890	97,347	170,065	93,730

Source: Department of Health Hawaii Health Survey (2007-2008)

Table 6. Adult Population by Ethnic Categories in Percentages

STATE	All Adults	Selected Age Groups			
		18-54	55-59	60-74	>75
White	30.1%	26.0%	36.9%	38.4%	34.4%
Native Hawn/Part	18.8%	22.6%	14.2%	13.2%	9.0%
Filipino	12.6%	15.2%	7.4%	10.1%	5.4%
Japanese	21.3%	16.9%	25.2%	25.8%	38.0%
Other Race	17.2%	19.3%	16.3%	12.5%	13.1%
Total	100.0%	100.0%	100.0%	100.0%	100.0%

Source: Department of Health Hawaii Health Survey (2007-2008)

ETHNICITY

Adult Population by Poverty Level

The U.S. Census Bureau estimated that across the nation, almost 3.4 million elderly persons (8.9%) were below the poverty level in 2009. Table 7 indicates that 20,882 older adults (7.9%) in the State, 60 years or older, live at or below the federal poverty level.

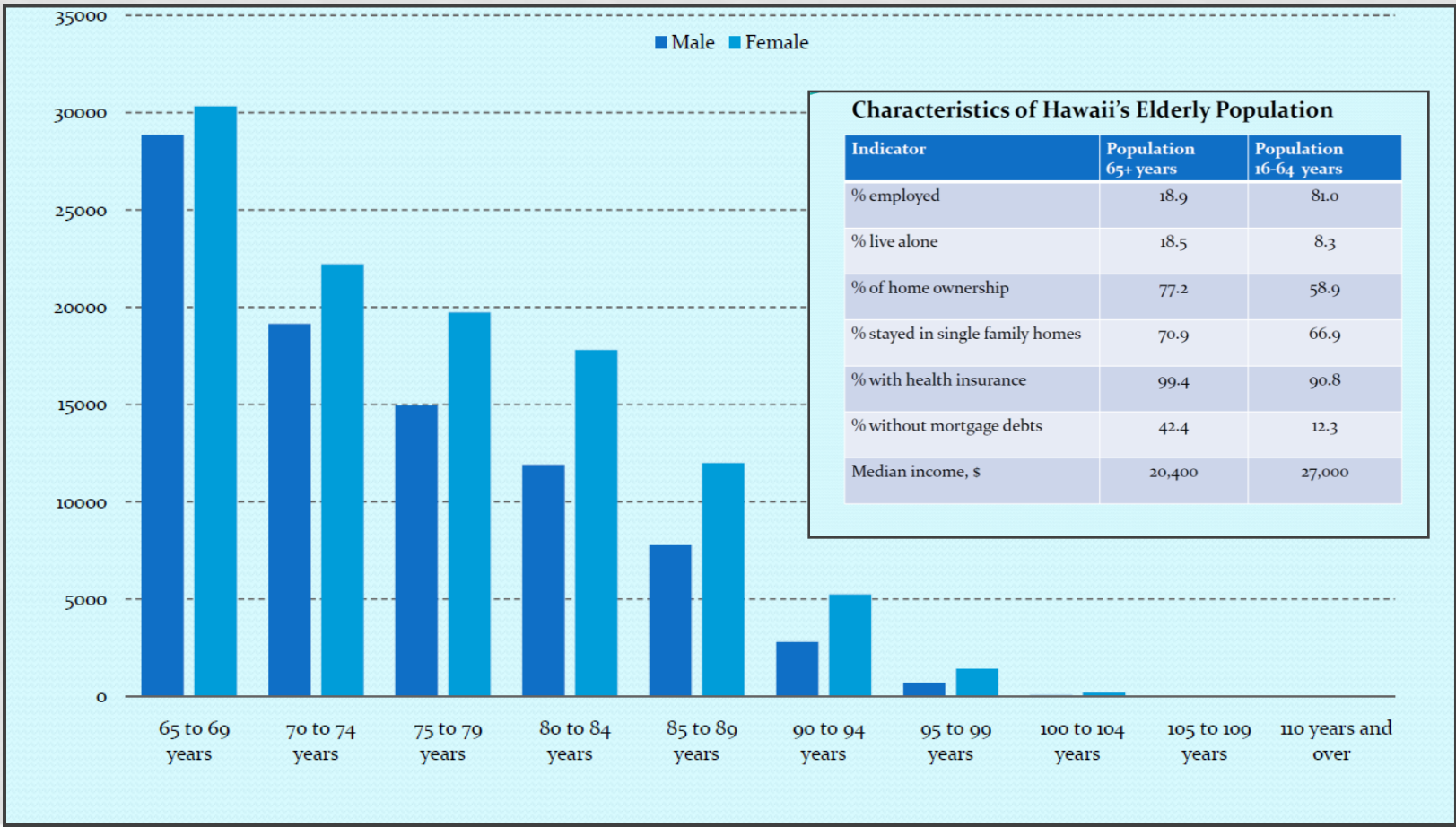
The largest percentage of older adults within the four counties, living at or below the poverty level, resides in Hawaii County (11.2%), whereas the smallest percentage resides in Honolulu County (6.9%).

Table 7. 60+ Below Poverty Level by State and County

	State of HI	Hawaii	Honolulu	Kauai	Maui
60+ Below Poverty	20,882	4,187	12,538	1,410	2,745
Percentage	7.9%	11.2%	6.9%	10.0%	9.4%

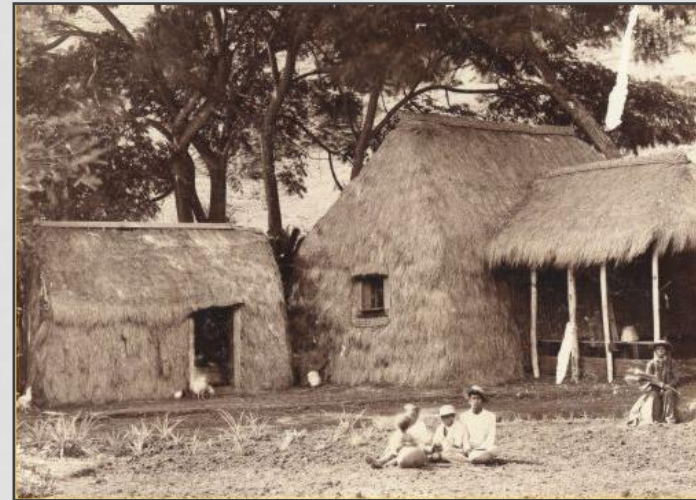
Source: Department of Health Hawaii Survey (2007-2008)

POVERTY LEVEL

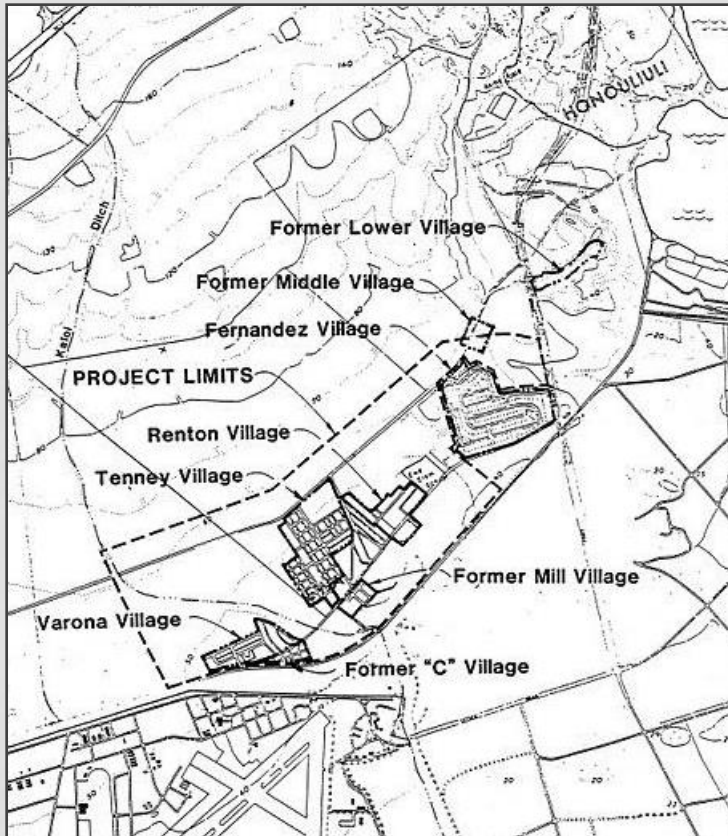


CHARACTERISTICS OF HAWAII'S ELDERLY

KAUHALE HAWAIIAN HOMESTEAD



PLANTATION VILLAGES



Ewa Plantation Village Community



Ewa Sugar Company, 1893



Early Immigrants' Housing



Plantation Villages



CLUSTER HOUSING



Rear View



Street View



Area Map



Front View

INTENTIONAL COMMUNITY



Chaminade University



Campus Map



Private Apartments



Community House



Living Room



Chapel



Dining Room



Shared Kitchen

COHOUSING

- *Originated in Denmark*
 - “Bofoelesskaber” (Living Communities)
 - Began in the 1960’s
 - Housing that embraced the needs of humans beings
 - “Moving from man the worker to man the player”
- *Concept brought to U.S. in the 1980’s by architects Kathryn McCamant and Charles Durrett*
 - *Intergenerational Cohousing*
 - Muir Commons Community, Davis, CA, 1990, First Cohousing development
 - *Senior Cohousing*
 - Silver Sage Village, Boulder, CO, 2007, First Senior Cohousing Development

6 DEFINING CHARACTERISTICS OF COHOUSING

- *Participatory process*
- *Neighborhood design*
- *Private Homes Supplemented by Extensive Common Facilities*
- *Resident management*
- *Non-hierarchical structure and decision-making*
- *No shared community economy*



SENIOR COHOUSING



ElderSpirit Community - Abingdon, VA



Glacier Circle-Davis, CA



Common House



Community Kitchen

“THEY REPRESENT ONE OF HAWAII’S FASTEST GROWING NATURAL RESOURCES.” PROF. KAHIKAHEALANI WIGHT

They are our connection to the past, and are a source of experience, knowledge, guidance, strength, and inspiration to the next generation.

- *Teachers*
- *Mentors*
- *Leaders*
- *Caregivers*



COHOUSING SITE VISITS



**PINE STREET COHOUSING
PIONEER VALLEY COHOUSING
NEW VIEW COHOUSING
ELDERSPIRIT COMMUNITY**

**COMMITTEE MEETING # 2
MARCH 4, 2013**

Cohousing



- **Overview**

- Developed in Denmark
- Brought to the United States in 1970s
 - Original 4 Hotbeds
 - California, Colorado, Washington, and Massachusetts
- Currently 31 States with Intergenerational Cohousing communities
- Elderly Cohousing
 - First Built in 2005 in Davis, CA
 - EIC- Elder Intentional Communities
 - First Built 2006 in Abingdon, VA
- Currently 4 States with Senior Cohousing communities
- 6 emerging communities

<http://www.geron.uga.edu/eic/communities.html>

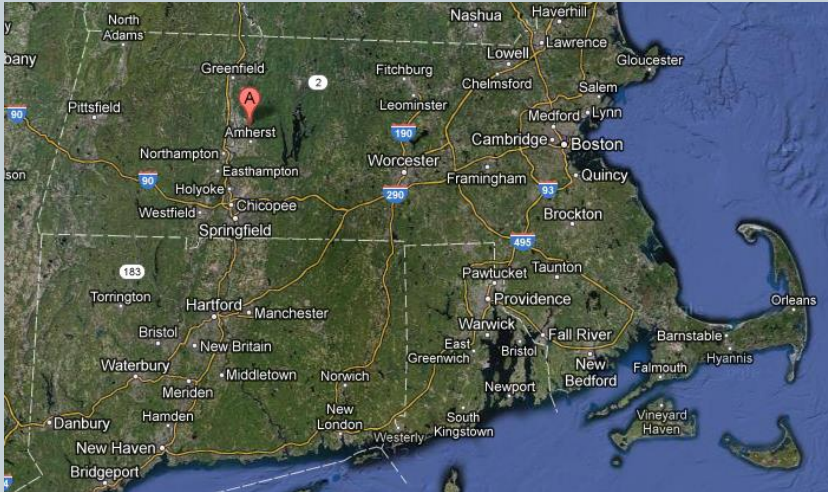
<http://www.cohousing.org/>

6 Defining Characteristics of Cohousing



- Participatory process
- Neighborhood design
- Private Homes Supplemented by Extensive Common Facilities
- Resident management
- Non-hierarchical structure and decision-making
- No shared community economy

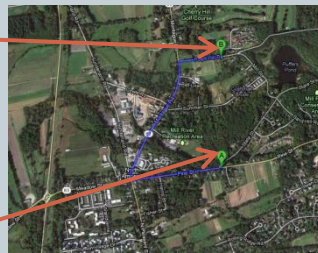
Amherst, Massachusetts



- 100 miles from Boston
- 27.8 square miles
- 295 feet elevation
- Population 37,800
- Five College Consortium
- Progressively Liberal Town
- Temperature range from the mid-teens to mid-80's
- Annual precipitation 46 inches
- Annual snow fall 41 inches



**Pioneer Valley
Cohousing**



**Pine Street
Cohousing**



Intergenerational Cohousing

Formed 1990

Completed 1994

One of the first two to be
built in the northeast

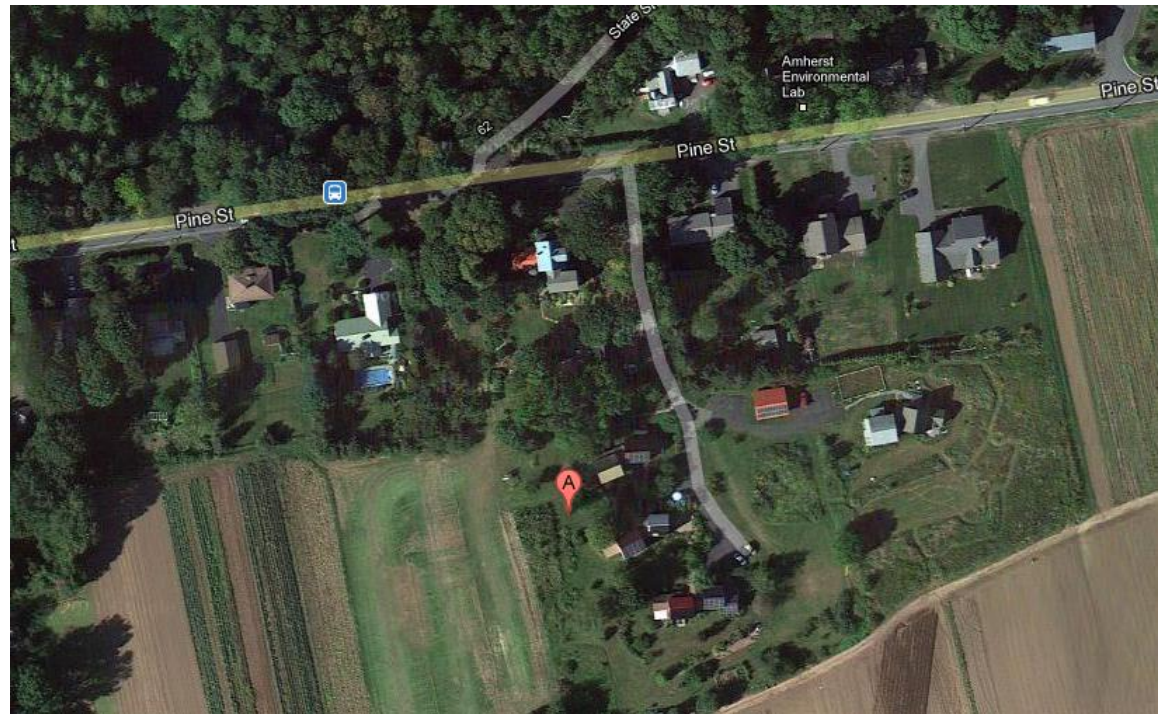
5.3 Acres

Surround by Conservation
Land

10 Households

Monthly Meeting

Consensus Decision
Making



Pine Street Cohousing
155 Pine Street
Amherst, Massachusetts 01002



8 Duplexes with Shared Entrances

800-1200 Square Feet

Common Driveway

Common House

Community Garden



Bruce Coldham, Architect and Resident

Residential Units

<http://www.coldhamandhartman.com/completed.php?id=>
<http://www.flickr.com/photos/annabelr/2990118475/in/p>

Intergeneration Cohousing

Formed 1989

Completed in 1994

One of the first 2 to be built
in the northeast

22 Acres, 7 Developed

32 Member Households

5 Rental Units

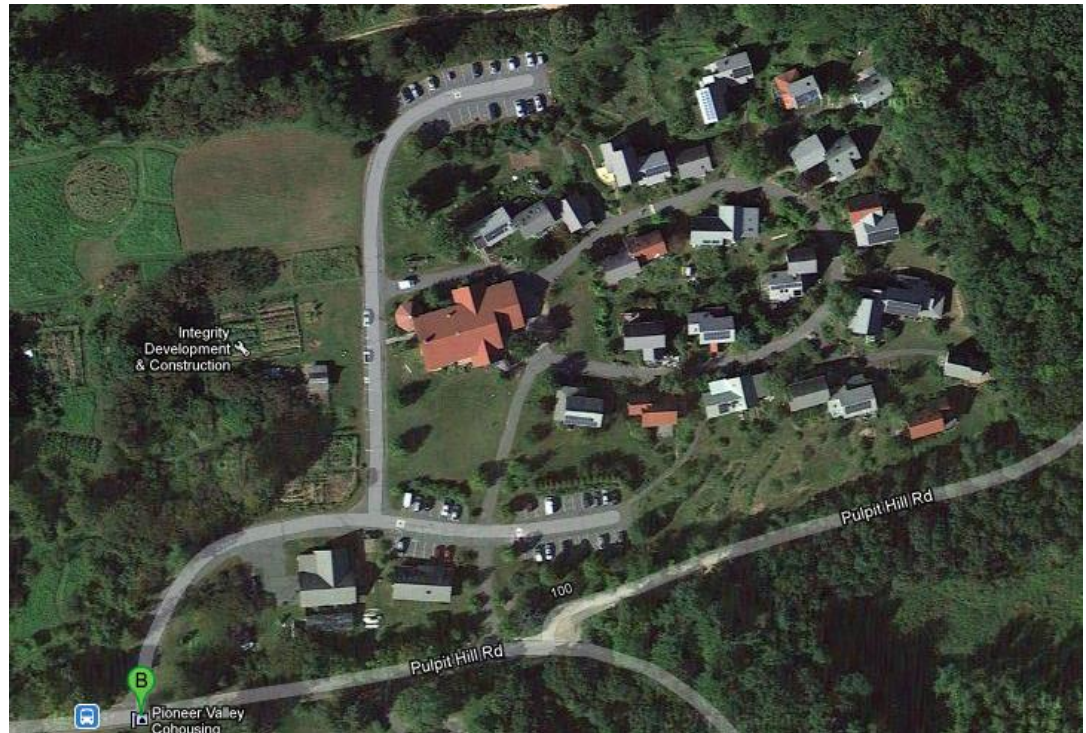
6 Associated Member
Households

Population: 75

Nonresident Member: 15

Condominium Monthly
Fees

<http://www.cohousing.com>



Pioneer Valley Cohousing
120 Pulpit Hill Road #4
Amherst, Massachusetts 01002



4500 Square Feet

Kitchen

Dining Room

Living Room

Meeting Room

Children's Room

Library

Two Guest Rooms

Laundry Facility

Food Pantry

Exercise Room

Root Cellar

Meditation Room

Sauna

Refrigeration



Common House



8 Detached Homes

9 Duplexes

2 Triplexes

616-2280 Square Feet

Central Pedestrian Pathway

Perimeter Parking

Community Meals Twice Weekly

Shared Events

Consensus Decision Making

6-8 Hours Required Labor
Contribution/person/month

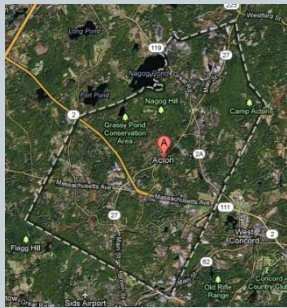


Residential Homes

Acton, Massachusetts



- 20 miles west northwest from Boston
- 20 square miles
- 260 feet elevation
- Population 21,900
- Voted #16th best small town
- Blue Ribbon High School
- Temperature range from the mid-teens to mid-80's
- Annual precipitation 42 inches
- Annual snow fall 41 inches



http://en.wikipedia.org/wiki/Acton,_Massachusetts

<http://www.clrsearch.com/Acton-Demographics/MA/Weather-Forecast-Temperature-Precipitation>



Intergenerational Cohousing

Formed 1989

Completed 1995

20 Acres, 5 Developed

24 Member Households

Monthly Committee
Meetings

Weekly Community Meal

Consensus Decision Making

Shared Events

Paid Maintenance and
Cleaning Service

5 Units Sold



New View Cohousing
6 Half Moon Hill
Acton, Massachusetts 01720



Living Room

Dinning Room

Kitchen

Kid's Room

Workshop

Game Room



Common House



11 Detached Units

5 Duplexes

1 Triplex

2-4 Bedrooms

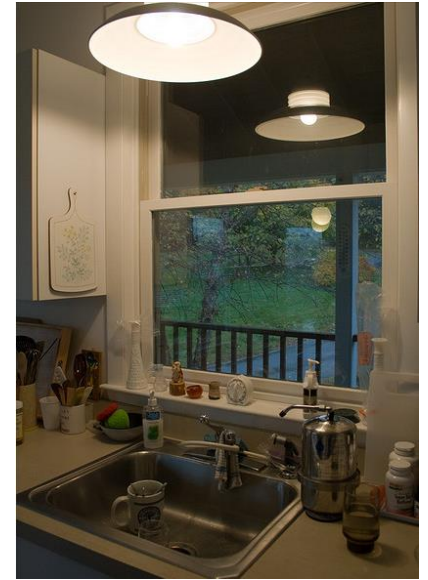
Perimeter Parking

Some with Attached
Garages

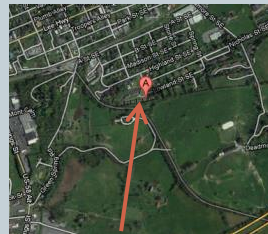
Some Detached
Garages



Residential Homes



Abingdon, Virginia



ElderSpirit Community

- 133 miles from Roanoke
- 8.3 square miles
- 2,087 feet elevation
- Population 8,100
- Historic treasures
- Art, music, tourist
- Temperature range from the mid-20's to mid-80's
- Annual precipitation 46 inches
- Annual snow fall 41 inches



Senior Cohousing

Formed in 1999

Completed 2006

3.7 Acres

29 Households

13 Offsite

Monthly Meetings

Required to Participate in
1 Committee

Consensus Decision
Making

Twice Weekly Community
Dinners

Twice Weekly Spiritual
Gathering

Paid Maintenance and
Cleaning Services



ElderSpirit Community
120 ElderSpirit Court
Abingdon, Virginia 24210



4 Apartments

2 Guest Rooms

Art Studio

Library

Kitchen

Dining Room

Multipurpose Room

Laundry Facility

Office

Mailroom

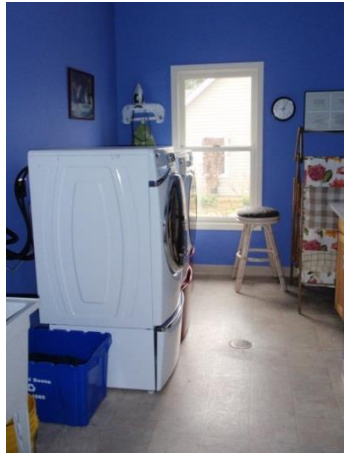
Entertainment Room

Workshop



Common House

Common House Interior





2 Duplexes

3 Triplexes

16 Rentals

1 and 2 Bedrooms Units

960-Square Feet Attached
Homes

590-860 Square Feet
Rentals

Peripheral Parking

Upper Level Front Door
Parking



Residential Units



Spiritual Center
Non Denominational
Prayer
Meditation
Classes
Outside Community
use



Spirit House



Personal Perspective



Intergenerational Cohousing

- Forward Thinkers
- 30-40 Year Olds
- Architects with No Cohousing Design Experience
- Idea of Community Changes with Age
- Diverse Community
- Sustainability
- Family Centered
- Reason to Live in Community
 - Community, Sharing, Neighborhood

Senior Cohousing

- Planning for the Future
- Mid-50s
- Universal Design
- Like Minds and Hearts
- Community Minded
- Diverse Community
- Sustainability
- Age Centered
- Reason to Live in this Community
 - Community, Simplicity, Spirituality

THANK YOU



<http://newoldage.blogs.nytimes.com/2011/08/22/shared-meals-and-lives/?ref=health>

<http://columbia.news21.com/diy-senior-living/>